The conceptualization and development of specifications for a doctoral program in security studies: A Delphi study

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THE CONCEPTUALIZATION AND DEVELOPMENT OF SPECIFICATIONS FOR A
DOCTORAL PROGRAM IN SECURITY STUDIES:
A DELPHI STUDY

by

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ABSTRACT

The Conceptualization and Development of Specifications for a Doctoral Program in Security Studies: A Delphi Study

by

Barent Nelson McCool

Dr. Gene Hall, Advisory Committee Chair
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In 1994 there were only four formal “Emergency Management/Security” college degree programs being offered in academic America, of which only one was offered at the baccalaureate level, the others being certificate programs (Federal Emergency Management Agency, 2007). Very little exists in the literature today that addresses the topic of homeland security, emergency management, and security administration educational degree programs at either the college or university level. This study focused on the following research questions.

1) Is there a current need for a doctoral program in security studies?

2) If so, how should such a program be structured academically?

3) If so, should such a program be offered as a PhD, EdD or an Executive Doctoral degree program?

A review of the literature indicated that a gap exists between current programs offered at the doctoral level and the emerging needs of professionals in the field of
security administration. The literature review also indicated that there is a rapid movement among colleges and universities to fill the emerging needs of educating security managers, especially at the masters degree level. Most of these offerings are attached to already established degree programs at the undergraduate or masters level in emergency medical services (EMS), political science or urban affairs. Currently, at the doctoral level, little has been done to address the advanced needs of those individuals at the upper executive levels tasked with the nation’s, as well as individual states’ leadership related to homeland security and crisis management.

In the Journal of Emergency Management, (March/April 2006), it is stated that:

Emergency management leaders need an academic, not just experiential, knowledge base of natural and manmade hazards to be able to develop the deep understanding necessary to effectively develop and implement strategic efforts to mitigate threats or to properly prepare for the response and recovery from their consequences (Woodbury, 2005, p. 27).

The Delphi method of investigation was used in this study. A Delphi study is a qualitative methodology that consists of a systematic collection of opinions from a panel of experts in the area under investigation. A consensus is developed through a series of questionnaires that are presented to the panel members. Their responses are analyzed for patterns and themes, and the group’s opinions derived from the first and second phases are provided as “feedback” in the following round/phase of the Delphi study process. In this particular case there were four phases or rounds of questionnaires, including the initial pilot study phase, and the final consensus was sent to all panel members at the conclusion of the study. A panel of experts (stakeholders) in both the fields of security
and post-secondary education was utilized to provide a wide scope of expertise for the development of the need for this program and its application in the area of security studies at the doctoral level.

The expert panel for this study was composed of individuals from the United States Departments of Homeland Security and Defense, post-secondary education institutions and security agencies within state and local governments. Policy makers from federal, state, and local governments were also included in the panel. The focus of this diversified panel of experts was to develop consensus opinions on the potential need and the requirements for a doctoral program in security studies that would serve those in executive leadership and decision making positions. The panel was asked to consider five areas of concentration: (a) program content, (b) qualifications of the individual candidates applying for program admission, (c) instructional modalities, (d) required competencies, and (e) potential dissertation topics.

The results of this study indicated that there was a need for a doctoral program in security studies and that such a program should be structured as a PhD degree program. It was also indicated that persons selected for admission to doctoral programs in security studies should have at least three to five years experience in emergency management, homeland security, or other security operations, and they should have had supervisory or other leadership level experience while in those positions. It was also found that graduates of such a program were potentially employable by the various security agencies found at all levels of government, by organizations that are seen as potential terrorist targets (e.g., the mega-resorts such as those found in Las Vegas, Nevada), and by higher education institutions working to develop educational programs in security studies.
Critical program content areas were found to be a focus on crisis management planning, communication and coordination between various local, state, and federal agencies and the leadership processes that provide the direction for the management of crises during a terrorist incident or a natural disaster. The results also indicated that, to be effective, these doctoral programs need to be constructed as flexible, modular programs which incorporate both resident and distance learning so that the potential students can integrate their studies with the responsibilities associated with their current positions in the security field.

Finally, the results of this study were used to develop a suggested plan for a doctoral program in security studies. This plan provides a possible structure for such a program, including indication of the number of required credit hours, suggested course titles, and possible topics that program students might select for their dissertation research.
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ACKNOWLEDGMENTS

I have dedicated this dissertation to the memory of my son Cdr. William (Willie) Cameron McCool, USN, pilot of the NASA Space Shuttle Columbia, who, along with the rest of the Columbia crew, perished in the sunny skies over Texas, 16 minutes from home, on February 1, 2003. I will always love and miss you, Son!

I must also express my deepest gratitude to my wife, Dr. Audrey C. McCool, who was my constant inspiration to finally finish this daunting task. Without her support, encouragement and sacrifice I could have never reached my goals in life or reached my dreams. Her editing of this document was priceless!

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CHAPTER 1

INTRODUCTION

This study investigated the current need for a dedicated doctoral degree in the field of security studies and how such a degree program should be structured academically. This first chapter provides an analysis of both the need for a doctoral program as well as what is currently available in higher education to meet this need. This chapter will identify the stated research problem, list the research questions, and describe the significance of the study. It will briefly describe the methodology and limitations of the study, and will finally list the key terms used throughout the study.

Background of the Study

The Secretary of Homeland Security, in a speech to Congress on July 13, 2005, stated in his opening remarks: "There is a growing need to invest in the department’s most important asset; its people through top-notch professional career training and development." (Chertoff, 2005).

We live in a world forever changed by foreign and domestic terrorist attacks. The attacks on the World Trade Center in New York City, the bombing of the Federal Building in Oklahoma City, the attack on the Pentagon, and the regular occurrence of attacks in cities worldwide have created a need for trained professionals in the science of
terrorism and crisis management. Today, emergency management is found at every level of government in the United States (U.S.), including federal agencies such as the Federal Emergency Management Agency (FEMA), the Federal Bureau of Investigation (FBI), the National Security Agency (NSA), The National Security Institute (NSI), and the Central Intelligence Agency (CIA). Additionally, every state, county, and city in the U.S. now has departments and agencies that have one or more individuals with emergency management tasking.

Even the private sector is engaged in business contingency and continuity planning, disaster preparedness training and succession plans on a “what if” basis. The financial losses associated with the attacks on the World Trade Center, the damage from hurricane Katrina in New Orleans, and the devastating fires in California in 2007 have created a need for better planning and employment of emergency services at all levels of government – federal, state, and local. This need is particularly apparent in the business realm where the impact of the September 11, 2001 attacks and the multiple natural disasters that have struck the U.S. since 2001 have devastated the insurance companies. Businesses have learned that they need to have advanced planning and expert assistance in dealing with not only the disaster but the recovery process that follows such an event (Aber, Hoven, and Kolter, 2003).

These experiences with terrorist attacks and natural disasters from 2001 through 2007 represent the vulnerabilities that the U.S. has faced in recent years and is currently facing. It seems likely that concerns with such events will grow in the future. The U.S. population is continuing to grow; there is increased urbanization and population concentration in hazard-prone areas such as coastal areas susceptible to flooding and/or
landsides, brush filled canyons susceptible to fires, and flood prone locations inland within the U.S. Some cities within America are making progress in revitalizing their “Old Town” areas, but the trend is still an accelerated deterioration of the urban infrastructures like those currently facing public officials in Camden, New Jersey and St. Louis, Missouri.

From a terrorist attack standpoint the U.S. is a “ripe target”. For example, there are 123 chemical plants that could release dangerous toxic materials that would endanger the lives of more than one million citizens (Adams and Marquette, 2002). The danger from the toxic materials release does not take into account the billions of tax dollars that would be required in containment, cleanup, and recovery. This example is just a “snapshot” of the potential challenges for emergency management. Security administrators for businesses and government, as well as presidents and/or administrators of higher education institutions, have to address such issues today and well into the future.

It is apparent that there is a growing need for expertise and organizational structure focused on the expanding field of security. For example, within state government agencies and local city governments, new positions and departments are being established and/or expanded. Each such structural modification requires leaders with security expertise. Homeland security is the “buzz word” of the new millennium and represents millions of dollars in government funding. The Homeland Security Department is expected to coordinate all of the ‘first responder’ agencies that would be involved in responding to a terrorist attack or a natural disaster such as hurricane Katrina, which devastated the Gulf Coast (Department of Homeland Security, 2004a).
The President of the United States has one primary responsibility to the American public: to protect and defend the American people from all threats, both foreign and domestic. Since the tragic attacks sustained by the U.S. on September 11, 2001, all levels of government (federal, state, and local) have cooperated together as a single unit for the first time since the other single most tragic event in U.S. history: the attack on Pearl Harbor, December 7, 1941. The terrorist attacks of September 11, 2001 have resulted in the galvanization of the nation as never before. Such unification has focused on strengthening border security and "hardening" the cockpits of the U.S. commercial aviation industry. Additional steps have been taken to stockpile medicines and vaccines to defend against bioterrorism and to improve interdepartmental communications and data transfer between the various intelligence agencies.

One of the issues that came to light as a result of the fall-out of the congressional investigation into the September 11, 2001 attacks was that more than 100 different federal governmental agencies had homeland security responsibilities, and these many responsibilities were not coordinated by any one central control point. This lack of coordination resulted in extensive redundancy of activities and clouded critical intelligence analysis because of the massive amounts of paperwork that was generated (Fennelly, 2003).

As a result of the congressional investigation, President George W. Bush used his executive powers to establish the White House Office of Homeland Security and the Homeland Security Council in an effort to gain control of the nation's patchwork of agencies so that these agencies and their activities might be molded into a single coordinated effort. A further strategic initiative, in an effort to place a single organization
in overall command and control of any future attacks or disasters, was launched by
President Bush when he signed Executive Order 12958 on November 9, 2001 (Bush,
2001). President Bush realized that the U.S. needed a single unified command structure
to deal with the paradigm shift in terrorism today, the shift from attacks in the Middle
East to the shores of the United States, thus EO12958 established the Department of
Homeland Security (DHS).

The Department of Homeland Security was given the following responsibilities to
ensure the safety of Americans:

- One department with the primary mission to protect the U.S. from future
  attacks;
- One department to secure the nation’s borders, transportation systems,
  seaports, airports and other critical infrastructures;
- One department that would synthesize, analyze and collate threat intelligence
  from the various foreign, federal and military security sources;
- One department to coordinate communications with state and local
  governments, leaders of the nation’s industries and the American public about
  threats to the nation’s security and steps to be taken for preparedness;
- One department to coordinate all of the nation’s efforts to protect Americans
  against bioterrorism and other weapons of mass destruction (WMDs);
- One department to assist with the training and equipping of the nation’s first
  responder forces;
- One department tasked to manage and coordinate the federal emergency
  response activities in the case of natural or manmade disasters;
• One department tasked to coordinate the recruitment and training of security officers to augment the number of field officers working to stop terrorists and a reduction of the bureaucratic management, duplicative and redundant efforts that place a critical drain on homeland security resources.

To accomplish these responsibilities, the Department of Homeland Security is now organized into four divisions that have specific organizational functions:

• Border and Transportation Security
• Emergency Preparedness and Response
• Chemical, Biological, Radiological and Nuclear Countermeasures
• Information Analysis and Infrastructure Protection

Initially, the DHS was staffed by 24,000 employees. Since its establishment initially as an agency, then as a full department within the federal government, it has become a secretariat which now employs over 180,000 individuals whose primary focus is the nation's security (Department of Homeland Security, 2004a). These individuals, recruited from every agency within local, state, and federal government, were selected based upon their current levels of expertise in fields associated with security.

In the short term these individuals are filling the gaps within the various government agencies. However, for the long term, there are two unanswered questions:

1. Who has replaced them, or will be replacing them, in the positions that they left to fill those in the DHS?

2. How well prepared are the persons moving to these DHS positions to assume the authority associated with higher level positions?
Additionally, the normal attrition, promotion and retirement of these senior personnel will likely deplete the current pool of qualified experts within the near future. In a paper presented at the Emergency Management Conference in June 2004, Dr. Neil Britton stated:

...some emergency management systems are exclusively "ambulances at the bottom of the cliffs, whereas others are also fences at the top." This is why, for those who tout the "Be-All" of "Experience," that "Experience" needs to be grounded in EDUCATION (Britton, 2004).

Added to this problem is the current turnover rate within the Department of Homeland Security (Chertoff, 2005) and the demands of every congressional and senatorial office for security experts, as well as the increasing demands within state and local governments. The current positions within federal, state, and local agencies are being filled by individuals with experience and expertise in specific areas of terrorism and/or security knowledge. Specifically, individuals with knowledge about terrorism (based on past experience gained from military or civilian fields) or who have national security expertise or foreign service experience are being recruited into these organizations to fill the voids (Department of Homeland Security, 2004a). While these individuals have expertise within a narrow field of view, they may lack the abilities necessary to function as leaders in the field of security at the executive level. According to Glen Woodbury:

Emergency management leaders need academic, not just experiential, knowledge based on natural and manmade incidents in order to develop a deep appreciation and understanding of the incident to effectively combat the incident
and properly prepare the most effective responses in a timely manner
(Woodbury, 2005, p. 27).

Initial Investigation

This dissertation is the result of three specific events that occurred at the University of Nevada Las Vegas, (UNLV) during the period between the fall of 2004 and the fall of 2005. These events involved the Department of Educational Leadership and the Center for Workforce Research and Development within the College of Education and the Institute for Security Studies (ISS). The results of these three events and the researcher’s interest and background in terrorism and crisis management, as well as a similar interest and background among faculty and administrators within the College of Education and the Educational Leadership Department, presented a unique opportunity for a “hands-on,” working dissertation.

The first of these events occurred when the director of the ISS approached the chairperson of the Department of Educational Leadership in 2004 with a proposal that would have the department assuming the responsibility for the masters degree program in security studies which was then housed in the ISS. This program was a federally funded masters degree program for the education of specific individuals in the field of security management. The program, at that time, was populated by 23 employees of Bechtel Corporation. The ISS had just graduated the first cohort of 18 students from this program, and the Institute was no longer interested in the program’s administration.

The second event occurred during this same time period and continued on into the spring semester of 2005. The Center for Workforce Research and Development, located
within the Department of Educational Leadership, was awarded a federal educational grant by the Department of Homeland Security (DHS), to develop a comprehensive training program for “first responders” during a natural disaster or a terrorist incident. This grant focused the Educational Leadership Department’s interest in education and training in security and on the need for leadership education in security administration. This researcher was appointed to the position of project director for the administration of this grant.

The third event was the appointment of a committee composed of faculty members from the Department of Educational Leadership. As the project director for the DHS grant, this researcher was also appointed as a member of this committee. This committee’s charge was to determine the feasibility of developing a doctoral program centered on security studies. The committee determined that the approach that would be taken for this feasibility analysis would be through the development of a Delphi study. If it was determined that there was a need for a such a doctoral program, then further study would be undertaken to determine the most desirable composition of such a program. As this researcher was both a member of this committee and a doctoral student in the Educational Leadership Department, he requested the opportunity to complete the study on behalf of the committee while also utilizing the study as his work for his dissertation.

Demand for Qualified Security Personnel

The current and projected demand for qualified security personnel continues to grow throughout the nation. For example, according to the Department of Labor, by the year 2012, the job market will see a 28 percent increase in emergency management specialists.
The emergency management profession is on the list of the top ten growth professions (listed as number four in growth potential) (Hot Majors, 2007). According to a survey conducted by the University of North Carolina, Chapel Hill (Marks, 2002), there is a growing need for employees trained in the emergency management field. The survey indicated that business leaders are willing to supplement their employees’ education in the following areas:

- Promotion with educational consideration
- Payment and/or reimbursement of educational expenses
- Provision of incentives for going to school
- Offering of schedule flexibility to attend school

The “bottom line” is that employers have recognized the value of employees who bring knowledge, expertise and skills in emergency management/disaster preparedness to their organizations, and these employers are willing to reward those skills with higher starting pay for degrees in emergency management. As a result, many higher educational institutions are considering establishing degree programs in response to the increasing demand for educated professionals in security studies (Marks, 2005).

Statement of the Problem

The unfortunate events of September 11, 2001, the bombing of the Federal Building in Oklahoma City, and the natural disasters such as the earthquakes and fires in California and hurricane Katrina that devastated the Gulf Coast of America have demonstrated that the federal agencies tasked with the protection, response, and recovery from any of these events were not prepared to deal with a disaster on the massive scale
that these events dictated. There has been a dramatic increase in the demand for security personnel who are prepared to provide leadership at the highest levels of federal, state, and local government. Most of these individuals were likely to have had years of personal training and experience in specific areas of security, crisis management or terrorism. However it appears that many of these individuals were likely to have had only limited experience and training in leadership and/or administrative skills. Thus, they would likely benefit from advanced leadership and management studies which would have given them increased knowledge while also developing the new skills necessary for them to function effectively at the executive level as administrators of homeland security, and disaster control programs within federal, state, and local agencies. Determining the need for a doctoral degree program in security studies and the design of this unique degree program is the primary purpose of this dissertation.

Research Questions

The field of security studies and emergency preparedness is relatively new from the perspective of higher education. There is very little literature on this subject as it applies to higher education prior to the events of September 11, 2001. Therefore, this Delphi study sought to provide a comprehensive description of what is currently available in higher education related to the field of security studies and provide a “map” of a possible structure for a doctoral degree program in security studies. To accomplish this goal, this study answered the following questions:

1. Is there a need for a doctoral level program in security studies?
2. Should a doctoral program in security studies be structured as a PhD, EdD or Executive Doctoral Degree?

3. How should a new degree program in security studies be organized in terms of curriculum and instruction?

4. What would be the characteristics of the individuals seeking an advanced degree in security studies?

5. Upon graduation, what types of positions/careers would these individuals be qualified to fill?

6. What are likely topics for dissertations in security studies?

Policy issues that need to be addressed by higher education institutions when development of a new doctoral program is being considered are also factors that impact the feasibility of such program development. Although such policy issues were not specifically addressed in this Delphi study process, discussion found in Chapter 5 of this document will consider some of the policy issues which need to be considered as a part of the discussion of the content and structure that would be appropriate for a doctoral program in security studies.

Definition of Terms

Delphi - The oracle of Apollo at Delphi on an island in Greece.

Delphi Study - Method of developing a group consensus developed by the RAND Corporation.

DHS - Department of Homeland Security.

Disasters - An occurrence causing widespread destruction and distress.
EMA - Emergency Management Agency including: state and local EMAs, Voluntary Organizations Active in Disaster (VOADs), Human Service Agencies (Red Cross), and any private agencies supporting EMA activities.

National Incident Management System (NIMS) - The NIMS is a system used in the United States to coordinate emergency preparedness and incident management among federal, state, and local agencies.

ODP - Office of Domestic Preparedness.

Public Health - Prevention of the spread of epidemics and disease, protection from environmental hazards. Professionals working in the field of public health include: environmental engineers/scientists, epidemiologists, facility management engineers, security personnel, public health policy analysts, community social services personnel, psychologists and mental health providers and counselors. Public health activities include interfacing with the U.S. Center for Disease Control (CDC).

Public Health Care Providers - Those individuals who provide clinical, forensic and administration support at hospitals, physician offices, clinics and any other facility that offers health care. Providers include: physicians, dentists, nurses, physician extenders (physician assistants and nurse practitioners), licensed practical nurses, veterinarians, dietitians, pharmacists, and technicians in multiple health care fields. Additional professionals included in this category are: medical examiners/coroners, physical and occupational therapists, epidemiologists, facility management engineers, security personnel, environmental investigators and medical records personnel.

Public Safety Communicators - Personnel who may be full or part-time employees who have duties to act as a conduit for incident reporting and to support the ICS. Such
personnel include: call takers, shift supervisors, medical control centers staff, and dispatchers for first responder agencies (Emergency Medical Services, Police and Fire Departments).

Public Works - Includes: environmental services (water quality), solid waste, animal services, water treatment, public buildings and parks (inspectors and engineers), telecommunications, electric districts (zones) and digital cable (video cameras used for surveillance of traffic), and engineering and equipment services.

Terrorism - Systematic use of violence and intimidation employed as a means to achieve a desired end. Can be either foreign or domestic in nature.

Terrorist - Person who makes systematic use of violence and intimidation as a means to achieve an end. Person can either be a resident of the United States (domestic terrorist) or of a foreign nation (foreign terrorist).

Weapons of Mass Destruction (WMDs) - Biological, chemical, and nuclear agents or materials that are employed against the public in a terrorist attack.

*These terms and definitions were extracted from Center for Homeland Defense and Security (CHDS) data base.
Overview of Methodology

As previously indicated, the purpose of this study was to determine the need, content, and form for a doctoral program in security studies. Additionally this study addressed the issues of how this program of instruction should be organized and delivered and what subject matter content should be included. This study utilized the Delphi method as the primary method of data collection and analysis. This method of data collection and analysis, first developed by the RAND Corporation for use by the military, has also found application in business, government, industry and academia.

The Delphi method has traditionally been a technique aimed at building an agreement or consensus about an opinion or view, without necessarily having people meet face to face, such as through surveys, questionnaires, e-mails etc. To build consensus, the Delphi method uses the Hegelian dialectic process of theses (establishing an opinion or view), antithesis (conflicting opinion or view) and finally synthesis (a new agreement or consensus), with the synthesis becoming the new thesis. This methodology has been described as “a method for structuring a group communication process so that the end process is effective in allowing the “GROUP” (Individuals) to deal with complex problems from a position of autonomy” (Keeney, Hasson and McKenna, 2000, p. 1012).

The Delphi method makes it possible to amass research panel members from a widely diverse population of individuals with expertise in any number of related fields that pertain to the question under investigation. Since the members of the panel respond in writing, they can be geographically disbursed (Cline, 2000).
The Delphi Method was used in this study to elicit expert opinion about the needs, curriculum, and instructional strategies for program delivery. There are five basic components of a Delphi study (Keeney, Hasson and McKenna, 2000; Sackman, 1974).

1. Selection/creation of the group of individuals who will make up the investigation panel of experts.

2. Development of a questionnaire or instrument for data collection and analysis that has been validated.

3. A series of survey rounds by respondents to develop a consensus.

4. A draft of the emerging consensus statements prepared by the researcher.

5. Feedback to the individuals to reiterate the consensus developed from the study.

Experts from the fields of homeland security, crisis management, emergency management, and higher education were utilized as the survey population for the Delphi study panel. The study elicited the expert opinion of this panel of experts in regard to their viewpoints about the need for homeland security administrators, as well as the curriculum, and instructional strategies for program delivery. The study also served as a means of conducting the needs assessment necessary for the establishment of a doctoral degree in security studies in the Department of Educational Leadership at UNLV (Core Research Areas, 2006).
Limitations of the Study

This study had several limitations and delimitations. The populations not surveyed delimit the study. First, this study did not attempt to survey every individual involved with higher education administration or the field of security. The numbers involved were beyond the practical financial support for the researcher even though they represented a significant body of expertise within these diverse fields.

A limitation was that of the Delphi study method itself. The basic methodology limited the number of participants used as panelists in-order to reach a group consensus. Also, this methodology requires at least three iterations over a sustained time period, which results in a natural attrition of members due to retirements, promotions and other normal job related factors (Le, et al. 2006).

The researcher decided to concentrate on those individual stakeholders who were felt to have the most extensive knowledge and expertise as it was felt that these persons would provide the best possible data for answering the primary research questions. While these diverse individuals had varying, and sometimes opposing, opinions and beliefs about security administration and security studies within higher education, the results of the study were still based on their group consensus.

An additional limitation to the study was that the researcher developed his own survey instrument. He was assisted with the development and refinement of the survey instrument by the appointed doctoral study committee prior to the pilot testing (see Chapter 3). The databases derived from the study participants’ responses were their opinions and, as such, were subject to their clarity in stating their viewpoints as well as their willingness to participate in the study throughout all the phases.
Significance of the Study

The Secretary of Homeland Security has already stated that there is currently a need for increasing the level of training and expertise of those individuals employed within the Department of Homeland Security. A logical extension of that statement is that this same requirement exists throughout multiple departments and agencies within the federal government as well as in both state and local governmental agencies. The current literature (see Chapter 2) has demonstrated that there is a need for a professional degree in the area of security studies at the doctoral level. It is not clear what the curriculum should include, what modes of instruction would be best, and what the expectations for graduates of such a program should be. This study has addressed these questions.

Summary of the Study

This dissertation is a reporting of this Delphi study and is organized into five chapters. Chapter 1 has discussed the background that led to the study, the research questions, and the methodology that was employed, as well as the significance and limitations of the study. Chapter 2 provides a comprehensive review of the literature related to the fields of security studies and higher education as it applies to establishing a doctoral program in security studies. Chapter 3 is a detailed methodology discussion focused on the application of the Delphi method utilized in this research as well as descriptions of the data collection methods. Chapter 4 reports the findings of the study and describes the data analysis that was used to develop the Delphi group consensus. Finally Chapter 5 discusses the final results, interprets the findings and significance of the study, and provides recommendations for future research.
CHAPTER 2

REVIEW OF RELATED LITERATURE

Introduction

The purpose of this study was to determine the need for and the possible content and form of a doctoral program in security studies. Initially, a review of the literature was conducted to assess previous research and identify programs that have addressed the establishment of an advanced degree in security studies. This review also addressed the establishment of the Department of Homeland Security (DHS), the Office of Domestic Preparedness (ODP) and the current graduate programs that are being offered which are focused on security studies, as well as a sample of the content of one of these programs.

The review also provides a brief historical review of the development of graduate programs in America with the emphasis focused on the doctoral degree. The Delphi methodology and issues related to establishing a new doctoral program and curriculum theory in higher education are addressed as part of this review.

History of Graduate Education in America

Historically, the graduate education, research and training for educational leaders and persons entering professional fields started with the first American PhD offered in 1861 by Yale University. The development of this degree marked the beginning of the drive
toward research colleges and universities that is seen today. Prior to Yale’s development of a PhD program, individuals were flocking to Europe for graduate studies with Germany’s universities as the focal point of advanced educational research for American students seeking a doctoral degree. German universities had established the “gold standard” with their curriculum focusing on “hard” sciences and research that would be the model that American higher education adopted over the next fifty years.

This model was first seen at Johns Hopkins University, when it opened its doors in 1876, primarily as a “German style” university. Throughout the 1880s the German university model influenced the development of graduate institutions in America. Those American scholars who returned from their studies abroad provided the nucleus for the research faculty here in America. These early faculty members provided the foundation for the eventual development of what has now become the standard by which the rest of the world measures their graduate schools, the American research university (Geiger, 1993).

The development of American graduate education was a slow, painstaking process that encompassed much of the twentieth century. Until well into the twentieth century, the quest for advanced training and graduate education was conducted outside of the college or university environment. Specifically, it was conducted within learned societies such as the American Philosophical Society, the National Academy of Sciences, and the American Association for the Advancement of Science. The mainline colleges and universities were entrenched in the noble pursuit of a classical education, meaning that the graduate degrees were concentrated in the liberal arts rather than focusing on the sciences. Basically research within America’s colleges and universities was limited due
to the lack of assets, specifically financial support for studies beyond the undergraduate level.

A major change occurred in graduate education with the movement toward the use of "gifts" to support graduate student education and research in American universities and colleges. Indeed, endowments, philanthropy, and gifts would eventually become the cornerstone of the graduate research model. Early examples of such gifts included the Hollis Professorship of Divinity at Harvard University (1721) and gifts given to Johns Hopkins University, Clark University, and the University of Chicago. These gifts, which were preserved as endowments, allowed institutions the freedom to use funds for other than undergraduate education (Geiger, 1993).

In 1899, at the turn of the century, Harvard University received a "gift" or bequest for the specific purpose of furthering research and knowledge. The University chose to utilize the money to fund fellowships (graduate assistance scholarships) for graduate students. This unique "American" concept had outcomes which would distinguish American graduate education from that of the German model. These monies provided financial support for graduate students so that they could teach classes at the university. Enabling graduate students to teach classes provided relief from the lecture halls for the professorship to conduct research. When this concept had reached both the university and college levels, it had the effect of "leveling" the playing field, or gap, between the wealthy private institutions and those of the public sector (Geiger, 1993).

The off-shoot of the "gifts" concept was the shift by institutions toward the development of the alumni as potential contributors for the continued growth and development of the institution. The end of World War I and the following depression
saw a divergence between the private and public colleges and universities. The public institutions' mantra became “bigger is better”, and these institutions concentrated on becoming “all things to all mankind” with large campuses and increased student body sizes, primarily at the undergraduate level. At the same time, the private institutions concentrated on the development of their resources, and they sought a specifically targeted “select” student body that would provide the potential for large alumni gifts in the future.

The “Ivy League” was born during this period, and the schools considered to be “Ivy League” were extremely successful in attracting alumni financial support which provided the capital necessary for the development of the “research university” model that is the foundation of graduate education today. This elitism was the means by which these universities were able to distinguish themselves from the more typical universities. This strategy was highly effective, enabling the “Ivy League” universities to attract the best of the undergraduate students for their graduate programs. While this concept built the elite universities’ graduate programs, it had an opposite effect on the more typical undergraduate colleges and universities as these universities were unable to compete effectively with the “Ivy League” universities and attract and retain elite undergraduates into their programs. Thus, they were less able to develop quality graduate programs and attract external financial support. This separation would become quite apparent in the era of the 1980s and 1990s (Geiger, 1993).

When Raymond Hughes published what became the first “rankings” of graduate institutions in 1925, he unwittingly set in motion what became an academic prestige hierarchy. From that time on, the standard by which graduate education was measured
became the number of graduate degrees that an institution conferred. In an attempt to qualify students for graduate work and standardize graduate education, Columbia, Princeton, Yale and Harvard developed the Graduate Record Examination in 1937.

The real boost or growth in research education in the twentieth century was a direct result of the federal government's monetary investment in colleges and universities to support World War II. Research in the fields of radar, aviation, acoustics, and atomic energy received unlimited funding. While the U.S. government was willing to support university research in support of their interests, they had little interest in the support of basic undergraduate education.

Today, there appears to be two major patterns in graduate education. The first is basically what occurred during the first 150 years of graduate education. In this pattern, the research-based doctoral programs were linked to research within the arts and sciences, and, for the most part, they offered PhD degrees. However, a different pattern developed as a specialization for graduate professional doctorate degrees. The development of the professional degree was driven by the need for individuals who have advanced to middle-level positions within government, industry and the public service sector of the U.S. These individuals needed to "catch-up" with their education in order to be eligible for promotion or future advancement. The majority of these doctoral students study on a part-time basis. Generally, they pursue their degrees on their own time, as opposed to being given time from their work to study for an advanced degree. They are typically not interested in a future career in teaching or research that would be the terminal objective of the traditional doctoral student. This segment of the population is seeking advanced degrees to be competitive in a knowledge-intensive world. They are
interested in developing their professional acumen and in becoming more effective leaders or practitioners of their profession. This trend is seen today in the variety of advanced degree programs, such as the PhD, EdD, and the Executive Doctoral degree (Brown, 1990).

The PhD Degree, the EdD Degree,
or the Executive Doctoral Degree

The question then becomes one of what type of degree should be offered by doctoral programs in security studies: should the degree be a PhD, an EdD or an executive doctoral degree? This question hinges on one pivotal point: where will the degree program be housed within the college or university? If the degree is offered by the department (college) of education, then it could have three possible tracks. The first option would be a curriculum that includes a dissertation component that leads to the conferring of a Doctorate of Philosophy (PhD) degree. A second option would be to offer a Doctorate of Education (EdD) degree, which today is typically only offered by Colleges of Education. A final option would be a customized executive doctoral program that meets the requirements of the institution relative to academic rigor while at the same time providing a curriculum that meets the unique needs of graduate students engaged in advanced education (Osguthorpe and Wong, 1991).

A pivotal consideration when determining which of the degree options to offer is the decision regarding the type of doctoral degree program that a student would chose. This decision is often significantly influenced by the public’s preconceived notion of the higher value of a PhD degree verses an EdD degree or an executive doctoral degree. This
view point has been perpetuated by the bi-annual report published by the Carnegie Commission on Higher Education.

The Carnegie Classification System was developed to provide an analytical system to classify and differentiate colleges and universities. The first “listing” was published in 1973, based on degree-level and specialization. The report was used by researchers in higher education to develop trends within higher education and to predict future enrollments and needs of students. It was used to reinforce the need for diversity within the educational institution. The intent of the report was to be relatively homogeneous regarding the functions of the various institutions and the characteristics of their student bodies. Thus, colleges and universities were grouped by what they did and the composition of their student bodies (McCormick and Zhao, 2005).

However, conflict developed between the various institutions and the Carnegie Commission. This conflict was focused on where particular institutions were ranked and the effect this ranking would have on their ability to attract the best students. This problem became even more important with the establishment of the *U.S. News & World Report*’s annual publication of college rankings. These rankings were based on data from the *Carnegie Report* as those data sold magazines even though the data were not always based on pure fact. While the annual publication sold out on the newsstands, the public was not presented with all of the facts. Still, the result today is that parents and students take the *U.S. News & World Report* as “gospel” and use the information from that magazine when making their decisions regarding where they will apply for admissions. This use of the *Carnegie Report* has motivated colleges and universities to try to “move-up” in the Carnegie rankings. In order to be competitive for grants (funding) and the best
students, institutions are implementing new doctoral degree programs to increase the number of degrees that they confer, a major ranking criteria of the Carnegie Ranking System. The basic outcome of the above is the general public's perception about the "value" of having a PhD verses an EdD or an executive doctoral degree. That perception, in most cases, is that one should have a PhD (McCormick and Zhao, 2005).

What is the difference between the EdD and the PhD? In theory the two degrees overlap in curriculum, yet have two distinct outcomes. The EdD is used primarily to prepare managerial and administrative leadership within both K-12 and post-secondary education. The first EdD degree was awarded by Harvard University in 1920. The EdD is focused on the existing knowledge and practical experience of the students (Brown, 1990). The PhD is a traditional academic degree which is focused on preparing researchers, university faculty, and scholars in education. PhD dissertations are usually based on experimental and quasi-experiential studies which use multivariate statistics. Such research studies are somewhat more generalized in application. EdD dissertations usually focus on local or regional concerns, such as student populations or social events that impact education. These dissertations often use students, teachers, and parents as their test subjects. This type of dissertation is more often based on qualitative or descriptive research studies that use various survey methodologies for data collection. (Clark and Clark, 1996; Osguthorpe and Wong, 1991). Ultimately, though, the type of degree offered depends on the preferences of the educational institution: some institutions offer one or the other, and some offer both the PhD and the EdD degrees.
Current Security Studies Degree Program

Offerings in the United States

In 1995 there were only four universities offering academic degrees in emergency management -- three at the bachelor’s level and one at a certificate level. These universities were the following.

- University of North Texas (Bachelor of Science)
- Thomas Edison University (Bachelor of Science)
- Rochester Institute of Technology (Bachelor of Science)
- University of California at Los Angeles (Continuing Education Certificate Program) (Marcus, 2005).

Now, six years after the attacks of September 11, 2001, there are 124 programs being offered across the nation, with eight programs being offered at the doctoral level. Generally, the doctoral level programs were not specifically designed as security studies program. Rather, a security studies component was incorporated into an existing doctoral program. Indeed, the majority of the programs incorporating a security studies component are not stand-alone degree programs, but are a variety of concentrations in emergency management similar to minors in an area. Additional courses are simply added to existing masters degree or doctoral degree programs to provide a specific ad hoc stream in a designated specialty. The offerings focusing on security studies are generally found as specific concentrations in political science, urban affairs, emergency management services and other disciplines. A listing of the programs that are currently offering doctoral degrees that are loosely associated with security emergency
management or security studies and where they are found is included as Table 1. All of
the listed programs offer PhD degrees; none offer EdD degrees (Marcus, 2005).

*Table 1*

*Emergency Management Doctoral Programs as of 2007*

<table>
<thead>
<tr>
<th>University</th>
<th>Degree Offered</th>
<th>Program Location Within the University</th>
</tr>
</thead>
<tbody>
<tr>
<td>George Washington University</td>
<td>PhD in Science, Crisis, Disaster, &amp; Emergency Management</td>
<td>Department of Engineering Management</td>
</tr>
<tr>
<td>Georgia State University</td>
<td>PhD in Disaster Science and Management</td>
<td>Department of Public Administration &amp; Urban Studies</td>
</tr>
<tr>
<td>North Dakota State University</td>
<td>PhD in Emergency Management</td>
<td>Department of Sociology &amp; Anthropology</td>
</tr>
<tr>
<td>Oklahoma State University</td>
<td>PhD in Disaster Science and Management</td>
<td>Department of Environmental Science</td>
</tr>
<tr>
<td>University</td>
<td></td>
<td>Department of Landscape Architectural &amp; Urban Planning</td>
</tr>
<tr>
<td>Texas A&amp;M University</td>
<td>PhD in Urban &amp; Regional Science</td>
<td>Center for Energy and Environmental Policy</td>
</tr>
<tr>
<td>University of Delaware</td>
<td>PhD in Environmental and Energy Policy</td>
<td>School of Management</td>
</tr>
<tr>
<td>Walden University</td>
<td>PhD in Public Policy &amp; Administration</td>
<td></td>
</tr>
</tbody>
</table>

Source: Marcus, 2005.

The premier graduate program that is a specific security studies masters degree
program is offered by the Naval Postgraduate School. This program offers a masters
degree in homeland security, and it is offered on a very limited basis to eligible local,
state, and federal officials at no cost. The demand for this program has been so great that
a new program is being offered in partnership with the University of Connecticut. All of
the new degrees offered by the Naval Postgraduate School are fully accredited (Marcus,
2005).
The newest doctoral degree program was established at the Naval Postgraduate School in Monterey California. This program was established in response to requests from the Joint Chiefs of Staff, as they now have a requirement for a doctoral degree in security studies as a qualification for senior officers assigned to positions which incorporate responsibilities related to homeland security. This new program started its first cohort of four students (one U.S. Air Force officer, two U.S. Navy officers, and one South Korean Army officer) in the fall of 2007. This program is an in-residence, two year (24 month), full-time academic program complete with a research component and a dissertation requirement. As with their masters degree program, this doctoral program is very restrictive in the admissions process, limiting both the type of students, as well as how many students, are admitted to the program (Naval Post-Graduate School, 2007).

In 2004, the Secretary of Homeland Security took positive steps in regard to graduate programs in security studies by directing the Federal Emergency Management Agency (FEMA) to establish the Higher Education Project. This program was instituted to help institutions of higher education create and promote academic programs to educate individuals from government, business, and industry. The program also provides colleges and universities with an avenue for conducting needs assessments for prospective feedback on the development of security programs. FEMA’s Higher Education Project has five goals:

- Increase collegiate study of hazards, disasters, and emergency management
- Enhance emergency management professionalism
- Support development of academic disciplines related to emergency management
- Long-term: make contributions to enhanced hazards footing

There are currently 116 degree programs with a security studies component, the majority as concentrations within other degree programs. These programs are offered at the following levels: 49 as associate degree programs; 35 as bachelor’s degree program; and 32 as graduate degree programs (Federal Emergency Management Agency, 2007). It may be said that these programs in security studies and any related degrees are an anomaly within the educational environment. Most degrees prepare a person to have the knowledge and skills that they hope to use regularly in the pursuit of their career. However, Carnevale (2005) has suggested that a degree in security management or emergency management is a course of study that one hopes is never needed.

Development of Curriculum in Higher Education

Throughout the history of higher education there has been a continuous explosion in the curricula and course offerings that were being offered as well as changes in the methods of instruction. At Harvard, established in 1636, the primary method of instruction was centered on the individual instructor, or in some cases the president of the university, who conducted face to face lectures. This instructional modality was indicative of the times: classes were small (six to ten students per faculty member); both faculty and curricula offerings were limited; and the same professor would have the same students throughout their four year college experience. The stand up lecture followed by student recitation and discussion was the norm. Today this approach to education is no longer the norm. There has been a paradigm shift toward a theory of “more is better” in
higher education. Those institutions that offer the most diverse curricula are considered the best and attract the best students and faculty (Lucas, 2006).

In order to understand how the explosion of diversity in curricula has impacted higher education, one has to look back at the changes in curriculum development that have occurred. As previously stated, Harvard had at its beginning a very limited curriculum based on a liberal arts education for elite white males, a curriculum which met the needs of society at that time in the areas of business and the church (Lucas, 2006; Goodchild and Wechsler, 1997). The first curriculum was based on seven specific liberal arts courses: grammar, rhetoric, logic, astronomy, arithmetic, geometry, and music (Cohen, 1998).

The typical modes of instruction included: face to face lectures usually conducted by the head administrator, recitation, and small projects (early attempts at research). These methods of instruction were the same at most of the institutions of higher education at that time, as they tended to duplicate what was most successful at the first institutions (Rudolph, 1977).

A hundred years after the establishment of Harvard University (originally established as Harvard College), there was an explosion in the number of colleges established throughout the nation as churches recognized that the church could spread their doctrines quickly through higher education. The curricula at these expansion colleges were basically high school level preparation courses to expand on the education students had already acquired in high school so that the students enrolled in the expansion colleges could, later on, gain admission to and succeed at the “real colleges” like Yale and Harvard. Also, there was a shift in the student bodies as parents began to equate a
college education with increased earning power and as both men and women from diverse backgrounds were being admitted (Rudolph, 1977).

The Yale Report of 1828 questioned the change from a classical curriculum to that of a modern curriculum. The report sought to force colleges to return to the classical liberal arts education and stated that this curriculum met the needs of society (Hofstadter and Smith, 1961). This mind set was to have a profound effect on the curriculum until the Civil War in the United States.

There were exceptions to the classical curriculum as several technical schools were established for the specific training of engineers. Examples of these technical schools included the United States Military Academy (established in 1802) and Rensselaer Polytechnic Institute (established in 1824). Other exceptions during this period were the normal schools, whose curricula focused on the occupational needs of society, primarily serving as teaching academies for women to become elementary teachers. Early in the history of U.S. higher education, there were just not that many high school graduates available to attend college. In addition to the limited number of persons who were qualified to attend college, a further difficulty with enrollments was the lack of transportation and the great distances between towns and cities relative to the location of the colleges. Some states that were granted land grant college status (Nevada, for example) did not have any high schools at that time (Gruber, 1975).

In order to attract students, some of these early institutions opened their doors to women as well as men; there were also a limited number of African Americans that were allowed access. With the exception of Oberlin College (founded in 1833) which opened its doors to everyone, women were limited to academies which offered the same curricula
as the colleges for men. Over time, the normal schools would follow the soon to be land grant colleges in the development of diverse curricula and innovative instructional methods as a means to attract additional students (Cohen, 1998).

The Civil War was the causative agent for the restructuring of curricula in higher education. The war accelerated the industrialization and the urbanization of the country, and the rise in war products manufacturing increased the nation’s awareness of the value of education. The increased emphasis on science and technology resulting from the war effort was a strong motivation for curriculum change. Also, the role of women started to change due to the reduction of the male population,

During the period after the Civil War, those families who benefited from the manufacturing of products sent their sons to European universities to learn the latest scientific methods, and those individuals brought that knowledge of scientific methods back to the U.S. That enlightenment led to a revision of curricula and instructional methods in higher education. Professional schools were based on the German model for law, medicine, and theology and promoted the utilization of the concept of free inquiry. The shift from the classical curriculum to that of pure learning would change the face of the universities in the U.S. (Herbst, 1962).

It was the Morrill Act of 1862 that had a profound effect on most of the states' concepts of curricula in higher education. This act, establishing the so-called “land grant” colleges was a major policy initiative that emphasized a new role in curriculum development for post-secondary education in the U.S. The “land grant” colleges were established with two primary goals: mass higher education with equal access for everyone and the founding of graduate research centers that could expand the nation’s
development in agriculture and the sciences. These institutions quickly became known for the development of all-purpose (diverse) curricula and the extension of service to the local community (Kerr, 1980).

New curricula required new methods of instruction at both the undergraduate college level and that of the graduate school. Face to face lecture and recitation were still used, but laboratory experiments, practical demonstrations, field research and dissertation preparation became common in colleges and universities nationwide (Gruber, 1975).

Throughout the twentieth century, the advances in technology, usually the result of wars, have constantly changed the focus of higher education. Both World Wars used the resident expertise at colleges and universities to provide solutions to military problems. The federal government provided the funding and support for this research, and the resulting outcomes led to new technologies that were, in turn, used in the classroom. Advances in radio, television, motion pictures, the earth sciences and computer technology changed both the curricula and the methods of instruction.

The GI Bill of 1944 forced the adoption of innovative instructional methods in response to enrollment increases. There was an increase of over 500 percent between 1945 and 1975 which severely taxed the college and university facilities and faculty. Increased access, federal aid, and the rapid increase in the number and type of higher educational institutions made it possible for many more students to attend college. This increase in access also had a profound effect on the type of student who attended college. Classes were no longer composed primarily of men and women 18 to 24 years of age. Under the provisions of the GI Bill, older Americans were able to return to school to complete their education.
More recently, federal programs like the Pell Grant Program, first established for the 2003 – 2004 academic year (US Department of Education, n.d.), and an emphasis on affirmative action applied to the student admissions process have made the attainment of a college degree within the reach of many more students from many different socioeconomic levels and ethnic backgrounds while also increasing the foreign student population. This widely differentiated student body, coupled with the rapid advancements in technology and the demands by the students for innovative curricula and instruction, have forced major change in the methods of instruction in U.S. colleges and universities today (Trow, 1970).

Educational Programs Focused on Security Studies

The current and projected demands for personnel that have specific expertise and educational backgrounds in the fields of emergency management and homeland security continue to grow throughout the nation. For example, according to the Department of Labor, by the year 2012, the job market will see a 28 percent increase in need for emergency management specialists. The emergency management profession is on the list of the top 20 growth professions in the U.S. today (Marcus, 2005).

Both the federal government and corporate America are offering qualified graduates higher starting pay for degrees in emergency management. Also, there are increasing demands for faculty educated in security studies to staff the many higher educational institutions that are considering establishing degree programs in this field. According to Jerry VeHaun, president of the International Association of Emergency Managers, “Emergency management today is a constant educational process, and if the local
emergency managers do not wish to continue their education, they will find they have been left behind and are ineffective in their communities,” (Department of Homeland Security, (2004a). This trend has been reinforced with the two latest natural disasters that have struck the United States: hurricane Katrina during August 2005 and the brush fires that devastated southern California in 2007.

The Department of Homeland Security and FEMA were slow in reacting to the recovery needs of those caught in the path of hurricane Katrina. Due to government chains of command (bureaucratic processes), critical supplies and equipment were delayed or failed to reach those areas or individuals that needed them the most. Items such as fresh water, medical supplies, and electrical power were delayed for days. It was not a question of having the supplies on hand; the public’s response to the crisis was tremendous. The problem, however, was how the mountain of supplies and equipment that arrived from all over the country could belogistically delivered to the areas that needed them. Too much time was wasted by those in charge in developing plans for distribution on site, and the media made sure that this apparent lack of action was transmitted on an hourly basis. Those individuals responsible for managing a complex recovery process, such as the process required for hurricane Katrina, need a firm educational foundation in disaster theory to draw from as the basis of their decision making process, as opposed to just reacting from past personal experiences that may not provide the tools necessary to deal with an event on the scope of hurricane Katrina. His lack of expertise in disaster planning, logistical research and recovery plan implementation ultimately cost the director of FEMA his job.
The Federal Responses To Hurricane Katrina:

Lessons Learned

The lessons learned during and in the aftermath of hurricane Katrina included the following:

1. National Preparedness: One of the critical challenges identified in the Federal Response to Hurricane Katrina, Lessons Learned (2006) focused on four flaws within national preparedness planning. The four areas that were flawed within the Federal government included: the federal government's unified management of the national response process, command and control structures within the federal government, knowledge of the national preparedness plan, and regional planning and coordination.

The national plan for dealing with catastrophic disasters is based upon responding to requests for assistance by local and state agencies. Response by the federal government is based on the National Incident Management System (NIMS) and the National Response Plan (NRP). State and federal first responder agencies build their plans to support the local command and coordination structures with the objective of providing assistance where and when requested by the local agencies. The lessons learned in the hurricane Katrina incident clearly indicated that this structure was insufficient to deal with a catastrophic event of this scope. The extent of the hurricane Katrina disaster was so great that the critical local government command structure was devastated. The absence of a functional local government severely inhibited the efforts to marshal federal, state, and local resources to support the hurricane Katrina relief effort. When hurricane Katrina made landfall, it devastated the infrastructure of the local government as well as most of its ability to communicate or coordinate a response. The federal response tried to
cope with those areas that would normally fall under the responsibility and control of the local government -- search and rescue, law enforcement, evacuation of citizens, and medical support -- all without any prior planning or a functional state/local incident command structure to use as a guide.

Lesson Learned: The problems encountered demonstrated that, in times of widespread disasters, local governmental structures will possibly be destroyed and/or local first responders will be unable to function to provide services. To implement needed services rapidly, there is a need for the universal incorporation of the Incident Command System through all levels of federal, state, and local governments and agencies.

2. Command and Control within the Federal Government: The Department of Homeland Security (DHS) and other federal agencies had unclear and, more often than not, overlapping roles and responsibilities. This lack of clarity in responsibilities was exposed as a major flaw during the hurricane Katrina disaster. The Secretary of Homeland Security is the President's primary representative charged with the management of disasters/incidents of this nature. Due to the lack of real-time, accurate situational awareness, the Secretary had difficulty coordinating the multitude of activities of the several federal departments and agencies involved in disaster relief activities. From the federal perspective, he had poor intelligence from on-going responses from the disaster area regarding what was being done and by whom. The National Response Plan's mission assessment process was far too bureaucratic to support an emergency that was as broad in scope as hurricane Katrina proved to be.
To get needed assistance, the Mayor-President of Baton Rouge, Mr. Melvin Holden, was required to complete formal request forms and related paperwork and secure all of the required approval signatures on the forms, a process which was far too time consuming given the nature of the situation. This bureaucratic process delayed critical medical actions and search and rescue efforts. Because of this breakdown in the command and control process, individual agencies made their own decisions of what missions would be assigned and where relief teams would be assigned. The result was often a duplication of efforts and wasted time and man-power. This lack of coordination at the federal headquarters demonstrated the confusing organizational structures that were operating in the disaster area. Further convoluting the response efforts, the DHS did not establish the National Response Plan’s required disaster multi-agency coordination center until after the height of the disaster.

A key finding relative to the command and control lessons learned was at the most basic level, a finding which partly explained why the federal government’s response to hurricane Katrina was so poor. This finding was that key decision-makers at all levels of the federal government were not familiar with either the National Response Plan or the Incident Command System and how these entities function during a disaster. As a result, time was wasted conducting on-the-job training for federal personnel assigned to the Joint Field Office (JFO). The inability of DHS and FEMA to staff all of the JFO positions also had a detrimental effect on the response efforts. At the time of hurricane Katrina, these federal agencies were in the process of developing operational procedures for asset integration in the event of a terrorist attack. In most instances those procedures were as yet non-existent or were in the developmental stages and had not yet been
instituted. All of this confusion and the lack of a single point of command and control resulted from the massive expansion of the Department of Homeland Security (DHS).

When FEMA was incorporated into DHS in March, 2003, its planning and coordination capabilities were distributed throughout DHS’s other directorates and bureaus. Those critical individuals who were removed from FEMA and dispersed throughout DHS were not yet replaced when hurricane Katrina struck as there was a critical lack of trained executive personnel experienced in the NIMS and ICS principles. The movement of the FEMA regional offices to DHS headquarters in Washington, D.C. effectively eliminated the close operational relationships between the state agencies and their counterparts within FEMA.

Lesson Learned: It is apparent that the federal government must work with its various homeland security partners to revive existing emergency management plans. Such revitalization is necessary to ensure a functional command and operational structure and establish clear accountability for all National Preparedness efforts. The executive branch agencies of the federal government must be fully organized, trained and equipped to do their jobs.

3. Integrated Use of Military Capabilities: The events that occurred during the response to hurricane Katrina demonstrated that the Department of Defense (DOD) has a critical role in the nation’s response to a catastrophic event. The DOD, including the active duty forces, National Guard, and the Coast Guard, was the only department (agency) that had the operational capabilities to translate the President’s decisions into prompt effective action on both the ground and in the air. This readiness included large numbers of personnel trained and equipped to respond quickly to an emergency and a
robust communications infrastructure, as well as competent logistics, and planning capability.

The use of DOD forces during the hurricane Katrina disaster identified several challenges that needed to be addressed for future disasters. The first challenge was the lack of coordination between the National Guard forces and the active duty military units. These two different military groups reported to different command structures. The National Guard reported to the governors of the various states from which the Guard personnel were deployed, and the active duty military personnel reported to the President of the United States. Under current federal law and DOD policy, military forces can only be deployed internally within the United States at the specific requests of the individual states’ governors. In the case of hurricane Katrina, the governors of the impacted states were operating with extremely limited communications. Further, the bureaucratic process for the approval of the use of military personnel in a civil disaster was a 21 step process that drastically delayed any DOD response. For example, each governor’s request had to go through an approval process by FEMA. Once approved by FEMA, the request was then sent to the DOD for assessment to determine whether the DOD could be support the request. After the request gained DOD approval, it was sent to the Service Secretaries who also had to approve the request. Finally, after the Service Secretaries approval, the request was forwarded to the Secretary of Defense for approval and implementation.

The DOD’s overall response was further hindered by the separate command structures of the involved forces, a situation which caused several important conflicts. USNORTHCOM commanded the active duty military forces. The commander of this
command lacked any situational awareness of what forces the National Guard had operational within the disaster area for the first few days of the disaster. This lack of control over half of the forces in the field responding to the disaster limited the effectiveness of the response efforts. For example: there were instances where several airborne units responding to calls to extract survivors from the tops of buildings arrived on location only to find helicopters from the Coast Guard, Army, and civilian (Police) agencies all within the same location responding to the same emergency. This duplication of efforts impacted and delayed the recovery process, and in some instances, survivors had to rely on their own resources for survival. Throughout the emergency, there was never any formal command relationship established between the DOD and the National Guard. The total disruption of communications throughout the disaster area contributed to all of these issues. Fifty percent of all of the radio stations and forty-four percent of all of the television stations were out of action due to flooding or the total lack of power.

Lesson Learned: The Departments of Homeland Security and Defense should jointly plan for the DOD’s role in future disasters. The response from the DOD and approval of the use of military forces needs to be readdressed and streamlined if possible. The National Guard needs to work with the DOD to develop plans for the integration of National Guard units with active duty forces and to determine their respective roles within the homeland security plans and activities (Federal Response to Hurricane Katrina, Lessons Learned, 2006).

The events during and after hurricane Katrina have provided critical areas that the DHS needs to address before the next disaster strikes the United States. There were seventeen critical challenges identified in the report, Federal Response to Hurricane
Katrina, Lessons Learned (2006). The researcher has addressed just those which have application to this dissertation. The final results detailed in this report indicate the continuing need for those individuals in critical leadership positions to have formal education and training beyond their individual operational experiences working in the context of the National Response Plan (NRP), the National Incident Management System (NIMS), and/or the Incident Command System (ICS) and how to implement these and other plans or systems in an organized and timely manner. The Federal Response to Hurricane Katrina, Lessons Learned (2006) report to the U.S. President reinforces the need for formally trained professionals (through the attainment of advanced degrees) to staff and provide leadership at the federal, state, and local levels or wherever there is an agency responsible for responding to a catastrophic disaster.

Adjustments Needed as a Result of Lessons Learned from Hurricane Katrina

This need for adjustments made in the coordination of activities as a result of the lessons learned from hurricane Katrina was reinforced in 2007, during the many brush fires in southern California. The ICS was implemented as soon as it became apparent that the first fire would not be contained. All of the California fire districts, fire departments, and airborne tanker assets were integrated into the ICS by FEMA. This integration proved to be the key tactical decision in the eventual containment and end of the fires. Gaining control of those fires was also partially facilitated because the California Fire Science Academy had developed the basic command and control system (Incident Command System {ICS}) which evolved into the National Incident Management System.
(NIMS). For the past 20 years, California firefighters have been trained in its utilization (Wilson and Oyola-Yemaiel, 2005). The field of emergency management has gained national attention since September 11, 2001 partly due to the natural disasters that have occurred and the realization by the general public that supporting emergency management is in their best interest.

Higher education is beginning to capitalize on the nation’s interest in disaster preparedness by offering both certificate and degree programs that focus on emergency management and security studies. There is now increased interest in disaster, hazard, and risk research and the development of knowledge about how to deal with it. The focus is on the application of disaster research from an emergency management context which is no longer the responsibility of a single organization but has evolved into a multi-disciplinary and multi-national complex. It is becoming clear that research and practice can better capture the realities of a terrorist attack or a natural disaster and can identify relevant universal contexts that pertain to disaster as a phenomenon which will lead to the development of more appropriate methodologies for managing an incident. The evolution of the security administrator as a profession has evolved due to the increased public awareness of the needs for qualified experts to manage events (disasters) that could affect them directly (Marks, 2002).

One of the issues affecting higher education is practice versus education. In his paper, *Professional competencies for the master's level emergency manager*, Craig Marks points out that his conversations with practitioners in security and emergency management indicated that those persons with the most experience tended to have the least formal education (Marks, 2005). This inverse relationship between experience and
formal education is the same trend that Secretary of Homeland Security Chertoff found when he assumed the leadership position for the Department of Homeland Security on February 15, 2005. There were many individuals in leadership positions that had strong backgrounds in the operational world of terrorism but lacked the educational theory and technology transfer to effectively make the transition from practitioner to manager. There was a long learning curve by the individuals who were drafted into DHS from other departments or agencies (Federal Emergency Management Agency, 2007).

Curriculum Development

In the classic text *Fundamentals of Curriculum Development*, the authors state that, “Persons who have given serious attention to the problems of curriculum development now agree that curriculum principles and procedures should be grounded in social reality” (Smith, Stanley, and Shores, 1957 p.13). This statement on the development of curriculum is as true today as it was in 1957. The curriculum that will be developed to support a doctoral degree in security studies should definitely be based on the realities of society as well as the vulnerability to terrorists' attacks and the current cycle of natural disasters that the U.S. is experiencing. The curriculum can be based on the data extracted from the current Delphi study reported in this document and the curriculum being used by the Naval Post-graduate School, as well as that purposed by scholars such as Dr. Patrick Carlton, Department of Educational Leadership, University of Nevada Las Vegas (Carlton, 2006).
The Delphi Methodology

In the world of ancient Greek Mythology, there was a site that one went to when one needed to communicate with the gods on Mt. Olympus: the Oracle at Delphi. It was here that Apollo established himself as the Master of Delphi and was known as the “Forecaster of the Future.” He used his priestesses to transmit his visions of the future to the common man (Dalkey, 1967).

The Delphi methodology was developed at the beginning of the “Cold War” in response to the United State’s concern about the Soviet Union’s strategic plan for the use of its nuclear strike capability. In the late 1940s and early 1950s, the federal government and the newly formed United States Air Force contracted with the RAND (Research and Development) Corporation for assistance in designing an effective plan for defending the U.S. against a nuclear attack by the Soviet Union. To answer this question, the RAND Corporation designed the Delphi methodology to utilize expert opinion to simulate an estimate of the number of atomic bombs that would be required to reduce the munitions output of the U.S. by a prescribed amount, assuming an optimal targeting system for a nuclear strike, from the point of view of a Soviet Union strategic planner (Dalkey, 1967; Gupta and Clarke, 1996).

Two members of the RAND Corporation, Norman Dalkey and Olaf Helmer, developed the Delphi Method and named the process Delphi because it was initially used as a means of predicting the future through reliable consensus of expert opinions acquired through a series of intensive questionnaires along with timely feedback of group opinions to the panel (Sharkey and Sharples, 2001; Snyder-Halpern, 2002).
This method of data collection and analysis has not only been used by the military but has found application in business, government, industry and academia. This methodology has been described as "a method for structuring a group communication process so that the end process is effective in allowing the "GROUP" (Individuals) to deal with complex problems from a position of autonomy." (Keeney, Hasson, and McKenna, 2000, p. 1012).

A Delphi Study has several common features:

1. All of the Delphi study methods use a group of individuals who comprise the panel of experts.

2. A series of questionnaires are used to obtain the required responses from the panel members.

3. The panel will be surveyed several times during the course of the study.

4. Following each survey round the researcher drafts a statement of the general thesis and emerging points of consensus.

5. The panel is then surveyed in regard to the emerging draft consensus.

6. The anonymity of the panel members from each other is a primary strength and allows for free personal viewpoints on the issue being studied (Dalkey, 1967).

The earliest application of a Delphi study in education was completed by Helmer, as part of the 1965 Kittering project. His study addressed the question of preferred goals for higher education that would have the highest probability of receiving federal funding (Helmer, 1967). Subsequent applications of the Delphi study method in higher education include use by Cyphert and Gant (1971) to define teacher education at the University of Virginia and the assessment of the knowledge and skills needed in future adult
educational programs (Rossman and Bunning, 1978), and the assessment of the effectiveness of affirmative action programs in higher education.

Advantages and Disadvantages of the Delphi Study

There are two primary concerns that researchers have with regard to the validity of the Delphi study. First, the primary goal of this method is to arrive at a consensus, which equates to mean a “general agreement.” In any study there is the risk that the panel of experts may not arrive at a consensus but only provide fragmented bits of information that are useless for the researcher (Stuter, n.d.). Second, the data that are collected are for the primary purpose of making decisions that are futuristic. Because these decisions are for the purpose of developing long term plans, the data can only be validated over the passage of time.

Some researchers are fixated on numbers, meaning that if the research can not be supported quantitatively, it is considered somewhat suspect. For example, Stockman (1975) questioned the reliability, validity, and credibility of this method of research, noting his concern that the anonymity associated with the Delphi study lacks accountability because the responses of the panel members cannot be traced back to the individual. Powell (2003) rejects the Delphi method as diluting the best opinion to a “lowest common denominator.”

Qualitative researchers, on the other hand, generally support research that has utilized the Delphi study as they believe that it has the following advantages:

1. Large groups of people from diverse populations can be included in the study without the additional expense of traveling for face to face meetings.
2. More than one “expert” in each of the groups or cohorts that make up the panels of experts can be included, and the researcher can benefit from a wider range of opinions.

3. The impact of group dynamics that usually must be controlled for in research are excluded from the Delphi study in that one panel member’s personal reputation, position, and force of personality do not influence the opinions of the other panel members. The researcher is assured that the responses are the panel members’ opinions.

4. A key detail in qualitative analysis is the assurance that each individual has an equal opportunity to participate. This opportunity is guaranteed by the Delphi study. Each individual’s opinion has equal weight in the final analysis. Snyder-Halpern (2002) suggested that the anonymity associated with the Delphi study encourages the experts to make statements on the basis of their personal knowledge and experiences in place of an institutional cautious mind set (Snyder-Halpern, 2002).

5. The use of the questionnaires that have been developed to include a wide range of inter-related variables allows for a wide range of geographically dispersed panel members to provide their understanding of the critical questions under investigation. These valuable data may provide unique insights into regional problems or positions that would be lost otherwise (Gupta and Clarke, 1996).

6. Finally, there is the advantage associated with the overall cost of the Delphi study. When all things are considered, the costs are minimal depending on the delivery methods used to get the questionnaires to the panel members and the
recovery of the responses. While the process of coding and analyzing the data for patterns is time consuming, it is still relatively inexpensive. Also, there are software programs that can be purchased that can deliver, recover, and analyze the data via the Internet that are very economical for the researcher (Snyder-Halpern, 2002).

While not perfect from all aspects, the advantages of the Delphi study research approach outweigh the disadvantages as applied to the current study and the research question under consideration. It is understood that this method is primarily situated within an interpretative paradigm, and some attention has been directed toward the epistemological aspects of the Delphi Methodology as well as that of social constructivism (Dalkey, 1967).

Summary of the Literature Review

This chapter reviewed the available literature related to the question of whether there is a need for a doctoral level program focused on security studies. The literature review also addressed the historical background of two issues that are important in the determination of the structure of a new doctoral degree program in security studies, the question of whether such a program should result in a PhD, an EdD, or an executive doctoral degree and the development of an appropriate curriculum.

The review of the current trends in higher education and the reclassification of the Carnegie Classification of Institutions of Higher Education provided useful background information on the current status of the PhD degree verses an EdD degree and the public’s perceptions of the “value” of these degrees. The review indicated that, basically,
there are few differences between the two degrees (McCormick and Zhao, 2005).

Prospective doctoral students make their decisions by comparing factors such as tuition, curriculum, required courses versus electives, class size, available financial support, and the reputation of the institution, a factor which they consider from the perspective of their career advancement potential. Their analysis of these factors usually determines the type of degree that they will pursue. In the case of the PhD degree or an EdD degree, it is simply a matter of where the program is offered within the institution. If the program is housed within a college of education, the doctoral student may then have the choice of either a PhD degree or an EdD degree. If it is not housed in a college of education, then the degree is almost certain to be a PhD (Osguthrope and Wong, 1991).

The literature review also dealt with the development of curriculum in higher education from an historical perspective. This review provided the basis for the conceptualization of the curriculum for a doctoral degree in security studies. The history of how curriculum at the university level was developed and the current trends in curricula and delivery modalities were reviewed.

The review discussed the limited availability of doctoral programs that deal with security and the growing field of homeland security and emergency management. It was noted that although there has been considerable growth in educational programs related to security studies, the majority of such programs were not specifically developed as programs designed to specifically address the knowledge associated with the field of security studies. Rather program development has occurred through the addition of a concentration of courses related to security studies to previously existing degree programs in related fields, such as urban affairs or political science. Currently, there is
only one doctoral level program that was specifically designed as a PhD level security studies program and that is the program implemented in 2007 by the Naval Post Graduate School.

Finally, the literature review considered the RAND Corporation's Delphi methodology for arriving at a group consensus. It began by reviewing several other studies that employed the Delphi methodology and a comparison of the results and limitations to determine if this method would be applicable for this study. The literature demonstrated that the concepts, resource requirements, and expected outcomes from a Delphi study would be applicable for answering the research questions. This review explained the theory behind a Delphi study and discussed the historical data from previous studies which showed how this methodology could be integrated into a qualitative investigation (Gupta and Clarke, 1996). It also explained the problems or limitations associated with this methodology and provided insights to avoid or at least limit their effect on the study.

Chapter 3 will provide detailed explanations of the methodology utilized for this study.
CHAPTER 3

METHODOLOGY

Introduction

This chapter addresses the methods employed to answer the research questions pertaining to the development of specifications for a doctoral degree program in security studies. The chapter focuses on the research problem, incorporation of the literature review into the research question analysis, the selection of the Delphi study cohort population, the development of each of the Delphi study phases and their survey instrumentation, and the data collection and analysis procedures. Both the qualitative and quantitative research methodologies used to analyze the inputs gathered from experts in the fields of education, emergency management, and homeland security are discussed.

Review of the Problem (Research Questions)

The questions addressed in this research study are based upon the perceived emerging need for executive level graduate education programs in the field of security studies. This study specifically targeted the need for and the development of specifications for a doctoral degree for upper level executives in leadership positions involving the administration of security or emergency management programs.
This study addressed the following questions:

1. Is there a need for a doctoral level program in security studies?

2. Should a doctoral program in security studies be structured as a PhD, EdD or Executive Doctoral Degree?

3. How should a new degree program in security studies be organized in terms of curriculum and instruction?

4. What would be the characteristics of the individuals seeking an advanced degree in security studies?

5. Upon graduation, what types of positions/careers would these individuals be qualified to fill?

6. What are likely topics for dissertations in security studies?

Research questions 1 and 2 above were studied through the review of relevant literature. This review has been presented in Chapter 2 of this document, and a further discussion of the literature review relative to research questions 1 and 2 will be presented in Chapters 4 and 5 of this document. The remaining four research questions were studied through an application of the Delphi methodology. The Delphi study process applied to this research is described in detail throughout the remainder of this chapter.

Protection of the Subjects

In accordance with the policies and procedures established by the Internal Review Board (IRB) at the University of Nevada Las Vegas (UNLV), this study was conducted following a review by the IRB and affirmation of the willingness of the individual respondents to participate. The survey instruments used in the study included a statement
of confidentiality and a statement block for those individuals who chose to participate to check that they understood the procedures and were willing to participate in the Delphi study. An example of this form and documents related to review and approval of this project by UNLV's Internal Review Board are included as Appendix A.

Also in accordance with the University of Nevada Las Vegas research protocol, data collected as part of this study were reported in a combined format with no individual attribution. All records were stored in a locked facility within the Department of Educational Leadership at the University of Nevada Las Vegas and will be retained in locked storage for at least three years after the completion of the study.

Selection of the Expert Panel Cohorts

The make-up of the study cohorts, or the selection of individuals to participate in a Delphi study as “experts”, varies according to the subject being investigated. Individuals are selected for their knowledge of the specific problem under investigation and should reflect a wide range of experience and diversity of opinion on the subject. In this study, the expert panel was selected from senior level personnel in federal agencies tasked with specific aspects of homeland security and from personnel in state and local governmental agencies that have specific homeland security responsibilities. Panel members were also selected from the directors and/or training officers of first responder agencies and from individuals in administrative positions in higher education institutions. Those institutions that currently have programs that deal with leadership, security, emergency response, and global political response were offered the opportunity for their deans, department chairs, and faculty to participate in the study (Gupta and Clarke, 1996; Hill and Fowles 1975).
Additionally, the directors and training officers within each states' and territories' homeland security agencies that had been newly established were surveyed.

The individuals selected from the subject population for participation in this study were grouped into three cohorts. These cohorts were:

**Cohort One:** Experts from the ranks of academia which included deans, department chairs, and faculty from colleges and universities with programs in higher education leadership or which offered advanced degrees in educational leadership or related fields.

**Cohort Two:** Civil support service experts from fire, police, or emergency services, who had executive level leadership positions within their cities and had responsibilities for activities as directed by the Department of Homeland Security.

**Cohort Three:** Federal and state members of newly created Homeland Security (HLS) organizations and congressional staff members tasked with duties involving HLS issues, as well as state level executive security managers.

Potential cohort members were identified in several ways. A World Wide Web (WWW.com) search of academic leaders from colleges and universities which have higher education leadership programs that offered courses and/or degrees in security related fields was used to identify potential panel experts who might serve as members of cohort one. First responder directors for major metropolitan areas, including emergency services such as fire, police and medical, were identified via the Internet as the potential panel members for cohort two. A list of state appointed executive directors for homeland security provided from the Department of Homeland Security was used to identify and
select panel members from federal, state, and local programs for cohort three. All such persons for whom both email and U.S. mail addresses could be identified were included in the three cohorts. As limitations were placed on the target population numbers due to the time and funding limitations associated with the longitudinal aspects of the Delphi methodology as well as the requirements for dissertation preparation, no further effort was made to identify other potential cohort members once the initial search for experts was completed and it was determined that approximately 250 names had been identified.

The Delphi Study

The Delphi method was used in this study to elicit expert opinions about the need for graduate programs in security studies, the curriculum content of such programs, and the instructional strategies for program delivery. The study also served as the primary tool for the needs assessment required by the Board of Regents for the Nevada System of Higher Education as the basis for establishing a doctoral program in security studies within one of the state supported universities. The classic Delphi method was selected for this study (see Chapter 2).

The Delphi study, developed by the RAND Corporation and the military in the late 1940's, is described as:

a systematic method of collecting opinions from a group of experts through a series of questionnaires, in which feedback of the group's opinions are analyzed for group trends and provided back to the participants between rounds while maintaining the anonymity of the participants. (Helmer, 1967).
Delphi Study Types

There are three different types of Delphi Studies.

1. The Classical Delphi: This type consists of five separate features or segments which include the following: anonymity, iteration, controlled feedback, statistical group response and stability in the responses from the panel with expertise on the issue or problem that is the focus of the study (Bender, Strack, Ebright, and Von Harenalter, 1969).

2. The Policy Delphi: This type is used to develop policy decision options using public dialogue. The focus of this technique is one of policy development and promoting participation by utilizing persons in the study who represent as many diversified public opinions as possible. This method has the following characteristics: selective anonymity, iteration, polarization of the group response, constructs conflict, and controlled feedback (Rasp, 1983). The term “selective anonymity” refers to the premise that the participants have the option of answering the questionnaire individually as well as joining groups for discussions and the formulation of answers.

3. The Decision Delphi: The primary difference between the traditional or classic Delphi and the Decision Delphi lies in the manner in which the panel or groups interact. The Decision Delphi is used in making decisions that affect social developments. It is composed of a group of decision-makers instead of an ad-hoc decision based on a small number of participants. A critical aspect of this process is that the decision makers themselves are involved in the Delphi process (Bender, Strack, Ebright, and Von Harenalter,
1969). The panel is selected according to their position within the hierarchy of the organization or the chain of the decision-makers. The objective of the exercise is to develop a decision that is the consensus of the group. The participants (panel members) have quasi-anonymity, that is, they are a group of individuals with expertise, who are mentioned by name and are known to the panel from the outset. However, the key here is that their individual responses to the questionnaire are kept anonymous (Van Zolingen and Klaassen, 2003).

There are other processes and techniques that can be used to predict the future and are capable of futuristic analysis. Most of these methods were originally designed and applied to systems theory research, but they can be applied in much the same way as a Delphi Study (Gordon and Helmer, 1964). Lindquist (1973) has provided a list of applications that fill this category: scenario writing, cross impact analysis, simulation gaming (war gaming), relevance trees, force analysis (force multipliers), contextual mapping, decision matrix, Markov Chain, morphological analysis and the Monte Carlo technique, just to name a few of these application tools.

There are five basic components of a Delphi study:

1. Selection/creation of the group of individuals who will make up the investigation panel of experts.

2. The development of a questionnaire or instrument that has been validated, for data collection and analysis.

3. A series of survey rounds by respondents to develop a consensus.
4. Drafts of emerging consensus statements prepared by the researcher after each 
survey round.

5. Feedback to the individuals to reiterate the consensus developed from the 
study.

In this study, the initial phase of the Delphi process served as the pilot study for the 
survey questionnaire development as well as a means of gaining broad input from expert 
panel members regarding graduate programs in security studies. This initial input was 
used to refine the questionnaire so that the second phase of the study focused on more 
specific statements related to the development of a doctoral program in security studies. 
The third phase further refined the consensus statements comprising the survey 
questionnaire and led to more focused responses from the panel members. Finally, the 
fourth and last phase led to the development of the final consensus statements for the 
study.

Phase One: Pilot Study

Phase One (Pilot Study) Questionnaire Development

This researcher gained knowledge of homeland security issues and the problems with 
personnel training at all levels from his initial experiences as the project director for a 
project to develop training modules for first responder training. This project was funded 
by a grant that was awarded to the Center for Workforce Research and Development 
within the Department of Educational Leadership in the College of Education at the 
University of Nevada Las Vegas (UNLV), by the Department of Homeland Security’s 
Office of Domestic Preparedness (ODP). Utilizing this knowledge, this researcher
developed the initial survey form for this study. A review of the developed survey form by a panel of faculty within UNLV’s College of Education with expertise in survey research methodology was the first step in validating the survey form.

The phase one questionnaire for the Delphi study consisted of four primary areas of investigation:

1. Program Content: The instrument requested input from those individuals who were surveyed regarding the topics or subject matter areas on which the core courses in the curriculum should focus. For example, queries focused on what specific security issues should be required for inclusion in the program and on any course topics regarding homeland security that would be essential for a doctoral degree in security studies.

2. Qualifications of Candidates: This question focused on who should be considered as students for this program and what should be their minimum qualifications. What levels of experience or academic background should an applicant have prior to acceptance into a doctoral program that focused on security studies?

3. Instructional Methods: This question focused on how the program of instruction should be structured and delivered. The objective was to acquire input on how this type of program should be structured to meet the needs of the students.

4. Competencies of Graduates: The focus of this question was to elicit what expected knowledge, skills, and abilities a graduate should have acquired from the program in order to hold positions of leadership in the fields of homeland
security or emergency management as well as be qualified for administrative positions within local, state, and federal government.

The final portions of the pilot study (phase one) of the Delphi study consisted of demographic information characterizing the respondents to the survey. The questions in this survey are included in Appendix B.

**Phase One (Pilot Study) Survey Administration**

Phase one of the Delphi study served as the pilot study test of the questionnaire. For this initial phase, the expert panel was composed of a sample of approximately 50 individuals randomly selected from cohorts one and two. As previously described, these cohorts were composed of persons who had been selected as potential panel members based upon their expertise. It was felt that a sample population of 50 persons was adequate for the pilot phase as the focus of this phase was to pilot test the survey instrument. It was anticipated that the response rate for this pilot test would be high since the survey was also being utilized to gather initial information to provide direction for the development of educational materials that would be the product of the Homeland Security Grant that, as previously noted, had been awarded to the Center for Workforce Research and Development within UNLV's Department of Educational Leadership.

This initial pilot phase of the study was conducted during the months of March and April, 2005. It consisted of an online survey that was sent via the Internet to the randomly selected members of cohorts one and two. A cover letter and the required consent form were included as part of the online survey package. Individuals who participated in the study were asked to check in the block on the consent form to indicate whether they were willing to participate or if they did not choose to participate in the
study. Those individuals who chose to not participate in the study were asked to submit the survey form without any further entries into the survey.

Createsurvey Inc. was retained to be the method of delivering the survey form. This firm’s software also functioned as the primary data collection tool. As previously noted, this phase one survey was sent to 50 individuals who held positions of leadership in higher education institutions and in the fields of emergency management (police departments, fire departments and members of security forces).

The response rate to the on-line survey was very poor as only 12 usable responses were received which represented a 24 percent response rate. The poor response rate was thought to be due to the vast amounts of “spam” emails that individuals receive on a daily basis, messages which are sent to the “recycle bin” without being read. This perception was the opinion of both the researcher and those faculty members who made up the Department of Educational Leadership committee tasked with completing the needs assessment study to determine the need for a doctoral degree in security studies.

Phase One (Pilot Study) Data Analysis

The data retrieved from Createsurvey Inc. were collected by the researcher and formatted for analysis by both the researcher and the Educational Leadership Department faculty committee. Although the number of responses was small, the resulting data were analyzed for the purpose of identifying any potential patterns. Basically, the analysis consisted of looking for patterns and frequencies of responses to the survey questions in order to develop a trend analysis for the decision making portion of the study.

This analysis was accomplished by each member of the Educational Leadership Department committee and the researcher individually reviewing the data and nominating
potential patterns in the responses. Observed patterns were forwarded to the researcher where they were combined into one document. This document was individually reviewed by each of the same reviewers, and they again recorded observed patterns or trends in the responses and forwarded their responses to the researcher. Following this review, the observations from the members of the Educational Leadership Department committee faculty were combined with the observations of the researcher and collated into a final list of responses to the phase one (pilot study) questionnaire. The resulting data from this coding and search for patterns in the responses to the phase one (pilot study) survey were used to form the consensus statements that would constitute the phase two questionnaire. The lists of the responses to the phase one questions are found in Appendix C.

There were several limitations associated with the application of the Delphi method to this study at this point. First, the survey was opened ended in design which is a primary characteristic of a Delphi study. The lack of specificity in the responses received for the phase one questions meant that considerable care and attention to the specific wording of the questions was required in the formulation of the phase two survey instrument to ensure that those individuals chosen to participate understood what was being requested in the way of feedback. Second, because the responses were open ended, the analysis process may have been skewed by the individual interpretations of the persons reviewing the responses even though every effort was made by the researcher and the data review panel to view the responses impartially. Finally, since the respondents were writing open ended responses, they may or may not have been able to express their thoughts or opinions regarding the questions in a way that their thoughts would be correctly
interpreted by the researcher and/or the data review panel who were reading and analyzing the responses.

Phase Two of the Delphi Study

Phase Two Questionnaire Development

Once the emerging censuses statements had been finalized, phase two of the Delphi study was initiated. The consensus statements developed from the phase one data were formatted into five specific subject areas. These areas were:

1. Program Content: Which of the following subject areas, topics or disciplines would you deem essential for inclusion in a doctoral program in security studies?

2. Qualifications of Candidates: What level of experience, type of position, or background should candidates have prior to entering this doctoral program?

3. Instructional Methods: Which of the following instructional modalities would be most desirable for a doctoral program in security studies based on the above candidates’ qualifications?

4. Required Competencies/Outcomes upon Graduation: What would be the expected competencies of a graduate of a security studies doctoral program?

5. Suggested Topics for Dissertations: List any dissertation research topics that you might like to see candidates in a doctoral in security studies degree program pursue.

For this survey, the respondents were asked to evaluate the importance of the listed statements on a five point Likert scale where a five indicated an evaluation of vitally
important and a one indicated an evaluation of not important. A copy of this survey instrument is included in Appendix D of this document.

**Phase Two Survey Administration**

This phase was conducted as a mail survey with a self addressed, stamped envelope included in the mailing for the return of the survey materials. A mail survey format was selected as a result of the lessons learned from the phase one pilot study regarding the problems associated with online survey methodology. Before mailing the survey to the potential members of the expert panel, the researcher eliminated the names of all of the originally selected cohort members who chose not to participate in phase one of the study or failed to respond to the online survey. After the elimination of those persons, the phase two survey was sent to 200 prospective panel participants. These prospective panel members were all of the remaining persons initially identified for the three cohorts. Between 65 and 70 individuals from each cohort received this mailing. Phase two commenced (was mailed out) on June 16, 2005, and the last response was received on August 25, 2005. There were 34 usable responses for a 17 percent response rate for the phase two survey.

**Phase Two Data Analysis**

At the close of the phase two survey time period, the responses received from the participating cohort members were reviewed and analyzed by the researcher to further determine response patterns and/or trends. The initial analysis of the data from the returned surveys was a qualitative review of the responses similar to the pattern analysis completed for phase one of this study. Additionally, SPSS-14 was used to quantitatively analyze the phase two data from the Likert scale responses. The format of the survey
instrument utilizing the Likert scale for statement evaluation was helpful in the development of the group consensus for this phase of the study. This utility resulted from the ease of analyzing the specific categories for patterns and trends both qualitatively and quantitatively through the use of frequency analysis (Babbie, 2001).

Frequencies were calculated for each of the Likert scale responses indicating the relative importance of each of the survey statements. These frequency analyses provided an additional means of validating the researcher's qualitative analysis of the responses. Both the qualitative review of the panel responses and an analysis of the quantitative calculation of the response frequencies were used to assist in the determination of patterns and trends for development of the group consensus statements that would form the basis of phase three of this Delphi study. The phase two responses and the actual data analysis will be presented in Chapter 4 of this document.

Phase Three of the Delphi Study

Phase Three Questionnaire Development

Since the 17 percent response rate for phase two of this study was lower than anticipated, the analysis of the phase two responses also considered the way in which the statements on the questionnaire were presented to the expert panel. Respondents found the statements in the program content category particularly difficult to evaluate because of the very large number of statements in this category (32 statements) and the random order in which they were listed. The qualitative analysis of the phase two responses for all the categories also suggested ways in which the wording of some of the statements could be modified to make the meaning more clear and eliminate redundancy found
among some of the statements throughout the phase two survey. As result of the findings of the phase two analysis, the questionnaire was restructured for phase three. While still retaining the five categories of statements used for the phase two questionnaire, the statements in the program content category were grouped into five subcategories. The statements in all categories were refined to better clarify the meaning of the statements. Some of the statements from phase two were eliminated from the phase three questionnaire while some new statements were added, reflecting new trends identified in the phase two analysis. Thus, the statements on the phase three questionnaire were formatted into five categories and five subcategories as follows:

1. Program Content: Which of the following subject areas, topics or disciplines would you deem essential for inclusion in a doctoral program in security studies?
   A. Executive leadership
   B. Systems
   C. Planning and policy analysis
   D. Terrorism and natural disasters
   E. Law

2. Qualifications of Candidates: What qualifications should a candidate pursuing a PhD in security studies have prior to admission?

3. Required Competencies/Outcomes upon Graduation: What knowledge, skills, and competencies should a candidate of a PhD program in security studies have upon graduation?
4. Instructional Methods: Which instructional methods and/or delivery methods would be most desirable for a candidate pursuing a PhD in security studies?

5. Dissertation Topics: List suggested topics for dissertations that would apply to this degree.

In addition to evaluating the statements included in the five categories above, respondents were asked to provide demographic information, such as their titles and the types of organization where they were employed. Similarly to phase two, respondents were again asked to evaluate the importance of the listed statements on a five point Likert scale where a five indicated an evaluation of vitally important and a one indicated an evaluation of not important. A copy of the phase three questionnaire is included in this dissertation as Appendix E.

Phase Three Survey Administration

This phase was also conducted as a mail survey with a self addressed, stamped envelope included in the mailing of the survey materials. This survey was sent to the same prospective panel members who had received the phase two questionnaire with the exception of the 34 respondents who had returned the phase two survey. Those panel members who had returned the phase two survey were excluded from the phase three mailing as it was felt that, although they were organized differently, the survey questions for phase two and phase three were very similar in content and having the phase two respondents also respond to phase three would potentially skew the response analysis in favor of the phase two respondents' opinions. Thus the phase three survey was sent to 166 potential panel members representing all three cohorts of experts in various aspects of security and education. The phase three survey time period began on November 16,
2005 and continued through February 25, 2006. Forty-one phase three questionnaires were returned. Four of the returned forms were deemed unusable as they were incomplete, leaving 37 usable responses for a 22.3 percent return rate.

Phase Three Data Analysis

Because the phase three questionnaire was structured similarly to the phase two questionnaire in that several categories of statements were listed and the panel members were asked to evaluate the importance of the statements relative to a potential doctoral program in security studies on a five point Likert scale, the phase three data analyses paralleled the process used for phase two. The researcher first completed a qualitative analysis of the responses, again determining patterns and trends in the responses. This analysis was followed by a quantitative analysis of the Likert scale responses using SPSS-14, as was described above for the phase two data analysis. The results of these analyses are included in Chapter 4 of this document. When completed, the qualitative and quantitative analyses were combined to form the basis for determining the statements to be included in the phase four survey form.

Phase Four of the Delphi Study

Phase Four Survey Form Development

The data from phase three of the Delphi study were used to develop the consensus statements that comprised the phase four questions (the final phase) of the Delphi study. This phase was utilized for the development of the final consensus. It was the cohort members' final opportunity to respond to the developing consensus regarding potential doctoral programs in security studies.
The structure of the phase four questionnaire varied from the structure of the previous questionnaires. While the statements included on the form for expert panel evaluation were again categorized in the same four categories and five subcategories as were used for the phase three questionnaire, the evaluation was not done on a Likert scale. Rather, the expert panel members were required to rank order the statements in each of the categories and subcategories in order of their evaluation of the importance of the statement to a potential doctoral program in security studies. For the rankings, the statement that the panel member deemed to be the most important was given the rank of one, with rank numbers increasing until all the statements in the category or subcategory were ranked. Rankings could not be duplicated, requiring panel members to make forced rank decisions for all the statements. For example, if there were five statements in a category or subcategory, the statement deemed most important would be given a one, the next most important statement given a two, the next statement a three, the next statement a four, and finally the least important statement would be given a five. The same demographic questions that were a part of the phase three questionnaire were again included in the questionnaire for phase four. A copy of the phase four survey form is included as Appendix F.

**Phase Four Survey Administration**

Phase four (the final phase) of this Delphi study was again administered as a mail survey with a self addressed, stamped envelope included in the mailing for the return of the survey materials. The survey administration began on December 3, 2007. This questionnaire was sent to the same 160 panel members to whom the phase three survey had been sent, exclusive of the four persons who had returned unusable phase three
surveys and two whose survey mailings had been returned unopened. The panel was again composed of approximately 50 individuals representing each of the three cohorts. All individuals who had failed to respond to mailings of surveys from previous phases of the study, along with the names of persons whose phase two and/or phase three surveys were returned unopened, were removed from the cohort lists for this final phase of the study. Data were collected through March 21, 2008.

Responses were received from 67 individuals. There were four response forms that were deemed unusable due to errors in the data. Specifically, three individuals failed to complete all of the sections of the survey, and one individual forced ranked the group consensus from 1-49 instead of by individual categories of statements. The final number of usable responses was reduced to 63 which represented a 39.38 percent response rate.

**Phase Four Data Analysis**

The results from phase four provided the data that contributed to the development of the final consensus statements that were used to answer the research questions posed for this study. As discussed for the three previous phases of this Delphi study, the results were again first qualitatively analyzed for patterns and themes. The ranking data for each statement was then entered into SPSS-14 for frequency analysis of the responses and the development of the final group consensus. The results can be found in Chapter 4. The final consensus and a discussion of the findings are included in Chapter 5.

**Summary of the Study Methodology**

The objective of this study was to determine the feasibility and potential design of a doctoral level program in security studies. A secondary purpose for the initial phase of
the study was to assist a committee comprised of faculty from the Educational Leadership Department and this researcher to determine the feasibility of offering a doctoral level program in security studies at the University of Nevada Las Vegas through the Department of Educational Leadership housed in the College of Education. This researcher used data from the literature review and the analysis of the data received from each phase of the Delphi study to answer the stated research questions (See Chapter 1) which reflected issues to be considered if it was determined that a doctoral level program in security studies was feasible.

Qualitative research methodology (the Delphi study methodology) was used to obtain a group consensus regarding the feasibility of the doctoral program in security studies, and if feasible, how such a program should be structured and if it should be offered as a PhD, an EdD, or as an Executive Doctoral degree. The survey instrumentation consisted of both an initial on line survey and three mailed survey forms. There were four phases of the study with the final phase culminating in the development of the expert panel consensus statements that were used to answer the posed research questions. The results of this study are presented in Chapter 4.
CHAPTER 4

DATA ANALYSIS

Introduction

The purpose of this study was to identify the feasibility of developing a doctoral degree program in security studies. It was designed to focus on the current need for individuals with an advanced degree in security studies or security administration. Such a degree might be a requirement for future advancement in the fields of emergency management, security, or homeland security and a doctoral degree is the usual requirement for positions in higher education. The study was also designed to provide data on how a doctoral degree in security studies should be structured, whether as a PhD, an EdD, or as an Executive Doctorate degree.

Chapter 1 outlined the historical background which generated the needs assessment that became the basis of this study and identified a primary research question. That question was: Is there a need for a new doctoral degree in security studies? This question was studied through the review of the pertinent literature that was presented in Chapter 2. The literature review clearly indicated that there was a need for a doctoral level degree program that focused on security studies.

Once this primary question was answered, five additional questions were developed regarding the parameters of such a program. This chapter will answer those research
questions by presenting an analysis of the data collected regarding the basic composition and structure of such a new doctoral program, and what the curriculum for a degree program of this nature should include. It also addresses the characteristics of the individuals who would make up the cohort of students. Finally, it provides an analysis of the survey data.

This study was conducted using the Delphi study methodology developed by Norman Dalkey and Olaf Helmer of the RAND Corporation during the late 1940s for the Department of Defense (Helmer, 1967). It was broken down into four phases; phase one was the pilot study. The survey for this phase was sent to 50 selected individuals in the fields of education and security as an on-line survey.

Phase two was developed from the themes and patterns that were derived from phase one. The survey for this phase was sent to 200 potential panel participants who represented the three cohort groups described previously in Chapter 3. This survey was distributed as a mail survey in an effort to counteract the poor response rate that occurred with the phase one on-line survey. However, the response rate was still low for this phase.

To gain further responses, the data from phase two were analyzed, and the survey form was restructured for phase three in an effort to make it more “user friendly” for the potential respondents. Although there was some modification to the items included for evaluation under each question, the majority of the content of this questionnaire paralleled that of the questionnaire used for phase two. This revised version of the phase two questionnaire served as the questionnaire for phase three. This questionnaire was again sent as a mail survey to 166 potential respondents.
included all of the 200 potential panel participants to whom the phase two survey was mailed except the 34 persons who had returned the phase two questionnaire as these 34 persons were construed as having already responded to these questions.

Phase four, which was the final mailing, was sent to 160 panel members who again represented all three cohorts (see chapter 3). The questions on this survey instrument were primarily based on the synthesized group consensus derived from the phase three data analysis. This phase resulted in the development of the final group consensus on each of the research questions. The results of each of the four phases are included in this chapter.

Phase One (Pilot Study)

The first phase of this Delphi study was also considered to be the pilot study for this project. This phase was conducted as an on-line survey which was available to the cohort panel throughout the months of March and April, 2005. A copy of the survey instrument used for phase one is included in this document as Appendix B. The response rate for this phase was very poor. It was felt that the use of an on-line survey was a key factor contributing to the poor response rate (see the discussion of the phase one methodology in Chapter 3).

The survey was emailed to 50 individuals from the fields of higher education and emergency management services, to police and fire department officials, to members of the newly formed Department of Homeland Security, and to governmental officials within the emergency management fields. Of the 50 individuals who were surveyed, 12 responded to the on-line survey for a response rate of 24 percent. The demographics of those who responded are listed in Table 2.
Since all of the questions on the phase one survey form, other than questions regarding the respondents' demographic data, were open ended questions, the purpose of this survey was to develop an initial listing of all possible thoughts of the expert panel respondents in regard to the questions asked. The complete listing of the responses to the phase one survey questions that were received is included in this document as Appendix C.

Table 2

Phase One (Pilot Study) Respondents' Demographic Data

<table>
<thead>
<tr>
<th>Profession</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
</tr>
<tr>
<td>Higher Education</td>
<td>2</td>
</tr>
<tr>
<td>Police</td>
<td>4</td>
</tr>
<tr>
<td>Fire</td>
<td>1</td>
</tr>
<tr>
<td>Emergency Services</td>
<td>0</td>
</tr>
<tr>
<td>Military</td>
<td>2</td>
</tr>
<tr>
<td>Federal Agencies</td>
<td>0</td>
</tr>
</tbody>
</table>

The data from the phase one survey became the basis for the development of the follow-up study questions in accordance with the Delphi methodology. The data were analyzed for themes and patterns which formed the basis of the phase two questionnaire through an iterative process involving the researcher and the faculty members of the Educational Leadership Department's committee investigating the feasibility of developing a doctoral program in security studies, as described in Chapter 3. Through
this process, the extensive listing of responses for each of the questions was distilled into a more limited list of items for each question. This more limited list was felt to be representative of all the responses received for each of the phase one questions.

Phase Two

All of the individuals identified as potential panel members for each of the three cohorts (see the discussion of the cohort composition in Chapter 3) were sent the phase two survey by mail, and a self-addressed, stamped envelope for returning the completed survey form was included with the mailing. Two hundred individuals from these three cohorts were initially surveyed during the three month time period of June through August, 2005. The phase two survey incorporated wording for the listed items that closely reflected the wording used by the phase one respondents. The items listed under each question were listed in a random order, and the respondents were asked to evaluate the importance of each of the listed items. A copy of the phase two questionnaire is included as Appendix D. At the end of the phase two time period, only 34 completed responses had been received, a number which represented a response rate of 17 percent.

The survey questionnaire was formatted into five questions (See Appendix D). Four of these questions asked the respondent to evaluate the importance of each item listed under the question. The fifth question was open-ended, asking the respondent to suggest possible dissertation topics for a degree in security studies. As this form was structured, the items relating to question one were simply listed randomly in a continuous listing of 32 items. To assist the researcher in determining the frequency of the responses to each of the items listed in the first four survey questions, the responses were to be indicated on
a five point Likert scale where five indicated vitally important and one indicated not important.

The data from the phase two responses were first analyzed qualitatively to determine patterns and trends which would indicate what the group consensus seemed to be at this point in time for each of the items listed under the first four survey questions. This qualitative analysis of the responses received from this phase of the study helped the researcher recognize problems with the structure of the form and provided guidance for the revision of the form for the phase three survey.

There were multiple items listed under each question on the survey form. For each of these items, the panel members were asked to indicate their perception of the degree of importance of each item relative to a possible doctoral program in security studies on a Likert type scale.

Following the qualitative analysis, the quantitative Likert scale data were analyzed quantitatively using SPSS-14 to determine the frequencies of the responses for the five importance level options given for the items listed under each of the first four questions. This quantitative analysis was done only to provide additional support for the findings of the qualitative trend analysis. Each question and the related items that were evaluated by the expert panel will be discussed in this chapter. Based on the frequency of the Likert scale responses to each item, those items which were evaluated as "vitally important" or "very important" were considered for inclusion in the phase three survey instrument used for this Delphi study.
Results of the Phase Two Quantitative Analysis

Question One

Question one on the survey form was stated as follows: "Which of the following subject areas, topics, or disciplines would you deem essential for inclusion in a doctoral program in security studies?" The results of the quantitative analysis of the data from the responses to question one are listed Table 3.

Table 3

Responses to Question One in Delphi Study Phase Two

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
<th>Combined # of ratings and % of total ratings = either 5 or 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>N = 34</td>
<td></td>
<td></td>
<td># of ratings % of ratings</td>
</tr>
<tr>
<td>The Interaction with Federal Agencies</td>
<td>4.418</td>
<td>.70141</td>
<td>30 88.2</td>
</tr>
<tr>
<td>Psychology of the Terrorist Foreign and Domestic</td>
<td>4.5588</td>
<td>.82356</td>
<td>29 85.3</td>
</tr>
<tr>
<td>Collaborative Leadership Processes</td>
<td>4.2647</td>
<td>.79043</td>
<td>29 85.3</td>
</tr>
<tr>
<td>Crisis Management</td>
<td>4.3824</td>
<td>.81704</td>
<td>27 79.4</td>
</tr>
<tr>
<td>Aviation Facilities Security</td>
<td>4.1765</td>
<td>1.05803</td>
<td>27 79.4</td>
</tr>
<tr>
<td>Cyber Security</td>
<td>4.1471</td>
<td>.98880</td>
<td>26 76.5</td>
</tr>
<tr>
<td>National Incident Management system (NIMS)</td>
<td>4.1765</td>
<td>.99911</td>
<td>25 73.5</td>
</tr>
<tr>
<td>Mid-Eastern Cultural Studies</td>
<td>4.0294</td>
<td>.969876</td>
<td>25 73.5</td>
</tr>
<tr>
<td>Item</td>
<td>Mean</td>
<td>SD</td>
<td># of ratings</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>--------</td>
<td>---------</td>
<td>--------------</td>
</tr>
<tr>
<td>Developing Crisis Action Plans</td>
<td>4.1176</td>
<td>1.26096</td>
<td>24</td>
</tr>
<tr>
<td>History of Terrorism</td>
<td>3.9706</td>
<td>.90404</td>
<td>24</td>
</tr>
<tr>
<td>The National Response Plan</td>
<td>3.9412</td>
<td>3.9412</td>
<td>23</td>
</tr>
<tr>
<td>The Incident Command System (ICS)</td>
<td>3.8529</td>
<td>.92548</td>
<td>23</td>
</tr>
<tr>
<td>Command, Control, and Communications</td>
<td>3.8235</td>
<td>.83378</td>
<td>22</td>
</tr>
<tr>
<td>Exercise Planning</td>
<td>3.7059</td>
<td>.67552</td>
<td>22</td>
</tr>
<tr>
<td>Management of Human Resources</td>
<td>3.8235</td>
<td>.83378</td>
<td>21</td>
</tr>
<tr>
<td>Criminal Justice and Terrorism</td>
<td>3.7059</td>
<td>.97014</td>
<td>21</td>
</tr>
<tr>
<td>The function of Homeland Security Ops Centers</td>
<td>3.7353</td>
<td>1.05339</td>
<td>20</td>
</tr>
<tr>
<td>Economic Impact of a Terrorist Incident/Attach</td>
<td>3.6471</td>
<td>1.06976</td>
<td>20</td>
</tr>
<tr>
<td>Disaster Planning and Managing the Media</td>
<td>3.6765</td>
<td>.91189</td>
<td>19</td>
</tr>
<tr>
<td>Civil Rights Law</td>
<td>3.5882</td>
<td>.95719</td>
<td>18</td>
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<tr>
<td>Management of Disaster Relief Assistance</td>
<td>3.5290</td>
<td>1.1345</td>
<td>17</td>
</tr>
<tr>
<td>Ethnic and Cultural Factors in Terrorism</td>
<td>3.4706</td>
<td>1.26096</td>
<td>17</td>
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<tr>
<td>Budget and Financial Processes</td>
<td>3.5588</td>
<td>.74635</td>
<td>16</td>
</tr>
<tr>
<td>Item</td>
<td>Mean</td>
<td>SD</td>
<td>Combined # of ratings and % of total ratings</td>
</tr>
<tr>
<td>-------------------------------------------------------------</td>
<td>----------</td>
<td>---------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>N = 34</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radiological, Chemical, and Biological Containment and Clean-up (HAZ-MAT)</td>
<td>3.3529</td>
<td>.98110</td>
<td>15  44.1</td>
</tr>
<tr>
<td>Emergency Management Policy Development</td>
<td>3.2941</td>
<td>1.26801</td>
<td>14  41.2</td>
</tr>
<tr>
<td>Facility Management</td>
<td>3.4118</td>
<td>1.10420</td>
<td>13  38.2</td>
</tr>
<tr>
<td>Immigration Enforcement and Management</td>
<td>3.3235</td>
<td>1.00666</td>
<td>13  38.2</td>
</tr>
<tr>
<td>Weapons of Mass Destruction (WMD)</td>
<td>3.1471</td>
<td>1.20937</td>
<td>13  38.2</td>
</tr>
<tr>
<td>Integration of First Responders</td>
<td>3.2647</td>
<td>1.10943</td>
<td>12  35.3</td>
</tr>
<tr>
<td>Transportation Systems Management</td>
<td>3.2353</td>
<td>.92548</td>
<td>12  35.3</td>
</tr>
<tr>
<td>National Disaster Medical Response system</td>
<td>3.2059</td>
<td>.91385</td>
<td>12  35.3</td>
</tr>
<tr>
<td>Emergency Operations for Local Municipal Infrastructures</td>
<td>3.3235</td>
<td>1.03633</td>
<td>11  32.4</td>
</tr>
</tbody>
</table>

Based on the quantitative analysis of the items in question one, 22 of the 32 items listed for this question were rated as either “vitally important” or “very important” by at least 50 percent of these respondents. Six of these 22 items were evaluated as being either “vitally important” or “very important” by more than 75 percent of these respondents. These six items were: the interaction with federal agencies, psychology of the terrorist foreign and domestic, collaborative leadership processes, crisis management, aviation facilities security, and cyber security. Because of the high ratings received by these items, they represented concepts that would be selected as key items for inclusion.
in the phase three survey. The remaining 16 items rated "vitaliy important" or "very important" by this group of respondents would be evaluated as concepts for the phase three questionnaire relative to the qualitative analysis of the responses to question one.

**Question Two**

Question two in the survey form was stated as: "What level of experience, type of positions, or background should candidates have prior to entering this doctoral program?"

The results of the quantitative analysis of the data from the responses to question two are listed in Table 4.

**Table 4**

*Responses to Question Two in Delphi Study Phase Two*

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
<th>Combined # of ratings and % of total ratings = either 5 or 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>N = 34</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Field Experience</td>
<td>4.1471</td>
<td>.70205</td>
<td>30 88.2</td>
</tr>
<tr>
<td>Minimal Education Required a Masters Degree</td>
<td>4.0882</td>
<td>1.02596</td>
<td>26 76.5</td>
</tr>
<tr>
<td>Experience in a Decision Making Position</td>
<td>4.0588</td>
<td>.85071</td>
<td>25 73.5</td>
</tr>
<tr>
<td>Upper Management/Leadership with Local, State, or the Federal Government</td>
<td>3.9412</td>
<td>.91920</td>
<td>23 67.6</td>
</tr>
<tr>
<td>Full Time Employment with a State, Local, or Federal Agency Associated with Security or Emergency Management</td>
<td>3.6471</td>
<td>.94972</td>
<td>22 64.7</td>
</tr>
<tr>
<td>Experience with Strategic Planning Responsibility</td>
<td>3.6176</td>
<td>.92162</td>
<td>17 50.0</td>
</tr>
<tr>
<td>Item</td>
<td>Mean</td>
<td>SD</td>
<td># of ratings</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>--------</td>
<td>--------</td>
<td>--------------</td>
</tr>
<tr>
<td>N = 34</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ten Years Experience in Emergency Management, Security Defense, or Homeland Security</td>
<td>3.0294</td>
<td>1.11424</td>
<td>15</td>
</tr>
<tr>
<td>Five Years Experience in a Specialty Field</td>
<td>3.3235</td>
<td>.91189</td>
<td>12</td>
</tr>
<tr>
<td>Military or Law Enforcement Background</td>
<td>2.6765</td>
<td>.94454</td>
<td>7</td>
</tr>
<tr>
<td>Executive Positions from Industry</td>
<td>2.7647</td>
<td>.74096</td>
<td>5</td>
</tr>
<tr>
<td>Professionals in the Field of Education</td>
<td>2.3235</td>
<td>.91189</td>
<td>3</td>
</tr>
</tbody>
</table>

Two of the listed possible characteristics of persons who might be considered as students in a doctoral program in security studies were evaluated as being either vitally important or very important by more than 75 percent of the respondents. These characteristics were: having field experience and having at least a masters degree as the minimal education required to enter a doctoral program in security studies. One additional characteristic was rated as either vitally important or very important by almost 75 percent of the respondents, and that characteristic was having experience in a decision making position. Three other characteristics were considered to be very high in importance by 50 percent or more of the respondents. These characteristics were: having an upper management or leadership position within local, state, or the federal government; having full time employment with a local, state, or federal agency associated
with security or emergency management; and having experience with strategic planning responsibility. These six key characteristics were prioritized for consideration for the phase three survey instrument when the quantitative data analysis was incorporated into the qualitative data analysis for the purpose of revising the item listings for the phase three survey instrument.

**Question Three**

Question three, in the survey instrument, was stated as: “Which of the following instructional modalities would be most desirable for a doctoral program in security studies based on the above candidates’ qualifications?” The results of the quantitative analysis of the data from the responses to question three are listed in Table 5.

The respondents’ evaluations of the importance of the several instructional modalities listed clearly indicate that the structure of a doctoral program in security studies needs to be such that the students’ can incorporate their participation in the program with their position responsibilities. More than 70 percent of the respondents rated having the program structure reflect a combination of resident and distance learning or having the program structured as a flexible modular program which will match the professional work commitment of the candidates as being either vitally important or very important. The respondents also emphasized the importance of practical learning as a component of the program with more than 50 percent of the respondents highly rating the importance of suggested components such as table top exercises, guest lectures by subject matter experts and field trips to first responder agencies. Clearly, the traditional classroom approach would not meet the responders’ expectations for a feasible structure to a doctoral program that would meet the needs of persons working in the fields of emergency management or security.
Table 5

Responses to Question Three in Delphi Study Phase Two

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
<th>Combined # of ratings and % of total ratings = either 5 or 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>N = 34</td>
<td></td>
<td></td>
<td># of ratings</td>
</tr>
<tr>
<td>A Combination of Resident and Distance Learning</td>
<td>4.1471</td>
<td>.85749</td>
<td>26</td>
</tr>
<tr>
<td>Flexible Modular Program to Match the Professional Work Commitment of Candidates</td>
<td>4.1471</td>
<td>.82139</td>
<td>25</td>
</tr>
<tr>
<td>1-2 Weeks of On-Campus Instruction Quarterly</td>
<td>3.8235</td>
<td>1.05803</td>
<td>22</td>
</tr>
<tr>
<td>Guest Lectures by Subject Matter Experts (SME)</td>
<td>3.7353</td>
<td>.93124</td>
<td>22</td>
</tr>
<tr>
<td>Table Top Exercises</td>
<td>3.8235</td>
<td>.86936</td>
<td>20</td>
</tr>
<tr>
<td>Field Trips to First Responder Organizations for Live Demonstrations and Hands-On Training</td>
<td>3.7647</td>
<td>1.01679</td>
<td>20</td>
</tr>
<tr>
<td>Independent Studies (On-Line Internet Based)</td>
<td>3.6176</td>
<td>1.01548</td>
<td>19</td>
</tr>
<tr>
<td>Traditional Classroom Instruction</td>
<td>3.3529</td>
<td>1.04105</td>
<td>15</td>
</tr>
<tr>
<td>Synchronous and Asynchronous On-Line Instruction</td>
<td>3.3529</td>
<td>.88360</td>
<td>12</td>
</tr>
</tbody>
</table>

Question Four

Question four on the survey form was stated as follows: “What would be the expected competencies of a graduate of a security studies doctoral degree program?” The
results of the quantitative analysis of the data from the responses to question four are listed in Table 6.

Table 6

Responses to Question Four in Delphi Study Phase Two

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
<th>Combined # of ratings and % of total ratings = either 5 or 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>N = 34</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working Knowledge of the Incident Command System (ICS)</td>
<td>4.3824</td>
<td>.77907</td>
<td>28 82.4</td>
</tr>
<tr>
<td>How to Implement Change Within the Organization</td>
<td>4.3529</td>
<td>.88360</td>
<td>27 79.4</td>
</tr>
<tr>
<td>Team Building</td>
<td>4.2647</td>
<td>.99419</td>
<td>27 79.4</td>
</tr>
<tr>
<td>Knowledge of Inter-Agency Operations and Response Capabilities</td>
<td>4.1471</td>
<td>.82139</td>
<td>27 79.4</td>
</tr>
<tr>
<td>How Interpretability and Communications Interact Between Local, State, and Federal First Responder Agencies</td>
<td>4.1176</td>
<td>.87956</td>
<td>27 79.4</td>
</tr>
<tr>
<td>Planning and Building a Security Program</td>
<td>4.2941</td>
<td>.83591</td>
<td>26 76.5</td>
</tr>
<tr>
<td>How to Deal with the Media in a Terrorist Event or Natural Disaster</td>
<td>3.8824</td>
<td>.91336</td>
<td>22 64.7</td>
</tr>
<tr>
<td>Knowledge of Civil Rights Law and International Terrorism</td>
<td>3.6765</td>
<td>1.06517</td>
<td>20 58.8</td>
</tr>
<tr>
<td>How to Address the Economic Impact of a Terrorist Attack</td>
<td>3.6471</td>
<td>1.15161</td>
<td>19 55.9</td>
</tr>
<tr>
<td>A Basic Understanding of the History of Terrorism and What Motivates Terrorists</td>
<td>3.6176</td>
<td>1.12855</td>
<td>18 52.9</td>
</tr>
<tr>
<td>Item</td>
<td>Mean</td>
<td>SD</td>
<td>Combined # of ratings and % of total ratings = either 5 or 4</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-------</td>
<td>------</td>
<td>------------------------------------------------------------</td>
</tr>
<tr>
<td>N = 34</td>
<td></td>
<td></td>
<td># of ratings</td>
</tr>
<tr>
<td>How to Develop Exercise Plans</td>
<td>3.5294</td>
<td>.82518</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>50.0</td>
</tr>
</tbody>
</table>

All of the competency items listed under question four were evaluated as either vitally important or very important by 50 percent or more of the respondents. Competencies associated with a knowledge of command and control systems such as the Incident Command System, communications among agencies at all levels (local, state, and federal), and organizational skills such as implementing change and team building were especially highly evaluated as competencies that graduates of a doctoral program in security studies should have.

**Question Five**

Question five was an open ended question asking respondents to list their thoughts as to what might be appropriate dissertation topics for students completing a doctoral program in security studies. Since the purpose of this question was to develop a listing of all topic thoughts, the responses to this question for phase two were combined with the phase three responses to this same question. The consolidated listing of responses will be presented in the discussion of the phase three data analysis in this chapter.
Phase Three

As the response rate for the phase two survey was deemed inadequate for the phase two results to be utilized as the only basis for the development of the final phase of the Delphi study, a decision was made to reformat the survey questionnaire (see discussion in Chapter 3) and utilize the reformatted survey instrument as the tool for phase three of the study. A copy of the phase three survey instrument is included in this document as Appendix E.

In this revised version, the items listed for respondent evaluation in question one were subdivided into five categories reflecting general program content areas. These content areas were identified as 1) executive leadership, 2) systems, 3) planning and policy analysis, 4) terrorism and natural disasters, and 5) law. Also, in the revised version of the survey instrument, some of the items listed in all of the questions were combined to eliminate what was perceived as redundancy in the intent of the statements. Thus, there were fewer items listed for the questions on the phase three revised version of the survey instrument than on the original instrument that was used in phase two of the study.

The phase three survey instrument was sent to all of the potential panel members who had received the original phase two mailing except for the 34 persons who had completed and returned the phase two questionnaire (166 persons representing all three respondent cohorts.) The panel members were allowed three months (from mid-November, 2005 to mid-February, 2006) to complete and return the phase three survey form. Completed questionnaires were received from 39 respondents for a response rate of 23.5 percent for this mailing.
Since the questions on the phase two and the phase three survey instruments were similar, the two respondent populations were combined for the purposes of demographic analysis. In total 73 responses were received for phase two and phase three. The demographic characteristics of these phase two and phase three respondents are listed in Table 7.

Table 7

Phase Two and Phase Three Respondents' Combined Demographic Data

<table>
<thead>
<tr>
<th>Profession</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
</tr>
<tr>
<td>Higher Education</td>
<td>3</td>
</tr>
<tr>
<td>Police</td>
<td>14</td>
</tr>
<tr>
<td>Fire</td>
<td>12</td>
</tr>
<tr>
<td>Emergency Services</td>
<td>24</td>
</tr>
<tr>
<td>Military</td>
<td>5</td>
</tr>
<tr>
<td>Federal Agencies</td>
<td>0</td>
</tr>
</tbody>
</table>

As with phase two, the data from the phase three responses were first analyzed qualitatively to determine patterns and trends which would indicate what the group consensus seemed to be at this point in time for each of the items listed under the first four survey questions. This qualitative analysis was augmented by the quantitative analysis of the phase three response data, and the combined analyses formed the basis for the determination of the items that would be included in the phase four survey questionnaire.
Results of the Phase Three Quantitative Analysis

**Question One**

Question one on the phase three survey form was stated as follows: “Which of the following subject areas, topics, or disciplines would you deem essential for inclusion in a doctoral program in security studies?” For this question, the listed items were divided into five categories. These categories were: 1) executive leadership; 2) systems; 3) planning and policy analysis; 4) terrorism and natural disasters; and 5) law. The results of the quantitative analysis of the data from the responses to question one are listed in Table 8.

<table>
<thead>
<tr>
<th>Item</th>
<th>Category</th>
<th>Mean</th>
<th>SD</th>
<th>Combined # of ratings and % of total ratings = either 5 or 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crisis Management, Crisis Action Plans, and Exercise Planning Development and Implementation</td>
<td>1</td>
<td>4.5641</td>
<td>.59802</td>
<td>37 94.9</td>
</tr>
<tr>
<td>Integration of Local, State, and Federal Agencies in Emergency Preparedness</td>
<td>4</td>
<td>4.5128</td>
<td>.85446</td>
<td>34 87.2</td>
</tr>
<tr>
<td>Communication and Media Relations and Control of Information</td>
<td>1</td>
<td>4.3846</td>
<td>.81484</td>
<td>33 84.6</td>
</tr>
<tr>
<td>Incident Command System</td>
<td>2</td>
<td>4.4103</td>
<td>.84970</td>
<td>32 82.1</td>
</tr>
<tr>
<td>Collaborative Leadership Processes</td>
<td>1</td>
<td>4.2821</td>
<td>.79302</td>
<td>31 79.5</td>
</tr>
<tr>
<td>National Incident Management</td>
<td>2</td>
<td>4.2308</td>
<td>1.03775</td>
<td>31 79.5</td>
</tr>
<tr>
<td>Item</td>
<td>Category</td>
<td>Mean</td>
<td>SD</td>
<td># of ratings</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>----------</td>
<td>---------</td>
<td>---------</td>
<td>--------------</td>
</tr>
<tr>
<td>System (NIMS)</td>
<td></td>
<td></td>
<td></td>
<td>N = 39</td>
</tr>
<tr>
<td>Emergency Management Policy Development</td>
<td>3</td>
<td>4.0256</td>
<td>.81069</td>
<td>29</td>
</tr>
<tr>
<td>National Response Plan</td>
<td>2</td>
<td>4.1282</td>
<td>.89382</td>
<td>28</td>
</tr>
<tr>
<td>Risk Assessment</td>
<td>3</td>
<td>4.1026</td>
<td>.94018</td>
<td>28</td>
</tr>
<tr>
<td>Key Indicators for Terrorism Awareness</td>
<td>3</td>
<td>3.8462</td>
<td>.84413</td>
<td>26</td>
</tr>
<tr>
<td>Civil Rights, International, and Federal Law as Applied to Terrorism</td>
<td>5</td>
<td>3.7179</td>
<td>.91619</td>
<td>26</td>
</tr>
<tr>
<td>Weapons of Mass Destruction (WMD), Delivery Methods, and</td>
<td>3</td>
<td>3.7949</td>
<td>95089</td>
<td>25</td>
</tr>
<tr>
<td>Haz-Mat Training and Containment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Border Security, Immigration Enforcement and Management</td>
<td>5</td>
<td>3.7692</td>
<td>.87243</td>
<td>25</td>
</tr>
<tr>
<td>National Disaster System</td>
<td>2</td>
<td>3.8974</td>
<td>.99459</td>
<td>24</td>
</tr>
<tr>
<td>Patriot Act</td>
<td>5</td>
<td>3.6154</td>
<td>1.0910</td>
<td>24</td>
</tr>
<tr>
<td>Ethnic and Cultural Factors and the History and Psychology of</td>
<td>3</td>
<td>3.7436</td>
<td>.84970</td>
<td>23</td>
</tr>
<tr>
<td>Terrorism, both Foreign and Domestic</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Budget, Financial and Economical Considerations in a Natural Disaster/Terrorist Incident</td>
<td>2</td>
<td>3.5641</td>
<td>.96777</td>
<td>23</td>
</tr>
<tr>
<td>Terrorism and the Physiological Impact on the Public</td>
<td>4</td>
<td>3.8974</td>
<td>.99459</td>
<td>22</td>
</tr>
<tr>
<td>Cyber Security</td>
<td>2</td>
<td>3.6410</td>
<td>.98641</td>
<td>22</td>
</tr>
<tr>
<td>Ethnic and Cultural Factors in Terrorism</td>
<td>4</td>
<td>3.6923</td>
<td>1.05516</td>
<td>21</td>
</tr>
<tr>
<td>Item</td>
<td>Category</td>
<td>Mean</td>
<td>SD</td>
<td>Combined # of ratings and % of total ratings = either 5 or 4</td>
</tr>
<tr>
<td>---------------------------------------------------------------------</td>
<td>----------</td>
<td>-------</td>
<td>-------</td>
<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td>N = 39</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transportation Systems Management in a Terrorist Event Facility</td>
<td>3</td>
<td>3.564</td>
<td>1.046</td>
<td>21 53.8</td>
</tr>
<tr>
<td>(Aviation, Commercial, Institutional) Management and Security</td>
<td>1</td>
<td>3.615</td>
<td>1.091</td>
<td>20 51.3</td>
</tr>
<tr>
<td>Human Resources</td>
<td>2</td>
<td>3.538</td>
<td>1.166</td>
<td>20 51.3</td>
</tr>
<tr>
<td>National Disaster Medical Response</td>
<td>2</td>
<td>3.538</td>
<td>0.996</td>
<td>19 48.7</td>
</tr>
<tr>
<td>Economic Impact of Terrorism Beyond Ground Zero</td>
<td>3</td>
<td>3.487</td>
<td>0.942</td>
<td>19 48.7</td>
</tr>
<tr>
<td>How Technology Assists Terrorism</td>
<td>4</td>
<td>3.461</td>
<td>0.822</td>
<td>17 43.6</td>
</tr>
<tr>
<td>History of Terrorism</td>
<td>4</td>
<td>3.359</td>
<td>0.986</td>
<td>17 43.6</td>
</tr>
<tr>
<td>Homeland Security Operation Centers</td>
<td>2</td>
<td>3.743</td>
<td>0.966</td>
<td>24 41.5</td>
</tr>
<tr>
<td>Chemical and Biological Delivery and Clean-Up</td>
<td>3</td>
<td>3.359</td>
<td>1.013</td>
<td>16 41.0</td>
</tr>
<tr>
<td>Practical Chemistry and Physics</td>
<td>3</td>
<td>2.846</td>
<td>1.113</td>
<td>10 25.6</td>
</tr>
<tr>
<td>Faculty and Student Actions during a Terrorist Attack/Event</td>
<td>4</td>
<td>3.026</td>
<td>0.811</td>
<td>9 23.1</td>
</tr>
<tr>
<td>University and College Law as it Applies to Crisis Action/Management</td>
<td>5</td>
<td>2.718</td>
<td>0.972</td>
<td>7 17.9</td>
</tr>
</tbody>
</table>

Note: Categories: 1 = Executive Leadership; 2 = Systems; 3 = Planning and Policy Analysis; 4 = Terrorism and Natural Disasters; 5 = Law

The quantitative analysis of the responses to question one of the phase three survey instrument reinforced the importance ratings observed from the quantitative analysis of
the responses to question one on the phase two instrument. Of the 32 items listed on the revised form, only nine were rated as being "vitally important" or "very important" by less than half of the respondents. Of those nine, three were rated as either "vitally" or "very important" by only 25 percent or less of the respondents. These three items were practical chemistry and physics; faculty and student actions during a terrorist attack/event; and university and college law as it applies to crisis action/management.

All three of those items were directed toward security and crisis management in an educational setting, and all three reflected program content that was not indicated in the listings included on the phase two survey instrument. Given the low ratings for these items from the quantitative analysis, it would seem that they would not be considered for inclusion in the questionnaire for phase four of this study. However, they were included in the final phase four survey form as the qualitative analysis of the data recognized that these items were not adequately considered in any of the other listed items, and they reflected subject matter that would impact educational institutions, institutions that have been the sites of several recent domestic terrorist attacks.

Comparable to the quantitative analysis results regarding the question one items on the phase two survey instrument, six items on the phase three survey instrument were rated as either "vitally important" or "highly important" by more 75 percent of the respondents. Of those six items, three were items categorized under executive leadership; two were categorized under systems; and one was categorized under terrorism and natural disasters. Three of these six items were also among the six items rated as "vitally important" or "very important" by 75 percent or more of the phase two survey respondents. The other three were so rated by 65 to 74 percent of the phase two survey respondents.
The very high ratings given to these six items would seem to indicate that they would be key items for inclusion on the phase four survey.

Following the complete review of both the qualitative and quantitative analysis of the question one data, all of the items listed on the phase three survey form under the categories of executive leadership, terrorism and natural disasters, and law were retained for inclusion in phase four of this study. Three items were eliminated from the systems category. These items were national disaster system; national disaster medical response; and homeland security operation centers. Two of these items received low importance ratings, and all three items could be considered components of other items retained for the phase four survey. Three items were also eliminated from the planning and policy analysis category. These items were emergency management policy development; ethnic and cultural factors and the history and psychology of terrorism both foreign and domestic; and weapons of mass destruction (WMD), delivery methods, and Haz-Mat training and containment. While all three of the items eliminated from the planning and policy analysis category were rated as "vitally important" or "very important" by more than half of the phase three survey respondents, they were rated low in importance by the respondents to the phase two survey form. Those low phase two ratings, combined with the qualitative analysis evaluations for both phase two and phase three, led to their elimination from phase four of the study.

**Question Two**

Question two on the phase three survey was stated as follows: “What qualifications should a candidate pursuing a PhD in security studies have prior to admission?” The
results of the quantitative analysis of the data from the responses to question two are listed in Table 9.

Table 9

Responses to Question Two in Delphi Study Phase Three

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
<th>Combined # of ratings and % of total ratings = either 5 or 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>N = 39</td>
<td></td>
<td></td>
<td># of ratings % of ratings</td>
</tr>
<tr>
<td>Strategic Planning Responsibility</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Should be in a Supervisory Position or Decision Making Position</td>
<td>3.5385</td>
<td>1.12029</td>
<td>24 61.5</td>
</tr>
<tr>
<td>3-5 years Experience in Emergency Management, Homeland Security, or</td>
<td>3.5641</td>
<td>1.02070</td>
<td>22 56.4</td>
</tr>
<tr>
<td>Security Administration Experience (3-10 years)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professionals in the Field of Education</td>
<td>3.1026</td>
<td>.91176</td>
<td>12 30.8</td>
</tr>
<tr>
<td></td>
<td>2.5897</td>
<td>1.22942</td>
<td>8   20.5</td>
</tr>
</tbody>
</table>

The results of the phase three quantitative analysis paralleled that of the phase two analysis. More than 50 percent of the respondents felt that experience was a critical qualification for someone seeking admission to a doctoral degree in security studies. Further, the respondents felt that gaining that experience in upper management or leadership positions in local, state, or federal organizations related to emergency management, homeland security or other security operations was either vitally important
or very important for candidates for such a program. They also felt that persons who
would be eligible for admission to a doctoral program in security studies should
definitely have had supervisory and/or decision making responsibilities in the positions
that they held during their careers.

**Question Three**

Question three on the phase three survey form was stated as follows: "What
knowledge, skills, and competencies should a candidate of a PhD program in security
studies have upon graduation?" The results of the quantitative analysis of the data from
the responses to question three are listed in Table 10.

**Table 10**

*Responses to Question Three, Delphi Study Phase Three*

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
<th>Combined # of ratings and % of total ratings = either 5 or 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>N = 39</td>
<td></td>
<td></td>
<td># of ratings                             % of ratings</td>
</tr>
<tr>
<td>Design and Plan Security Programs</td>
<td>4.2564</td>
<td>.88013</td>
<td>33                             84.6</td>
</tr>
<tr>
<td>Command, Control, and Communications in an Emergency Situation</td>
<td>4.2051</td>
<td>.76707</td>
<td>33                             84.6</td>
</tr>
<tr>
<td>In-Depth Understanding of the Interrelationship Between City, State, and Federal First Responders to a Terrorist Attack</td>
<td>4.3333</td>
<td>.80568</td>
<td>31                             79.5</td>
</tr>
<tr>
<td>Incident Command system (ICS) Understanding, Utilization, and Implementation</td>
<td>4.1282</td>
<td>.80064</td>
<td>31                             79.5</td>
</tr>
<tr>
<td>Leadership Development Within the Organization</td>
<td>3.9744</td>
<td>.87320</td>
<td>28                             71.8</td>
</tr>
<tr>
<td>Item</td>
<td>Mean</td>
<td>SD</td>
<td># of ratings</td>
</tr>
<tr>
<td>---------------------------------------------------------------------</td>
<td>--------</td>
<td>---------</td>
<td>--------------</td>
</tr>
<tr>
<td>How to Deal with Media Relations</td>
<td>3.9487</td>
<td>.97194</td>
<td>28</td>
</tr>
<tr>
<td>Understand the Interpretational/Inter-Agency Coordination and Response Capabilities</td>
<td>3.9231</td>
<td>.92863</td>
<td>28</td>
</tr>
<tr>
<td>How to Implement Change Within the Organization</td>
<td>3.8974</td>
<td>.82062</td>
<td>28</td>
</tr>
<tr>
<td>Execute Planning in an Emergency</td>
<td>3.8462</td>
<td>.84413</td>
<td>26</td>
</tr>
<tr>
<td>Evaluate Current Structure-Environment</td>
<td>3.7436</td>
<td>.81815</td>
<td>24</td>
</tr>
<tr>
<td>Knowledge of Potential Security Systems and Communications</td>
<td>3.8205</td>
<td>.85446</td>
<td>23</td>
</tr>
<tr>
<td>Address the Economic Impact of a Terrorist Attack</td>
<td>3.5385</td>
<td>.88396</td>
<td>21</td>
</tr>
<tr>
<td>Counterintelligence and Cyber Security</td>
<td>3.5128</td>
<td>.91398</td>
<td>21</td>
</tr>
<tr>
<td>Civil Rights Law and Terrorism, Civil Liberties Awareness</td>
<td>3.5641</td>
<td>.99459</td>
<td>20</td>
</tr>
<tr>
<td>Understanding the Effects of Terrorism from a Cultural and Physiological Perspective</td>
<td>3.4359</td>
<td>.94018</td>
<td>19</td>
</tr>
</tbody>
</table>

Question three on the phase three survey instrument corresponded to question four on the phase two survey form. The phase three quantitative analysis of the 15 listed competencies indicated that the respondents felt that all but one of these competencies were either vitally important or very important. Since the one remaining competency was evaluated as either vitally important or very important by 48.7 percent of the respondents, it might be said that all the listed competencies were evaluated highly by the respondents to the phase three survey.
This evaluation of the level of importance of these competencies mirrored the phase two responses to the competency listing on that instrument as all of those competencies were also evaluated as being either vitally important or very important. Also similar to the phase two competency question results, competencies associated with a knowledge of command and control systems such as the Incident Command System and communications among agencies at all levels (local, state, and federal) were among the most highly evaluated competencies. However, a competency such as team building that was highly evaluated in phase two was less highly evaluated in phase three. Instead, competencies such as planning and designing security programs and developing leadership in organizations were especially highly evaluated as competencies that graduates of a doctoral program in security studies should have.

On the basis of the combined qualitative and quantitative analysis of the responses to question three, the following eight competencies were selected for inclusion in phase four of this study: team building; planning and building a security program; working knowledge of the Incident Command System (ICS); how interoperability and communications interact between local, state, and federal first responder agencies; how to develop exercise plans; knowledge of inter-agency operations and response capabilities; how to address the economic impact of a terrorist attack; and how to implement change within the organization.

Three competencies listed on the phase three survey form were eliminated for phase four of the Delphi study. These competencies were: knowledge of civil rights law and international terrorism; how to deal with the media in a terrorist event of natural disaster; and a basic understanding of the history of terrorism and what motivates terrorists.
In addition to the competencies included on the survey form for evaluation by the expert panel, three suggestions for competencies were listed by panel members. These suggestions were the following:

Suggestion 1: The students should have a very good understanding of the current methods used by terrorists to defeat security systems.

Suggestion 2: How to use personnel and their unique skills to build a competent organization beyond team building.

Suggestion 3: Use of time and application of proactive time management skills and the training of others.

Question Four

Question four on the phase three survey questionnaire corresponded to question three on the phase two survey form. This question was stated on the phase three survey form as follows: “Which instructional methods and/or delivery methods would be most desirable for a candidate pursuing a PhD in security studies?” The quantitative analysis of the phase three responses re-emphasized the importance that respondents placed on flexibility in the structure of any doctoral program in security studies. The results of the quantitative analysis of the data from the responses to question four are listed in Table 11.
Table 11

Responses to Question Four in Delphi Study Phase Three

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
<th>Combined # of ratings and % of total ratings = either 5 or 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>N = 39</td>
<td></td>
<td></td>
<td># of ratings % of ratings</td>
</tr>
<tr>
<td>Independent Study (On-Line Internet Based with On-Line Chat Rooms for Group Discussion)</td>
<td>3.9744</td>
<td>.87320</td>
<td>28 81.8</td>
</tr>
<tr>
<td>Guest Lectures from the Array of Subject Matter Experts in the field of Security/Terrorism</td>
<td>4.1282</td>
<td>.97817</td>
<td>31 79.5</td>
</tr>
<tr>
<td>Flexible Modular Program to Match Professional Work Commitments of the Students</td>
<td>4.1282</td>
<td>.89282</td>
<td>30 76.9</td>
</tr>
<tr>
<td>Combination of Resident and Distance Learning</td>
<td>3.8974</td>
<td>1.18754</td>
<td>27 69.2</td>
</tr>
<tr>
<td>Both On and Off Campus Instruction</td>
<td>3.8718</td>
<td>.92280</td>
<td>26 66.7</td>
</tr>
<tr>
<td>Widest Possible with Emphasis on Practicum</td>
<td>3.8205</td>
<td>.85446</td>
<td>23 59.0</td>
</tr>
<tr>
<td>1-2 Weeks of On-Campus Instruction/Seminars</td>
<td>3.5385</td>
<td>.94162</td>
<td>22 56.4</td>
</tr>
<tr>
<td>Field trips to Various First Responder Organizations for Demonstrations and Hands on Training</td>
<td>3.6923</td>
<td>1.05516</td>
<td>18 46.2</td>
</tr>
<tr>
<td>Traditional Classroom Instruction</td>
<td>3.3590</td>
<td>1.08790</td>
<td>17 43.6</td>
</tr>
<tr>
<td>Standard On-Campus Delivery Throughout the Degree</td>
<td>2.0256</td>
<td>1.08790</td>
<td>5 12.8</td>
</tr>
</tbody>
</table>

More than 75 percent of the respondents indicated that they considered on-line, independent study courses and a flexible structure tailored to reflect the students' work commitments as either vitally important or very important as options appropriate for a doctoral program in security studies. Only 12.8 percent of the respondents highly valued
the standard on-campus delivery throughout the degree program. While the phase two
respondents also indicated that they highly valued industry related experiential learning
as structural component of a doctoral program in security studies, the phase three
respondents indicated that they highly valued only one such structure – guest lectures by
subject matter experts.

When all of the analyses of the data related to question four were completed, the
following six instructional modalities were selected for further analysis in phase four of
this study: a combination of resident and distance learning; flexible modular program to
match the professional work commitment of candidates; guest lectures; field trips to first
responder organizations for live demonstrations and hands-on training; table top
exercises; and synchronous and asynchronous on-line instruction. The only instructional
modalities that were not considered to be sufficiently important to include in phase four
of this study were traditional classroom instruction and 1-2 weeks of on-campus
instruction quarterly.

**Question Five**

This question varied in format from the other four questions in the survey on both the
phase two and the phase three survey instruments. There were no items listed here for
the members of the expert panel to evaluate. Instead, the panel members were simply
asked to list any topics that they thought might be pertinent for doctoral students in a
security studies degree program to pursue in their dissertation studies. This same
question was included in the survey instrument used for phases one and two of this study,
as well as the form used for phase three. It was not included in the final phase of the
Delphi study (phase four). Since the purpose of this question was to determine a listing
of all possible dissertation topic suggestions made by the study respondents, the responses to this question from phases one, two, and three of this study were consolidated into a single listing of responses. No ranking, or prioritizing of these suggestions was done as the purpose of this question was simply to gather all possible suggestions regarding potential dissertation topics.

In phases two, and three of the Delphi study, question five was stated as follows: “List suggested topics for dissertations that would apply to this degree.” The 25 dissertation topics that were suggested by the respondents from both of these phases, combined, are listed below in Table 12.

Table 12

*Combined Responses to Question Five in Phases Two and Three of the Delphi Study*

<table>
<thead>
<tr>
<th>1. How to deal with the public’s perspective regarding:</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. What a citizen should expect from the government</td>
</tr>
<tr>
<td>B. Attitudes of “Nothing is going to happen”</td>
</tr>
<tr>
<td>C. Costs associated with developing security</td>
</tr>
<tr>
<td>2. Fix the Department of Homeland Security!</td>
</tr>
<tr>
<td>3. Working Relationships of Federal, State, and Local First Responder Organizations</td>
</tr>
<tr>
<td>4. Defining Interoperability</td>
</tr>
<tr>
<td>5. Fusion Center Creation -- Is It Worth It?</td>
</tr>
<tr>
<td>6. Competencies Gained from the Exercise Process</td>
</tr>
<tr>
<td>8. Technology Assessments</td>
</tr>
<tr>
<td>9. How to Build Improvised Explosive Devices (IEDs)</td>
</tr>
<tr>
<td>10. How to Gain Access to Chemicals for Weapons</td>
</tr>
<tr>
<td>11. Biological Dissemination Devices</td>
</tr>
<tr>
<td>12. What is the Threat to Middle America?</td>
</tr>
<tr>
<td>13. Effects of Grants on Government Agencies</td>
</tr>
<tr>
<td>14. Different Homeland Security Approaches by Different States</td>
</tr>
<tr>
<td>15. Decision Making in a Crisis</td>
</tr>
<tr>
<td>16. The Psychology of Disasters</td>
</tr>
<tr>
<td>17. How States and Federal Governments Address Interoperability on Limited Budgets</td>
</tr>
<tr>
<td>18. Streamlining the Department of Homeland Security</td>
</tr>
<tr>
<td>19. Focusing on Rural America, Domestic and Agricultural Terrorism</td>
</tr>
</tbody>
</table>

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Phase Four

Once all of the items for questions one through four were analyzed and the items for which there was both a trend toward consensus and which met the criteria of being evaluated by the expert panel respondents as being either vitally important or very important were identified, the selected items were formatted into the survey form that would be utilized for phase four of the Delphi study (the final phase of the study). Phase four was utilized for the development of the final consensus; thus, the expert panel members were given their final opportunity to respond to the development of the group consensus.

The structure of the phase four questionnaire was different than the structure of the phase two and phase three questionnaires. A copy of the phase four survey form is included in this document as Appendix F. This questionnaire was structured so that the panel members were required to force rank the items retained from phase three for each of the four questions and the five categories within question one. In the ranking process, a ranking of one indicated the highest priority, two indicated the item with the next highest priority and so on until all of the items in a listing were ranked. The items listed for each of the questions or categories within a question were force ranked only relative
to the other items listed for that question or category, not for all of the items listed for all
four of the questions. For example, had the following three items been listed as the items
to rank for a particular subject matter category, they might have been ranked as follows
by one of the panel respondents.

National Disaster System - 2 (indicating the item that was second in priority)
Homeland Ops Center - 1 (indicating the item with highest priority)
National Response Plan – 3 (indicating the item with the lowest priority)

The phase four questionnaire was sent to 160 panel members; the final expert panel
was composed of approximately 50 individuals from each of the three cohorts. For this
phase of the study, responses were received from 67 panel members. There were four
response forms that were not usable due to the respondents using incorrect ranking
methods. Elimination of those response forms reduced the usable responses to 63 for a
39.38 percent response rate. The phase four responses were analyzed quantitatively using
SPSS 14 to determine the frequency of the rankings received by each of the items listed
in the survey form.

Results of the Phase Four Quantitative Analysis

Question One

For phase four, question one was phrased as follows: “Which of the following
subject areas, topics or disciplines would you deem essential for inclusion in a doctoral
program in security studies.” The results of the quantitative analysis of the data from the
responses to question one are listed in Table 13.
Table 13

Responses to Question One in Delphi Study Phase Four

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
<th># of ratings</th>
<th>% of ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>N = 63</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EXECUTIVE LEADERSHIP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crisis Management, Crisis Action Plans, and Exercise Planning</td>
<td>1.6349</td>
<td>.70257</td>
<td>55</td>
<td>87.3</td>
</tr>
<tr>
<td>Development and Implementation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication and Media Relations and Control of Information</td>
<td>3.0000</td>
<td>.62217</td>
<td>51</td>
<td>81.0</td>
</tr>
<tr>
<td>Collaborative Leadership Processes</td>
<td>1.8889</td>
<td>1.04898</td>
<td>50</td>
<td>79.4</td>
</tr>
<tr>
<td>Facility (Aviation, Commercial, Institutional) Management and Security</td>
<td>3.4603</td>
<td>.87668</td>
<td>10</td>
<td>15.9</td>
</tr>
<tr>
<td>SYSTEMS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>National Incident Management System (NIMS)</td>
<td>1.8730</td>
<td>1.23774</td>
<td>49</td>
<td>77.8</td>
</tr>
<tr>
<td>Incident Command System</td>
<td>3.2698</td>
<td>1.66750</td>
<td>24</td>
<td>38.1</td>
</tr>
<tr>
<td>National Response Plan</td>
<td>3.2063</td>
<td>1.29713</td>
<td>23</td>
<td>36.5</td>
</tr>
<tr>
<td>Cyber Security</td>
<td>4.0635</td>
<td>1.80388</td>
<td>15</td>
<td>23.8</td>
</tr>
<tr>
<td>Budget, Financial and Economical Considerations in a Natural Disaster-Terrorist Incident</td>
<td>3.9206</td>
<td>1.34766</td>
<td>9</td>
<td>14.3</td>
</tr>
<tr>
<td>Human Resources</td>
<td>4.6667</td>
<td>1.41421</td>
<td>6</td>
<td>9.5</td>
</tr>
<tr>
<td>PLANNING AND POLICY ANALYSIS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk Assessment</td>
<td>1.9206</td>
<td>1.42898</td>
<td>49</td>
<td>77.8</td>
</tr>
<tr>
<td>Key Indicators for Terrorism Awareness</td>
<td>2.0000</td>
<td>1.01600</td>
<td>47</td>
<td>74.6</td>
</tr>
<tr>
<td>Item</td>
<td>Mean</td>
<td>SD</td>
<td>Combined # of rankings and % of total rankings = either 1 or 2</td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------------------------------</td>
<td>-------</td>
<td>------</td>
<td>---------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>N = 63</td>
<td></td>
<td></td>
<td># of ratings % of ratings</td>
<td></td>
</tr>
<tr>
<td>Economic Impact of Terrorism Beyond Ground Zero</td>
<td>3.492</td>
<td>1.09062</td>
<td>35</td>
<td>55.6</td>
</tr>
<tr>
<td>Transportation Systems Management in a Terrorist Event</td>
<td>3.7778</td>
<td>.94091</td>
<td>8 (0 = priority 1)</td>
<td>12.7</td>
</tr>
<tr>
<td>Practical Chemistry and Physics</td>
<td>5.4286</td>
<td>1.25357</td>
<td>4</td>
<td>6.3</td>
</tr>
<tr>
<td>Chemical and Biological Delivery and Clean-Up</td>
<td>4.4603</td>
<td>1.18900</td>
<td>3 (0 = priority 1)</td>
<td>4.8</td>
</tr>
</tbody>
</table>

**TERRORISM AND NATURAL DISASTERS**

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
<th># of ratings % of ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integration of Local, State, and Federal Agencies in Emergency Preparedness</td>
<td>1.6349</td>
<td>1.12596</td>
<td>49</td>
</tr>
<tr>
<td>Ethnic and Cultural Factors in Terrorism</td>
<td>3.1270</td>
<td>1.59123</td>
<td>29</td>
</tr>
<tr>
<td>History of Terrorism</td>
<td>3.5556</td>
<td>1.66344</td>
<td>23</td>
</tr>
<tr>
<td>Terrorism and the Physiological Impact on the Public</td>
<td>2.9365</td>
<td>.78026</td>
<td>15 (0 = priority 1)</td>
</tr>
<tr>
<td>How Technology Assists Terrorism</td>
<td>4.3968</td>
<td>.88972</td>
<td>7</td>
</tr>
<tr>
<td>Faculty and Student Actions During a Terrorist Attack-Event</td>
<td>5.3492</td>
<td>1.23339</td>
<td>6 (0 = priority 1)</td>
</tr>
</tbody>
</table>

**LAW**

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
<th># of ratings % of ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patriot Act</td>
<td>1.9524</td>
<td>.90569</td>
<td>47</td>
</tr>
<tr>
<td>Border Security, Immigration Enforcement and Management</td>
<td>2.2381</td>
<td>.85599</td>
<td>37</td>
</tr>
<tr>
<td>Civil Rights, International and Federal Law as Applied to Terrorism</td>
<td>2.1746</td>
<td>.99255</td>
<td>36</td>
</tr>
<tr>
<td>University and College Law as it Applies to Crisis Action-Management</td>
<td>3.6032</td>
<td>.88972</td>
<td>7</td>
</tr>
</tbody>
</table>

*Note*: Within each category, items are ranked in priority order with a ranking of 1 indicating the highest priority.
In the category of executive leadership, the subject areas that were perceived to have the highest priority for inclusion in a doctoral program in security studies included crisis management and the development and implementation of crisis action plans and exercise planning, collaborative leadership, communications and information control. In the systems category, only the National Incident Management System was consistently considered to be a high priority item for program content. In the category of planning and policy analysis, two items received high priority rankings. These items were risk assessment and key indicators for terrorism awareness. In the terrorism and natural disasters category, only the integration of local, state, and federal agencies in emergency preparedness was consistently high ranked. In the final category, law, only the Patriot Act was consistently highly ranked by the respondents.

**Question Two**

Question two on the phase four survey form paralleled question two in phase three and was stated as follows: “What qualifications should a candidate pursuing a PhD in security studies have prior to admission?” The results of the quantitative analysis of the data from the responses to question two are listed in Table 14.

In terms of the qualifications that a candidate for acceptance into a doctoral program in security studies should have, 66.7 percent ranked three to five years of experience in emergency management, homeland security, or security as the highest priority qualification, while about half of the respondents felt that the person applying for admission to such a doctoral program should have held a supervisory or decision making position or a leadership position with strategic planning responsibility.
Table 14

Responses to Question Two in Delphi Study Phase Four

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
<th>Combined # of rankings and % of total rankings</th>
</tr>
</thead>
<tbody>
<tr>
<td>N = 63</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-5 Years Experience in Emergency Management, Homeland Security, or Security</td>
<td>1.7778</td>
<td>1.03868</td>
<td>42 66.7</td>
</tr>
<tr>
<td>Should be in a Supervisory Position or Decision Making Position</td>
<td>2.6508</td>
<td>1.09484</td>
<td>31 49.2</td>
</tr>
<tr>
<td>Upper Management-Leadership in Local-State-Federal Professionals or Strategic Planning Responsibility</td>
<td>2.8413</td>
<td>1.41657</td>
<td>29 46.0</td>
</tr>
<tr>
<td>Administration Experience (3-10 years)</td>
<td>3.1270</td>
<td>1.05482</td>
<td>23 36.5</td>
</tr>
<tr>
<td>Professionals in the Field of Education</td>
<td>4.6032</td>
<td>.68485</td>
<td>1 1.6</td>
</tr>
</tbody>
</table>

Note: Within each category, items are ranked in priority order with a ranking of 1 indicating the highest priority.

Question Three

Question three in the phase four survey form paralleled question three in phase three and was stated as follows: “Which instructional methods and/or delivery methods would be most desirable for a candidate pursuing a PhD in security studies?” The results of the quantitative analysis of the data from the responses to question three are listed in Table 15.

More than three-fourths of the respondents ranked a flexible modular program to match the students’ professional work commitments as their highest or second highest
priority for a structure for a doctoral program in security studies. The respondents' agreement on the need for flexibility in program structure was further indicated by 65 percent of the respondents prioritizing a combination of resident and distance education as a preferred program structure. The structure options of traditional classroom instruction and standard on-campus delivery throughout the degree were given very low priority rankings with none of the respondents giving these items a priority rank above their fourth priority.

Table 15

Responses to Question Three in Delphi Study Phase Four

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
<th># of ratings</th>
<th>% of ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexible Modular Program to Match Professional Work Commitments of the Students</td>
<td>1.9524</td>
<td>1.05385</td>
<td>49</td>
<td>77.8</td>
</tr>
<tr>
<td>Combination of Resident and Distance Learning</td>
<td>2.6032</td>
<td>1.69001</td>
<td>41</td>
<td>65.1</td>
</tr>
<tr>
<td>Independent Study (On-Line Internet) Based with On-Line Chat Rooms for Group Discussion</td>
<td>4.7460</td>
<td>2.68189</td>
<td>16</td>
<td>25.4</td>
</tr>
<tr>
<td>Guest Lectures from the Array of Subject Matter Experts in the Field of Security-Terrorism</td>
<td>4.1270</td>
<td>1.63127</td>
<td>8</td>
<td>12.7</td>
</tr>
<tr>
<td>1-2 Weeks of On-Campus Instruction-Seminars</td>
<td>5.6190</td>
<td>1.87021</td>
<td>5</td>
<td>7.9</td>
</tr>
<tr>
<td>Both On and Off Campus Instruction</td>
<td>5.0000</td>
<td>1.78705</td>
<td>4</td>
<td>6.3</td>
</tr>
<tr>
<td>Table Top Exercises</td>
<td>4.9048</td>
<td>1.64331</td>
<td>3 (0 = priority 1)</td>
<td>4.8</td>
</tr>
</tbody>
</table>
Combined # of rankings and % of total rankings

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
<th># of ratings</th>
<th>% of ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>N = 63</td>
<td>7.7302</td>
<td>1.23401</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Traditional Classroom Instruction</td>
<td>7.7302</td>
<td>1.23401</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Standard On Campus Delivery</td>
<td>8.3492</td>
<td>1.10947</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Throughout the Degree</td>
<td>8.3492</td>
<td>1.10947</td>
<td>0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Note: Within each category, items are ranked in priority order with a ranking of 1 indicating the highest priority.

**Question Four**

Question four was stated on the phase four survey form as follows: “What knowledge, skills, and competencies should a candidate for a PhD program in security studies have upon graduation?” The results of the quantitative analysis of the data from the responses to question four are listed in Table 16.

In regard to the competencies that graduates of a doctoral program in security studies should have, the respondents ranked having an in-depth understanding of the interrelationship between city, state, and federal first responders to a terrorist attack as the competency that they felt was the highest priority.
### Table 16

Responses to Question Four in Delphi Study Phase Four

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
<th>N = 63</th>
<th>Combined # of rankings and % of total rankings = either 1 or 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td># of ratings % of ratings</td>
</tr>
<tr>
<td>In-Depth Understanding of the Interrelationship Between City, State, and Federal First Responders to a Terrorist Attack</td>
<td>2.7778</td>
<td>2.30318</td>
<td>38</td>
<td>60.3</td>
</tr>
<tr>
<td>Understand the Interpretational/Inter-Agency Coordination and Response Capabilities Command, Control, and Communications in an Emergency Situation</td>
<td>3.2222</td>
<td>1.73618</td>
<td>28</td>
<td>44.4</td>
</tr>
<tr>
<td>Incident Command System (ICS) Understanding, Utilization, and Implementation</td>
<td>3.8254</td>
<td>1.79191</td>
<td>15</td>
<td>23.8</td>
</tr>
<tr>
<td>Leadership Development Within the Organization</td>
<td>4.8571</td>
<td>2.58318</td>
<td>14</td>
<td>22.2</td>
</tr>
<tr>
<td>How to Deal with the Media Relations</td>
<td>5.2857</td>
<td>2.71453</td>
<td>13</td>
<td>20.6</td>
</tr>
<tr>
<td>Design and Plan Security Programs</td>
<td>5.6873</td>
<td>2.5984</td>
<td>7</td>
<td>11.1</td>
</tr>
<tr>
<td>Civil Rights Law and Terrorism, Civil Liberties Awareness</td>
<td>6.4603</td>
<td>2.38155</td>
<td>6</td>
<td>9.5</td>
</tr>
<tr>
<td>Address the Economic Impact of a Terrorist Attack</td>
<td>6.2540</td>
<td>1.80437</td>
<td>0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

**Note:** Within each category, items are ranked in priority order with a ranking of 1 indicating the highest priority.

Competencies given low priority rankings included designing and planning security programs, knowledge of civil rights law and terrorism and civil liberties awareness, and addressing the economic impact of a terrorist attack. None of the respondents ranked the competency regarding the economic impact as either their first or second priority.
Summary of the Data Analysis

The data from phase four provided the basis for the consensus statements for each of the four questions that made up this final phase. The data analyses for each of the sub-categories under question one and each of the other three questions were used to form the group consensus statements. All of the items with the lowest priority rankings (i.e., received the lowest percentage of first and second priority rankings) were not included in the final consensus other than when it seemed appropriate to include an item for reasons resulting from the qualitative analysis of the phase four data.

When considering the responses to question one concerned with the program content of a potential doctoral program in security studies, the final consensus regarding the listed content statements would indicate possible courses for inclusion in the doctoral program. For example, within the sub-category of executive leadership, the item "crisis management, crisis action plans, and exercise planning & development and implementation" was ranked as either the first or second priority for inclusion as a content area in a security studies doctoral program by 87.3 percent of the respondents. These three items or topics, which were grouped together as one item on the phase four questionnaire as a result of a gradual consensus regarding their relationship with each other as a content item from the previous phases of the Delphi study, should be included as components of core courses in the development of a model curriculum for a doctoral program in security studies. The same consensus development applies to the item "communication and media relations and control of information" which 81.0 percent of the respondents ranked as their first or second priority. The item "collaborative
leadership process” was also indicated as vitally important by the group consensus with 79.4 percent of the respondents ranking this item as either their first or second priority.

Under the systems sub-category, a completely different pattern of consensus emerged. The National Incident Management System (NIMS) was ranked as their first or second priority by 77.8 percent of the respondents, an indication by the respondent panel that NIMS should be a specific subject area for inclusion in the security studies doctoral program curriculum. However, the next two topic items, Incident Command System (ICS) and the National Response Plan, were ranked as their first or second priority by only 38.1 and 36.5 percent, respectively, of the phase four respondents. The lower priority ratings given to these topic items would indicate that the respondent group felt that these items were considerably less important in the development of the curriculum to support the doctoral degree. Therefore, if included in course content, their inclusion would be less prominent than content related to NIMS.

Other key subject areas listed under program content (question one) have been noted previously in this chapter in the presentation of the results of the quantitative analysis of the question one data. These subject areas will be discussed further as a part of the presentation of the final consensus statements and the incorporation of these statements into the development of a possible curriculum for a model doctoral program in security studies, as presented in Chapter 5.

The conflict between the priority rankings identified for the program content areas and other program development considerations through the phase four data analysis and the concerns identified through the literature review will also be discussed in Chapter 5. The rankings found for the items included in question two, the qualifications of
candidates, is an example of the concerns that the researcher has with the group’s consensus. The respondents ranked 3-5 years of experience in emergency management or other security field as the highest priority qualification with 66.7 percent of the respondents ranking this item as either their first or second priority. In contrast, the other four qualification items listed were ranked as their first or second priority by less than 50 percent of the respondents. The qualification “professionals in the field of education” was particularly noteworthy here as a qualification that was not valued at all as only one respondent ranked this qualification as the first or second priority.

The variance between the priority rankings of the items in question three (instructional methods) also represented a disparity in the group consensus resulting from the phase four data analysis compared to items considered to be important in the previous phases of the Delphi study and the literature review. There were two program structures highly ranked by the Delphi panel members as their final consensus. Flexible modular program that matched the professional work commitments of the students was ranked as their first or second priority by 77.8 percent of the respondents and a combination of resident and distance learning was ranked as their first or second priority by 65.1 percent of the respondents. There was a major variance between the rankings of these two items and the next highest priority instructional method, independent study, ranked as their first or second priority by only 25.4 percent of the respondents. Structures that incorporated experiential learning were rated as quite important in phases two and three, but received lower priority rankings in phase four. This change in perceived importance or priority level is another example of a variance between the phase four responses and the responses received in the previous phases.
One possible explanation for the variance in the responses between phases three and four could be the time lapse that occurred between these phases. It is possible that the study panel members became more aware of the need for advanced education and what such education might entail during the extended time period between these phases. As a result of this additional awareness and possible realization of the areas in which they needed additional skills and the ways in which such skills might be attained in an educational environment, the respondents varied the way in which they responded to this study's survey questions.

Question four addressed the required competencies, or the expected level of knowledge, that graduates from a doctoral program in security studies would have upon graduation. About 60 percent of the Delphi panel members rated the competency “in-depth understanding of the interrelationship between city, state, and federal first responders to a terrorist attack” as the primary skill needed by the program graduates. This importance ranking is supported by both the literature review and the Federal response to hurricane Katrina, lessons learned (2006). Interestingly, all of the other items listed under question four were given high priority ratings by only a limited number of respondents, but those high priority ratings were distributed among almost all of the listed items. Thus, from about 9.5 percent to 23.8 percent of the respondents felt that certain items should be given high priority as competencies expected from program graduates, but there was no high level agreement about which of these items should have a high priority. This diversity of opinion regarding the priority of the listed competencies would seem to indicate that course content in the model doctoral program presented in
Chapter 5 should reflect these competencies, but either as limited content of the suggested courses or as course options for the students in the program.

Consensus Statement Development

The last step in the data analysis was the development of the final consensus statements that were derived from the integration of the qualitative and quantitative analysis of the data. The final consensus statements were as follows.

**Question One:** Which of the following subject area, topics, or disciplines would you deem essential for inclusion in a doctoral program in security studies?

Consensus Statements:

For this first question, each of the five sub-categories indicated in the question as it was formatted for phases three and four will be addressed separately with the several consensus statements listed as 1-A through 1-E.

**1-A Executive Leadership:**

The panel members rated the following three items as "Vitally Important" for inclusion as key curriculum items for a doctoral degree in security studies. These items included: Crisis Management, Exercise Planning Development and Implementation; Communications and Media Relations; and the Collaborative Leadership Process. These particular items were also identified in the white paper, *Federal response to hurricane Katrina, lessons learned* (2006), as areas that were particular problems impacting the federal response in the execution phase of the response and recovery process.
1-B Systems:

Only one item, the National Incident Command System (NIMS), was highly ranked. This item was also particularly addressed in the white paper, *Federal response to hurricane Katrina, lessons learned* (2006), as an area in which leaders in the emergency services field required professional training/education.

1-C Planning and Policy Analysis:

The group consensus indicated risk assessment and key indicators for terrorism awareness as specific high priority areas for inclusion in the development of curriculum for a model doctoral degree program in security studies.

1-D Terrorism and Natural Disasters:

Consensus was reached for only one item, the integration of local, state, and federal agencies in emergency preparedness was “vitally important” as a key item for inclusion as curriculum content in a model security studies doctoral degree program.

1-E Law:

The Delphi panel consensus was that only one item was a very high priority for inclusion in a security studies program curriculum, and that item was the “Patriot Act”. The item “border security, immigration enforcement and management” was also highly ranked though by not a number sufficient to indicate a consensus. However, it should be considered for inclusion in a doctoral level security studies program.

It was expected that the Law category would present the panel with a challenge for developing a consensus. It was thought that many of the responders would lack adequate knowledge of the specific laws that apply to acts of terrorism and govern the actions of first responder forces. This expectation proved to true.
**Question Two:** What qualifications should a candidate pursing a PhD in security studies have prior to admission?

**Consensus Statements:**

Two consensus statements were developed from this question. One focuses more on the personal characteristics of the persons who would be likely to apply for admission to a doctoral level program in security studies, a consensus largely derived from the qualitative analysis of the study responses. The other statement reflects the quantitative data analysis of the items listed on the survey instruments for this question and focuses more on the qualifications of the individuals who might be potential students.

**Statement One:**

Students who would likely participate in the initial cohorts would be non-traditional professionals from the fields of emergency management and security.

**Statement Two:**

Consensus was reached that 3-5 years experience in emergency management, homeland security, or security was the first priority as a qualification required for a candidate for admission to a doctoral program in security studies. This priority level for experience when other qualifications, such as a masters degree, were eliminated from final consideration indicates a lack of understanding by the responding cohort members of the academic requirements demanded by higher education institutions for admission to doctoral degree programs (minimum standards typically require a masters degree).
Question Three: What knowledge, skills, and competencies should a candidate of a PhD program in security studies have upon graduation?

Consensus Statements:

Two consensus statements were developed for this question. The first statement is derived from the qualitative analysis of the respondents' comments included in their responses to all phases of the Delphi study. The second is more reflective of the results of the quantitative analysis of the responses to this question.

Statement One:

The majority of the initial graduates (first cohorts) would return to their parent organizations to continue their careers in leadership positions. There would also be opportunities for individuals to fill faculty positions similar to that currently under search by Missouri State University.

Given the respondents' consensus regarding the potential positions that graduates of a doctoral degree program in security studies would fill, statement two reflects the respondents' consensus regarding the competencies that they felt the program graduates would need to have to be successful in the positions of the type indicated here in consensus statement one.

Statement Two:

Graduates of a doctoral level program in security studies would have an in-depth understanding of the interrelationship between city, state, and federal first responders to a terrorist attack. They would also have a clear understanding of
inter-agency coordination and response capabilities. Both of these items were identified as “key issues” in the white paper, *Federal response to hurricane Katrina, lessons learned* (2006).

**Question Four:** What instructional methods and/or delivery methods would be most desirable for a candidate pursuing a PhD in security studies?

Consensus Statement:

The non-traditional professional students who are mostly likely to be the persons pursuing a PhD degree in security studies would require a flexible modular program that would allow them to pursue a doctoral degree while maintaining their current positions. The degree would have to be structured to provide both on-line instruction as well as on-campus face to face meetings with faculty.

**Question Five:** List suggested topics for dissertations that would apply to this degree.

Consensus Statement:

The inputs received from the panel members in Phase Two have provided over twenty possible dissertation topics that are applicable for students admitted to a doctoral program in security studies.

These consensus statements were used as the basis for the answers to the research questions posed for this study. The results of the data analysis reported here in Chapter 4 relative to the stated research questions will be discussed further in Chapter 5. In addition, a suggested structure for a doctoral degree in security studies that is based on the results of this study will be presented. Finally, the
significance and limitations of this study and recommendations for future research will be incorporated into the Chapter 5 discussion.
INTRODUCTION

This chapter contains a discussion of the findings of this study relative to the research questions posed in chapter 1. The results of the analyses of the characteristics of a curriculum that would be feasible for a doctoral program in security studies and how a program that specifically targets security management might be structured are considered in this discussion. Also, issues relative to establishing a doctoral program in security studies are noted and reviewed. Finally, the limitations associated with this study and recommendations for future research in the field of security studies, are identified and discussed.

Previously, chapter 2 addressed the limited options that are currently available for individuals with a need or desire for an advanced degree in security studies and the significance that the development of such a program might have for higher education institutions. The consensus developed by this study’s Delphi panel has provided a baseline for all phases of the development of a doctoral degree program in security studies. Thus, this chapter seeks to relate this study’s findings to the potential for developing a doctoral level program in security studies. In doing so, a plan for higher
education institutions interested in developing such a program is provided as a possible model for program development.

The Need for a Doctoral Program in Security Studies

Research question one was stated as: "Is there a need for a doctoral level program in security studies."

Early in this study, the literature review, as presented in chapter 2 of this document, gave clear indication of a need for the development of doctoral level programs in security studies. For example, the U.S. Department of Labor is predicting that the job market will see at 28 percent increase in emergency management specialists by the year 2012, and it was noted that the emergency management profession is on the list of the top ten growth professions (Hot Majors, 2007). Indications of this need were shown by the current surge among higher education institutions to develop security related programs or add a security component to existing programs during the past five years. As noted in chapter 2, in the six year period from 1995 to 2001, the number of academic degree programs offering degrees (both undergraduate and graduate) in emergency management grew from 4 to 124 although very few of these programs were specifically developed as security studies programs. This proliferation of programs (or program components) suggests a growing need for a dedicated doctoral program in security studies.

Further justification of the need for a doctoral level program in security studies came from unsolicited comments from members of the Delphi study expert panel. Many of this study's respondents acknowledge the increasing need for a security studies program at the doctoral level to meet the needs of homeland security in the United States (U.S.).
Indeed, several members of the second and third cohorts expressed an interest in enrolling in any program that might be developed and requested information on how they might apply to any developed program so that they might be considered for the first cohort of such a program. For example, a comment which one respondent included with his returned survey stated: “I have completed your survey and found that your questions raised in me a desire for more discussion. As a result, I would like to be one of your first candidates for the doctoral program you are developing. Please keep me informed.”

The external environment (represented by indicators outside of the professional fields of security and higher education) is another important factor that supports the need for the development of a doctoral program in security studies. For example, the media’s continued focus on terrorist attacks and natural disasters worldwide and their emphasis on the loss of life associated with these incidents helps create public recognition of the need for qualified leadership to effectively manage these situations. The increased attention given to the economic impact that these incidents can have on the nation’s economy has also raised public awareness of the need for individuals in leadership positions within agencies or organizations responsible for crisis management and emergency services in terrorism or disaster situations to have an understanding of the overall impact of these incidents throughout society. As an example of the economic impact of disaster situation, in September, 2005, the Milken Institute predicted that the devastation from hurricane Katrina would cost insurance companies somewhere between $20 - $45 billion and that the federal government could end up spending as much as $150 billion on cleanup and support (Milken Institute, 2005). Similarly, the California State Employment Development Department noted that while the cost of the 2007 fires in Southern
California had not yet been determined, the cost of similar fires in 2003 was $2.5 billion. In December, 2007, the Department was estimated a quarterly wage loss of about $513,000,000 as a result of the 2007 fires (State of California Employment Development Department, 2007). A doctoral degree in security studies could provide this needed level of understanding.

The external environment is also encouraging and supporting educational institutions and their efforts to develop and/or incorporate security studies into graduate programs, as shown by the development of the Department of Homeland Security’s (DHS) federal grants program (Federal Emergency Management Agency, 2007). Agencies tasked with the responsibility for managing terrorist incidents and natural disasters have recognized the need for advanced education for individuals in key positions within the agencies. For example, FEMA has established a Higher Education Program designed to assist universities that are interested in developing an advanced degree in fields related to security studies (Federal Emergency Management Agency, 2007).

There is also support for advanced degrees in the fields of security and emergency management by professional organizations such as the International Association of Emergency Managers (IAEM) and the National Emergency Management Association (NEMA), as well as state disaster management organizations. All of these organizations have realized that colleges and universities need to develop advanced degrees to meet the rapidly expanding need for educated experts in the security and emergency management professions. This expanding job market, the response to FEMA’s Higher Education Program, and the professionalization of the security and emergency management career fields have all created opportunities for colleges and universities to utilize the support of
these agencies and organizations to help them develop advanced degree programs in security studies.

The Validity of a Doctoral Degree in Security Studies

An issue not explored in this study is that of the question of the validity of a doctoral degree in security studies. Not only would an educational institution have to determine that there is a need for a security studies doctoral program, but the institution would have to determine if such a degree encompassed a valid area of study at the doctoral level before such a program could be established. David Neal (2000) of the Department of Sociology at the University of North Texas addressed this question of program validity in an article in the *International Journal of Mass Emergencies and Disasters*. He highlighted two key issues that impact the validity of a graduate level program: the legitimacy within the educational institution and the quality of the faculty. Any educational institution considering the establishment of a doctoral program in security studies must address these two issues prior to approving such a program.

Legitimacy within the Educational Institution

Legitimacy within the educational institution is based upon two questions. The first question is the availability of a body of knowledge. Relative to a doctoral program in security studies, the question surrounding the body of knowledge focuses on whether there is sufficient knowledge about the subject of disaster management, emergency management on a mammoth scale, and the newly developed homeland security management to warrant study at the graduate level. It would appear from the review of the literature presented in Chapter 2 that there is an adequate body of knowledge for a doctoral degree in security studies. The literature review presented multiple references
on the subjects of homeland security, emergency management, and terrorism. The *Journal of Homeland Security*, published monthly, has a portion devoted to new book reviews as a part of the journal; it also provides the latest journal articles on many subjects related to security studies. There are also professional organizations that publish their own journals. Examples of such journals include the *International Journal of Mass Emergencies and Disasters, Disasters, Environmental Hazards*, and *Natural Hazard Review*. These publications address the current trends in the security industry. These same professional organizations hold annual conventions and meetings which would provide faculty, students, and industry practitioners access to the latest information in the field and provide support for research and scholarly presentations relative to security, emergency, and terrorism management.

An additional question related to the body of knowledge is whether emergency management and disaster management are considered real professions. When Neal wrote about this issue in 2000, there were very few higher education programs available for those seeking a career in emergency management from a professional degree perspective (Neal, 2000). Today, however, there are over 124 professional development degree programs being offered within higher education institutions at both the undergraduate and graduate levels. Crisis management has become an even more focused topic in higher education after the disastrous events at Virginia Polytechnic Institute and State University in 2007. The rapid expansion of programs focused on security studies would seem to indicate that graduates of security studies programs are considered professionals.
Quality Faculty

The second issue in the development of a valid degree program in security studies is that of quality faculty. A valid graduate degree program has to be staffed with faculty with qualifications enabling them to teach the required subject matter at a graduate level of study. Earlier in this document, reference was made to the search being conducted by Missouri State University for a faculty member with a doctoral degree in homeland security or a related emergency management field. For even a very small doctoral program, at least one faculty member needs to have a doctoral degree in a directly related discipline to direct the program and add to the legitimacy of a new degree program that involves emergency management or security studies. Since three faculty members from the field of study are generally required for a doctoral student’s committee, it would seem likely that at least three adequately qualified faculty persons would be the minimum number required for the development of a reputable security studies doctoral program. Program faculty members need to be tenured or tenure track eligible, have degrees from accredited universities, and have, or be in the process of developing, a research/publication record in a field/discipline related to disaster management. Currently, there are few individuals available for teaching positions who could meet these requirements, though there are individuals who can meet some or most of these qualifications. The challenge for any educational institution wanting to establish a security studies doctoral program is recruiting these few qualified persons to staff a new program.

Neal (2000) stressed that, in addition to qualified faculty, the development of a research institute that addresses the wide spectrum of issues pertaining to the subject of
security and emergency management will enhance the validity and legitimacy of the fledgling doctoral program. He also noted that it is necessary to recruit faculty members with both academic and practitioner experience or expertise. These individuals will be a key factor in the development of curriculum and provide the vital link between the students and the legitimacy of the program. He indicated that many very well qualified individuals are starting to become available as they retire from agencies like FEMA, the American Red Cross, DHS, and other federal and state disaster management organizations. Many of these persons have masters degrees and are looking for second careers. Even though they do not have doctoral degrees, many are interested in teaching what they have learned in the last twenty years (Neal, 2000).

Structuring a Doctoral Degree in Security Studies as a PhD, an EdD, or an Executive Doctoral Degree

Research question two was stated as “Should a doctoral program in security studies be structured as a PhD, an EdD, or an Executive Doctoral Degree?”

Once it had been determined that there was a definite need for a doctoral level program in security studies, this Delphi study was designed to provide a comprehensive analysis of questions related to the development of a such a program. The most desirable program would be one that would meet the needs of individuals employed by federal, state, and local homeland security agencies and first responder groups while also being feasible to implement within the parameters of higher education institutions. The Delphi study consensus statement that is applicable to this question is as follows:
A doctoral degree in security studies needs to be flexible and modular in nature to meet the unique requirements of the non-traditional students from the ranks of the professional in the fields of emergency management and security who would comprise the initial cohorts of students.

One of the first questions to be explored prior to planning the structure of a doctoral degree is the determination of the appropriate degree that should be earned by someone completing the degree program. There are three degree options available for educational institutions contemplating a doctoral degree in security studies: offering the program as leading to a PhD degree or to an EdD degree or as an Executive Doctoral degree. A key aspect of this decision making process is where the degree program will be housed. If the degree is housed within the institution’s college (or department) of education, then all three degree patterns are viable options. If the program is housed elsewhere, then only the PhD degree and the Executive Doctoral degree are possible options.

This question was first explored through the literature review found in chapter 2 of this document. It was further explored through the question concerned with program structure included in the Delphi study (question four in phases three and four). While there is no decisive answer to this question, there was clear indication as to which degree would be chosen by potential students, if given a choice. Their decision would likely be based on the perceived notion of the “value” of their degree in terms of both perceived status and recognition by society. There was indication in the literature that a large portion of professional educators currently seeking a doctoral degree choose the PhD option as it is perceived to have more prestige than the EdD (Redden, 2007). Thus, the PhD program would likely be the most desirable structure for a program focused on
preparing graduates for positions focused on education and/or research. However, PhD programs tend to have a full time residency requirement and a heavy research component, characteristics that may not be fully compatible with the program structure preferences expressed by this study’s respondents.

There was little discussion of the Executive Doctoral degree in the literature, but generally such degrees are specifically designed to meet the advanced educational needs of industry practitioners and would not be acceptable for someone planning to teach or conduct research in a higher education institution. Given the concern with program flexibility expressed in the consensus statement developed from this Delphi study, structuring a security studies doctoral program as an Executive Doctoral degree program may have merit in the appeal of such a program to potential students, the majority of whom are likely to be industry practitioners.

Thus, it may be concluded that the decision as to the type of degree that should be offered as a doctoral program in security studies in any one educational institution would be at least partly contingent on where the program was housed within that institution. If the program was to be housed within a college (department) of education then the options include a PhD, an EdD or an Executive Doctoral Degree. If the program was not part of the College of Education, then only the PhD and the Executive Doctoral degree would be options for the students. The decision regarding the degree offered would also be contingent upon the career paths of the students that the educational institution hopes to attract into its program. Regardless of where the program is housed within the institution, the Executive Doctoral degree would be applicable if the program targeted exclusively industry executives or other professionals in the fields of emergency management and
security who have no intentions of pursuing a teaching or research based career upon graduation. Thus, there is no one degree structure that would be applicable to all doctoral programs in security studies that might be developed by higher education institutions in the U.S.

There is an additional degree possibility: a Doctor of Security Studies (DSS). In a personal conversation with the Associate Dean for Graduate Student Services, University of Nevada, Las Vegas, Dr. Harriet Barlow, she made the suggestion that in place of the three possibilities mentioned above, there was the fourth possibility; that of a Doctoral degree of Security Studies, DSS. (H. Barlow, personal communication, June 25, 2008)

Curriculum and Instruction

Research question number three was phrased as: "How should a new degree program in security studies be organized in terms of curriculum and instruction?"

The data the researcher accumulated through website searches, journals, textbooks, and completed surveys while conducting this Delphi study provided the base line information for the development of the core curriculum to support a doctoral program in security studies. Interestingly, higher education administrators (the members of cohort one) seemed to have little understanding about the field of homeland security as a body of knowledge for academic study. These administrators also did not seem to know what the actual educational requirements are for students from the various homeland security agencies and the other fields associated with security and emergency management, as they would apply to a doctoral program of this nature.
Findings from the Delphi Study

The results of the patterns and trends analysis as dictated by the Delphi methodology indicated that the primary areas of focus for this question were in the areas of coordination between the various local, state, and federal agencies, and the leadership processes that provide the direction for the management of crisis during a terrorist incident or a natural disaster. Content topics such as transportation systems, national disaster medical responses, and local municipal EMS infrastructures were ranked relatively low by the Delphi study panel members with between 35.3 and 32.4 percent of the respondents ranking these topics as “not important”. The following consensus statements summarize the study results related to curriculum and instruction.

1-A Executive Leadership:

The panel members rated the following three items as “Vitally Important” for inclusion as key curriculum items for a doctoral degree in security studies. These items included: Crisis Management, Exercise Planning Development and Implementation; Communications and Media Relations; and the Collaborative Leadership Process. These particular items were also identified in the white paper, Federal response to hurricane Katrina, lessons learned (2006), as areas that were particular problems impacting the federal response in the execution phase of the response and recovery process.

1-B Systems:

Only one item, the National Incident Command System (NIMS), was highly ranked. This item was also particularly addressed in the white paper, Federal response to hurricane Katrina, lessons learned (2006), as an area in which leaders in the emergency services field required professional training/education.
I-C Planning and Policy Analysis:

The group consensus indicated risk assessment and key indicators for terrorism awareness as specific high priority areas for inclusion in the development of curriculum for a model doctoral degree program in security studies.

I-D Terrorism and Natural Disasters:

Consensus was reached for only one item, the integration of local, state, and federal agencies in emergency preparedness was “vitaly important” as a key item for inclusion as curriculum content in a model security studies doctoral degree program.

I-E Law:

The Delphi panel consensus was that only one item was a very high priority for inclusion in a security studies program curriculum, and that item was the “Patriot Act”. The item “border security, immigration enforcement and management” was also highly ranked though by not a number sufficient to indicate a consensus. However, it should be considered for inclusion in a doctoral level security studies program.

On the basis of these consensus statements, the curriculum for a degree in security studies would be primarily focused on crisis planning and management, organizations that have security oversight, and those subjects that deal with security operations or the administration of emergency management programs. The leadership core would include subjects related to the following topic areas: crisis management, managing organizational change, team building, and leadership development for executives, communications and media relations, strategic planning, and crisis action plan development. Courses concerned with planning and policy would focus on subject content related to emergency management policy development, ethnic and cultural
factors in the psychology of terrorism, the National Incident Management System, and
the integration of the Incident Command System. Finally, curriculum content would
include a research sequence covering qualitative and/or quantitative methodologies as
applied to research in security studies.

Proposed Design for a Doctoral Degree Program
in Security Studies

The Federal Emergency Management Agency (FEMA) has created the FEMA Higher
Education Project (Federal Emergency Management Agency, 2007) in an effort to
support development of graduate programs focused on security studies. The following
statement expresses its primary goal for this program:

To encourage and support the dissemination of hazard, disaster, and emergency
management-related information to colleges and universities, we believe that in
the future emergency managers in government, business and industry will come to
the job with a college degree in emergency management. We also believe that to
build a disaster resilient community a broad range of college students and
professionals need courses in risk, vulnerability, disasters, terrorism, and how to

A doctoral degree in security studies should be grounded in the belief that leaders in
the fields of security, emergency management and disaster management should be well-
informed professionals who make decisions based on theory, research and data supported
information. The objectives of such a program are to: (a) prepare students for leadership
positions within local, state, and federal governments departments of emergency
management, security forces, homeland security and other fields that relate to security;
(b) prepare individuals with the skills necessary to fill positions within higher education
as faculty members within programs dealing with security and emergency management;
(c) assist doctoral students in the development of research skills in assessment,
evaluation, research design in both qualitative and quantitative methodologies appropriate for leadership positions in the management of security, emergency management, and disaster management.

The suggested program for a doctoral degree would consist of a minimum of 60 semester credit hours of course work, at a level beyond the masters degree, including up to 12 hours for the dissertation. In addition to a core curriculum and a research core, students would specialize in a focused security, disaster control, emergency management or terrorism related concentration of courses. The uniqueness of an effective security studies graduate program is the provision of opportunities for the students to interface with individuals from outside the university who are current practitioners in the various fields of security management. Students would be provided with the opportunity to expand their individual interests outside of their academic environment through an elective cognate.

Students would be required to meet the traditional doctoral degree residency requirement by completing 30 semester credit hours during a 24 month period. Students would be required to sit for a comprehensive examination after the first year of the program, or after the completion of their initial 30 credit hours of study. The comprehensive examination would be designed to ascertain the student’s current level of knowledge relative to the required core courses that they would have completed prior to sitting for the examination. Normally, in doctoral programs, the comprehensive examinations are scheduled in September and February on an as needed basis. It would be highly desirable for graduate teaching or research assistantships to be available to the students accepted into the program. Ideally, these assistantships would be available
within the department or college that houses the program, although it may be that there would be a limited number of assistantships throughout the campus for full-time students.

**Course Offerings**

A model doctoral degree in security studies would require 60 semester credit hours of coursework including up to 12 semester credit hours of dissertation research. The coursework would center around two required content cores, a crisis, emergency, disaster, and security management core suggested to account for 18 semester credit hours and a research core suggested to consist of 15 semester credit hours. In addition, each student would select a cognate area in which they were particularly interested for 9 additional semester credit hours and would select 6 semester credit hours from specialty electives. Finally, the remaining 12 semester credit hours would be allocated to dissertation research. The primary focus in the development of the content of the courses included in these two cores will be on the importance of the development of needed leadership skills for senior level security professionals.

Suggested course titles for a model doctoral program which indicate the subject matter that might be contained in these courses are indicated in Table 17. All the listed courses are assumed to be three semester credit hour courses.
Table 17

Suggested Course Structure for a Model Doctoral Degree Program in Security Studies

<table>
<thead>
<tr>
<th>Core</th>
<th>18 Semester Credit Hours Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crisis Management in Today’s Environment and the Incident Command System</td>
<td></td>
</tr>
<tr>
<td>Critical Infrastructures: Vulnerability Analysis and Protection</td>
<td></td>
</tr>
<tr>
<td>Multi-Discipline Approaches to Disaster/Security Management</td>
<td></td>
</tr>
<tr>
<td>Strategic Planning and Budgeting</td>
<td></td>
</tr>
<tr>
<td>Inter-Agency Operations and the MIMS Implementation</td>
<td></td>
</tr>
<tr>
<td>Organizational Change</td>
<td></td>
</tr>
</tbody>
</table>

| Required Courses:                                                     |
| Policy Analysis and Research Methodology                               |
| Advanced Qualitative Research                                          |
| Descriptive and Inferential Statistics                                 |
| Choice of one: Either Survey Research Methods, Program Evaluation, or |
| Inferential Statistics and Experimental Design^a                       |
| Prospectus for Dissertation                                            |

<table>
<thead>
<tr>
<th>Research Core</th>
<th>15 Semester Credit Hours Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suggested Required Courses:</td>
<td></td>
</tr>
<tr>
<td>Policy Analysis and Research Methodology</td>
<td></td>
</tr>
<tr>
<td>Advanced Qualitative Research</td>
<td></td>
</tr>
<tr>
<td>Descriptive and Inferential Statistics</td>
<td></td>
</tr>
<tr>
<td>Choice of one: Either Survey Research Methods, Program Evaluation, or</td>
<td></td>
</tr>
<tr>
<td>Inferential Statistics and Experimental Design^a</td>
<td></td>
</tr>
<tr>
<td>Prospectus for Dissertation</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cognate Area</th>
<th>9 Semester Credit Hours Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students will develop a 9 credit hour (3 courses) area of study that</td>
<td>focused on broadening their perspective regarding their special interest area within the program. It is suggested that at least two of these courses be taken in departments other than the department in which the security studies degree program is housed.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Specialty Electives</th>
<th>6 Credit Hours Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suggested Specialty Elective Courses (2 courses to be selected):</td>
<td></td>
</tr>
<tr>
<td>National Security Law</td>
<td></td>
</tr>
<tr>
<td>Agro-Terrorism and the Impact on the United States Economy</td>
<td></td>
</tr>
<tr>
<td>Weapons of Mass Destruction (NBC)</td>
<td></td>
</tr>
<tr>
<td>Technology for Homeland Security</td>
<td></td>
</tr>
<tr>
<td>Organizational and Policy Challenges in Disaster Management</td>
<td></td>
</tr>
</tbody>
</table>
Building Organizational Teams
Special Problems in Disaster Recovery
Command, Control, and Communications in Emergency Management
History of Terrorism
Psychology of Terrorism

Dissertation
Up to 12 Semester Credit Hours Required

Registration in up to 12 semester credit hours in Dissertation Research would be required.

Note: Inferential Statistics and Experimental Design is recommended only for PhD programs. Either Survey Research Methods or Program Evaluation are suggested for EdD or Executive Doctoral programs.

A suggested program for an Executive Doctoral degree would vary somewhat from this suggested model program for a PhD or an EdD degree. The Executive Doctoral degree program would cover essentially the same course content as that indicated here for the model doctoral degree. However, the courses would be taught differently. The majority of the courses would be taught as Internet based distance education courses or as hybrid courses combining Internet based education with limited periods of intense course work conducted on-campus. The on-campus work might be conducted on one weekend per month, for example. The dissertation requirement for the Executive Doctoral degree would be the same as for the PhD or the EdD degree. An example of an Executive Doctoral degree program in security studies that has been developed as a proposed program to be offered at the University of Nevada Las Vegas by the Educational Leadership Department is included in this document as Appendix G.
Characteristics of Students

Research question number four was phrased as: "What would be the characteristics of the individuals seeking an advanced degree in security studies?"

When considering the structure of a doctoral program in security studies it is necessary to consider the characteristics of the students who would be likely persons seeking this degree. The results of this Delphi study provided consensus statements characterizing the persons who would be those most likely to be applicants for such a degree program. These consensus statements are summarized as follows:

Students who would likely participate in the initial cohorts would be non-traditional professionals from the fields of emergency management and security.

Students would likely have 3-5 years experience in emergency management and may or may not have a masters degree.

As the Delphi Study has shown, the students seeking this degree would fall under the category of non-traditional students. These students will likely be older than the average university graduate student. Most will have many years of "operational" experience as professionals in some aspect of security management, emergency services management, first responder organizations, security agencies, or homeland security organizations. Many of the candidates will be coming from positions of supervision or decision making; they may be from the upper levels of management in local, state or federal governments. The Delphi study has shown that most of the potential students will be coming from their normal, everyday positions and will be highly motivated. This conclusion is based on the number of unsolicited requests for information about the doctoral program which members of the Delphi study panel wrote on their survey response forms. Some of the
study respondents also indicated their desire to be included in the first cohort that would
start the degree program.

The majority of these students will not be looking for the traditional on-campus
semesters or quarters of instruction. They may or may not have financial support or a
leave of absence from their employers so that they can reside on or near the university
campuses. It is likely that they will have families, possibly including children established
in school systems where their jobs are located. All of these factors must be taken into
account when developing a doctoral program of this nature. These non-traditional
candidates will have requirements that are quite different from those characterizing the
more traditional doctoral candidate. Structuring a program to meet those requirements
will be a challenge for those institutions working to develop a security studies doctoral
program.

One possible solution to this dilemma is the Executive Doctoral degree. A degree
program of this nature can be tailored to meet both the needs of the institution in terms of
rigor and structure as well as the needs of the students who will be seeking flexible
modalities, problem-based learning, and a combination of on-campus and distance
learning instruction. An Executive Doctoral program could be structured to emphasize
the identification and development of solutions to real problems in the world of security.
A flexible program of this nature would benefit both faculty and students from the dual
aspects of time and social interaction. Faculty would have the freedom to develop both
on-line courses and classroom based seminars without the burden of classes meeting
every week on campus. Since a large portion of the curriculum would be based on the
knowledge of the professional practitioners (students) working in the fields of security or
emergency management, faculty would have more time for developing a vibrant program of guest speakers. These guest speakers (subject matter experts) would provide expertise on current problems in security, along with unique looks into current affairs, in a seminar format during the periods when the students were on campus. (See Appendix G for an example of a possible structure for an Executive Doctoral degree program in security studies.)

Types of Positions that Graduates of a Doctoral Program in Security Studies Might be Qualified to Fill

Research question number 5 was phrased as: “Upon graduation, what types of positions/careers would these individuals be qualified to fill?”

An important consideration in the determination of the curriculum content that is desirable for a security studies doctoral program is where the program graduates might be employed. The question to be considered is concerned with graduates’ career paths and the type of positions graduates would be qualified to fill. A consensus statement that evolved from the Delphi study is applicable to this question. That statement is as follows.

*The majority of the initial graduates (first cohorts) would return to their parent organizations to continue their careers in leadership positions. There would also be opportunity for individuals to fill faculty positions similar to that currently under search by Missouri State University.*

Initially, it seems likely that the majority of the graduates from a security studies doctoral program would return to their parent organizations with the prospect of advancement or selection for a position with greater decision-making responsibilities. It
was noted in Chapter 2 that one of the problems that is currently being experienced by institutions that have advanced degree programs in security studies, security management or emergency services management is that their students are being hired throughout the industry prior to finishing their degrees. The demand for individuals to fill the gaps in leadership positions within the many fields of security is apparent throughout the nation, starting with the demands within the Department of Homeland Security mentioned by the Secretary of Homeland Security (Chertoff, 2005) in Chapter 2, down to the local city needs for experts in the field who have advanced degrees. This high demand for qualified personnel could lead to difficulties for students who accept full time positions prior to completing their degrees. It would be likely that many of these students would never complete their doctoral degrees or, at a minimum, face an extended time for the completion of their degrees.

The career opportunities are not limited to the fields related to emergency management; higher education is also seeking individuals with doctoral degrees in security studies. As previously noted, Missouri State University is currently seeking an individual to fill a position in its College of Humanities and Public Affairs. The position is for an assistant, associate or full professor with a doctoral degree in homeland security or closely related area. Duties include teaching on-site and online courses in homeland security and related disciplines.

Other colleges and universities are looking for individuals with advanced degrees to staff their emerging programs associated with security and emergency management. One only needs to look at the faculty required to staff the growth in programs offering security studies in the past six years, a growth from 4 to 124 programs. That growth has been
experienced throughout the nation; there just are not enough individuals with advanced degrees in security studies to meet the needs. Not only are the traditional institutions within the local, state, and federal governments looking to hire graduates with degrees in security, but businesses such as the major hotel, resort, and casino corporations are hiring graduates of these programs. The concern for terrorism and the effect that it has had on tourism and all other economic sectors has opened positions for graduates in all types of organizations.

Thus it would be important for the curriculum developed for a doctoral program in security studies to contain content which would prepare students for employment in both the public and private sectors, as well as in academia. To do so will likely require flexibility in course structures so that the content of courses might be studied through alternative avenues and the desired competencies for a course achieved through multiple, varied paths.

Dissertation Topics in Security Studies

Research question number six was phrased as: “What are the likely topics for dissertations in security studies?”

During the second and third phases of the Delphi study, respondents were asked to indicate what they thought might be appropriate dissertation topics for students completing a doctoral degree in security studies. The responses to that open ended question resulted in the following consensus statement.
The inputs received from the panel members in Phase Two have provided over twenty possible dissertation topics that are applicable for students admitted to a doctoral program in security studies.

The complete listing of responses to this question are listed in Chapter 4, Table 12. It is interesting to note the wide array of topics that the Delphi study panel members have suggested and the potential for additional research in the fields related to security that is apparent from this array of topic listings. Suggested topics range from specific concerns with weapons that might be used for terrorism (biological dissemination devices) to concerns regarding budgets and resources (effects of grants on government agencies) to more “big picture” topics such as threat assessment (what is the threat to Middle America). Given the diversity of the suggested topics, it seems likely that they reflect the concerns that the panel members have in regard to security, emergency management and homeland security. Most of the suggested topics seem to be oriented toward applied research, and several of these topics could be expanded to form a very interesting dissertation or follow-up studies to this dissertation.

Significance of the Study

The significance of this Delphi study is directly related to today’s concerns with homeland security in the face of potential terrorist acts or natural disasters. First, this study contributes to the body of knowledge within higher education concerning the need for a doctoral program in security studies. The first research question: “Is there a need for a doctoral level program in security studies?” has been answered both by the results of the research conducted in support of this dissertation and by the literature review.
Second, this study demonstrates the conflicting perspectives on the part of higher education faculty and administrators versus those professionals working in the related fields of security regarding the knowledge and skill that should be incorporated into a security studies doctoral program. The findings also identify the lack of professional development by those same security professionals beyond their extensive operational experiences. This need for professional development is supported by the findings of this Delphi study, the lessons learned from Hurricane Katrina discussed in the white paper, *Federal response to hurricane Katrina, lessons learned.* (2006), and the FEMA Higher Education Project (Federal Emergency Management Agency, 2007).

This study provides the basic concept, instructional modalities, program structure options and suggested curriculum that those universities contemplating the development of a new doctoral degree in security studies could use as a starting point for that endeavor. This study provides significant valuable insights regarding the knowledge and skills the executive leadership within the fields of emergency management/security would need to effectively fulfill their leadership responsibilities. Additionally, this study provides significant information regarding the knowledge that future faculty teaching in a security studies program in higher education would need to effectively develop and sustain a viable, valid graduate level program focused on security studies.

**Limitations**

The limitations associated with this Delphi study are in regard to two aspects of the study -- time and financial support and the response rate to the survey instruments by the potential expert panel members. The first limitation is related to the time available to the
researcher. This study was not conducted according to the normal time line characteristic of most dissertation research. Due to the circumstances of the Homeland Security Grant awarded to the Center for Workforce Research and Development and the professional background of the researcher, the opportunity for conducting this study was out of sequence with that of the normal doctoral student progression. As the project director for the grant, the researcher was playing “catch-up” throughout the study. The researcher conducted the research and literature review concurrently with his teaching load at the university and while completing the courses required for the doctoral degree, specifically, both the core courses and the research core. There was also an unexpected delay in this study due to medical limitations that restricted the mobility of the researcher and a family commitment associated with the Columbia Space Shuttle Tragedy that accounted for two lost semesters during this study. The researcher, using hind-sight, would not recommend this sequence, especially considering the time necessary to prepare for the comprehensive examinations. He feels that it is critical to the successful research necessary for any study that the research core be completed prior to the beginning of the research for the dissertation.

This research study was conducted with little financial support; it was not supported by a research grant. Thus, the costs associated with this study were borne by the researcher. Time and money were considerations in limiting the scope of the mailed surveys. Therefore, the range of persons included as potential members of the expert panel cohorts was likely not as extensive as would have been desirable. This limitation may restrict the applicability of the findings to all potential security studies programs that might be developed nationwide.
The second limitation centers on the responses from the Delphi cohorts. The poor survey response rate from those cohort panel members in higher education highlighted the current lack of understanding regarding the topic of security and its application in reference to a doctoral degree in security studies. Those educators that responded had a different perspective on the topics for inclusion in the curriculum section of the survey than did the respondents who were industry professionals. The educator respondents also had a marked difference of opinion, compared to the security industry professionals, on the majority of the program content topics that were rated as either vitally important or very important. The poor response rates presented challenges for the researcher and led to the inclusion of an additional survey phase resulting in a study comprised of four phases instead of the three phases, initially planned, in an attempt to obtain greater input from the cohort members.

Recommendations for Future Study

This study has just begun to address the question of the need for a doctoral degree in security studies and how that need might be met. The rapid expansion of programs currently offered is a key indicator that higher education institutions have recognized that a significant gap existed at the close of the twentieth century in regard to the demand for security studies. In the short time period between 1998 and 2007, 120 new programs or program components were developed and implemented in colleges and universities nationwide. The Naval Post Graduate School, which offers the premier graduate program in security studies, is graduating its seventh class in security administration in May 2008.
This present study represented only a very small percentage (less than one percent) of those institutions now offering some type of security studies program at either the undergraduate or graduate level or both. It also represented only a very small portion of the individuals working in leadership positions in emergency management, management of first responder forces, and security management.

The survey instruments designed for this study accomplished their basic function; however, they should be modified for future research. These instruments need further testing and, most importantly, a greatly expanded number of responses or the use of another survey method to enrich the data from this study. Construct validity could be enhanced through factor analysis if the number of items on the form were reduced while the number of survey responses was increased. An increased number of responses would provide sufficient data for factor analysis and increase the level of confidence of the resulting findings.

The primary purpose of this study was to determine if there was a need for doctoral programs in security studies, and, if so, how should such programs be structured. The question regarding the need for a security studies doctoral program question has been answered in the affirmative. That question could be expanded in future research with the following suggested areas of research.

1. This current study should be replicated and expanded in scope to validate the findings reported in this document and/or expand the findings regarding program content and structure.

2. Studies should be conducted to determine where the graduates from the 124 current programs have found employment. Related to this employment question would
be studies to determine whether any of these individuals have continued their educational
development and, if so, at what level of graduate study. Another related question would
be to study how many graduates from the current doctoral programs offering degrees
associated with emergency management or security have entered the ranks of academia?
For example was Missouri State University successful in their search for a faculty
member with a PhD in homeland security?

3. A study should be conducted to determine how many dedicated doctoral programs
are being offered and how many students are enrolled in these programs since the last
such reported study was completed in 2001. That study should also investigate where the
graduates of these programs are being employed. Currently (in 2008) emergency
management/security is being reported as a “growth industry” in higher education; this
growth level has been confirmed by the massive expansion of programs addressed above.
This new study should determine to which these programs have expanded to by this
future point in time

4. Finally a new needs assessment at some point in the future should be conducted to
determine if there is still a requirement for individuals with a doctoral degree in security
studies or if the initial surge in the demand for individuals with graduate education in this
field for positions in federal, state, and local government, as well as in business
organizations, has declined as the state of terrorism declines (presuming that terrorism
will decline in the future).
Conclusion

This study sought to determine if there was a need for a doctoral program in security studies. The results of the Delphi study showed that there is indeed a gap between the masters degree and the doctoral degree programs currently available in higher education. The study also developed a suggested curriculum and structure that experts in the fields of security and higher education felt were required for a degree program of this quality level. While there were questions about the actual type of degree to offer -- a PhD, an EdD, or Executive Doctoral degree -- the essential findings indicated that regardless of the type of degree offered, the need exists for the degree. Indeed, the study suggested that there may be a need for a PhD or an EdD degree structure for persons most interested in a career in education and/or research as well as a need for an Executive Doctoral degree for industry professionals who are focused on advancing in their careers within the agency or organization in which they are employed.

A major finding of this study also focused on the need for flexibility in program structure so that a program can meet the needs of the potential students entering the program as most of these students are likely to be non-traditional students. Finally, the suggestions for possible topics for doctoral students’ dissertation research seems to indicate that there are many areas in which research is needed, areas which would offer ample opportunities for doctoral students to complete meaningful research.

It is anticipated that this study will provide needed information to assist higher education institutions with the development of doctoral level programs in security students. It is hoped that by providing this information to higher education institutions, this study will play a significant role in helping to alleviate the gap between the need for
and the availability of graduate level programs in security studies, particularly the need for doctoral programs.
APPENDIX A

INTERNAL REVIEW BOARD DOCUMENTS AND INFORMED CONSENT FORM

University of Nevada, Las Vegas

Doctorate Degree in Security Studies, Project Director

College of Educational Leadership

TITLE OF STUDY: Delphi Study for Doctoral Degree in Security Studies.

INVESTIGATOR: Barent N. McCool, M.Ed

Description of Study:
Delphi Study
College of Educational Leadership
    Delphi Study for Doctoral Degree in Security Studies.
The purpose of this study is to determine the types of course content and academic experiences that should be included in developing the curriculum for such a program, as well as identifying qualifications and competencies for program graduates.

Subjects:
You are invited to participate in a Delphi study as part of a needs assessment process to determine the need and feasibility of offering a Doctoral Degree in Security Studies within the Department of Educational Leadership at the University of Nevada, Las Vegas (UNLV). You are being asked to participate in this study because of your unique position as a Subject Matter Experts (SME) in the fields of security and higher education. Due to your experiences and
expertise you represent an important source of knowledge about what should be included in an advanced graduate program in the field of security studies. Your assistance will help us develop a database, identify possible program gaps and describe needs that should be addressed in such a program.

**Purpose, Methods, Procedures:**
The Delphi method is a well-established procedure for developing a consensus based on input from a large number of participants. Typically there will be three rounds, with each round having two parts. The first part entails the participants providing their responses to four (4) questions. (We estimate that this activity will take no more than fifteen to twenty minutes. The Delphi Study will be an online assessment with participant's responses being sent electronically back to the database software for processing. The second part is accomplished by the researchers. We expect that this part will take two to three weeks). Once all participants have submitted their responses, the research team's task is to develop a set of statements that begin to summarize the emerging themes that appear to be represented across all of the participant responses. The second round begins when the first approximations of the general themes are shared back with the participants and they are asked to respond.

The research team then reviews and summarizes the responses and narrows the themes again. Usually by the end of the third round the consensus themes are clear and agreed upon by most participants. Information collected as part of this study will be reported in a combined format with no individual attribution unless prior permission has been received from any individual being quoted. All records will be stored in a locked facility at UNLV for at least 3 years after the completion of the study. After the storage time the information gathered will be destroyed.

**Benefits:**
Benefits of your participation include the opportunity to provide your unique insight into the development of a new advanced degree in a Security Studies. You also are in the position of having direct input for the professional development of future executive leadership in the rapidly developing field of security.

**Risks-Benefit Ratio:**
The risks associated with this research are minimal. We are not asking for any personal information whatsoever. There is a possible risk that is anxiety oriented when one takes a test but it is minimal in this case. Your participation in this study is voluntary. You may refuse to participate in this study or in any part of this study. You may withdraw at any time without prejudice to your relations with the University of Nevada, Las Vegas. You may contact those listed under Contact Information with any questions at any time.

**Costs to Subjects:**
The risks associated with this research are minimal. We are not asking for any personal information whatsoever. There is a possible risk that is anxiety oriented when one takes a test but it is minimal in this case. Your participation in this study is voluntary. You may refuse to participate in this study or in any part of this study.

**Contact Information:**
If you have any questions about this study, you may contact Barent N. McCool at 702-895-1613, Dr. Gene Hall at 702-895-3441, or Dr. Teresa Jordan at 702-895-2724. For questions regarding the rights of research subjects, any complaints or comments regarding the manner in which this study is being conducted you may contact the UNLV Office for the Protection of Research Subjects at 702-895-2794.

**Informed Consent:**
This will be an on-line survey utilizing Web-based data collection. Information collected as part of this study will be reported in a combined format with no individual attribution unless prior permission has been received from any individual being quoted. All records will be stored in a locked facility at UNLV for at least 3 years after the completion of the study. After the storage time the information gathered will be destroyed.

Checking the provided box indicated that you have read the informed consent form and are willing to participate in this on-line Delphi Study.

I accept □ I do not accept □
APPENDIX B

SURVEY FORM FOR PHASE ONE
(PILOT STUDY)

Phase One (Plot) Delphi Study

The Department of Educational Leadership at the University of Nevada Las Vegas is exploring the possibility of offering a Ph.D. in Security Studies. Please assist us in determining the program's feasibility and design by providing your insights for the following questions in this online survey.

1. Program Content.

What subject areas, topics, or disciplines would be deemed essential for inclusion in a doctoral program in Security Studies?
2. Qualifications of Candidates.

What level or type of experience, positions, or backgrounds, should candidates have attained prior to entering this doctoral program?

3. Instructional Modalities.

Which methods of instruction/delivery would be most desirable for a doctoral program in security studies?

4. Program Outcomes.

What would be the required competencies (knowledge, skills, and abilities) that a graduate of this degree program should have acquired upon graduation from the Security Studies degree program?
5. Which category does your organization fall under?

- Federal
- State
- Local
- Private
- Other

6. What professional area are you associated with?

- Law enforcement
- Military
- Political/policy
- Education
- Emergency Services
- Other

7. What is your level of education?

- Less than a BS
- BS
- Masters Degree
- Doctoral Degree
- Other
8. Please describe your current position/work assignment.

Thank you for your participation in the first phase of this study.
APPENDIX C

RESPONSES TO PHASE ONE (PILOT STUDY) OF THE DELPHI STUDY

Question 1. Program Content

Facility management
Budget processes and financial considerations
Human resources
Collaborative leadership processes
Civil rights law
University, college, and public school law as it applies to crisis management
Interaction with government agencies in emergency preparedness
Emergency management policy development
Criminal justice and terrorism
Communications and the media
Crisis management
Planning for disasters
Faculty and student actions during a terrorist attack/event
Utilization of outside subject matter experts (SMEs)
How to develop a crisis plan
Facility needs in the case of a terrorist event
Border security
Screening of visitors to facilities and campuses
Radiation detection in schools
Chemical and biological containment
How does the National Disaster System function?
Aviation facility security and prevention
Cyber security
National disaster medical response system
How do homeland security operation centers function?
The function of the National Incident Management System (NIMS)
The national response, recovery, and prevention exercise planning
Economic impact of a terrorist attack
History of terrorism
Ethnical and cultural factors in terrorism
Middle-Eastern cultural studies
Developing curriculum for weapons of mass destruction (WMD)
The Incident Command System (ICS)
Emergency operations for local municipal infrastructures
Haz-mat training and containment
Transportation systems management in a terrorist event
Tourist awareness and security
Immigration enforcement and management
Leadership from the scholarly perspective
Risk assessment and mitigation
Practical chemistry and physics
Weapons of mass destruction delivery methods
Technology that assists the terrorist
Transportation of WMDs
Communications disruption in the wake of a disaster
Why do terrorists attack?
Chains of command
Psychology of the terrorist foreign and domestic

Question 2. Qualifications of Candidates

Professionals in the field of education
Minimally a masters degree
Field experience
Administration experience
Military or law enforcement background
Executive positions from the emergency management/security industry
10 years experience in emergency management, homeland security, defense, security etc.
5 years experience in a specialty field
Full time employment with local, state, or federal agencies associated with security or emergency management
Should be in a supervisory position or decision making position
Executive or middle management leadership position
Public administrator
Upper management/leadership in local/state/federal professions

Question 3. Instructional Modalities:

Combination of resident and distance education
Flexible modular program to match professional work commitment of the students
Guest lecturers from the array of subject matter experts in the fields of security
Field trips to various first responder organizations for demonstrations and hands on training
Both on and off campus instruction
Table top exercises
Traditional classroom instruction
Independent study (on-line/Internet) based
1-2 weeks of on-campus instruction/seminars
Widest possible instruction with emphasis on practicums
Face to face instruction
Synchronous and asynchronous on-line instruction
On-line chat rooms for group discussions
The more applied and hands instruction the better

**Question 4. Required Competencies**

- Evaluate current structure/environment
- Plan and build a program at any level
- Strong ability for interoperability and communications
- Team building
- Execute planning in an emergency
- Leadership skills and development of subordinates
- Design, develop, and plan security programs
- Firm understanding of the Incident Command System (ICS)
- How to develop exercise plans
- Knowledge of inter-agency operations and response capabilities
- Civil rights law and terrorism
- Ability to communicate in an emergency situation
- Knowledge of potential security systems and communication systems
- In-depth understanding of the interrelationship between local, state, and federal first responders to a terrorist attack
- How to deal with the media
- Ability to pass on through training the lessons learned to other organizations (Train the Trainer)
- Legal issues and civil rights
- Exercise planning
- Counterintelligence and cyber security
- How to address the economic impact of a terrorist attack
- Infrastructure protection methods
- Civil liberties awareness
- Review and design security programs
- How to implement change within the organization
APPENDIX D

PHASE TWO SURVEY INSTRUMENT

Doctoral Degree in Security Studies Needs Assessment

The Department of Educational Leadership, the University of Nevada Las Vegas, is developing a doctoral degree program in Security Studies. Please help us develop a quality program, by filling out the survey questions listed below.

The responses are on a Likert scale that decreases from a high of 5 (very important) to 1 (not important) left to right. Please select one value for each of the items in each of the categories. A self addressed pre-stamped envelope is included to return your completed questionnaire.

Thank you for taking the time to assist us in this project.

Vitally Important Very Important Important Slightly Important Not Important
5 4 3 2 1

1. Which of the following subject areas, topics or disciplines would you deem essential for inclusion in a doctoral program in Security Studies?

Crisis Management 5 4 3 2 1
National Incident Management System (NIMS) 5 4 3 2 1
Collaborative Leadership Processes 5 4 3 2 1
Budget and Financial Processes 5 4 3 2 1
National Disaster Medical Response System 5 4 3 2 1
The Function of Homeland Security Ops Centers 5 4 3 2 1
Facility Management 5 4 3 2 1
Exercise Planning 5 4 3 2 1
<table>
<thead>
<tr>
<th>Topic</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Impact of a Terrorist Incident/Attack</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Criminal Justice and Terrorism</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Developing Crisis Action Plans</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Ethnic and Cultural factors in Terrorism</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Management of Disaster Relief Assists</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>History of Terrorism</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Integration of First Responders</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Emergency Management Policy Development</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Aviation Facilities Security</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Cyber Security</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Disaster Planning and Managing the Media</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Command, Control, and Communications</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Management of Human Resources</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>The Interaction with Federal Agencies</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Civil Rights Law</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>The National Response Plan</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Radiological, Chemical, and Biological Containment and Clean-up (HAZ-MAT)</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Mid-Eastern Cultural Studies</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Immigration Enforcement and Management</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Weapons of Mass Destruction (WMD)</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Transportation Systems Management</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>The Incident Command System (ICS)</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Emergency Operations for Local</td>
<td>5 4 3 2 1</td>
</tr>
</tbody>
</table>
2. **What level of experience, type of positions, or background should candidates have prior to entering this doctoral program?**

<table>
<thead>
<tr>
<th>Qualification</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimal Education Required a Masters Degree</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Field Experience</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Military or Law Enforcement Background</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Professionals in the Field of Education</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Executive Positions From Industry</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Ten Years Experience in Emergency Management Security, Defense, or Homeland Security</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Five years Experience in a Specialty Field</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Full time Employment with a State, Local, or Federal Agency Associated with Security or Emergency Management</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Experience in a Decision Making Position</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Upper Management/Leadership within Local, State, or the Federal Government</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Experience with Strategic Planning Responsibility</td>
<td>5 4 3 2 1</td>
</tr>
</tbody>
</table>

3. **Which of the following instructional Modalities would be most desirable for a doctoral program in Security Studies based on the above candidates’ qualifications?**

<table>
<thead>
<tr>
<th>Modality</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Combination of Resident and Distance Learning</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Flexible Modular Program to Match the Professional Work Commitment of Candidates</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Guest Lectures by Subject Matter Experts (SME)</td>
<td>5 4 3 2 1</td>
</tr>
</tbody>
</table>
Field Trips to First Responder Organizations for Live Demonstrations and Hands-On Training

Table Top Exercises

Independent Studies (on-line Internet based)

Traditional Classroom Instruction

1-2 Weeks of On-Campus Instruction Quarterly

Synchronous and Asynchronous On-Line Instruction

4. What would be the expected competencies of a graduate of a Security Studies Doctoral?

Team Building

Planning and Building a Security Program

Working Knowledge of the Incident Command System (ICS)

How Interpretability and Communications Interact Between Local, State and Federal First Responder Agencies

How to Develop Exercise Plans

Knowledge of Inter-Agency Operations and Response Capabilities

Knowledge of Civil Rights Law and International Terrorism

How to Deal with the Media in a Terrorist Event or Natural Disaster

How to Address the Economic Impact of a Terrorist Attack

A Basic Understanding of the History of Terrorism and What Motivates Terrorists

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How to Implement Change within the Organization

Please List Any Other Competencies That You Wish to Add:

5. List any Dissertation research topics that you might like to see candidates in a doctoral in security studies degree program pursue.
APPENDIX E

PHASE THREE SURVEY INSTRUMENT

November 15, 2005

Dear Sir or Madam:

The Department of Educational Leadership at the University of Nevada, Las Vegas is conducting a needs assessment as part of the development of a doctoral degree in Security Studies. Our purpose is to develop a program to prepare security personnel in positions of leadership at the highest levels in federal, state, and local government, as well as those within education and industries that have the need for security specialists with advanced degrees.

We ask you to respond to the survey so that we can identify content for the development of a curriculum that will prepare competent professionals in the field of security. Your participation will help us refine and tailor a doctoral program that will meet the needs specified by the Office of Domestic Preparedness under which Homeland Security resides. In addition, your expert opinion is needed to assist us in clarifying the type of student who could be recruited for such a program as well as identify the types of organizations and positions for which these graduates would be qualified to fill. We value your input and feel your expertise could benefit us. We respectfully request your assistance with the completion of the attached survey. We look forward to your response, and we thank you for your assistance with this survey. We are looking to begin the data analysis of the Delphi Study NLT March 10, 2006. Should you have any questions, feel free to contact me at the telephone number listed.

Respectfully,

Barent McCool, Project Director for Homeland Security
Center for Workforce Development & Research
(702) 895-1613

Sterling Saddler, PhD, Department of Educational Leadership, Chair
Project Director for Homeland Security
University of Nevada, Las Vegas
The Department of Educational Leadership, the University of Nevada Las Vegas, is developing a doctoral degree program in security studies. Please help us develop a quality program by completing this survey. The responses are on a Likert scale that measures the importance of each component from a high of 5 (Vitally Important) to 1 (Not Important). Please select one value for each of the items in each of the categories. A self addressed pre-stamped envelope is included to return your completed questionnaire. Thank you for taking the time to assist us in this project.

<table>
<thead>
<tr>
<th></th>
<th>Vitally Important</th>
<th>Very Important</th>
<th>Important</th>
<th>Slightly Important</th>
<th>Not Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Leadership</td>
<td>5 4 3 2 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facility (Aviation, Commercial, Institutional) Management and Security</td>
<td>5 4 3 2 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication and Media Relations and Control of Information</td>
<td>5 4 3 2 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collaborative Leadership Processes</td>
<td>5 4 3 2 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crisis Management, Crisis Action Plans, and Exercise Planning Development and Implementation Other (Write In)</td>
<td>5 4 3 2 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SYSTEMS**
National Disaster System | 5 4 3 2 1         |                |          |                    |               |
National Disaster Medical Response 5 4 3 2 1
Homeland Security Operation Centers 5 4 3 2 1
National Incident Management System (NIMS) 5 4 3 2 1
Incident Command system 5 4 3 2 1
National Response Plan 5 4 3 2 1
Budget, Financial and Economical Considerations in a Natural Disaster/Terrorist Incident 5 4 3 2 1
Human Resources 5 4 3 2 1
Cyber Security 5 4 3 2 1
Other (Write In)

Vitally Important 5
Very Important 4
Important 3
Slightly Important 2
Not Important 1

PLANNING AND POLICY ANALYSIS
Emergency Management Policy Development 5 4 3 2 1
Ethnic and Cultural Factors and the History and Psychology of Terrorism Both Foreign and Domestic 5 4 3 2 1
Key Indicators for Terrorism Awareness 5 4 3 2 1
Weapons of Mass Destruction (WMD), Delivery Methods, and HAZ-MAT Training and Containment 5 4 3 2 1
Transportation Systems Management in a Terrorist Event 5 4 3 2 1
Practical Chemistry and Physics 5 4 3 2 1
Economic Impact of Terrorism Beyond Ground Zero 5 4 3 2 1
Chemical and Biological Delivery and Clean-Up 5 4 3 2 1
Risk Assessment 5 4 3 2 1

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TERRORISM AND NATURAL DISASTERS
Integration of Local, State, and Federal Agencies in Emergency Preparedness

Faculty and Student Actions During A Terrorist Attack/Event

How Technology Assists Terrorism

History of Terrorism

Terrorism and Psychological Impact on the Public

Ethnic and Cultural Factors in Terrorism

Other (Write In)

<table>
<thead>
<tr>
<th>Vitaly Important</th>
<th>Very Important</th>
<th>Important</th>
<th>Slightly Important</th>
<th>Not Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

LAW
Civil Rights, International, and Federal Law as Applied to Terrorism

University and College Law as it Applies to Crisis Action/Management

Border Security, Immigration Enforcement and Management

Patriot Act

Other (Write In)
Q2. QUALIFICATIONS OF CANDIDATES:
What qualifications should a candidate pursuing a PhD in security studies have prior to admission?

Professionals in the Field of Education
Administration Experience (3–10 Years)
3-5 Years Experience in Emergency Management, Homeland Security or Security
Should Be in a Supervisory Position or Decision Making Position
Upper Management/Leadership in Local/State/Federal Professionals Or Strategic Planning Responsibility

Other (Write In)

Q3. REQUIRED COMPETENCIES/OUTCOMES UPON GRADUATION
What knowledge, skills, and competencies should a candidate of a PhD program in security studies have upon graduation?

Design and Plan Security Programs
Execute Planning in an Emergency
Evaluate Current Structure/Environment
Understand the Interpretational/Inter-Agency
Coordination and Response Capabilities 5 4 3 2 1
Address the Economic Impact of a Terrorist Attack 5 4 3 2 1
How to Implement Change within the Organization 5 4 3 2 1
Leadership Development within the Organization 5 4 3 2 1
Incidental Command System (ICS) Understanding, Utilization, and Implementation 5 4 3 2 1
Civil Rights Law and Terrorism, Civil Liberties Awareness 5 4 3 2 1
Command, Control, and Communications in an Emergency Situation 5 4 3 2 1
Knowledge of Potential Security Systems and Communications 5 4 3 2 1
In-Depth Understanding of the Interrelationship Between Cities, State, and Federal First Responders to a Terrorist Attack 5 4 3 2 1
How to Deal with Media Relations 5 4 3 2 1
Counterintelligence and Cyber Security 5 4 3 2 1
Understanding of the Effects of Terrorism from a Cultural and Physiological Perspective 5 4 3 2 1
Other (Write In)

<table>
<thead>
<tr>
<th></th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vitaly Important</td>
<td>Very Important</td>
<td>Important</td>
<td>Slightly Important</td>
<td>Not Important</td>
<td></td>
</tr>
</tbody>
</table>

**Q4. INSTRUCTIONAL METHODS:**
Which instructional methods and/or delivery methods would be most desirable for a candidate pursuing a PhD in security studies?

Combination of Resident and Distance Learning 5 4 3 2 1
Flexible Modular Program to Match Professional Work Commitments of the Students 5 4 3 2 1
Guest Lectures from the Array of Subject Matter Experts in the Field of Security/Terrorism

Field Trips to Various First Respondent Organizations for Demonstrations and Hands-On Training

Both On and Off Campus Instruction

Table Top Exercises

Traditional Classroom Instruction

Independent Study (On-Line Internet) Based with On-Line Chat Rooms for Group Discussion

1-2 Weeks of On-Campus Instruction/Seminars

Widest Possible with Emphasis on Practicum

Standard On-Campus Delivery Throughout the Degree

Q5. LIST SUGGESTED TOPICS FOR DISSERTATIONS THAT WOULD APPLY TO THIS DEGREE:

Q6. BACKGROUND INFORMATION:

Participant Background Information: Please place an “X” in the box next to the response in each category that best describes your background.

<table>
<thead>
<tr>
<th>Area of Jurisdiction</th>
<th>Type of Organization/Dept./Agency</th>
<th>Professional Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>International</td>
<td>_Other Government Agency</td>
<td>_Elected Official</td>
</tr>
<tr>
<td></td>
<td>_Elected Office</td>
<td>_Org./Dept./Agency Head</td>
</tr>
<tr>
<td></td>
<td>_Fire Response/Suppression</td>
<td>_Senior Manager</td>
</tr>
<tr>
<td></td>
<td>_Hazardous Materials</td>
<td>_Medical Professional</td>
</tr>
<tr>
<td></td>
<td>_Explosive Ordnance Disposal</td>
<td>_Manager/Administrator</td>
</tr>
<tr>
<td></td>
<td>_Law Enforcement</td>
<td>_Line Supervisor</td>
</tr>
<tr>
<td>Township</td>
<td>Security/Safety</td>
<td>Operator/Responder</td>
</tr>
<tr>
<td>----------</td>
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<td>-------------------</td>
</tr>
<tr>
<td>Metro</td>
<td>Search and Rescue</td>
<td>Trade Worker</td>
</tr>
<tr>
<td>City</td>
<td>Emergency Medical Services</td>
<td>Volunteer</td>
</tr>
<tr>
<td>Campus</td>
<td>Emergency Management</td>
<td>Other</td>
</tr>
<tr>
<td>Airport</td>
<td>Public Health</td>
<td></td>
</tr>
<tr>
<td>Port</td>
<td>Public Works</td>
<td></td>
</tr>
<tr>
<td>Domestic Business</td>
<td>Active Duty Military</td>
<td></td>
</tr>
<tr>
<td>Int'l Business</td>
<td>Guard/Reserve Military</td>
<td></td>
</tr>
<tr>
<td>Individual Interest</td>
<td>Airport Authority</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>Port Authority</td>
<td></td>
</tr>
<tr>
<td>Hospital/ Medical Group</td>
<td></td>
<td></td>
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<tr>
<td>Education/ Training</td>
<td></td>
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</tr>
<tr>
<td>Industry/ Business</td>
<td></td>
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</tr>
<tr>
<td>Individual</td>
<td></td>
<td></td>
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<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX F

PHASE FOUR SURVEY INSTRUMENT

Doctoral Degree in Security Administration: A Delphi Study

The Department of Educational Leadership, the University of Nevada, Las Vegas is developing a doctoral degree program in Security Studies/Administration. Please help us develop a quality program, by completing this final phase in the Delphi Study. The responses listed below are the consensus of those who participated in the first two phases of the study. It is understood that due to maturation, attrition, advancement or promotion/retirement, that the individuals who were in your position may not be the same ones who participated in the first two phases, this will be taken into consideration in the final analysis. Please assist us in the development of the final consensus by looking at the group's consensus for each of the categories below and force ranking them. A self addressed pre-stamped envelope is included to return your completed questionnaire. Thank you for taking the time to assist us in this project.

Please Force Rank the following Group Consensus in the spaces provided, listing them from highest to lowest in priority as they apply to each category in establishing a doctoral degree in Security Administration.

Example: National Disaster System 1

Homeland Op Center 2

National Response Plan 3

Q1. PROGRAM CONTENT:
Which of the following subject areas, topics or disciplines would you deem essential for inclusion in a doctoral program in Security Studies?

EXECUTIVE LEADERSHIP

Facility (Aviation, Commercial, Institutional) Management and Security
Communication and Media Relations and Control of Information

Collaborative Leadership Processes

Crisis Management, Crisis Action Plans, and Exercise Planning Development and Implementation

SYSTEMS

National Incident Management System (NIMS)

Incident Command System

National Response Plan

Budget, Financial and Economical Considerations in a Natural Disaster/Terrorist Incident

Human Resources

Cyber Security

PLANNING and POLICY ANALYSIS

Key Indicators for Terrorism Awareness

Transportation Systems Management in a Terrorist Event

Practical Chemistry and Physics

Economic Impact of Terrorism Beyond Ground Zero

Chemical and Biological Delivery and Clean-Up

Risk Assessment
Integration of Local, State, and Federal Agencies in Emergency Preparedness

Faculty and Student Actions During a Terrorist Attack/Event

How Technology Assists Terrorism

History of Terrorism

Terrorism and the Physiological Impact on the Public

Ethnic and Cultural Factors in Terrorism

**LAW**


University and College Law as it Applies to Crisis Action/Management.

Border Security, Immigration Enforcement and Management

Patriot Act

**Q2. QUALIFICATIONS OF CANDIDATES:**
What Qualifications Should a Candidate Pursuing a Ph.D. in Security Studies Have Prior to Admission?

Professionals in the Field of Education

Administration Experience (3-10 years)

3-5 years Experience in Emergency Management, Homeland Security or Security

Should be in a Supervisory Position or Decision Making Position
Upper Management/Leadership in Local/State/Federal Professional or Strategic Planning Responsibility

Q3. REQUIRED COMPETENCIES/OUTCOMES UPON GRADUATION:
What knowledge, skills, and competencies should a candidate of a Ph.D. program in Security Studies have upon graduation?

Design and Plan Security Programs

Understand the Interpretational/Inter-agency Coordination and Response Capabilities

Address the Economic Impact of a Terrorist Attack

Leadership Development Within the Organization

Incident Command System (ICS) Understanding, Utilization, and Implementation

Civil Rights Law and Terrorism, Civil Liberties Awareness

Command, Control and Communications in an Emergency Situation

In-Depth Understanding of the Interrelationship Between City, State, and Federal First Responders to a Terrorist Attack

How to Deal with the Media Relations

Q4. INSTRUCTIONAL METHODS:
Which instructional methods and/or delivery methods would be most desirable for a candidate pursing a Ph.D. in Security Studies?

Force Ranking

181
Combination of Resident and Distance Learning

Flexible Modular Program to Match Professional Work Commitments of the Students

Guest Lectures from the Array of Subject Matter Experts in the Field of Security/Terrorism

Both On and Off Campus Instruction

Table Top Exercises

Traditional Classroom Instruction

Independent Study (On-Line Internet Based) with On-Line Chat Rooms for Group Discussion

1-2 weeks of On-Campus Instruction/Seminars

Standard On-Campus Delivery Throughout the Degree

Q5: BACKGROUND INFORMATION:
Participant Background Information: Please place an 'X' in the box next to the response in each category that best describes your background.

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☐ Education/Training
☐ Industry/Business
☐ Individual
☐ Other___________
APPENDIX G

Leadership, Planning and Policy (LPP)
Executive Ph.D. in Security Studies-Program of Studies

Prepared by Patrick W. Carlton, Ph.D.

Fall 2006

As a result of the new federal emphasis on homeland security, combating terrorism, and
natural disaster management, academic institutions across the country are creating the disciplines
of homeland security and security studies, while the previously existing academic discipline of
emergency management is going through a paradigm shift. This evolution mirrors the changes
which are occurring in the emergency management and security marketplace itself.

As part of the philosophy associated with the Federal Emergency Management
Administration’s recently created Higher Education Project, one finds a goal statement to the
effect that

One of the goals of the FEMA is to encourage and support the expansion of hazards, disaster and emergency management-related education in colleges and universities across the United States....in the future more emergency managers in government, business, and industry should come to the job with college degrees.

A significant number of institutions of higher education have, during the past three years,
created programs that address entry level skills in security operations and administration. The recently created National Academic Consortium for Homeland Security, based at Ohio State University, had at last report 155 member institutions spread over 43 states. The Homeland Security/Defense Education Consortium, overseen by US Northern Command (NORTHCOM), at Peterson AFB, CO, has more than 50 member institutions. All these institutions were, at last report, offering courses or programs related to homeland security. The programs range from the certificate and associate degree level to the baccalaureate and masters degree in scope and content. UNLV sees the need for a Capstone, doctoral level degree which will provide training beyond these entry and mid-level course initiatives.

The Ph.D. in Security Studies has been created in response to the pressing need for advanced studies by those occupying senior management positions within the security community (GS-15, Colonel [0-6] and higher.) In response to the tragic events of 9/11/2001, the Katrina and Rita hurricanes, and other recent emergencies, it has become clear that strategic, as well as tactical, thinking in this area is required. UNLV has responded to this challenge by creating an executive-
type Ph.D. intended to provide academic experiences designed to broaden the strategic thinking capabilities of security professionals from a wide variety of backgrounds. The program is also designed to assist them in honing their conceptual and operational skills in this important priority area.

The program is designed to fit the schedules of bright, but exceptionally busy personnel associated with various units of local, state and federal government, the military, and executives from security-related private industry. The curriculum combines traditional on-site instruction along with distance education sequences. This arrangement offers a significant degree of flexibility for busy senior security professionals.

The coursework is designed to be completed in two 12 month academic years, with an additional year devoted to preparation of a final dissertation-level product. The latter product will address a real-world, security-related area of inquiry, the output from which will provide answers to one or more pressing organizational issues.

Onsite direct instruction will be conducted at UNLV in several week-long blocks distributed over the fall, spring and summer terms for each of two (2) academic years. Classroom instruction during the two year period of coursework will be augmented by means of online interaction made available at home as a regular part of the course offerings.

During the second and third years of enrollment students will participate in periods of week-long on-campus experiences focused directly on the preparation of the doctoral dissertation. As mentioned elsewhere, the final dissertation-level product will focus on a field-based ("real world") problem that addresses a pressing issue in the area of security studies. While academically rigorous and respectable in nature, the format of this product may well deviate from that found in more traditional doctoral level programs.

The program is staffed by faculty members from COE and throughout appropriate UNLV departments, along with experts from federal, state and local agencies serving as part-time instructors.

**Fee Structure**

Students will pay regular in or out of state tuition. In addition, they will be assessed a $3000 program fee in each of the Fall, Spring and Summer terms to cover unusual costs associated with implementing and administering an executive doctoral program.

**Course Offerings**

The Ph.D. in Security Studies will consist of 60 semester hours of coursework, plus a minimum of 12 hours dissertation for those possessing a masters degree in an appropriate field. The coursework will be distributed over a variety of areas, and all offerings will address areas of importance to senior security professionals. They will be distributed as follows:

**Leadership Core (24 semester hours)**
EDA 771a Managing Organizational Change
EDA 771b Crisis Leadership
EDA 771c Strategic Planning and Visioning
EDA 771d Executive Assessment and Development
EDA 771e Creating and Shaping Organizational Culture
EDA 771f Negotiations Skills for Executives
EDA 771g Team Building and Team Leadership for Executives
EDA 771h Human Resource Management (HRM) for Senior Executives

Research Sequence (18 semester hours)
EDH 707 Designing and Critiquing Research
EPY 718 Qualitative Analysis
EPY 721 Quantitative Analysis
EDH 7xx Policy Analysis and Research
EDA 796 Prospectus for Dissertation (Fall/Spring in year 3-six semester hours)

The Dissertation (minimum of 12 semester hours)
EDA 799 The Dissertation

Two Academic Concentrations of 9 Semester hours each

Government and Policy Studies Track
Exxx1 US Foreign Policy in an Age of Global Terrorism
Exxx11 National Security Law
Exxx21 Federal Budget Policies and Process

Disaster Recovery Track
Exxx13 Critical Infrastructure Protection
Exxx16 Biowarfare and Bioterrorism
Exxx26 Weapons of Mass Destruction in Homeland Security
Course Descriptions

Leadership Core (24 semester hours)

EDA 771a Managing Organizational Change
The course seeks to enhance leadership skills that move organizations in a positive direction, providing recognizable results that will affect the organization positively. Students will design and develop a succession plan for the organization; incorporate techniques to gain commitment vs. compliance from employees; strategically manage projects using an entrepreneurial framework; and learn to incorporate the basic principles presented in everyday actions.

EDA 771b Crisis Leadership for Senior Executives
The course provides executives with the skills needed to cope with rapidly changing situations by developing their skills in leading under pressure. Students will be exposed to the National Incident Management System and will employ it in simulated emergencies to assess organizational biases in high pressure situations; create and lead an effective crisis team; master the roles of planners and implementers; evaluate ethical challenges presented during crisis leadership situations; and learn the techniques employed in post-crisis recovery activities.

EDA 771c Strategic Planning and Visioning
Students are challenged to think globally about policy, leadership and change; to act strategically, communicate orally, interact positively with constituencies; identify and plan for strategies to address internal and external politics that influence their visions, missions and organizations; and master the finer aspects of strategic thinking. Students will address such real world concerns as decision-making on funding priorities; program size; programmatic and agency interoperability; translation of plans into programs, and choosing among desirable alternatives to provide maximum security with limited budgetary resources.

EDA 771d Executive Assessment and Development Seminar
This course introduces students to various assessment tools that help them to chronicle their leadership strengths and weaknesses. These include: the Myers-Briggs Type Indicator (MBTI, Form M; The Fundamental Interpersonal Relation Orientation (FIRO-B); Leader Practices Inventory (LPI); Strength Deployment Inventory (SDI); Thomas-Kilmann Conflict Mode Instrument; Leadership Behavior Analysis II (LBA II) and the Ethical Type Indicator, among others. They will learn how personal and professional behavior affects their organizational effectiveness and will analyze their strengths and weaknesses in oral and written communication, interpersonal effectiveness, problem solving, decision making and conflict resolution. Students will be introduced to: the concepts of organization culture and values within federal, state and local agencies operating in the security arena; 360 degree multi-rater feedback; forces for change and organizational stability; influence, persuasion and consensus building, and the application of basic problem solving models and methods in real world settings.

EDA 771e Creating and Shaping Organizational Culture
This course examines the concept of organizational culture and explores the manner in which underlying common assumptions, beliefs and shared values can affect an organization’s shape, functioning, capabilities and limitations. An examination is also made of approaches to changing organizational culture and the challenges involved in that process.
EDA 771f Negotiations Skills for Executives
The course introduces students to various modes of inter and intraorganizational bargaining as practiced in public and private organizations. Students study traditional adversarial collective bargaining and Fisher and Ury’s Mutual Gains Model, along with the Federal Mediation and Conciliation Service’s Interest Based Bargaining Model of negotiations. They will gain new skills needed to function in public and private negotiatory relationships.

EDA 771g Team Building and Team Leadership for Executives
Students will examine tested models, practices and tools used to work effectively in a team-based environment. Students will identify proper team implementation venues; learn and apply knowledge of the stages of team development to improve group dynamics; practice effective collaborative problem solving and conflict resolution skills; and analyze ongoing team organization needs.

EDA 771h Human Resource Management (HRM) for Senior Executives
The course provides a set of intellectual resources designed to equip students to analyze their organizational environment (federal, state, or local) and to develop a strategic human resources management plan. Following an examination of the basic functions of human resource management, students are tasked to define and develop a strategic human resource plan for their agency.

Research Sequence (18 semester Hours)

EDH 707 Designing and Critiquing Research
The course provides experiences in the survey and analysis of data pertinent to the study of executive leadership in the security studies environment. Students will hone their skills as knowledgeable users of various research modalities and as sophisticated judges of the quality and usefulness of research output.

EPY 718 Qualitative Research Methodologies
The course addresses qualitative approaches to exploring phenomena related to various social contexts. Attention is given to theoretical and practical considerations associated with the utilization of case study, ethnography, participant observation and narrative reporting. Students will engage in discussions of criteria for establishing the “goodness” of qualitative studies.

EPY 721 Quantitative Analysis: Descriptive and Inferential Statistics
The course addresses descriptive indices of central location and dispersion, correlation and regression, hypothesis testing and basic inferential techniques. It is designed to help students become sophisticated consumers of research output as well as equipping them to use various quantitative techniques in the completion of the doctoral dissertation.

EDH xxx Policy Analysis and Research
The course provides students with the basic tools required by senior executives who are charged with responsibility for policy formulation, creation and implementation of analytical exercises, and the periodic evaluation of newly promulgated policies at the national and state level. It will reinforce student mastery of the modes of inquiry and critical thinking required in their graduate studies and in their professional lives.
EDA 796  Prospectus for Dissertation
This six hour course sequence involves selection and preparation of a culminating academic project that is both acceptable and appropriate for the student, the program, involved agencies, and the doctoral committee.

The Dissertation

EDA 799  The Dissertation
The sequence involves development and execution of a capstone, doctoral research project which addresses a current, agency-related requirement or initiative. The topic will to be negotiated between faculty committee and student on an individual basis.

Course Content--Security Studies Concentrations

Government and Policy Studies Concentration

E xxx1  US Foreign policy in an Age of Global Terrorism
The course examines the policy context for the ongoing prosecution of the Global War on Terrorism (GWOT). It examines current actors in critical regions, along with their motivations and describes linkages between various terrorist groups, examining their modus operandi.

E xx11  National Security Law
The course provides the non-attorney student with an understanding of the impact of law upon strategy and operations in Homeland Security and Defense and the Global War on Terrorism.
Students will explore homeland security action in relation to the laws that support and constrain it. The role of community policing in homeland security and defense, civil-military relations in prevention and response, the Patriot Act, and the handling of US citizens detained for terrorist violations are considered. Military, law enforcement and judicial issues are central course concerns.

E xx21  Federal Budget Policies and Processes for Executives
The course provides students with a high level understanding of the Federal budget process from budget preparation through budget execution in both the executive and legislative branches of the US government. Topics covered include budget preparation and defense, Congressional authorization, the budget and appropriations process, and budget execution.

Disaster Recovery Concentration

E xx13  Homeland Defense: Critical Infrastructure Protection
The course addresses critical infrastructure targets and various threats to them. Threats to information management, water, power and Energy, agriculture and food, transportation, financial, public education, postal, and public health systems are discussed. The roles of government agencies and national organizations responsible for infrastructure protection are set forth. The course develops a network theory of vulnerability analysis and risk assessment, and applies fault and risk reduction techniques to develop a strategic model for protecting each identified sector.

HED 780  Biowarfare and Bioterrorism: Policy Implications
The course provides students with an understanding of those living agents or organic products which are of potential use in warfare, terrorism, or criminal activities. The discussions will be couched in the context of diplomacy and policymaking.

Exx26 Weapons of Mass Destruction in Homeland Security

Students are introduced to the threats posed by Weapons of Mass Destruction (WMD) to homeland security in general and their communities in particular. Included are discussions of nuclear, chemical, biological and radiological weapons; and the potential use of such weapon systems against the US by state and non-state sponsored agents. Students will examine community vulnerability to WMD, identifying options for and approaches to reducing such vulnerabilities.

Calculations Concerning Course Contact Hours

Ph.D. in Security Studies

Students are required to participate in two (2) week-long intensive instructional sequences during Fall, Spring and Summer terms during years one and two of the program, and a single instructional sequence dedicated to dissertation activity during the third and final year of the program.

The following description is based upon the assumption that 15 contact hours (ch) equals one semester hour (sh) of credit, and that a contact hour is 50 minutes in length, (plus a 10 minute break each hour. The standard Carnegie unit.)

\[ 3 \text{sh} \times 15 \text{ch} = 45 \text{ch per course} \]

Assuming 7 full days of 9 hours, made up of 8 contact hours and 1 hour for lunch, and that two courses are to be offered:

For each Hybrid course:
\[ 7 \text{days} \times 4 \text{ch} = 28 \text{ch} + 17 \text{hrs. of online/project work at home station and total = 45 ch equiv. to one 3 sh course} \]

Course sequence is predicated on two 7 day intensive on-campus offering of 56 contact hours in each of Fall, Spring, and Summer sessions.

During each session two courses are to be offered
Fall—2 courses per week \( \times 2 = 4 \)
Spring—2 courses per week \( \times 2 = 4 \)
SS—2 courses per week \( \times 2 = 4 \)

Total for yr 1 is 12 courses and for year 2 is 8 courses

Over two years the total reaches 20 courses, or 60 on-campus semester hours

In addition, students will enroll in 12 hours of dissertation credit during second year summer session and Fall of third year.

This brings total credit hours completed to a minimum of 72.
BIBLIOGRAPHY


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Associate of Science in Business Management, 1997
Community College of Southern Nevada

Completed U.S. Armed Forces Staff College, 1984
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Dissertation Title: The Conceptualization and Development of Specifications for a
Doctoral Program in Security Studies: A Delphi Study

Dissertation Examination Committee:
Chairperson, Dr. Gene Hall, Ph.D.
Committee Member, Dr. Carl Steinhoff, Ed.D.
Committee Member, Dr. Gerald Kops, Ph.D.
Committee Member, Dr. Patrick Carlton, Ph. D.
Graduate Faculty Representative, Dr. John Stefanelli, Ph.D.