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Continuity of Operations Planning at Historically Black Colleges and Universities in Alabama

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Abstract

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Lewis A. Eakins

MS, Bellevue University, 2007

BS, Athens State University, 1977

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Public Policy and Administration

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Abstract

Continuity of operations planning for Historically Black Colleges and Universities (HBCUs) is critical for institution sustainability. The absence of such planning can result in an HBCU closing for an extended period of time after a disaster resulting in loss of revenue, research projects, students, faculty, and staff. There is a void of information on the extent of continuity of operations planning at HBCUs and how these institutions would continue functioning after a disaster. Using resilience theory as the foundation, the purpose of this qualitative case study was to explore the extent of continuity of operations planning at HBCUs in Alabama in the event of a disaster and explore opportunities to strengthen continuity planning for the future. Four HBCUs were chosen in the State of Alabama for this research. Data were collected through interviews with 5 individuals with information on continuity of operations planning at the universities selected. These data were inductively coded and subjected to thematic analysis. The results of this study indicate comprehensive continuity of operations planning is not taking place, and planners at these institutions perceive they do not have the guidance needed for effective planning and the time to conduct planning activities. It is recommended the Federal Emergency Management Agency (FEMA) develop a guideline for continuity of operations planning applicable to higher education. It is further recommended that HBCU leadership insure planners have adequate time and resources to devote to continuity of operations planning. This study fosters positive social change by bringing an awareness to FEMA and HBCU leadership of the need and importance of continuity of operations planning for institutional sustainability.

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Dedication

I would be remiss if I fail to dedicate the completion of this dissertation to my Lord and Savior Jesus Christ for giving me perseverance, wisdom and knowledge, opportunity, and presence of mind. I also want to thank my loving wife Denese Eakins for her patience and understanding. Finally, I want to thank my mother Elinor Eakins for her financial sacrifices during my formative years that allowed me to attain a quality Christian education at Ramah Jr. Academy and at Pine Forge Academy.

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Chapter 1: Introduction to the Study

Introduction

This study explored the extent of continuity of operations planning at HBCUs in the State of Alabama to determine how well prepared they are to continue mission-essential functions during and after a disaster or critical incident. Mission-essential functions in general are characterized as functions and operations that must take place in order to sustain the viability of an organization (Federal Emergency Management Agency [FEMA], 2013). For institutions of higher education, mission-essential functions include instruction, research, information technology, care of laboratory animals and research specimens, major sporting events, housing, food service, and ancillary functions such as payroll, financial aid disbursements, security, and library services (U.S. Department of Education, 2013). These general mission essential functions affect most if not all institutions of higher education. Major universities that have medical schools, law schools, and industrial activities on their campuses have additional mission-essential functions to consider (U.S. Department of Education, 2013).

In addition to mission-essential functions, the concept of continuity of operations planning as it relates to institutions of higher education involves succession, delegation, alternative facilities, communications, vital records, devolution, and reconstitution of operations (FEMA, 2013). These are critical components of overall continuity of operations planning.

Succession is the process of designating individuals to take the place of those who are in the university leadership hierarchy should they become unavailable or incapacitated (FEMA, 2013). Delegation is the granting of authority to individuals to

make decisions in satellite locations or in the field during a critical incident (FEMA, 2013). This includes campus law enforcement, physical plant personnel, and other individuals who might be considered first responders (FEMA, 2013). Alternative facilities, also referred to as continuity facilities, are locations, platforms, and venues that can be utilized to resume or continue operations (FEMA, 2013). For IHEs, this might involve delivering instruction completely online or at temporary locations such as churches, nearby schools, and community centers. Continuity of communications involves the ability to maintain information technology functions, telecommunications, and emergency notifications when there has been a disruption in power or other infrastructure disruption (FEMA, 2013). Satellite telephones and the availability of generators to keep information technology systems operating in a crisis situation are viable strategies in this regard. Vital records management considers the identification, storage, protection, and availability of records that are critical for operations; it may entail cloud-based storage and the storage of hard copies off-site (FEMA, 2013). FEMA (2013) identifies devolution is the process of transferring an operation, along with all authority and responsibility for that operation, to another entity. An example of devolution in the IHE realm was the transfer of Tulane University's medical school to the Texas Medical Center in the aftermath of Hurricane Katrina (Crawford, Kahn, Gibson, Daniel, & Krane, 2008). Reconstitution is the process by which an IHE resumes normal operations or the new normal at its alternative or former location of operation (FEMA, 2013).

There is relatively limited literature on COOP in higher education. Most of the existing literature details the planning, preparation, and response phases of emergency

management at IHEs. No studies have been found that specifically address COOP at HBCUs. At most, the literature has been anecdotal, such as descriptions of the plight of HBCUs in New Orleans after Hurricane Katrina (Gasman & Drezner, 2007).

The potential social and economic value of my study is substantial. Tuition, research funding, and other grants are major streams of income for HBCUs (Gasman & Drezner, 2013; Toldson & Cooper, 2014). Canceling classes, closing for the remainder of a semester, or being unable to open for a semester (as was the case for some IHEs following Hurricane Katrina) can negatively impact these major streams of income (Johnson, 2011). The result can be the loss of students and faculty to other institutions, which would threaten the future of the affected HBCUs (Owen, 2010). Exploring the preparedness of Alabama's HBCUs to continue functioning during and after a disaster will identify strengths and weaknesses in COOP and will have broad application for other HBCUs throughout the United States.

In this chapter, the important societal role of IHEs and HBCUs in particular are discussed to show the need to keep these institutions viable through appropriate continuity planning. The current literature on best practices and government guidelines for overall emergency management planning at IHEs leave a gap with regard to specific COOP guidance for these institutions. Unfortunately, the preponderance of the literature is focused on preparedness and response, with only a very brief reference in some cases to COOP.

Background of the Study

IHEs are an important segment of our nation's education system and are often viewed as the gateway for "intellectual maturity and personal growth" (Davis, 2013, p.

113). According to Davis (2013), government records indicate that obtaining a college degree will significantly increase ones earning potential. Hawkins (2007) posits IHEs are considered national treasures in the United States due to their important role in developing and shaping the intellectual, personal growth, and financial potential of students.

Within the broader category of IHEs, HBCUs specifically have played a crucial role in the education of the African American community. Brown (2013) described HBCUs as remarkable in terms of the education opportunities they provide to African Americans. These institutions were identified by the Higher Education Act of 1965, which defined them as any IHE that was founded prior to 1964 for the express purpose of educating African Americans and that maintains accreditation by a regional accreditation authority (Brown, 2013).

HBCUs have a legacy of educating African Americans who would not normally qualify for admission or perform well at a predominantly white institution (Stewart, Wright, Perry, & Rankin, 2008). HBCUs have been hugely successful in fulfilling their mission, graduating over 75% of all African American Ph.D.'s, 75% of African American Army officers, 80% of African American federal judges, and 85% of African American physicians (Nichols, 2004). Other studies have revealed that HBCUs graduate over 48% of all African American teachers and computer scientists, and six HBCUs combine to graduate over 40% of all African American engineers (a2004).

In spite of the HBCUs' legacy of success, these universities have been plagued in recent years by negative publicity, low graduation rates, allegations of mismanagement, fiscal instability, miniscule endowments, and even closures (Association for the Study of

Higher Education, 2010; Drezner & Gupta, 2012; Gasman & Bowman, 2011; Hobson, 2012). Many of the important bastions of academia that serve the African American community are experiencing an uncertain future.

Especially due to their tenuous existence, most HBCUs can ill afford to suffer a debilitating blow from a catastrophic disaster exacerbated by a lack of preparedness. A major disruption in the education process or a temporary closure would leave a serious void in the African American community in that HBCUs "educate students in an environment free of racial tensions" (Nichols, 2004). Being able to continue the education process in the face of disasters will ensure that HBCUs can remain a prominent higher education resource for the African American community.

Problem Statement

Incidents of active shooter occurrences at IHEs are on the rise (Blair & Martindale, 2013) and have garnered national media attention. Severe weather-related incidents have negatively impacted operations at IHEs in the Gulf Coast region (Beggan, 2011; Stein, Vickio, Fogo, & Abraham, 2007). Pandemics including the H1N1 flu virus in 2009 (Katz, May, Sanza, Johnson, & Petinaux, 2012) have ushered in quarantines at IHEs. All these events have raised awareness of the need for comprehensive emergency management planning at IHEs. In response, federal government agencies have published several guides within recent years. The *Guide for Developing High-Quality Emergency Operations Plans for Institutions of Higher Education* is a detailed roadmap published by the U.S. Department of Education (2013) in cooperation with the Federal Emergency Management Agency (FEMA) for the purpose of assisting IHEs in the development and testing of emergency operations plans. This guidance builds on the earlier template,

Action Guide for Emergency Management at Institutions of Higher Education (U.S. Department of Education, 2010). The U.S. Secret Service (2010), in cooperation with the Department of Education and Federal Bureau of Investigations, published *Campus Attacks: Targeted Violence Affecting Institutions of Higher Education*, which described the extent of violent acts occurring on campuses and mitigation strategies that can be employed. Private trade groups such as the National Fire Prevention Association (2010), ASIS International (2005), and the National Association of College and University Business Officers (2009) have also published guidelines to assist in the development of emergency operations plans by IHEs.

As discussed above, there is substantial literature delineating best practices in preparing for and responding to disasters that impact IHEs. However, there is no comprehensive government guidance on continuity of operations planning specifically for IHEs. The overarching guideline issued by the federal government, *Continuity Guidance Circular 1* (FEMA, 2013), on continuity of operations planning for nongovernmental entities does not give particular guidance to the education industry in general on how to plan for the continuation of operations during and after a disaster. Rather, this guidance is focused on continuity of operations planning for nonfederal government agencies, with only a mention that "private sector and other non-government organizations may also benefit from this guidance" (FEMA, 2013, p. 1-1).

The nongovernment discussions of continuity of operations planning at IHEs have extolled online learning as the mainstay of instruction delivery (Lorenzo, 2008). This option came into prominence during Hurricane Katrina when the Sloan Consortium provided instructional support for 153 institutions of higher education throughout the

Gulf Coast area (Lorenzo, 2008; SchWeber, 2008). Online classes were developed to allow students at affected institutions to complete the fall 2005 semester. Based on the success of this program, online learning quickly became established as a best practice for continuing the education process during a disaster (American College Health Association, 2011; Coyner, 2011; Ebersole, 2008; SchWeber, 2007; Young, 2009).

However, instructional delivery is not the only consideration in higher education. There is also a distinct absence of literature on continuity plans for the following facilities and operations that are of important concern at many IHEs:

- Residential facilities
- Major sporting events
- Hospitals and auxiliary facilities (clinics, laboratories, dialysis)
- Research facilities
- Laboratory animals and specimens
- Libraries
- Museums and archives
- Zoos, aquariums, and historical attractions
- K-12 laboratory schools
- Internships
- Retail business strategic alliances
- Businesses operating in leased space

This major gap in the literature addressing COOP and IHEs, coupled with the tenuous status of many HBCUs, places these institutions in a precarious position of

significant vulnerability to a disruption, which could result in a temporary or even permanent closure of an institution. The HBCUs scattered across Alabama represent a diverse grouping of institutions, situated in a geographical area with incumbent hazards:

- Hurricanes (along the coastal areas).
- Winter storms.
- Earthquakes (the San Madrid fault).
- Tornadoes (in northern Alabama).
- Flash floods.
- Forest fires.
- Terrorist attacks (primarily a threat in larger cities and near military bases).
- Radioactive matter discharge (due to some schools' proximity to nuclear plants).
- Major criminal incidents.

Moreover, the findings of this study on HBCUs in Alabama will have broad application to other HBCUs throughout the nation.

Purpose of the Study

The purpose of this qualitative study was to explore the extent of COOP at HBCUs in the state of Alabama. The central phenomenon under study is COOP, or the preparation and planning for continuing the education process and all essential functions during and after a critical incident.

Research Questions

Creswell (2007) recommends asking no more than one or two central questions that can be further elucidated by no more than seven sub-questions. For this study, the following two research questions were posed:

RQ1 What is the extent of continuity of operations planning at HBCUs in the State of Alabama?

RQ2 What can be done to strengthen COOP at these institutions?

Theoretical Framework

The theoretical lens through which my study was conducted was the resiliency theory. Resiliency in general is the ability to bounce back or rebound as opposed to breaking under stress or duress (Norris, Stephens, Pfefferbaum, Wyche, & Pfefferbaum, 2008; Plough et al., 2013). Resiliency theory, founded in the behavioral sciences, sought to understand how some individuals were successfully able to surmount obstacles and adversity while others were not (Plough et al., 2013). Adaptive capacity (Plough et al, 2013) and positive adaptation (Kim & Hargrove, 2013) are the terms that have evolved over time to conceptualize the phenomenon of resiliency. Most notably, resiliency theory has been applied in the education system to determine how some individuals from disadvantaged and marginalized groups have been able to succeed in their educational pursuits by making adjustments and through the reduction of risk when the odds have not been in their favor (Kim & Hargrove, 2013).

In the larger context of community resilience, resilience can be viewed as the adaptive capacity of a system to "absorb, change, and still carry on" (Longstaff et al., 2010, p. 3). Community resiliency has been defined as "the sustained ability of a

community to withstand and recover from adversity" (Plough et al., 2013). Communities, viewed as "complex systems" (Longstaff et al., 2010, p.1) that are sufficiently resilient will be able to absorb a disruptive event, or change or adjust in response to such an event, and carry on. To elucidate this point further, Longstaff (2010) states a resilient community can make the necessary adjustments to confront a critical incident and ensure that essential functions and structures are retained for long-term sustainability. Short-term disruptions in service and operations may still occur, or certain subsystems may become temporarily unstable, but a resilient community will be able to adequately address these short-term disruptions and expeditiously return to a state of normalcy or a new norm for long-term survivability. A case in point is the adaptive capacity demonstrated by Tulane University and Dillard University in the aftermath of Hurricane Katrina. Both institutions had short-term disruptions in their education process. However, they were able to bounce back rather quickly for long-term survival. Tulane University acquired a cruise ship for housing and classroom purposes (Johnson, 2011). Dillard University was able to transfer its housing and classroom instruction to the Hilton Hotel in New Orleans (Johnson, 2011). Johnson (2011) states there were no prior agreements with the cruise ship or the hotel to use these facilities in the event of a critical incident.

Resilience is not an outcome, but a process that embodies a set of adaptive capacities. The literature is not consistent on the identity of these capacities. Norris et al. (2008) cited economic development, social capital, information and communication, and community competence as components. Plough et al. (2013) cited physical and psychological health, social and economic equity and well-being, effective risk communication, integration of organizations, and social connectedness. All these

adaptive capacities are applicable in some form to the continuity of operations in higher education.

In order for an institution of higher education to be resilient, it must be able to bounce back from a disruption and continue its mission-essential functions (Longstaff et al., 2010). It must be connected with community and government agencies, through social connectedness, to be able to access their resources when needed (Norris et al., 2008; Plough et al., 2013). Long-term survivability is the goal, with the understanding that minor disruptions in the academic process may occur and may need to be absorbed by other internal departments or functions. Moreover, IHEs that are highly robust due to the resources at their disposal and that develop a high level of adaptive capacity will have strong resiliency in the face of a catastrophic or an otherwise disruptive event (Longstaff et al., 2010). The opposite is true of IHEs that have scarce resources and lack adaptive capacity (Drezner & Gupta, 2012). According to Drezner and Gupta (2012), few IHEs, with the exception of larger, complex schools with sizable endowments, have adequate resources and proficient adaptive capacity.

HBCUs do not generally have robust financial resources to draw upon in comparison to PWIs, based on their funding shortfalls and small endowments (Drezner & Gupta, 2012). Hence, HBCUs must have a high degree of adaptive capacity in order to bounce back from a disruptive incident. For instance, if an HBCU lacks sophisticated communication equipment such as satellite telephones, it will need instead to be adaptive and use telephone trees, the Internet, social media, or its own emergency notification system.

Resiliency theory is directly related to the research questions and the approach of this study. As noted, the two research questions involve exploring the extent of continuity planning at HBCUs in Alabama and how planning can be strengthened. Appropriate planning through the development of resources and adaptive capacity will build resiliency to counter disruptive events that may negatively affect furtherance of these institutions' mission-essential functions. Such factors as economic health, social connectedness, communication, and physical and psychological health are all keys to building resiliency for maintaining continuity (Norris, Stevens, Pfefferbaum, Wyche, & Pfefferbaum, 2008). Additional discussion on resiliency theory and its applicability to continuity will be provided in Chapters 2 and 5.

Nature of the Study

In this qualitative study, utilizing a purposeful sample, it was my intent to determine the extent of continuity planning at HBCUs in Alabama and ways in which continuity planning can be strengthened to improve the sustainability and viability of these institutions. It was decided that three to five Alabama HBCUs representative of similar institutions throughout the nation would be participants in the study. HBCUs in Alabama are diverse in their size, geographical location, exposure to hazards, and classification. Alabama has the highest number of HBCUs in the nation (Brown, 2013). HBCUs in the state are located in coastal areas, major metropolitan areas, in close proximity to nuclear plants and military installations, and in areas that are susceptible to such natural hazards as tornadoes, hurricanes, winter storms, forest fires, flash floods, and earthquakes. Hence, a study of the extent of continuity planning at these institutions will have broad applicability to the other 105 HBCUs scattered throughout the United States.

I collected data through administration of a survey instrument, interviews with the person responsible for emergency operations planning at each university, examination of emergency operations plans, review of exercise after-action reports, and documentation of responses to actual emergency response scenarios. Coding took place to develop general themes and to ascertain the extent of continuity planning.

The literature review conducted for this study was focused on continuity planning guidance for IHEs in general, with special attention to COOP at HBCUs.

Operational Definitions

Academic continuity: In the present study, this term is used synonymously with COOP in the IHE context and refers to the process of continuing the performance of mission-essential functions during and after a critical incident at IHEs (University of Maryland, 2007). The term tends to focus more on the delivery of instruction than on the continuation of research, sustenance, housing, payroll, and other functions that would also be categorized as mission-essential. The term draws upon the basic concepts of COOP with application to a higher education setting.

Continuity: This term is synonymous with continuity of operations planning, and the two are used interchangeably in the emergency management field (Federal Emergency Management Agency, 2013).

Continuity of operations planning (COOP). This term was coined by the Federal Emergency Management Agency (2013). It refers to the process of foreseeing how an entity will continue the performance of mission-essential functions during and after a critical incident.

Federal Emergency Management Agency (FEMA). FEMA is an agency of the U.S. Department of Homeland Security that is primarily charged with coordinating responses to disasters in the United States that have overwhelmed the resources of state and local authorities (U.S. Department of Education, 2010).

Historically Black Colleges and Universities (HBCUs). These 105 institutions were so defined under the Civil Rights Act of 1965, which specifically designated regionally accredited institutions of higher education that existed prior to 1964 and served a predominantly African American population (Brown, 2013).

Institution of Higher Education (IHE). An educational institution that offers academic instruction beyond the secondary educational level (U.S. Department of Education, 2013).

Predominantly White Institutions (PWIs). Institutions serving a population that is predominantly Caucasian (Drezner & Gupta, 2012).

Purposeful Sampling. A sampling strategy where the researcher purposefully selects study participants based upon the data rich information they can provide to address the research problem and central theme or phenomenon of the study (Creswell, 2009). Creswell (2009) states maximum variation is a strategy used to ensure participant diversity and differentiation.

Assumptions

Although HBCUs need to have continuity of operations plans in place to ensure continuation of their essential processes in an emergency situation, there is an absence of research on what, if anything, HBCUs have done or are doing in this regard. Without

such planning, HBCUs are leaving themselves vulnerable to a major disruption of their academic process.

In this study, it was assumed that the person providing information on behalf of an HBCU has sufficient knowledge and responsibility for emergency operations to describe the institution's preparedness suitably. This assumption may not always be true. For instance, it may be difficult to ascertain the level of respect that the person responsible for emergency operations planning has with university administrators and throughout the campus community. Administration may not be forthcoming with admitting to their lack of respect for this person's professionalism or competence. The ostensibly responsible person may be saddled with too many other responsibilities, such as transportation or parking control, with a limited staff, or this person may not be fully informed as the measures that the university has implemented.

Scope and Delimitations

Four Alabama HBCUs were chosen for this qualitative case study. Diversity was achieved by utilizing a purposeful sample including at least one institution from each of three categories: a private HBCU, a public HBCU, and a 2-year HBCU. The institutions chosen were geographically diverse with exposure to a multitude of weather related hazards. I chose study participants based upon their location to metropolitan areas, close proximity to nuclear power plants, and close proximity to military bases. The institutions chosen offered the needed diversity and geographical location representation..

The goal was to utilize a purposeful sample that would produce rich data applicable to HBCUs across the country with exposure to the same hazards as the participating institutions.

Limitations

My study was limited by the fact that the topic dealing with continuity of operations planning at institutions of higher education has not been adequately researched for the establishment of a suitable baseline. I was not able to assess the extent of academic continuity without first developing a model of what academic continuity constitutes. In the absence of adequate extant literature and studies in the area of academic continuity, I drew upon the following to develop a model:

- My years of experience working at an HBCU where I had held continuity of operations planning responsibilities
- My recent FEMA training and certification in the area of continuity of operations planning, and my participation in a FEMA sponsored working group on the topic of academic continuity from a broad perspective.
- Continuity of operations planning concepts outlined in *Continuity Guide Circular 1* (FEMA, 2013)

To bring balance to my conception of what academic continuity should look like at an HBCU, I used FEMA's *Continuity Guide Circular 1* (2013) as my overarching reference. Although the emphasis of this document is not directed toward IHEs, it discusses basic, foundational principles of continuity of operations planning.

There may have been a perception of bias in my selection of the study participants. I have been an active member of the Historically Black Colleges and Universities Law Enforcement Executive Administrators (HBCU-LEEA) since 2008. I was an executive board member of this organization, serving in the capacity of recording secretary, from 2012 to 2014. In this capacity, I was the voice of the association to the

membership through emails that alerted them to employment opportunities, training opportunities, the annual conference, calls for presentations, equipment resources, grant opportunities, and other association matters. I have had a very visible presence at the annual conferences and I have visited several HBCUs in connection with my attendance at trainings and conferences. Based on these contacts, I have a professional relationship or familiarity with most of the HBCU chiefs of police, public/campus safety directors, and security directors. These individuals are generally responsible for spearheading emergency management and academic continuity planning on their campuses. Rather than viewing these existing relationships as a factor that could inject bias into my research, I saw them as an overall benefit. Through professional relationships, trust is developed. Trust was a key factor in encouraging participation in my study and inspiring openness in discussing what, in some cases, maybe disparaging information on the extent of academic continuity planning at the respondents' institutions. I believe that my relationships with my colleagues did not create an aura of bias but, rather a situation that was conducive to a spirit of cooperation and candor, which was essential to the success of this study. By not identifying the respondents by name or geographical area, respondents were protected from identification.

Significance of the Study

This study is significant because it adds to the limited knowledge base on academic continuity at HBCUs. The results of this study have broad application to all HBCUs and to the higher education community in general. Emergency management is still an emerging field, with limited study conducted on disaster planning at IHEs or on academic continuity planning specifically. By researching the extent of academic

continuity planning at HBCUs in Alabama, I have contributed to the development of disaster resilience, which is important to the viability and sustainability of these historic institutions serving a segment of society that may not otherwise be able to receive a quality education.

Summary

Continuity of operations planning in higher education, also referred to as academic continuity, is a rather new concept that has emanated from standard continuity of operations planning, which has a wide application for government, businesses, and nonprofit organizations.

HBCUs have a long legacy of providing educational opportunities to African-Americans. Without these historic institutions, many African Americans would be unable to obtain a quality education (Nichols, 2004). It is important for these institutions to build resiliency against disasters and to have mechanisms in place to continue their academic and operational processes with little or no interruption. Continuity of operations planning can provide guidance in sustaining these institutions during and after disasters. However, only a few studies have been conducted and minimal literature is available on continuity of operations planning in higher education specifically or takes into account the complexities inherent in IHEs. Continuity of operations planning must consider the delivery of instruction, the continuation of critical research, care for laboratory animals and specimens, operations of medical facilities, and many other mission-essential functions during any type of natural or manmade disaster, ranging from severe weather to flu pandemic that requires quarantining.

It was not known how well HBCUs have prepared to continue the education process and associated ancillary mission-essential functions during and after a disaster prior to my study. Through a qualitative case study approach, I attempted to grasp the extent of academic continuity planning at HBCUs in Alabama, along with impediments that are hindering planning efficacy. This study will have major significance by adding to the knowledge base regarding academic continuity. In addition, this study will have broad applicability to all HBCUs throughout the nation.

In Chapter 2, the literature review methodology employed in this study and the available literature on academic continuity has been detailed. In addition, comprehensive information is provided on the theoretical foundation for the study.

Chapter 2: Literature Review

HBCUs are susceptible to a surfeit of disasters based on their geographical locations, such as exposure to severe weather events, unforeseen pandemics, and acts of terrorism. These disasters all have the potential to disrupt and even suspend the performance of mission-essential functions at these institutions. Mission-essential functions at IHEs include the delivery of instruction, research activities, care for laboratory animals and specimens, housing, major sporting events, food service, and various other ancillary functions that support the overall operations of the institution.

An extant body of literature and federal guidelines set forth the manner in which IHEs should prepare for disasters. Even though current literature and federal guidelines indicate the need for continuity of operations planning at IHEs, there is minimal specific guidance for IHEs. This study was designed to identify the extent of continuity of operations planning, also commonly referred to as academic continuity, at HBCUs in the state of Alabama. The results of this study have broad application to HBCUs throughout the United States and to predominantly white institutions in establishing the need for specific continuity of operations planning guidance in higher education.

Existing Literature and Domain Knowledge

Current literature and guidelines relative to continuity of operations planning in higher education were mainly developed after Hurricane Katrina and have generally been referred to as *academic continuity* (SchWeber, 2007). The Alfred P. Sloan Foundation sponsored the Sloan Consortium which developed an online academic portal for students at IHEs impacted by Hurricanes Katrina and Rita (Lorenzo, 2008). From this successful impromptu initiative, working groups were formed, studies were conducted, and

literature was published in peer-reviewed journals and periodicals concerning the concept of academic continuity. Government publications, professional associations, and trade groups issued anecdotal guidelines on academic continuity. Several IHEs developed and published their own protocols for academic continuity on their websites, and these have become a standard for peer institutions. These publications, studies, and guidelines encompass the academic continuity body of knowledge.

While some information pertaining to academic continuity is available through a hodgepodge of literature, studies, guidelines, working groups, and university websites, the extent of focus on academic continuity pales when compared to the increasing emphasis on mitigation, preparedness, response, and recovery—the cornerstones of emergency management and disaster preparedness that receive substantial funding, and government and media attention. This imbalance is evidenced in a recent guideline on how to develop emergency operations plans for IHEs, published jointly by the FEMA, and the U.S. Department of Education. In this 88-page document, the U.S. Department of Education (2013) designates less than a half page to academic continuity planning. In comparison, multiple pages are devoted to FERPA, HIPAA, and other regulatory matters (U.S. Department of Education, 2013). There is even a reference to finding more information on academic continuity planning in a Resource section that does not exist.

There is an overall lack of detailed information on academic continuity planning in higher education. Furthermore, there is virtually no information available on how HBCUs are using available resources to plan for academic continuity on their campuses.

In this chapter, I have detailed the methodology used to search for literature on COOP in higher education, some of which was relevant even if dated. The literature is

categorized into five areas: (a) the state of HBCUs; (b) government guidelines; (c) professional association publications; (d) peer-reviewed and general literature; and (e) university websites. As noted, a significant number of studies appeared during the year immediately after Hurricane Katrina (Gasman & Drezner, 2007; Johnson, 2011; Stein et al., 2007). It appears that for a short while, Hurricanes Katrina and Rita were the catalysts for increased interest in planning for disaster response (Beggan, 2011). However, government and professional association publications were found to only provide anecdotal and cursory information on COOP for IHEs. In addition, I reviewed literature that detailed the tenuous state of many HBCUs, as this concern provided the impetus for embarking upon the present study to ascertain the extent of HBCUs' COOP.

Literature Research Strategy

In order to gain a sense of the condition of HBCUs, I researched databases using the search terms *HBCU, historically Black, minority serving,* and *United Negro College Fund.* For information on COOP in higher education, the search terms *academic continuity, COOP, disaster preparedness, disaster planning, higher education, higher ed, pandemic, emergency management,* and *emergency operations* were employed. The Walden University library was used to access journal articles, studies, and dissertations. The databases accessed included CINAHL Plus, Academic Search Complete, ERIC, Education Resource Complete, ProQuest Central, Thoreau, Homeland Security Digital Library, Sage Encyclopedias, and Dissertations and Theses at Walden University.

The Plight of HBCUs

The body of literature reviewed on the status of HBCUs was diverse in its relevance and validity. While the mainstream media have generally portrayed HBCUs as

irrelevant, deficient in finances, plagued by miniscule endowments, and weak in leadership (Gasman & Bowman, 2011), there has been an absence of empirical studies to confirm these allegations. With the exception of the considerable research conducted by Gasman and Bowman (2011), most of the literature has been "heavily colloquial and anecdotal" (Brown, 2013, p. 4). There appear to be three distinct perspectives on HBCUs. Proponents extol the high percentage of Ph.D.'s, teachers, dentists, medical doctors, military officers, federal judges, and other professionals who have graduated from HBCUs (Nichols, 2004; Brown, 2013). Detractors question the relevance of these institutions, pointing to studies and media reports touting weak leadership, low graduation rates, and financial woes (Brown, 2013; Gasman & Nelson, 2011). Finally, a more balanced perspective views these institutions as treasures of the community based on the educational opportunities that they have provided to African Americans, and it contends that these institutions have been funded disparately and unfairly characterized and lumped together by the media and political quarters (Johnson, 2011; Gasman & Drezner, 2007).

Several studies have highlighted the number of successful HBCU graduates in numerous fields (Nichols, 2004; Stewart et al., 2008). More recent studies have also reflected the positive function of HBCUs in providing leadership opportunities, role models, and the promotion of African American history and culture (Brown, 2013). Some recent studies have promoted the positive attributes of HBCUs from a defensive position, seeking to offset the criticism that these institutions have received (Gasman & Bowman, 2011). In combination, these various perspectives indicate the evolving role of HBCUs over the years and how they have now come under attack.

The mainstream media frequently do not paint a favorable picture of HBCUs, thereby helping to influence broader opinion that these institutions are no longer viable (Gasman & Bowman, 2011). Media sources have brought the very existence of these schools into question, characterizing them as "endangered institutions" (Brown, 2013, p. 10). Some of the key allegations are that HBCUs suffer from poor leadership, inadequate concepts of governance, and financial mismanagement (Brown, 2013; Drezner & Gupta, 2012; Gasman, 2010; Gasman & Bowman, 2011; Stuart, 2013). It appears that HBCUs leaders who fail draw more attention than failed leaders at PWIs (Gasman & Bowman, 2011). Moreover, when leaders fail or a financial crisis ensues at an HBCU, reports often indicate that the problem is systemic and a broad brushstroke is used to paint all HBCUs as having similar problems. Such allegations, often based on outdated studies and spouted by op-ed writers who have never set foot on an HBCU campus (Brown, 2013; Drezner & Gupta, 2012; Gasman & Bowman, 2011), have placed HBCUs on the defensive and in a constant cycle of justifying their relevance and existence—a situation that PWIs and religiously affiliated IHEs rarely face (Brown, 2013; Drezner & Gupta, 2012; Gasman & Bowman, 2011).

Another area that generates negative publicity for HBCUs is their low graduation rates (Toldson & Cooper, 2014). However, critics generally overlook the fact that HBCUs do not receive the same level of funding as their PWI counterparts and thus often struggle to provide comparable resources to enhance the learning environment (Bowman, 2009; Johnson, 2011). Endowments (or the lack thereof) play a major role in the financial health, capital improvements, and scholarship availability at HBCUs (Coupet & Barnum, 2010). HBCUs tend to have very low endowments compared to PWIs (Drezner & Gupta,

2012). Despite many notable exceptions, their graduates tend overall not to attain the same level of career success as graduates of PWIs, thereby limiting the amount of disposable income that can be contributed back to their alma maters (ASHE, 2010).

A study conducted by Gasman (2010), as a member of an investigative team that assessed the termination of 55 faculty members at Clark Atlanta University, is a good example of the application of a balanced perspective in assessing an HBCU. The president of Clark Atlanta University fired the faculty members in 2009, claiming financial exigency (Gasman, 2010). Many of the faculty members had tenure. Gasman (2010) states the American Association of University Professors was notified of the incident and engaged the expert services to determine if due process had taken place and if there were any violations of governance. Gasman (2010) reported that her team found poor leadership and a labyrinthine governance situation, along with a still very dedicated faculty who had labored at salaries of $45,000 per year as tenured associate professors. Gasman spoke against the common practice of comparing HBCUs to their more wealthy PWI counterparts (2010). Gasman and Drezner (2007) pointed out the disparate levels of funding (compared to PWIs) given by states to public HBCUs and by foundations and corporate sources to private HBCUs.

An analysis of HBCUs was published by Toldson and Cooper (2014) from the White House Initiative on Historically Black Colleges and Universities. Toldson and Cooper (2014) ranked HBCUs with regard to graduation rates, student retention, endowment size, enrollment increases and decreases, grants and contracts, and frequency of leadership changes. There is, however, very little commentary on or interpretation of the data.

The literature reviewed on the condition of HBCUs can be interpreted in several ways because there is an insufficient amount of empirical information by which to make a conclusive judgment on the viability of these institutions. However, what can be deduced from the literature, studies, and commentaries is that these institutions are closely watched, their relevance is constantly challenged, critical questions are raised concerning graduation rates in spite of a lack of funding and meager endowments, and concerns about leadership and governance are increasing (Toldson & Cooper, 2014; Gasman, 2010; Johnson, 2011; Bowman, 2009; Drezner & Gupta, 2012; Gasman & Bowman, 2011).

The comparison of HBCUs to PWIs has not been an issue in the context of academic continuity. However, the relevance of HBCUs' fiscal limitations in this context is that many of them can ill afford to be impacted by a disaster that would portend a significant interruption of the education process and major property damage (Johnson, 2011). Hurricane Katrina is a constant reminder of the impact that a disaster can have on HBCUs. According to Gasman and Drezner (2007), HBCUs tend to be located on "undesirable land" (p. 35) that is susceptible to natural and manmade disasters. For instance, Xavier University, Dillard University, and Southern University of New Orleans are all situated at low elevations (Johnson, 2011). The absence of business interruption insurance due to the high premiums, miniscule endowments that do not provide for reconstruction, loss of student enrollment and ensuing tuition (which is the primary revenue source at HBCUs), employee terminations, and drastic elimination of academic programs can be devastating (Gasman, 2010; Gasman & Drezner, 2007; Johnson, 2011; Drezner & Gupta, 2012). Johnson (2011) states recovery funding has not recognized the

HBCUs' greater levels of need. According to Johnson (2011), there were many problems associated with the allocation of funds for rebuilding IHEs in Mississippi and Louisiana after Hurricane Katrina. The funds were distributed equally to each institution without regard to need. Hence, institutions in central and northern Louisiana that had received minimal wind damage received the same funding as Dillard, Xavier, and Southern. No consideration was given to IHEs' capacity to rebuild based on the size of their endowments. For example, Southern University of New Orleans, with an endowment of $2 million, received the same federal and state aid as did Loyola University with an endowment of $300 million (Johnson, 2011). In short, for HBCUs, conducting academic continuity planning to build disaster resiliency on their campuses may be critical to their survival if a disaster should occur.

Government Guidelines

The federal government has issued *Continuity Guidance Circular 2* (FEMA, 2013), has served as the overarching document for COOP in nongovernment sectors. This document provides a foundation for the concept of academic continuity. It provides general information on how to identify functions that must take place (mission-essential functions or MEFs) in an organization (2013). For IHEs, these functions generally include instruction, research, housing, and food service (U.S. Department of Education, 2013). Instruction is given in exchange for payment of tuition, which is the primary revenue source for IHEs (Johnson, 2011). Research infuses grant funding into IHEs and is thus another major source of income, according to Johnson (2011). In addition, research projects can take years to come to fruition. The loss of research specimens, laboratory animals, and research data can be a devastating blow both financially and to

the reputation of an institution. A loss of electrical power for an extended length of time due to a tornado, hurricane, ice storm, or an act of terrorism can bring institutional research to a halt.

In additional to outlining mission-essential functions, the *Continuity Circular Guide* (FEMA, 2013) outlines multiple steps that should be taken to plan for delegation of authority, succession, devolution, and reconstitution. These concepts can be adapted to higher education with varying levels of success. A good example is the process of devolution. FEMA (2013) outlines how this activity that government agencies can often carry out without consequences. If a particular federal or state agency is unable to perform its mission-essential functions, those functions may be transferred to another location of the same agency. For example, if the mission-essential functions of NASA's Huntsville, Alabama facility cannot be performed, all operations are transferred to Houston. The employees at Huntsville would remain in Huntsville while the Houston location would take on additional responsibilities with its current staff. In higher education, however, devolution generally has considerable negative consequences (2013). First, most IHEs do not have a *continuity facility* or another campus to which all functions can be transferred. Second, it may be possible to relocate the function, but the process of relocating students on a temporary basis, or transporting them on a daily basis to the new location, can be a logistical nightmare. Third, devolution is not a viable option for IHEs engaged in research. Even though it may be possible to relocate research animals and specimens, the original researchers who have proprietary knowledge of the research must still perform the research. Fourth, relocating students and functions to another IHE may result in the loss of students from the original institution in subsequent

years (Crawford et al, 2008). In a study conducted by Crawford (2008), Tulane University experienced such a loss when it devolved its medical school to the University of Texas Medical Center in Houston. Many medical students chose to remain in Houston to complete their studies rather than return to Tulane University. Furthermore, this devolution of a medical program required restructuring of courses and curriculum that presented a challenge for students. Subsequently, the students' scores on national examinations decreased significantly (Crawford, 2008).

The *National Incident Management System Incident Command System Emergency Responder Field Operations Guide* (Department of Homeland Security, 2010) offers guidance on how to implement concepts of the National Incident Management System (NIMS) and the Incident Command System (ICS) at the operational level. The NIMS is a scalable template that is used nationwide to facilitate government and non-governmental agencies working together to "prevent, protect against, respond to, recover from, and mitigate the effects of incidents" (Department of Homeland Security, 2010). The NIMS signifies a core set of doctrines that include common terminology, concept of operations, and organizational processes that are necessary for an effective collaborative response to disasters (2010). ICS is the operational component of NIMS that delineates leadership roles and functional responsibilities focused on planning, operations, finance, and logistics (2010). Continuity of operations plan and emergency operations plan activations in higher education must occur within the framework of NIMS and ICS for effective response and recovery coordination (2010).

Several federal agencies collaborated to produce the *Guide for Developing High-Quality Emergency Operations Plans for Institutions of Higher Education* (U.S.

Department of Education, 2013). This document provides minimal guidance on continuity of operations planning for higher education. The U.S. Department of Education (2013) gives a one-paragraph overview of continuity of operations planning and then lists four bullet points on what should be considered in carrying out this activity. The document builds upon the *Action Guide for Emergency Management at Institutions of Higher Education* (U.S. Department of Education, 2010).

The *Results of the National Campus Safety and Security Project Survey* (National Association of College and University Business Officers, 2009) indicate that only 30% of respondents had a business continuity plan in place to ensure recovery should a disaster take place. Twenty-eight percent responded that a business continuity plan was being drafted. This document does not contain any guidance on how IHEs should prepare for academic continuity.

Professional Association Publications

The National Fire Protection Association (NFPA), Disaster Recovery Institute International, ASIS International, and the Business Continuity Institute have all produced guidelines focused on business continuity plan development. Although business continuity planning and COOP have similar components, the former is more involved with preservation of supply chains, business records, and information technology functions. None of these entities' publications delve into the peculiarities of academic continuity with the exception of *NFPA 1600, Standard on Disaster/Emergency Management and Business Continuity Programs* (NFPA, 2010). This extensive document devotes only two paragraphs to planning for alternate sites, identifying functions that must be maintained, vital records, resources needed, and planning for recovery.

Business continuity planning is a sub-specialty of COOP designed to assist business in planning for the continuation or resumption of manufacturing, service delivery, and product sales functions during and after a disaster (Business Continuity Institute, 2013). It is a good model for IHEs to follow in developing a similar sub-specialty devoted to academic continuity.

Peer-Reviewed Articles and General Literature

Literature pertaining to academic continuity at IHEs was produced mainly in the aftermath of Hurricane Katrina. SchWeber's (2008) study indicates the concept of continuity of operations planning in higher education can be traced back to September 1939 in France, when World War II was declared. France's education minister at the time conferred with the French president and suggested that a structure be established to continue the education process. This resulted in a correspondence course program that is still in place today, involving over 350,000 students.

The primary approach to academic continuity today has not veered far from this 1939 effort. The emphasis is still on distance learning as an alternative to a brick-and-mortar learning environment (Lorenzo, 2008). With the onset of the Internet and advances in other technologies, distance learning can be accomplished via several platforms, including email, videoconferencing (Skype, Google Hangout), podcasts, and specifically designed online portals such as Blackboard and D2L (Coyner, 2011).

Lorenzo (2008) detailed how the Sloan Consortium initiated the "Sloan Semester" to assist students attending IHEs that were impacted by Hurricane Katrina, enabling them to continue their education in an online environment. Prior to Hurricane Katrina, the architects of the Sloan Semester had discussed online learning options in the event of a

flu pandemic. Little did they realize that a hurricane would be the impetus for the development of an online course delivery program. Within an unprecedented 48 hours, the Sloan Semester organizers obtained $1.1 million in financing from the Sloan Consortium for the project (Lorenzo, 2008). Lorenzo (2008) states over the course of a weekend, a website was developed to allow affected students to log on and search for course offerings. Lorenzo (2008) estimates that by September 21, 2005, students were enrolled in over 1,345 accelerated online courses being offered by 135 institutions for that fall semester. Most of the courses began by October 10, 2005.

The Sloan Semester was not without its problems (Lorenzo, 2008). There were issues associated with getting the impacted institutions to verify the current enrollment of students attempting to take online classes. Sometimes spam filters prevented email notifications from reaching students to advise them of their enrollment in a course. As new courses became available, students began dropping and adding courses—but no system had been set up to manage drops and adds. Finally, the cost of textbooks was not included in the Sloan Semester program funding. Families who had lost all their worldly possessions could hardly spend $100 for a textbook. Some students who enrolled in classes at the last minute did not receive their textbooks for several weeks, putting them behind in their studies. These were unique and unusual challenges since the project involved creating a system to enroll students from disparate institutions into courses being offered by a myriad of IHEs across the United States. The focus of preparedness now is for each IHE to have its own system in place a system for continuing the education process in a crisis situation; means of doing so can range from setting up tents

in campus parking lots (Wright & Wordsworth, 2013) to utilizing space in motels and churches or relying on established online delivery systems.

Despite its difficulties, the Sloan Semester established online learning during a disaster as a proven option (Lorenzo, 2008). It also motivated IHEs across the nation to start planning for academic continuity. The Sloan Semester serves as a blueprint today for IHEs and is frequently referenced in the relatively few studies and working groups on the topic of academic continuity.

A working group (University of Maryland, 2007) that was funded by a grant from the Sloan Foundation came together to focus collectively on academic continuity. The members of the working group included a cross-section of emergency management practitioners and academicians from the U.S. Department of Homeland Security, Department of Education, Sloan Consortium, Sloan Foundation, and IHEs. This was the first organized effort of record that considered academic continuity in terms of both continuing the delivery of instruction and also defining the support functions necessary to sustain the institution. The Sloan Semester did not have to contend with payroll, financial aid awards and refunds, residential life, food service, and other ancillary functions that IHEs must consider in their continuity of operations planning.

The working group made several important observations (University of Maryland, 2007). First, most IHEs have not established a solid relationship with state and local emergency management agencies. Second, IHEs have miniscule guidance or examples to follow in developing academic continuity plans. Third, no federal agency has been designated to take the lead in promoting academic continuity planning at IHEs. Unfortunately, these premises from 2007 remain true today.

The working group developed nine recommendations to lay the groundwork for sustainable academic continuity planning. These recommendations include the following (University of Maryland, 2007):

- The establishment of a national center for the dissemination of resources and information
- Engagement of regional accreditation bodies to require academic continuity planning for initial accreditation and subsequent renewal
- Appointment of a board of subject matter experts to develop academic continuity planning standards
- Pursue strategies to procure funding for academic continuity planning
- Encourage IHEs to proactively pursue academic continuity planning
- The appointment of a federal agency to spearhead academic continuity planning for IHEs
- Encourage networking among higher education stakeholders and state and local emergency management agencies

With the exception of the guidelines published jointly by the Department of Education and FEMA on developing overall emergency operations plans, there has been no discernible action on the recommendations of the working group, nor have any additional working groups been formed since then according to my research.

Coyner (2011) recommended specifically that IHEs consider issues of academic continuity related to a pandemic. Coyner (2011) advocated for social distancing through distance learning as a means of slowing the spread of a contagious disease. In addition to

recommending instructional delivery methods such as online learning, correspondence, and the use of local radio and television stations (the last of which is improbable), Coyner (2011) also called for considering essential operations such as payroll, security, maintenance, custodial services, and food service. These essential functions tend to be overlooked in most documents that focus on how to continue the delivery of instruction during and after a disaster.

Coyner (2011) recommended having plans in place to ensure academic integrity, planning for short-term and long-term disruptions, and contemplating how instruction will be delivered if there is an absence of technology. Coyner (2011) also discussed planning for internships and laboratory classes and ensuring that syllabi for each class contain an academic continuity component with assignments to be completed in the event that the class is no longer able to meet.

Katz et al. (2012) offered further guidance on how to prevent the spread of influenza through proper continuity of operations planning, including alternative food-service delivery for those who are ill and a revised absence policy. This study, although focused on the health behaviors of students during a flu pandemic, offered good practical information on sanitation practices to prevent the spread of infectious diseases as a subset of academic continuity. Katz's (2012) premise was prevention can promote good health and thereby facilitate the continued delivery of instruction by healthy professors to healthy students.

Several additional studies have contributed to the dialog on academic continuity in advance of infectious disease pandemics (American College Health Association, 2011; Zhang, May & Stoto, 2011). A task force appointed by the American College Health

Association (2011) focused on the four phases of emergency management in addition to some continuity of operations planning concepts, including alternative instruction delivery, alternative facilities, alternative food service, maintenance, custodial services, and other essential functions.

Other earlier articles (five to ten years old) extolled the benefits of academic continuity planning with an emphasis on online education (Blackboard Inc., 2009; Ebersole, 2008; Henderson, 2005; McClure, 2010; Orlando, 2007; Young, 2009).

Theoretical Foundation

As outlined in chapter 1, the theoretical framework for this study was the resiliency theory, which evolved from the notion in physics of an object's ability to "rebound or bounce" back from deformation or distress" (Plough et al., 2013; Norris et al., 2007). Within the behavioral sciences, resiliency is identified with individuals and their capacity to adapt to adverse situations. Comparisons have been conducted to understand why some individuals are able to adapt and others are not (Kim & Hargrove, 2013; Plough et al., 2013). Further evolution of the concept of resiliency encompassed concerns for communities and their ability to sustain themselves or quickly recover in the face of adversity.

Resiliency is the foundation of continuity of operations planning, which is focused on the ability to rebound or bounce back from a disaster while sustaining or expeditiously resuming the institution's essential functions (Longstaff et al., 2010). An HBCU that has a continuity of operations plan in place has thereby increased its adaptive capacity to continue the performance of operations that are critical for survival. Both Tulane University and Dillard University exhibited adaptive capacity in the aftermath of

Hurricane Katrina by utilizing cruise ships and a hotel, respectively, to provide for housing, food service, and instruction (Crawford et al., 2008).

Resiliency theory has become dominant in laying the foundation for the development of goals and policies that have become national in scope (Longstaff et al., 2010; Plough et al., 2013) in addressing manmade and natural disasters. Resiliency theory is also applicable to complex systems such as IHEs. Plough et al. (2013) stated that resiliency is essential and directly applicable to communities that are marginalized, economically stressed, and vulnerable due to deficiencies in critical infrastructures. Many HBCUs find themselves in exactly this situation due to disparate funding, low alumni support, leadership shortcomings, and miniscule endowments (Toldson & Cooper, 2014; Gasman, 2010; Johnson, 2011; Bowman, 2009; Drezner & Gupta, 2012; Gasman & Bowman, 2011).

Summary

In general, the body of literature and studies relevant to continuity of operations planning at IHEs is limited and often dated. Government and professional association guidance on continuity of operations planning is lacking and weighted toward mitigation, preparation, response, and recovery. The literature reviewed in this chapter tends to promote academic continuity through online learning as the main methodology for the delivery of instruction in emergency situations. The literature is generally silent, however, on methodologies for continuing research, providing food service, and performing other essential functions germane to higher education. There is only general guidance on the need to have plans to address these essential ancillary functions.

No prior research was found that deals specifically with continuity of operations planning at HBCUs. HBCUs have established themselves as viable alternative IHEs for individuals who cannot qualify for admittance to PWIs or who desire a nurturing educational environment more aligned with their culture. The large number of successful graduates from these institutions has been well documented. However, many of these IHEs are facing a tenuous existence due to several factors that have been featured in the mainstream media and in a few scholarly studies. Hence, exploring the extent of continuity of operations planning at HBCUs in Alabama is critical to building resiliency at these institutions and eliminating a possible crucial weakness. The results of this study can be generalized to the larger population of HBCUs.

Resiliency theory was identified as the most applicable theoretical framework for my study, based on its focus on the concept of adaptive capacity, which is very applicable to continuity of operations planning in higher education. Institutions that have adequate continuity of operations plans will be more prepared to adapt and bounce back from a disaster. This is the core element of resiliency theory.

In chapter 3, the research design, methodology, and data collection procedures for the study are described. Chapter 3 explains the rationale for selecting a qualitative research approach and a case study design.

Chapter 3: Methodology

The purpose of this study was to explore the extent of academic continuity planning at HBCUs in the state of Alabama. Academic continuity planning, which is closely related to and often referred to as continuity of operations planning in an academic environment, is the concept of planning for the continuation of essential functions, or the expeditious resumption of essential functions during and after a disaster that causes significant disruption (FEMA, 2013). This study was designed to investigate how academic continuity at HBCUs in Alabama can be strengthened.

In order to explore the extent of academic continuity at the study participant institutions, it was necessary to conduct in-depth interviews and examine plans and other documents. Hence, I chose a qualitative methodology. A qualitative approach involving face-to-face interviews was conducive to the purpose of this study in that there were minimal risks to the participants of this study, and because such dialog was necessary to gain a thorough understanding of the extent of academic continuity planning, one that could not have been obtained from quantitative data alone.

In this chapter, I have delineated the role that I assumed as a researcher; discussed in detail the methodology as it relates to the identified population, my sampling strategy, the estimated number of participants, and other factors; addressed matters of trustworthiness; and outlined how ethical procedures were followed.

Research Design

Based upon Creswell's (2007) recommendation that no more than one or two central questions be asked, the following research questions were developed:

RQ1. What is the extent of continuity of operations planning at HBCUs in the state of Alabama?

RQ2. What can be done to strengthen continuity of operations planning at these institutions?

The central concern of this study is how well HBCUs have planned for the continuation of academic and ancillary functions on their campuses in the event of an imminent or actual disruptive critical incident. It is anticipated that there may be impediments to adequate continuity of operations planning. Identifying these impediments facilitated the development of strategies to strengthen academic continuity planning at these institutions.

Research Tradition

At the onset of the study, I began exploring the various traditions promoted by writers such as Creswell (2007, 2009) and Patton (2002). Whereas Patton (2002) outlined an exhaustive set of research traditions, Creswell (2007, 2009) limited his focus to five general traditions: narrative, grounded theory, ethnography, phenomenology, and case study. Creswell (2007) focused on these five traditions because they are the ones used most often in research studies. I explored the attributes of each tradition and their relevance to my research before choosing the case study approach.

The narrative tradition involves studying the lives of individuals and often is intertwined with the life of the researcher for comparative purposes (Creswell, 2009). Even though in-depth interviews are required, as in the case study tradition, the narrative tradition also considers life histories and memoirs to reflect possible patterns that may be

cultural or social in nature (Patton, 2002). This tradition is based more on individuals as opposed to a program evaluation, which is what I was seeking to do in this study.

The grounded theory tradition is based on generating a theory (Patton, 2002) or facilitating the emergence of a theory from multiple data collection levels involving interviews, observations, review of documents, and other data sources (Creswell, 2009). Even though multiple interviews were conducted and various levels of data collection took place in this study, there was no need for observations of study participants or for the generation of an emerging theory. Resiliency theory was sufficiently applicable to my study.

The ethnography tradition focuses on people or cultural groups and their way of life (Patton, 2002). An ethnographic study may involve observing people or a cultural group over an extended period in their natural setting (Creswell, 2009). This tradition had no relevance to my study.

Phenomenology had some applicability to my study in that a program being studied could qualify as a phenomenon (Patton, 2002). However, this tradition goes further to examine the human experience as the phenomenon, making it more skewed toward a humanistic approach as opposed to program evaluation (Patton, 2002). According to Creswell (2009), a researcher must set aside his or her own experiences so that greater understanding of the study participants can be attained. However, for this study, my own experience and training in continuity of operations planning at an HBCU formed a foundation for generating interview questions, reviewing existing plans, and facilitating an overall reference foundation.

According to the attributes of the case study tradition as outlined by Creswell (2009), a researcher deeply explores a "program, event, process, or activity" (p. 13). In this approach, an issue is studied by using one or more cases in a contextual setting. It is particularly conducive to purposeful sampling that involves cases that provide different perspectives. This approach was directly related to my intention to choose a small number of HBCUs in Alabama that are varied in their structure (private, public, technical college, community college, etc.) so that different perspectives can be derived from their continuity of operations planning as part of a holistic examination (Janesick, 2011). A case study tradition can involve examining a few cases and then looking for common themes that are germane to all the cases (Creswell, 2007). This research is intended to develop common themes that transcend all the study participants for external validity purposes. The case study was the methodology chosen for my study in that it was more applicable than the other approaches reviewed.

The Researcher's Role

My role in the study was that of a "key instrument" (Creswell, 2007, p. 38) in that I collected data through interviews and examination of existing documents. I then analyzed the collected data.

I had a cursory and informal professional relationship with some participants in the study. I am a former recording secretary and executive board member of the Historically Black Colleges and Universities Law Enforcement Executive Administrators (HBCU-LEEA). I served in this capacity from 2012 to 2014 and interacted with several campus law enforcement and security administrators from HBCUs in Alabama at the organization's annual training conferences. In addition, some of the study participants

were familiar with me because I corresponded with the HBCU-LEEA membership via email and telephone calls on a regular basis. My professional association was in no way supervisory, and it did not involve any authority over the study participants. I recently served as chairperson of the Campus Safety and Resiliency Committee of the Historically Black Colleges and Universities Emergency Management Alliance. This organization, although currently relatively inactive, seeks to provide a networking platform to encourage African American students to consider a career in emergency management, encourage the development of emergency management academic programs at HBCUs, and build campus resiliency (HBCU-EMC, n.d.). I saw my contact with campus law enforcement and security executives through these two organizations as being a catalyst for garnering cooperation in the study and for ensuring openness for internal validity purposes.

Methodology

Participation Selection Logic

The population for my study was the 15 HBCUs located in Alabama. From this population I drew a purposeful sample of four institutions that reflect diversity in terms of enrollment; public and private schools with 2-year, 4-year, and graduate programs.

A purposeful sample strategy was chosen based upon the nature of the study that was conducted, and based upon Creswell's (2007) assertion that this is a good approach for a qualitative study and for understanding the problem related to the research questions. A purposeful sample strategy employing the concept of maximum variation (Creswell, 2007) to ensure that the study participants are differentiated based upon predetermined diversity criteria will produce data that reflect different perspectives.

The specific criteria established for sample selection included diversity in geographical location, so as to account for exposure to weather-related disasters such as hurricanes in coastal Alabama, winter storms and tornadoes in the state's northern region, earthquakes (the New Madrid fault), forest fires, and flash floods. Geographical diversity involved institutions in close proximity to military bases, nuclear plants, and institutions located in larger metropolitan areas where an act of terrorism, manmade disaster, or major criminal incident might occur. Diversity was sought relating to institution size, residential versus commuter schools, research focus versus liberal arts focus, and endowment size. Verification that institutions met the criteria was accomplished by reviewing statistical information from institution websites and demographic information from local government and economic development agencies.

I specifically chose the four HBCUs in Alabama that met the referenced criteria for differentiation and then initiated contact on an informal basis by telephone. Once tentative agreement had been received for participation, a formal invitation to participate in the study was drafted and forwarded to respondents at the selected institutions.

Instrumentation

IRB approval was obtained before data collection was initiated. The IRB approval number for this study is 01-11-16-0334362. Data was collected through personal, audio-recorded interviews and through review of emergency operations and continuity of operations plans at each institution when such plans existed. The primary interviewees at each school were the persons responsible for emergency management planning and operations—generally the public safety director, chief of police, or a designated emergency manager—or the person responsible for academic administration, typically

the provost, vice president of instruction, vice president for academic affairs, or a similarly titled administrator.

The person responsible for emergency management planning was able to provide specific information on whether continuity of operations planning is taking place and to what extent. This person's role was generally directed towards sustaining essential functions relating to safety, maintenance, housing, food service, information technology, financial aid, accounting, transportation, and related functions. The administrators interviewed, who are charged with academic programs and instruction, were able to articulate the extent of continuity of operations planning for sustaining the delivery of instruction and the continuation of research activities. The information that the respondents were asked to provide through interviews, along with my review of existing plans, and my review of government and industry guidelines established sufficient data to answer the research questions.

Data Collection Plan

Three sets of data were collected during the course of the study: one set from face-to-face interviews, another set of data from the review of participant emergency operations plans and continuity of operations plans, and the final set from a review of government and industry guidance on continuity of operations planning to establish a baseline for determining effective planning. The collection of these three sets of data corresponded to my first research question, which concerns the extent of continuity of operations planning at the participating institutions. The continuity of operations plans reviewed at one of the participant institutions had specific guidance and procedures for continuing operations. For the participants that did not have written continuity of

operations plans, the emergency operations plan in some instances were found to have a discussion of continuity of operations planning in the basic plan. I made inquiries as to how the planning process takes place, the composition of the planning team, revisions to the plan, whether the plan is reviewed by the local emergency management agency, and exercises that have been conducted to test the plan. As the researcher, I collected the data during the telephone interviews. All interviews were audio-recorded. Participants were informed in advance of the telephone interviews as to the nature of the questions that I would be asking and the documents that I would need to review for analysis. The responses to the interview questions asked were straightforward. Hence, there was no need for follow-up interviews.

Data Analysis

Interviews were transcribed and coded utilizing the software program NVivo for the development of common themes to answer the research questions. No discrepant information was found throughout the interview process. Hence, there was no need for conducting the second interviews for which I had originally planned. Available emergency operations plans and continuity of operations plans from the participating institutions were analyzed in the context of current studies and government continuity of operations planning guidelines to determine the extent of continuity of operations planning taking place.

Issues of Trustworthiness

Trustworthiness of findings is the overarching goal of validity and reliability. Reliability and validity are the mechanisms for demonstrating and communicating the level of rigor engaged in the research and the overall trustworthiness of the findings

(Morse, Barrett, Mayan, Olson & Spiers, 2002). Trustworthiness involves "credibility, transferability, dependability, and confirmability" (Morse et al., 2002, p. 2). Within these concepts are contained the strategies member checking, audit trail, peer debriefing, referential materials, and participant confirmation of results (Morse et al., 2002). Validity plays a strong role in credibility, dependability, and confirmability by ensuring that the results of the research are accurate, and the conclusions and interpretations can be trusted (Maxwell, 2013; Creswell, 2009). It is concerned with the question: did we actually measure what we intended to measure? Reliability is evident in certifying that the approach used by the researcher and the results developed are consistent and can be replicated by other researchers to obtain the same results (Creswell, 2009).

A goal of trustworthiness is to make the research process transparent so that other researchers and readers of the findings can trace the decisions that were made, methodologies used, the analysis process, and the conclusions that have been drawn over the course of the study (Roberts, Priest & Traynor, 2006). Due to the iterative nature of qualitative research during the course of a study, it is important for researchers to move back and forth between the research question, data collection, analysis, and conclusions to insure that there is congruence throughout the process to bolster the trustworthiness of the study (Morse et al., 2002). It was my intention to employ strategies at the onset of my research to guide me in deciding when to modify, realign, or adjust the research process "to achieve reliability and validity and ensure vigor" (Morse et al., 2002, p. 10).

Validity

The validity process must begin with the selection of the study participants. Creswell (2007) states that purposeful sampling is the best strategy to use in a qualitative

study because it involves selecting participants who can directly provide information pertaining to the research problem and the "central phenomenon." Purposeful sampling should achieve representation to enhance the richness of the data that will be obtained that speaks to the central phenomenon. This sampling technique should consider participants with whom the researcher can establish a productive relationship and participants with whom a collegial relationship has already been established that will encourage uninhibited discourse (Maxwell, 2013). I chose four HBCUs in the State of Alabama that are diverse in their governance, size, educational offerings, location, and funding sources. The State of Alabama offered the largest number of HBCUs to select from in the United States (Brown, 2013). The diversity of the population from which my sample was drawn produced an abundance of information that was needed to answer the central research question. My eight year tenure at an HBCU in the State of Alabama was beneficial in establishing collegial working relationships with my counterparts. These relationships facilitated forthrightness in response to the interview questions and provided for introductions to additional individuals who needed to be interviewed at participant institutions.

Triangulation is the process of gathering information from diverse resources inclusive of interview responses and documents to reduce the risk of personal bias and tunnel vision in order to add to the validity of a study (Maxwell, 2013; Creswell, 2009). Triangulation played a major role in my study to confirm participant responses to interview questions. For example, when a participant stated that the institution has a formal continuity of operations plan or a continuity of operations plan annex in their emergency operations plan, I asked to see the plan to confirm that such a plan exists.

Going a step further, the plan was reviewed to ascertain the comprehensiveness of continuity of operations planning. In several instances, the plan addressed how the instructional process will continue during and after a critical incident, however, it did not detail how research functions will continue. When a participant indicated that no plan existed, there was still a possibility that the institution had continuity of operations concepts integrated into their emergency operations plan. This was found to be the case when emergency operations plans were reviewed.

It was assumed that participants might not have a good grasp of what is involved in continuity of operations planning. By reviewing the one continuity of operations plan at a participant institution, and in reviewing emergency operations plans at the other participant institutions, interview responses were validated. The review of documents directly linked to my research questions that sought to ascertain the extent of continuity of operations planning at participant institutions.

Member checking is the technique of allowing study participants to review the conclusions that have been drawn from their interview (Morse et al., 2002). It gives the participant an opportunity to confirm the gist of their responses. If misinterpretations have occurred, the researcher can obtain clarification and make adjustments in the findings. I conducted member checking at the conclusion of each interview to insure that I had a good grasp of their responses, and to confirm that they fully understood the questions and responses they made. It was important to confirm their responses for overall theme development and data analysis (Creswell, 2009).

Bias in my study was addressed by openly reflecting on my background, professional experience, training, and life experiences through a process of reflexivity.

Reflexivity is a self-awareness process that seeks to keep before a researcher an awareness of actions, suppositions, feelings, and perceptions throughout the data collection, interpretation, and drawing of conclusions (Darawsheh, 2014). Disaster planning and response is a major part of my background, professional experience, and training at a HBCU in the State of Alabama. The closeness I have to my dissertation topic lays a strong foundation for framing interview questions, reviewing documents with a critical eye, and identifying the best subjects to interview at participant institutions. What I had to guard against was allowing subjective views, perceptions, feelings, and speculations cloud aspects of my research. This was accomplished through a continuous process of reflexivity (Darawsheh, 2014). While employing my expertise in disaster planning and response during the course of the research, I took on a mindset of seeking new knowledge that helped increase my skill set in this area by learning from the participant institutions. This approach assisted me in recognizing that I do not have all the answers and that there is something to be learned from others. Open mindedness and humility mitigated against bias in this study.

Reliability

Reliability deals with the consistency of results. It may involve the credibility of a questionnaire and whether similar results will be obtained by different researchers using the same measurement instrument (Roberts et al., 2006). In essence, other researchers should be able to develop the same results and reach the same conclusions by following the steps used in the original study. Creswell (2009) confirms this when he states that reliability "indicates that the researcher's approach is consistent across different researchers and different projects" (p. 190).

Reliability was enhanced in my study by creating an audit trail, reviewing transcripts for errors, taking an iterative approach versus a linear approach, and by using a quality software program for coding purposes. Roberts and Traynor (2006) recommend keeping detail notes on what, how, and why certain decisions were made during the research to increase reliability. Note taking involving every aspect of my research was crucial for creating an audit trail that can be followed by other researchers seeking to duplicate my research. Notes on decisions such as when to interview individuals at participant institutions were important. It was not feasible to conduct interviews at the beginning of school terms, during final exam periods, and during times leading up to homecoming, graduation, and major sporting events. The best time to conduct interviews were during summer months and other breaks or slow periods during the school year. For this study, interviews were conducted after the Spring semester registration, but prior to final exam weeks and graduation. Notes were written on the rationale for each interview question, setting and time of day for interviews, lead time given for the production of documents and the scheduling of interviews, how the data was organized, and the method used for transcription. As data was being collected, I started recording my general thoughts and impressions on the depth of the data, its applicability to the study, and its overall use (Creswell, 2009). The notes taken will serve as an audit trail for the study.

Transcripts were reviewed for omissions and errors. This was accomplished by reading through the transcriptions as I listened to the audio recordings. An iterative approach that involves moving "back and forth between the data" (Roberts & Traynor, 2006, p. 43) was used to ensure there was a firm connection between the data and interpretations. This approach also allowed for modifications and adjustments to be made

during the course of the research and guarded against drifting away from the central phenomena of the study.

In lieu of hand coding the interview transcripts and documents, the software analysis program NVivo was used for this purpose. According to Miles, Huberman, and Saldana (2014) the main benefit of using Computer Aided Qualitative Data Analysis Software (CAQDAS) is the storage and retrieval of data, assignment of codes, and the creation of analytical audit trails. The latter benefit is directly related to the iterative nature of my research and data analysis involving ongoing reflection and interpretation. CAQDAS packages serve to document a researcher's thoughts, hunches, and the logic used in drawing conclusions for reliability (Miles et al., 2014). Overall, CAQDAS packages are "efficient data management systems" (Carcary, 2011, p. 14) that are critical for tracking data analysis. Carcary (2011) states NVivo is a CAQDAS that has been thoroughly vetted having been used by over 400,000 researchers in more than 150 countries.

Ethical Procedures

The extent of continuity of operations planning at the participating institutions was considered confidential information along with their emergency operations plans. These plans reflect the operational processes in place to address a disaster or critical incident. Public disclosure of such plans could leave these institutions vulnerable to a terrorist attack. A terrorist could cause a disruptive event and then sabotage continuity efforts by destroying continuity facilities, inflicting a virus on the online learning portal to disable the system, or targeting individuals who are in the order of succession. With these considerations in mind, it was my goal to maintain the anonymity of study

participants by identifying them solely by a coded system so that they cannot be identified.

Anonymity was going to be especially critical to protect the study participants' reputations if their institutions were found to be lacking in continuity of operations planning. Negative publicity directed at HBCUs regarding a lack of preparedness could fuel deeply ingrained stereotypes and negatively impact these institutions' efforts to recruit students and philanthropic support.

Summary

My decision to use a qualitative, case study approach was based on the need to study a small, select group of participants constituting a purposeful sample. My role as the researcher facilitated information-rich interview sessions, since I drew upon my knowledge and experience in the area of continuity of operations planning at an HBCU in Alabama. Trustworthiness was ensured by adhering to best practices in participant selection, data collection, and data analysis that are relevant to qualitative research. Care was taken to protect the anonymity and thereby the reputation of study participants.

Chapter 4 contains an overview of the data collected and the research results along with the strategies used to reflect evidence of trustworthiness.

Chapter 4: Data Analysis

Introduction

The purpose of this study is to explore the extent of continuity of operations planning at HBCUs in Alabama. In an academic environment, continuity of operations planning, also referred to as academic continuity, is involved with continuing or expeditiously resuming mission essential functions during and after a disaster. Mission essential functions can be defined as operations that must take place for the sustainment and continuation of the academic process (FEMA, 2013). Mission essential functions can include instruction, research, major sporting events, food service, and ancillary functions such as payroll, security, library services, and financial aid disbursements (Coyner, 2011). This study is also designed to investigate how academic continuity at HBCUs in Alabama can be strengthened by identifying impediments to planning. The identification of impediments and obstacles will facilitate the development of mitigation strategies so academic continuity planning can take place.

The central phenomenon is continuity of operations planning in a higher education setting. The following two research questions provided the foundation for studying this phenomenon:

RQ1: What is the extent of continuity of operations planning at HBCUs in the State of Alabama?

RQ2: What can be done to strengthen continuity of operations planning at these institutions?

This chapter delineates the results of the research to include data collection methods, data analysis, the coding method, theme development, review of government guidelines and institution plans, and the rationale for selecting study participants.

Participant Selection

HBCUs in the State of Alabama were chosen because Alabama has the highest number of HBCUs in the country with 15 institutions of higher education that fit into this category. Furthermore, the State of Alabama is susceptible to the following hazards based upon several factors:

- Weather related hazards
  - Hurricanes in Southern Alabama from the Gulf of Mexico
  - Ice and snow storms in Northern Alabama
  - Earthquakes in Western Alabama due to proximity to the San Madrid fault
  - Tornadoes in Northern and Central Alabama due to the confluence of warm gulf air meeting cooler air from a western flowing jet stream
  - Flashfloods in Northern Alabama
  - Forest fires due to the amount of timber throughout the state
- Acts of Terrorism
  - Military installations in the state
  - Nuclear power plants in the state
  - Populated cities such as Birmingham, Huntsville, and Mobile

The 15 HBCUs in Alabama are located in each of the areas where hazards are prevalent and acts of terrorism can occur.

Table 1 identifies the HBCUs in the State of Alabama

Table 1

List of HBCU's in the State of Alabama in alphabetical order

Institution	Public or Private	2 Year, 4 Year, or Technical
Alabama A & M University	Public	4 Year
Alabama State University	Public	4 Year
Bishop State Community College	Public	2 Year
Concordia College	Private	4 Year
Shelton State Community College	Public	2 Year
Gadsden State Community College	Public	2 Year
Lawson State Community College	Public	2 Year
Miles College	Private	4 Year
Oakwood University	Private	4 Year
Selma University	Private	4 Year
J.F. Drake Technical College	Public	2 Year
Stillman College	Private	4 Year
Talladega College	Private	4 Year
Trenholm State Community College	Public	2 Year
Tuskegee University	Private	4 Year

In keeping with Creswell's (2007) guidance on using a purposeful sample, participants for the study were selected based upon his concept of maximum variation to insure that the participants represented a diverse mix of 2-year, 4-year, public, and private HBCUs. In addition, the institutions were selected based upon the diversity of their geographic location. The following are additional variations that were considered:

- Research and non-research institutions
- Institutions with housing on campus and commuter institutions with no housing
- Institutions with and without food service
- Institutions with emergency operations plans online
- Institutions with accessible individuals with knowledge of emergency operations

Finally, consideration was given to having representation by HBCUs that had experienced a disastrous event within the past 7-years. This was an important consideration to determine how these institutions responded to the event with or without continuity of operations plans in place. A good response would indicate that appropriate academic continuity planning was effective in maintaining mission essential functions, or for the expeditious resumption of these functions. Having participants in the study that had experienced a disastrous event offered a better gauge on the extent of continuity planning than an institution that has a continuity of operations plan that has never been tested in a real-life situation. Two of the four HBCUs that agreed to participate in the study have been exposed to a disastrous weather event within the past 7-years. One of the two participant institutions that experienced a disastrous event had to close for several days near the end of a semester. The other institution that experienced a disaster had to close one of its campuses and move all academic functions to another campus.

Four HBCUs were selected and agreed to be participants in this study. Each participant was assigned a code name for confidentiality purposes. The code names consisted of letters and numbers that were based upon a key kept in a confidential file folder. The geographical vicinity of the participants is not identified in this study to keep the identity of the participants confidential. In some geographical areas, there is only one HBCU. Through the process of deduction, certain participant schools could be identified if geographical vicinities are listed.

Table 2 reflects minimal demographic information on the HBCUs in Alabama that agreed to be participants for the study:

Table 2

Information on the participant institutions

Code	Classification	Level	Experienced Disaster
B22	Public	2 Year	Yes
M23	Private	4 Year	No
T24	Private	4 Year	No
DM25	Public	2 Year	Yes

The person interviewed at institution B22 has overall responsibility for emergency operations planning and continuity of operations planning. This person serves in an administrative position at the institution and has had military experience in disaster response with assignments to emergency operations centers and appointments to disaster control groups. The person interviewed has administrative responsibilities for security, emergency management, physical plant, construction, and capital projects. The institution has no on-campus housing or food service. The disaster experienced by the institution occurred within a 7-year period and was weather related. The impact of the event cut off electrical power to the institution for an extended number of days during the academic school year. The institution does not have a written emergency operations plan nor does it have a written continuity of operations plan. At the time of the interview, an emergency operations plan was in the development stage.

Institution M23 has on-campus housing, food service, on-going research, a robust athletic program, and other functions that are common at a midsize institution of higher education. The person interviewed serves as the chief law enforcement officer at the institution with responsibility for both police operations and emergency management operations. The institution has not experienced any recent major disasters. The emergency operations plan for the institution was downloaded from the institution's website. The person who was interviewed provided a continuity of operations plan for a department involved in animal research. The continuity of operations plan provided is the only written document governing continuity of operations planning at the institution.

Institution T24 is a small private HBCU with on-campus housing, food service, a moderate athletic program, and minimal research activities. The person interviewed at this institution has extensive criminal justice experience and is the chief law enforcement official for the campus with responsibilities for police operations and emergency management operations. The person interviewed has not had formalized training in emergency management or continuity of operations planning. The institution's emergency operations plan was downloaded from their website.

Institution DM25 is a community college with several campuses. There is an absence of on-campus housing and significant food service. Two individuals were interviewed. Both individuals are administrators with one having direct responsibility for emergency management operations by title. The other individual has experience with administering a FEMA grant. Neither individual have had formalized training in emergency operations or continuity of operations. The institution experienced a weather

related disaster within the past 7-years. An emergency operations plan was downloaded from their website.

Data Collection

Data for this study came from semi-structured interviews with key individuals at the participant institutions. I conducted the interviews telephone and recorded each interview. In addition, available Emergency Operations Plans and Continuity of Operations Plans from participant institutions were reviewed. Finally, I reviewed federal government and industry guidelines *Continuity Guidance Circular 1* (FEMA, 2013), *Guide for Developing High-Quality Emergency Operations Plans for Institutions of Higher Education* (U.S. Department of Education, 2013), and *NFPA 1600 Standard on Disaster/Emergency Management and Business Continuity Programs* (NFPA, 2010) for triangulation purposes. These guidelines, although limited in supplying an exhaustive overview of continuity of operations planning at institutions of higher education, assisted in establishing a baseline for determining the extent of continuity of operations planning at the participant institutions.

Once participant institutions were selected based upon the criteria stated, an individual was identified at the institution that had overarching responsibility for emergency operations. This person is typically responsible or plays a major role in emergency operations planning and continuity of operations planning. At participant institutions B22 and M23, I was aware of the individuals with this responsibility through my leadership role as Recording Secretary for the Historically Black Colleges and Universities Law Enforcement Executive Administrators (HBCU-LEEA) from 2012 – 2014. In my official capacity with the HBCU-LEEA, I had interacted with these

individuals and others holding similar positions throughout Alabama. My professional association with these individuals was in no way supervisory, and I have never had any authority over them.

For institution participants T24 and DM25, I reviewed their websites to identify the individuals most likely to be involved in emergency management. Initial contact was made by telephone with the individual most likely to be involved in emergency operations at participant institution T24. This individual confirmed his overarching responsibility for emergency management operations and planning at the institution. At participant institution DM25, initial contact was made with a person identified in the online Emergency Operations Plan as having responsibility for plan development. This person, who serves as an administrator for the institution, confirmed that she is the primary person responsible for emergency operations planning. She further stated that another administrator at the participant institution could offer relevant information for my study. This second individual was contacted and agreed to provide input on the participant institution's emergency operations planning.

Interview Process

The assumption was made that the individuals contacted at the participant institutions may not have a full understanding of continuity of operations planning at an institution of higher education. Before each interview was conducted, an overview was given that followed the verbiage outlined below:

COOP is the process of planning for how mission essential functions will continue or quickly resume during and after a disaster causes a major disruption or stoppage of normal operations. This usually first involves identifying mission essential

functions which are functions that must take place for the sustainability and continuation of the organization operations. In an academic setting, mission essential functions may involve the delivery of instruction, on-going research, major sporting events, payroll, security, information technology, accounting, etc (Coyner, 2011). Once mission essential functions have been identified, the next course of action is for plans to be developed to insure mission essential functions can continue. According to Coyner (2011), the identification of alternative facilities, delegation of authority and succession planning, provisions for accessing vital records, alternative methods for communications, and returning to a state of normalcy are often the considerations of continuity of operations planning for an academic setting.

After each individual at the participant institutions had been briefed and allowed to ask questions and make comments, I secured their verbal consent to be involved in the. Each individual was advised that a Consent Form would be forwarded by email or facsimile for his or her review, signage, and return. The consent form contained the following sample questions to further clarify the intent of the study and the nature of the questions that were going to be asked:

- If a natural, mechanical, or manmade disaster should occur that cuts off electrical power for the campus while school is in session, how would the learning process continue?
- What protocols are in place for sending notifications to the campus community during an emergency?
- Is there a team or point person for spearheading emergency management operations, and if so, what is their function?

I scheduled a time for each interview that was convenient for the participant. Participants were made aware that the telephone interviews would last approximately 30 minutes, and subsequent interviews might be needed to clarify points or to obtain additional information. Finally, I informed the participants that I would be requesting existing written plans relevant to emergency operations and continuity of operations from the participating HBUs. According to Creswell (2009), obtaining data from several sources such as interviews and the review of documents facilitates the development of themes.

Thirteen interview questions (Appendix B) were asked of each person interviewed. Some of the questions were not relevant to all the participant institutions. For example, institutions not engaged in research were not asked the question, "What plans are in place to care for laboratory animals and continue research during and after a disaster?" Furthermore, commuter participant institutions with no food service or on-campus housing were not asked "What requirements are in place for vendors such as food service providers to continue or quickly resume operations during and after a disaster?" Finally, the administrators who were questioned were not asked the question "What support does administration provide for continuity of operations planning?"

Telephone interviews took place from February 1, 2016 through February 8, 2016. After each interview, I went back through the interview questions with the individuals interviewed and their responses as a form of member checking (Morse et al., 2002, p. 2). Each individual was afforded the opportunity to receive a copy of the interview transcription. I double-checked the transcribed interviews for accuracy by listening to the interviews while reading the transcriptions. Based upon the

straightforward responses that were received, I determined there was no need to conduct follow-up interviews.

The interviews were transcribed into Microsoft Word documents. Each transcription was then uploaded into the software program QRS NVivo 11. I embarked upon cleaning the data using the auto code feature of the program. I used the auto code feature to regroup the data based upon each research question. By doing this, I was able to review all the responses to each research question at one time instead of reviewing each transcribed interview separately to review responses. This measure assisted greatly in reviewing the responses for patterns and theme development.

Patton (2002) recommends making several "reads" of the data to become more familiar with it, and to develop a coding system (p. 463). I read the interview responses several times to look for patterns and themes. Notes were made of similarities in responses and the themes and patterns that were beginning to emerge. In keeping with Creswell's (2007) strategy of using "lean coding," I established a short listing of parent nodes with expansion of these nodes with child nodes (p. 152). I was careful to keep the research questions in mind as I developed these nodes to insure that my research questions would be addressed. Table 3 reflects the parent and child nodes that developed:

Table 3

Parent and Child Nodes

Parent Nodes	**Child Nodes**
General knowledge of COOP	Formal training, practical work experience, COOP planning experience, COOP implementation
COOP in action	Pandemics, food service, housing, prior disaster response using COOP
Responsibility for COOP Development	Team approach, singular individual, administration
COOP development support	Administration, local emergency management agency
COOP strengthening needs and impediments	Training, overwhelmed with other tasks and priorities

The parent nodes General Knowledge of COOP, COOP in Action, and Responsibility for COOP Development are directly related to the first research question "What is the extent of continuity of operations planning at HBCU's in the State of Alabama?" In order to effectively conduct continuity of operations planning, one must first have a general knowledge of COOP through formal training which generally comes from FEMA online and face-to-face classes. Table 4 lists the COOP training classes offered by FEMA:

Table 4

COOP Training

Training Course		Online	Classroom
IS-546.a	Continuity of Operations Awareness	Yes	
IS-547.a	Introduction to Continuity of Operations	Yes	
IS-548	Continuity of Operations Program Managers Train the Trainer Course	Yes	
IS-524	Continuity of Operations Planners Train the Trainer Workshop	Yes	
IS-545	Reconstitution Planning Workshop	Yes	
IS-550	Continuity Exercise Design Course	Yes	
IS-520	Introduction to Continuity of Operations Planning for Pandemic Influenza	Yes	
IS-526	Mission Essential Functions Workshop	Yes	
IS-551	Devolution Planning Workshop	Yes	

The courses are free and can take from two to four hours to complete. Additional courses can be taken to attain the Professional Continuity Practitioner (PCP) and the Master Continuity Practitioner (MCP) certifications. However, certification is not needed in order to grasp an understanding of continuity of operations planning. The two basic courses *IS-546.a Continuity of Operations Awareness* and *IS-547.a Introduction to Continuity of Operations* will lay an adequate foundation for basic continuity of operations planning.

Practical work experience, COOP planning experience, and COOP implementation - child nodes of the parent node General Knowledge of COOP, are all intertwined with formal training. They are actually building blocks. Formal training in continuity of operations planning is foundational for work and planning experience. Successful implementation of continuity of operations will be an indicator of the level of training received that influenced the planning. If the formal training establishes a platform for good continuity of operations planning, then implementation will be successful.

The parent node COOP in Action considers the responses to different types of disasters where continuity of operations plans were implemented, or not implemented. Relevant child nodes are Pandemics, Food Service, Housing, and Prior Disaster Response Using COOP. The child nodes were developed from interview question and responses.

Parent nodes Responsibility for COOP Development, COOP Development Support, and COOP Strengthening Needs and Impediments are related to the second research question which asks, "What can be done to strengthen COOP at these institutions?" Interview questions that addressed administrative support, local emergency management agency support, team approach to plan development, and other priorities generated the parent and child nodes.

Interview Responses – Analysis

The purpose of asking the interview questions that were chosen was to gain insight into the extent of continuity of operations planning at the participant institutions and any evident impediments to planning and implementation of academic continuity.

There was some crossover in several of the questions that elicited responses that built upon several of the themes that developed.

The following interview question was put forward to the individuals at the participant institutions, “What is your understanding of continuity of operations planning in an academic environment?” The responses to this basic question were surprising and ranged from direct answers to question avoidance. Table 5 details the responses that were received:

Table 5

Understanding of COOP in an academic setting.

Participant	Response
DM25	My background is counseling
	That everyone who needs to be informed be informed
	You know who to contact, you know where to go, you know that information is disseminated
T24	I haven't had any really FEMA courses, but you're talking to a Chief that I used to run all the jails in this area
B22	Being able to continue to carry out your mission based on any interruption, power, or other essential element that you would need to continue on
M23	Protocol that is followed to maintain the educational system once we've had a campus emergency or some type of natural disaster

From the responses given by DM25 and T24, it was apparent they do not have a competent grasp on continuity of operations planning in an academic setting. This is the first question that was asked after my introduction and brief overview of the components of continuity of operations planning. Participants B22 and M23 demonstrated minimal understanding of continuity of operations planning in their responses. This first question laid the foundation for subsequent questions that were designed to elicit an understanding of continuity of operations planning. A simplistic theme was evident from the responses

to this question – either you understood the meaning of continuity of operations planning in an academic climate or you did not.

The question was asked, "What has been your training and experience in continuity of operations planning?" T24 responded that no FEMA training had been received in general. DM25 mentioned that training had been received in hurricane preparedness and that one-on-one training for developing their emergency operations plan had been received from an "ex-military person." M23 has received FEMA training in the Incident Command System. B22 had the most experience and training from military service inclusive of key roles in emergency operations centers, disaster control centers, and as part of a commander's disaster planning group. T24's lack of FEMA training probably contributes to substandard understanding of continuity of operations planning. The same holds true for DM25. The theme that emerged is a misunderstanding of what constitutes continuity of operations training relevant to the courses outlined on Table 4. Even though continuity of operations planning had been explained several times, there still was a tendency among all the participants to equate continuity of operations planning with overall emergency operations planning.

Participants were queried as to "Where can continuity of operations planning documents and information be found?" This question elicited the following responses outlined in Table 6:

Table 6

Location of Continuity of Operations Planning Documents and Information

Participant	Response
B22	We don't have a continuity of operations plan
M23	We have three basic types
T24	Part of the emergency preparedness manual
DM25	Intertwined in the emergency management plan

Participant M23 was asked to clarify his response. It was stated that there are three types of emergency operations plans at the institution to include a comprehensive plan, an abbreviated plan that is listed on the website, and a continuity of operations plan that was developed by a specific department for the care of laboratory animals. A review was made of the abbreviated plan from the institution's website. It appears to be focused on emergency preparedness for the campus community and covers topics such as evacuations, shelter-in-place, active shooter survival, medical emergencies, terrorism, poisoning, hazardous material spills, severe weather, and demonstrations.

Participant M23's comprehensive emergency operations plan was developed for an ROTC unit at the institution and is not general in nature for the institution as a whole. The purpose of the plan states:

> "The purpose of this plan is to prepare the (name of institution) (military unit) to better respond to and recover from emergencies and disasters."

The plan reflects guidance for addressing active shooters, bomb threats, suspicious behavior, demonstrations, fires, chemical spills, severe weather, and medical emergencies. The plan does not contain guidance on continuity of operations in terms of restoring operations to a state of normalcy. Hence, the abbreviated emergency preparedness plan and the comprehensive emergency preparedness plan are almost identical in covering the same areas. Yet, neither plan contains continuity of operations guidance.

The third plan reviewed from participant M23 was developed by a research division of the institution and focuses on the care of laboratory animals. Even though it is more response focused than continuity focused, it does provide some guidance on relocating animals during and after a disaster, alternative feed sources if current feed is damaged from flooding, succession planning when it is unsafe for persons to travel to the campus to care for research animals (use of resident students), emergency lighting during a prolonged power outage, continuity of operations during civil disturbance involving animal rights groups, and mandatory supplies that must be kept on hand at all times. The supply list includes euthanasia supplies, carbon dioxide tank, water, bedding, animal food, and decontamination supplies. Most of the supplies must cover a 2-week period. The guide was issued in 2010 and revised January 2012. It was developed by individuals within the division. Even thought it does not follow generally accepted continuity of operations planning best practices, it is still a good grassroots attempt to have something in place for the care and housing of research animals.

The emergency preparedness manual published online by participant T24 is comprehensive from a preparedness and response standpoint. As related by the

participant, continuity of operations planning is minimally a part of the plan and interspersed throughout. Reference is made to divisions being responsible for food service and academics during a pandemic. A team is identified in the plan that has the function of providing recovery care. Overall responsibility for meals during a disaster is placed on one specific individual. An appendix outlines supplies that are required by the campus community for sheltering-in-place in a residence facility and in an academic building.

The emergency operations plan recently published by DM25 offers comprehensive guidance for responding to emergencies and disasters. There is also continuity of operations guidance throughout the document. Table 7 outlines some of the statements that are relevant to continuity of operations in the plan:

Table 7

DM25 Guidance on Continuity of Operations

Guidance	Responsibility Area
Restoration of general campus operations.	Priority statement – no area of responsibility
College will carry out disaster response and short-term recovery operations in conjunction with local resources.	Assumption statement – no area of responsibility
Develop plans to reschedule classes.	Administration
Implement proper back-up controls and redundancy to maintain critical services.	Information Technology
Maintain a records management plan that duplicates data on a regular basis and secures this information at a remote location.	Information Technology
Maintain a plan to perform critical applications at a remote site	Information Technology
Identify alternate facilities where college activities can be conducted	Academic Affairs
Prepare student center to be used as an alternate shelter during and after an emergency	Student Affairs
Maintain the continuity of payroll processing and critical employee benefit services	Human Resources
Maintain mail service operations	Business Office

The statement made by DM25 to the effect that continuity of operations is intertwined in their emergency management plan is a true statement. This probably accounts for their misunderstanding of continuity of operations planning at the beginning of the interviews. They and the other participants seemed to view continuity of operations planning as being a part of emergency management planning as opposed to a separate planning function. If continuity of operations planning had been segregated into an annex in the emergency management plan, DM25 may have had a better understanding of the interview questions that were asked. DM25 has some level of understanding of continuity of operations planning by the mere fact that they were able to state where continuity of operations planning can be found.

Of all of the participants, DM25 had the most comprehensive written plan that included continuity of operations. Tenets of continuity of operations planning in their plan include alternative facilities, vital records, communications, and reconstitution. More importantly, responsibilities are divided into several areas of the institution which is indicative of a team approach to continuity of operations planning.

The theme that developed from the three participants who have emergency operations plans is that continuity of operations is integrated into the plan but not as a separate subset or a separate plan with more intense focus and step-by-step guidance based upon FEMA training and FEMA guidelines. Even though it is desirable for continuity of operations to be a separate plan due to the significant need for HBCU's to be able to expeditiously recover from a disaster, having continuity of operations planning in the general emergency operations manual is a step in the right direction and an indication of forward thinking.

The following two interview questions are similar:

"Who is the person tasked with continuity of operations planning and how is planning accomplished?"

"What responsibilities do departments have for continuity of operations planning?"

For the first question concerning the identity of the person who is responsible for continuity of operations planning, the responses included the president and executive cabinet, vice president for student affairs, administrative team, emergency management coordinator, and a disaster team. There was no general consensus on the second question involving the responsibilities departments have for continuity of operations planning. The common theme from the responses received to the first question is that the responsibility for continuity of operations planning is generally shared either at the executive level or accomplished through a team or committee. The team concept is ideal for buy-in across the institution. Furthermore, an individual will not have expertise in all facets of an institution. For example, the person in charge of Housing may not be adept at the workings of the Information Technology department. The Payroll department head may not be well-versed in Food Service operations. Plan development at the executive level demonstrates the importance leadership places on continuity of operations planning. Continuity of operations planning can involve change, and change is best implemented at the highest level of an organization (Burke, 2011).

The question was asked: "What will be the institution's response to a pandemic that will require student isolation or quarantining, and how will students be taught, fed, and cared for?" The purpose of this question was to solicit a response on how well the

study participants have planned for several aspects of continuity of operations inclusive of housing, food service, isolation of students, and academic studies. Two of the participants do not have housing or food service on campus. One of the participants stated that such a situation would have little impact for them since they are a commuter school. The other institution that has no housing or food service advised that students at the affected school would be relocated to one of their other campuses. The two participants with housing had two differing responses. One participant stated they would close the school, isolate the students, and then allow the health department to take the lead. The other participant did not indicate the type of action would be taken other than to offer it would be a "triage-type situation" and they would handle the situation as best they can. No general themes developed from the participant responses. One will close down, another will transfer students, a third participant will "play it by ear," and yet another feels that the impact will be minimal.

Participants were asked about plans for caring for laboratory animals during and after a disaster. Only participant M23 has ongoing research involving laboratory animals and specimens. As outlined earlier, the area responsible for research at this participant's institution has developed a continuity of operations plan.

Several interesting responses developed when participants were queried about requirements for contractors such as food service providers to have a continuity of operations plan in place as part of their contractual agreement with the institution. B22 stated they do not have contracted food service, and that the campus community would have to "eat off the local economy." The respondent further clarified "eat off the local economy" to mean that restaurants and fast food establishments are located in close

proximity to the school. This respondent further stated that they could use the facilities of a larger university close to their campus if food service is needed. Food services at T24 is contracted, however, there is no requirement in the contract for the food service vendor to have a continuity of operations plan for quickly resuming and maintaining their services during and after a disaster. Participant M23 has an agreement with a local elementary school to provide food services in the event of a disaster. The food service contractor for M23 had to transfer all meal preparations off-site approximately 3-years ago to the elementary school when a structural defect threatened the safety of the building on campus where food service was being provided. The food service contractor also has an agreement with its parent company to quickly resume operations. DM25 does not have food service on its campuses. The theme that emerged from responses to this question is that the commuter schools and a smaller university either had no provisions in place for food service during and after a disaster or the campus community had to fend for themselves by obtaining food service from the local economy. Conversely, the larger institution, participant M23, has a plan in place for alternative facilities for food preparation, and this plan was put into action approximately 3-years ago.

The question, "What disruptions in the educational process have occurred within the past seven years" was asked to gain an understanding of the disruptions that have negatively impacted participants and how participants have responded to the disruptions. Participant B22 had to close for more than a week due to a severe weather event that cut off electrical power to the area. The campus did not have back-up generators at the time. As a result, servers could not be used to send updates to keep the campus community informed of the situation and the progress being made to continue the education process.

Participant DM25 had two severe weather events occur at the same time that were distinctly different. The institution closed for several days. DM25 used its emergency notification system to send text messages and telephone messages to the campus community on a daily basis to keep them abreast of the situation and whether classes were going to be held. DM25 cites their emergency notification system as being key in their response to the disaster. Participant T24 has not experienced a disaster within the past 7-years. It was mentioned that a severe weather pattern came within one mile of their campus, but there was no impact. This is the same weather pattern that negatively impacted participant B22. According to participant T24, two students were killed who resided off-campus. T24 theorized that if they had to close campus for several days, they would most likely teach classes online or use a local church or K-12 school. These plans have been discussed although they have not been committed to written form. The only disruptions that have been experienced by participant M23 are weekend power outages. According to M23, these disruptions have had minor impact on the institution. There was no general theme that developed from this inquiry. Only two participants – both commuter institutions have experienced a disruption. One was prepared and the other was not. Of the two participants that have not experienced a disruption, one theorized on how they would respond, and the other participant had only experienced weekend power outages that had little impact on the institution.

Two questions were asked regarding administrative support and local emergency management agency support for continuity of operations plans development. Participants made the following comments about administrative support at their institutions for continuity of operations planning:

"She (president) is very supportive."

"Most definitely"

"…an open cash register or cash drawer."

Participant DM25 was not asked this question because both individuals interviewed at the participant institution are administrators. The following comments were made concerning support offered by local emergency management agencies:

"We have a great partnership"

"… constant information from the EMA (emergency management agency)"

"I've got direct lines with them."

"In the process of trying to put a plan together, they were very helpful."

"Gave us good feedback."

"Partnership and relationship is solid."

"Able to partnership with emergency management people."

"They help with the writing of plans."

The theme that developed from these questions is that administrative and local emergency manage support is very strong for overall emergency operations planning. Administration insures that there is participation for the planning and time allotted from normal operations to engage in the planning process. The local emergency management agency, at the county level, offers technical assistance for planning.

The final question was asked: "What can be done to strengthen continuity of operations planning at your institution in terms of training, financial resources, equipment, and overall institution support?" Participant B22 related that new technology such as the software program Maxient would strengthen overall public safety and

emergency operations planning. It was further stated that being able to communicate in real-time with the local emergency management agency would be of benefit to activating a continuity of operations plan.

Participant T24 responded that there are two issues standing in the way of effective continuity of operations planning at the institution. The first issue has to do with finding the time to take on this task in consideration of all of his other responsibilities inclusive of crime fighting, crime prevention, federal compliance, overall emergency operations planning, and day-to-day incidents and emergencies that have to be addressed. The second issue is related to the topic itself being placed on the back burner if it were to be brought up at a meeting. This issue seemed to speak to a lack of administrative support. According to T24, there are so many other matters that are pressing that something like continuity of operations planning would probably not be a priority.

Participant M24 indicated that having to deal with normal operations involving criminal activity and other responsibilities is definitely an impediment to engaging in continuity of operations planning. This participant further offered that lack of equipment for implementing a continuity of operations plan for the overall campus is a problem. It should be noted that this participant has a continuity of operations plan that was developed and published by the division responsible for the care of research animals. Response to this question was focused on a general continuity of operations plan for the institution.

Participant DM25 identified several hindrances to having an effective continuity of operations plan. The first deals with personnel. It is felt that a dedicated person is needed to attend to all emergency operations planning and response activities. Currently,

one of the administrators, who is part of the two person team who responded on behalf of the institution, is responsible for emergency operations planning. She offered that she has to do safety inspections at all their campuses; initiate, plan, and lead out in exercises at the campuses; and develop disaster response plans. The respondent felt that with all of her other administrative duties, she is not able to effectively do continuity of operations planning other than to integrate such planning in their overall emergency operations plan. Having a dedicated person for this initiative would be advantageous, according to the respondent. The other administrative respondent for participant DM25 stated that training is a factor that negatively impacts their continuity of operations planning and response. According to this respondent, emergency operations training seldom flows down to security officers.

The theme that developed from the responses to this final interview question is that there are impediments to effective continuity of operations planning that center around lack of resources, the need for training, and time to devote to planning. Dedicated persons who have adequate time and professional training are needed to spearhead the planning function with administrative support in terms of establishing this training as a priority.

Summary of Interview Responses

Responses to initial questions relevant to understanding the concept of continuity of operations planning indicated that half of the respondents at the participant institutions had at least a rudimentary understanding. However, when emergency operations plans were reviewed, one of the respondents who did not appear to have an understanding of continuity of operations planning had the most continuity of operations tenets in their

emergency operations plan. Hence, three out of the four respondents either have knowledge of continuity of operations principles or have continuity of operations principles in their emergency operations plan.

Only two of the respondents had conducted continuity of operations planning – the participant that has a continuity of operations plan developed by a research division, and the participant that has extensive continuity of operations planning in its overall emergency operations plan.

In terms of overall emergency operations planning to include continuity of operations planning, the team approach was the generally accepted protocol. The teams included executive level involvement and support.

There was a general understanding by all respondents from the participant institutions that some form of response would be needed to resume or maintain operations during a critical incident. One participant had been discussing using alternative facilities such as churches, schools, or community centers to hold classes. Another participant had an actual disruption that necessitated transferring academic functions to another campus. A third participant had to use alternative food services during a disruption.

There appears to be executive support for overall emergency operations planning at the participant institutions, and support from the local emergency management agency.

Impediments to effective continuity of operations planning at the participant institutions appear to be lack of resources, lack of training, and time constraints due to other responsibilities and commitments.

Review of Government & Industry Guidance on COOP

A review of government and industry guidance relating to continuity of operations planning in general was conducted for purposes of triangulation to establish a baseline, if possible, for what constitutes continuity of operations planning at institutions of higher education. The principal documents reviewed were *Continuity Guidance Circular 1* (FEMA, 2013); *Guide for Developing High-Quality Emergency Operations Plans for Institutions of Higher Education* (U.S. Department of Education, 2013); *Business Continuity Guideline: A Practical Approach for Emergency Preparedness, Crisis Management, and Disaster Recovery* (ASIS, 2005); and *Standard on Disaster/Emergency Management and Business Continuity Programs* (NFPA, 2013).

Continuity Guidance Circular 1

*Continuity Guidance Circular 1(*CGC1*)* is the overarching guidance on continuity of operations planning for non-federal government agencies with adaptation and utility for the private sector and non-government organizations. This is the principal resource that will be used for determining what should be involved in continuity of operations planning for an academic setting, matters to be considered relevant to higher education, the critical components of a plan, and testing of the plan. Each of the other documents mentioned will be reviewed for the minimal guidance they offer. In the end, a model of the planning process will develop that will be used to determine the extent of continuity of operations planning by the study participants based upon their responses to the interview questions and their written plans that were reviewed.

CGC1 outlines a philosophy that organizations should build redundancy and resiliency into their operations as a standard to insure that the organization can carry

forward its mission essential and supportive functions during and after disastrous situations that may include acts of nature, catastrophic accidents, technological emergencies, and acts of terrorism (FEMA, 2013). The CGC1 (FEMA, 2013) designates the following pillars that are the mainstay for an organization being able to perform its essential functions and thereby build continuity capability and resiliency:

Leadership and Staff – For continuity of the performance of essential functions within an organization, there has to be continuity of leadership. Clear lines of succession and delegation of authority must be planned for and present at the onset of an emergency incident in the event existing leadership is absent. The leadership gives reassurance, manages the crisis, and keeps the focus in sync with functions that must be performed. Effective leadership continuity involves cross-training with both peers and subordinates on the performance of essential functions that are expected during a crisis situation. Leaders must understand their role and the process of implementing continuity of operations plans.

Communication – A means of communicating during a crisis using all avenues available is critical for performing essential functions. Interoperability is an important aspect of technology use so that functions inherent in continuity of operations implementation can remain seamless. The use of voice, data, and video should mirror day-to-day operations during a crisis.

Facilities – During a crisis, the performance of essential functions may need to occur at alternative facilities. This may be inclusive of a building, tent, or even the hood of a vehicle. The goal is to have an adequate base operation that can be used in the event there is a problem functioning from current locations.

CGC1 delineates the following elements of sound continuity of operations planning for continuity capability (FEMA, 2013):

Essential Functions - Identifying and setting priorities establishes parameters that lay the foundation for continuity of operations planning and response. There are several categories of essential functions that range from national essential functions geared towards federal continuity of operations planning to essential supporting functions that are ancillary and do not rise to a high level of urgency. In the middle are mission essential functions which are broad in nature and must continue or quickly resume for the sustainability of an organization. Mission essential functions have broader application to private industry, state and local governments, and non-profit organizations.

Orders of Succession – Key leadership positions must have predetermined alternates in the event leadership is unavailable or incapacitated.

Delegation of Authority – During a critical incident, the legal authority of leadership to make decisions at all levels must be clearly defined. This should be predetermined and disseminated throughout the organization. This predetermined delegation of authority will normally be put into place "when normal channels of direction and control are disrupted."

Continuity Facilities – This term refers to "alternate sites" and "devolution sites." Alternate sites are locations other than primary locations where essential functions are normally performed. Devolution sites are locations that are geographically separated from the primary site where all operations will take place.

Continuity Communications – During a critical situation, an organization must maintain a communication system through redundancy or alternative means that will

continue information technology functions; and voice, print, and electronic communications for connectivity with government agencies, employees, stakeholders, and the general public as appropriate.

Essential Records Management – Records needed for the performance of essential functions must be readily available at primary operation locations during a critical incident, and at alternate locations when primary operation locations are disabled or otherwise unusable. Such records may include hardcopies of documents, software, and data records contained on information technology systems.

Human Resources – When a continuity plan is activated, organizations must have provisions in place for addressing the needs of workers in the workplace, and for having additional human resources available to augment the current workforce. Telework provisions should also be a consideration with policies in place that govern working from remote locations in terms of expectations, procedures, and instructions.

Test, Training and Exercise (TT&E) Program – A TT&E program will validate that everyone has been trained on the plan, and through exercises and drills, the viability of the plan will be affirmed. Training will familiarize everyone with the plan and offer guidance on the various roles individuals will play when the plan is activated. Exercises and drills will validate "the organization's continuity capabilities" in the performance of essential functions during and after a critical incident. Deficiencies noted during exercises and drills will facilitate a plan of improvement that will guide a revision of the plan.

Devolution of Control and Direction – This process involves planning for the complete transfer of the performance of essential functions to another geographic

location when the primary site, staff, and equipment are incapable of sustaining the performance of these functions. Authority to perform essential functions are delegated in total to the new site which may be a related organization or department, or an unrelated entity.

Reconstitution of Operations – Reconstitution is the process of resuming normal operations at the original facilities by surviving or replacement personnel. It is sometimes a process of establishing a "new norm" with replacement facilities, additional personnel, and a modified or replaced infrastructure as relates to communications, information technology and essential records. Reconstitution reflects the ability of an organization to fully recover from a critical incident and resume normal operations.

CGC1 offers guidance on how continuity of operations planning should take place in an organization from an organizational standpoint. Table 8 offers some organizational considerations from the CGC1 (FEMA, 2013):

Table 8

Organizational Considerations

Consideration	Explanation
Develop and document a continuity plan and its supporting procedures.	The plan and procedures should provide for the continued performance of essential functions under all circumstances.
The organizational head should approve and sign the plan to include significant updates and addendums.	Such as an administrator, president, Director
Review the plan annually.	Document dates of review and changes.
Incorporate continuity requirements into daily operations.	Insures seamless and immediate continuations of essential functions.
Annual certification by divisions and departments within an organization that they have a current plan.	
Annual certification that the plan has been tested through an exercise.	Exercise should involve movement to an alternate site that has been preplanned.

CGC1 (FEMA, 2013) also offers guidance on how the planning process should take place within an organization from a planning perspective. Table 9 outlines some pertinent planning considerations:

Table 9

Planning Considerations for Continuity of Operations Planning

Consideration	Explanation
Address the key elements of continuity	Essential functions, orders of succession, delegation of authority, continuity facilities, continuity of communications, essential records, human resources, TT&E, devolution, and reconstitution
Address the four phases of continuity	Readiness & Preparedness; Activation; Continuity Operations; and Reconstitution
Provide a process for determining the organization's readiness posture.	Include a decision matrix
Provide a process that insures plan activation.	
Establish and maintain relocation, devolution, and transition of responsibility procedures.	Includes challenges imposed by extenuating circumstances.
Identify the process for implementation of the continuity plan within a minimum timeframe.	
Insure operations can be sustained for up to 30 days.	Includes challenges imposed by extended events.

Standard on Disaster/Emergency Management and Business Continuity Programs

The 2013 edition of the *Standard on Disaster/Emergency Management and Business Continuity Programs* published by the National Fire Protection Association (NFPA, 2013), commonly referred to as NFPA Standard 1600, and herein referred to as

NFPA 1600, has continuity of operations planning guidance comingled throughout the document with emergency management planning concepts. The NFPA 1600 has many of the concepts as outlined in the CGC1 document. Some of the key concepts offered in the NFPA 1600 are condensed or abbreviated and listed as follows (NFPA, 2013):

- Identification of records (hard copy or electronic) vital to continue the operations of the entity.
- Implementation of procedures to store, retrieve, and recover records onsite or offsite.
- Designating lines of authority.
- Designating lines of succession and delegation of authority
- Conducting exercises to identify planning/procedural deficiencies, and to test and validate the plan and changes to the plan.
- Identification of essential and critical functions
- Logistical support and procedural requirements
- Plan should include recovery strategies to maintain critical time-sensitive functions and processes.
- The plan should identify stakeholders who need to be notified; alternative work sites; vital records; contact lists; functions and processes that must be maintained; and personnel, procedures, and resources that are needed while the entity is recovering.

Business Continuity Guideline

The *Business Continuity Guideline* published by ASIS International (ASIS, 2005), and billed as "A Practical Approach for Emergency Preparedness, Crisis Management, and Disaster Recovery" provides continuity of operations planning guidance that is focused more towards Business Continuity Planning (BCP) as opposed to continuity of operations planning. ASIS (2005) states the BCP is a planning process that is often used by businesses – especially manufacturing and production establishments. Consideration is given to purchasing, supply chain, sales, distribution channels, accounts receivables, accounts payables, payroll, information technology, and research and development (ASIS, 2005). However, several concepts that can be applied to basic continuity of operations planning were reviewed. These concepts are summarized as follows:

- Senior leadership in the organization should take responsibility for the business continuity plan.
- A determination should be made on how long essential functions can be delayed before impact becomes unacceptable.
- There may be different recovery mandates based upon the time of year.
- Compliance audits should be conducted to enforce business continuity planning.
- Alternate worksites should be designated
- Transportation of workers, supplies, and critical data to alternative worksites is important.

- Agreements should be reached with vendors and service providers before a critical incident occurs.
- Where appropriate, the business continuity plans of vendors and service providers should be reviewed to gauge their capability to maintain or resume operations.
- The business continuity plan should seek to bring the company back to normal operations or the "new norm" if normal operations are no longer possible.
- The business continuity plan should be tested through drills and exercises.
- Based upon the results of drills and exercises, the business continuity plan should be modified if such is warranted.

Guide for Developing High-Quality Emergency Operations Plans for Institutions of Higher Education

The *Guide for Developing High-Quality Emergency Operations Plans for Institutions of Higher Education* (The Guide), as published in 2013 and developed by the Department of Education and several other federal agencies, is the most recent publication on emergency management planning directed at the higher education community (U.S. Department of Education, 2013). This document is wholly deficient in continuity of operations planning with a greater emphasis being placed on nonsensical matters that appear to be unrelated to overall emergency management. For example, even though continuity of operations planning guidance is dispersed throughout the document, less than a half page of guidance is given specifically dealing with continuity of operations planning which is recommended be relegated to an annex in an overall emergency operations plan (U.S. Department of Education, 2013). Conversely, six pages

are devoted to crime reporting and other aspects of the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act (Clery Act); 17 pages are devoted to information sharing requirements of the Family Educational Rights and Privacy Act (FERPA); and two pages are devoted to privacy issues related to the Health Insurance Portability and Accountability Act of 1996 (HIPAA) (U.S. Department of Education, 2013). In the paragraph that recommends having a COOP Annex, reference is made to a "Resource Section" where further information on continuity of operations planning can be found for institutions of higher education. However, there is no Resource section anywhere in the document or further instructions on where additional resources on continuity of operations planning can be found for institutions of higher education. The main take-away from the U.S. Department of Education (2013) guideline is the process for emergency operations planning which is directly applicable to continuity of operations planning. The U.S. Department of Education (2013) delineates continuity of operations concepts such as forming a collaborative team for planning, determining goals and objectives, overall plan development, plan review and approval, and plan implementation and maintenance delineated. This step-by-step planning process is further delineated in Table 10 (2013):

Table 10

Steps For Plan Development

Steps	Description
1. Form a team	Small but representative of campus community
2. Understand situation	Identify threats and hazards and assess the risks posed
3. Goals & objectives	Develop three goals for each threat or hazard Develop objectives to meet the goals
4. Plan development	Develop courses of actions, assign responsibilities
5. Plan preparation, review, and approval	Format, write, approve, and share the plan
6. Plan implementation & maintenance	Train campus community, publish and distribute to key stakeholders, test the plan through exercises and drills. Review, revise, and maintain the plan.

In addition to guidance on the planning process, the U.S. Department of Education (2013) offers the following guidance on general continuity of operations planning for institutions of higher education that I have summarized:

- Identify alternative facilities where institution operations can take place if primary facilities are unusable or inaccessible.
- Develop a business continuity plan for the Business office
- Develop a Continuity of Operations annex
- Develop individual plans to maintain payroll, human resource, and teaching functions.

- Develop procedures for temporary housing for residential students
- The plan should account for plan activation for up to 30 days; safety and security; basic services such as food and housing, financial aid, instruction; and devolution.

Summary of Review of Government & Industry Guidance on COOP

The purpose for reviewing the government and industry guidelines on continuity of operations planning and implementation was to establish a baseline for determining what constitutes effective continuity of operations planning at institutions of higher education. As a form of triangulation and to guard against bias on my part in injecting my feelings on what constitutes effective continuity of operations planning, a model planning process would be used for this determination. The model that developed from my review of government and industry guidelines and from my personal experience and training is outlined as follows in order of importance (FEMA, 2013; U.S. Department of Education, 2013; ASIS, 2005; NFPA, 2013):

1. The overall goal of continuity of operations planning for an institution of higher education should be to build redundancy and resiliency into normal operations for the continuation of mission essential and supportive functions.
2. Support for the planning process must be at the highest level of the institution which may include the board of trustees, president, provost, and vice presidents.
3. A planning committee should be formed that is small, yet representative of the critical facets of the institution. A leader or coordinator should be designated.

4. A Threat and Hazard Identification and Risk Assessment (THIRA) should be conducted to determine the kinds of incidents that may negatively impact the institution. Such an assessment will guide the identification of mission essential functions and the development of mitigation strategies.
5. The planning committee should work towards developing an overall continuity of operations plan for the institution, and assist divisions and departments in developing plans that are specific to their functions and responsibilities.
6. The planning committee should identify three to four mission essential functions for the institution. Depending upon the institution as relates to focus, size, public versus private, etc., the mission essential functions may include any of the following:
    a. Instruction
    b. Research (grant funded studies, laboratory animals/specimens)
    c. Major sporting events that generate substantial revenue and media attention (e.g. Alabama vs. Auburn football game)
    d. Residential life (on-campus housing and food service)
    e. Hospital and auxiliary facilities (clinics, dialysis, labs)
    f. Campus safety and security
    g. Museums and archives
7. Supportive essential functions should also be identified which may include the following:
    a. Financial aid (scholarship awards, student loans, refund disbursements)

b. Regulatory reporting (Jeanne Clery Act, Title IX, Title IV)
c. Payroll & Human Resource functions
d. Enrollment management (student recruitment, campus visits)
e. Information technology
f. Vital records (Registrar's office, clinic medical records, HR records)
g. Facilities (custodial, maintenance, air conditioning/ heating, transportation, grounds)
h. Accounting (receivables, payables, research accounting, contracts, vendor management)

8. Plans must be in place for the institution's order of succession and delegation of authority
9. Identify continuity facilities (online instruction; use of K-12 schools, churches, community centers, and malls for classroom and lab instruction; alternative facilities on campus for offices, food service, and housing)
10. Plan for transportation of individuals, records, and equipment to continuity facilities.
11. Plan for continuity of communications, and storage and retrieval of vital records
12. The planning committee should outline how devolution, if necessary, will take place for all institution functions or for specific functions
13. The process of reconstitution should be outlined in terms of who institutes this process and how it is carried forward

14. A decision matrix is needed that specifies who activates the continuity of operations plan, and requirements for implementing the plan within a minimum timeframe
15. A plan for training employees, in-house vendors/contractors, and external stakeholders on the continuity of operations plan is needed.
16. Testing of the plan through exercises and drills, and a plan review schedule must be included in the continuity of operations plan
17. The plan must be approved and signed-off by the institution's leadership.
18. The plan should be distributed internally and externally as appropriate

Once the overall plan is developed for the institution, the planning committee should embark upon a campaign to assist divisions, departments, and functional units in the development of their continuity of operations plans. All the components of the overall plan will generally apply.

Summary of Government and Industry Guidelines

By far, *Continuity Guidance Circular 1* (FEMA, 2013) offered the most guidance for developing continuity of operations plans for institutions of higher education. The *Guide for Developing High-Quality Emergency Operations Plans for Institutions of Higher Education* (U.S. Department of Education, 2013) offers some guidance on continuity of operations planning and brings *Continuity Guidance Circular 1* into context for continuity of operations planning at an institution of higher education. The documents *Business Continuity Guideline: A Practical Approach for Emergency Preparedness, Crisis Management, and Disaster Recovery* (ASIS, 2005); and *Standard on Disaster/Emergency Management and Business Continuity Programs* (NFPA, 2013) both

provide some of the same guidance that is contained in *Continuity Guidance Circular 1* (FEMA, 2013) and *Guide for Developing High-Quality Emergency Operations Plans for Institutions of Higher Education* (U.S. Department of Education, 2013).

Summary

The responses to the interview questions by respondents at the participant institutions developed themes relevant to continuity of operations training and understanding, implementation, and impediments that pose a hindrance to planning. From a review of government and industry guidelines emerged a model guideline for continuity of operations planning at institutions of higher education.

The research questions were directly linked to the topic of this study which sought to understand the extent of continuity of operations planning at Historically Black Universities and Colleges in the State of Alabama. The review of government and industry guidelines provided a baseline for examining where the participant institutions stand in continuity of operations planning. The data analysis and findings indicate that continuity of operations planning is lacking and there are impediments to effective planning.

Chapter 5 will provide further interpretation of the findings in the context of the theoretical framework. Furthermore, conclusions, limitations, recommendations, and implications for positive social change will be discussed in the next chapter.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

This study was initiated for the primary purpose of exploring the extent of planning conducted by HBCUs in a specific state to sustain or quickly resume the education process and supportive functions during and after a disaster. This process is known as continuity of operations planning or academic continuity. A purposeful sample of HBCUs in Alabama was chosen due to the following criteria:

- Having the highest number of HBCUs in the nation.
- The susceptibility of Alabama to severe weather and manmade hazards
- My familiarity with HBCUs in Alabama as a result of my working at one of the institutions as a Director of Public Safety.

From a review of the limited literature on continuity of operations planning in higher education, it became apparent that a focus in this area of emergency preparedness is lacking. The sole emergency management planning guideline from a federal government agency directed at institutions of higher education was found to be heavy on overall emergency preparedness from a planning and response mode, but light on guidance for continuity of operations planning and preparedness (U.S. Department of Education, 2013).

The absence of substantial literature and guidance pertaining to continuity of operations planning for institutions of higher education can leave HBCUs unprepared. Many HBCUs are experiencing an uncertain future due to negative publicity, low graduation rates, fiscal instability, miniscule endowments, and allegations of poor leadership (Association for the Study of Higher Education, 2010; Drezner & Gupta,

2012; Gasman & Bowman, 2011; Hobson, 2012). However, in spite of these negative issues, HCBUs have built a legacy of educating African Americans, some of whom would do not meet the academic standards to gain admission to predominantly white institutions (Brown, 2013). HBCUs have graduated the majority of African American Ph.D.'s, Army officers, federal judges, and physicians (Nichols, 2004). Furthermore, they have graduated almost half of all African American teachers, computer scientists, and engineers (Nichols, 2004). For many African Americans, HBCUs are the gateway to maturing intellectually (Davis, 2013).

These institutions must remain viable for the academic opportunities they offer to African Americans and others in society. This underscores the importance of HBCUs having continuity of operations plans in place to increase resiliency in the event of a disaster.

A secondary purpose for this study was to explore any impediments that might hinder effective continuity of operations planning. It had been my experience working at an HBCU that the person responsible for the policing, security, or safety of the campus was also responsible for spearheading overall emergency operations planning. This person usually holds the title of Director of Public Safety, Director of Security, Chief of Campus Police, or a similar title. In my former capacity as a board member of the HBCU-LEEA; and as the former head of the Campus Resiliency Committee for the HBCU Emergency Management Consortium, I had constant contact with these individuals. I became keenly aware of the challenges they were facing in taking on the added responsibility of emergency operations planning. Most of my peers were functioning with limited staffing while being consumed with combating crime on and

near their campuses. Their training and experience in emergency management, with the exception of active shooter response, was often lacking. Administrative and financial support for purchasing equipment, upgrading facilities, and for attending training and conferences was sometimes less than adequate.

Finally, it was my thought that bringing to the forefront the deficiency in continuity of operations guidance focused towards institutions of higher education in general might generate interest at the federal level to place guidance in this area as a high priority.

Key Research Findings

The interview questions that were presented to respondents from the participant institutions were designed to solicit the following information.

- Knowledge relevant to the concept and tenets of continuity of operations planning
- Whether formal or informal continuity of operations planning has been, or is currently taking place
- Practical experience in implementing continuity of operations principles during and after an actual disaster.
- Support and impediments to effective continuity of operations planning.

In response to the first item, most of the respondents did not have a solid grasp of continuity of operations planning in a formal sense in terms of terminology, principles, step-by-step planning sequence, implementation, and other factors. However, the respondents did have an informal perspective on continuity of operations planning. This was from (a) having implemented essential functions during an actual disaster, (b) having

continuity of operations guidelines interspersed throughout their emergency operations plan, (c) having knowledge a continuity of operations plan at their institution, or (d) having informal discussions with administrators regarding disaster plans.

Some of the respondents have formal continuity of operations plans in place as stand-alone documents or as part of their emergency operations plans. Other respondents have had discussions on how they will respond to a major disruption in operations. At least two of the respondents had responded to incidents where alternative facilities and services were utilized.

In response to the final item, overall support for emergency management planning appears to be strong internally at the administration level and externally through local county emergency management agencies. The primary impediment to effective planning appears to be lack of time, lack of training, and lack of resources.

A review of government and industry guidance on continuity of operations planning specifically geared towards institutions of higher education was found to be inadequate. The review was conducted with the hope of establishing a model for continuity of operations planning in the setting of an institution of higher education. It was my intention to compare the model with the planning that had taken place at the participant institutions to assess whether their planning had been consistent with a recognized standard. Instead, I was tasked with developing a model using *Continuity Guidance Circular I* (FEMA, 2013) as my primary resource with supportive information gleaned from *the Guide for Developing High-Quality Emergency Operations Plans for Institutions of Higher Education* (U.S. Department of Education, 2013).

Interpretations of the Findings

The interpretations of the findings of this study are guided by the following two central research questions:

RQ1 What is the extent of continuity of operations planning at HBCUs in the State of Alabama?

RQ2 What can be done to strengthen continuity of operations planning at these institutions?

In comparison to the continuity of operations planning model that was developed, the study participants did not compare well in their continuity of operations planning efforts. This may be attributable to two factors: a lack of training and the absence of comprehensive guidance in continuity of operations planning for higher education. None of the respondents at the participant institutions had taken any of the continuity of operations planning courses offered by FEMA identified in Table 4. Furthermore, there is no specific systematic guidance available from the Department of Education or any other federal agency on continuity of operations planning focused towards institutions of higher education (FEMA, 2013; U.S. Department of Education, 2013). The lack of comprehensive government guidance in continuity of operations planning specific to higher education was outlined in the Chapter 2 literature review. The literature review brings to the forefront that general guidance for nongovernment entities is provided in *Continuity Guidance Circular 1* (FEMA, 2013), and minimal continuity of operations planning guidance is contained in *the Guide for Developing High-Quality Emergency Operations Plans for Institutions of Higher Education* (U.S. Department of Education,

2013). What is wholly absent is a guideline that offers a model approach to continuity of operations planning in the higher education arena.

Hence, the lack of comprehensive continuity of operations planning by the study participants may result in their inability to perform mission essential functions during and after a disaster. This adds to the tenuous existence of the participant institutions as outlined in the Chapter 2 literature review. HBCUs are plagued with a host of problems that threaten their existence (Association for the Study of Higher Education, 2010; Drezner & Gupta, 2012; Gasman & Bowman, 2011; Hobson, 2012). In addition, since the participant institutions are located in a gulf coast state, they are susceptible to severe weather related incidents (Beggan, 2011; Stein Vickio, Fogo & Abraham, 2007) as outlined in the Chapter 2 literature review.

In terms of what can be done to strengthen continuity of operations planning at the study participant institutions, the findings reflect that more time is needed for planning. There is a lack of equipment and resources so planning needs to be a priority. A dedicated person is needed to spearhead the planning and training is needed in continuity of operations planning. This finding indicates that the study participants are strapped for resources, training, and equipment; and they are multitasking to the point of not being able to position continuity of operations planning as a priority. Simply stated, individuals responsible for leading out in the planning effort are being hindered by other responsibilities that take priority, unavailable resources, and little if any training.

Theoretical Framework

The theoretical framework for this study is the resiliency theory that has its origins in physics and is based upon the ideology of objects having the ability to rebound

or bounce back from distress (Plough et al., 2013). In the behavioral science realm, the term resiliency is identified with communities and individuals and their capacity to adapt to adverse conditions (Plough et al., 2013). Resiliency theory has evolved to encompass concerns for communities and individuals to be able to sustain themselves or quickly recover when faced with adversity (Plough et al., 2013; Norris et al., 2008; Longstaff et al., 2010).

Resiliency theory has a direct connection to continuity of operations planning in terms of communities rebounding from a disaster to sustain or quickly resume the performance of essential functions (Longstaff et al., 2010). In consideration that institutions of higher education are communities, their resiliency is directly related to effective continuity of operations planning.

The findings of the study reflected that the respondents at the participant institutions are resilient even in the absence of formalized continuity of operations plans and planning efforts. They have recovered from critical incidents at their institutions that have necessitated the use of alternative facilities and alternative services to sustain key essential functions. Finally, the respondents, in the absence of formalized plans, conceptualized verbally how they will respond to disasters. This is an indication of their resiliency.

Limitations of the Study

In Chapter 1, I stated that continuity of operations planning in an academic setting has not been adequately researched for the development of a continuity of operations planning model to be used as a baseline to gauge the planning that had been done by study participants. It became necessary for me to develop such a model from government

guidelines and my personal experience. It is possible that the model I developed will not be applicable to all HBCUs and institutions of higher education in general. Scalability may be an issue since institutions of higher education vary and they may have various levels of athletic programs, professional schools, and commercial establishments. Hence, one size may not fit all.

I selected HBCUs in Alabama for this study because the state has the highest number of HBCUs in the nation (Brown, 2013). Alabama was also an ideal location for my study due to the number of hazards and threats that are present in the state inclusive of large urban populations with the potential for criminal activities, military bases, nuclear plants, and exposure to severe weather. The study participants may represent a worst-case scenario in comparison to HBCUs in other states where there are less threats and hazards. Hence, continuity of operations planning may not be as critical in these states.

Recommendations

Individuals and committees charged with emergency operations planning at HBCUs must receive training and guidance in continuity of operations planning to build adaptive capacity which will foster resiliency during and after a disaster that negatively impacts the institution. Thus, based upon the findings of this study, the following recommendations are being made, some of which mirror the recommendations made earlier by a 2007 working group (University of Maryland, 2007):

- A federal agency, preferably the U.S. Department of Education, needs to revise the *Guide for Developing High-Quality Emergency Operations Plans for Institutions of Higher Education* (FEMA, 2013) and include

comprehensive continuity of operations planning guidance. A better alternative will be to develop a separate guide that focuses on continuity of operations planning for higher education.

- A working group should be formed by a lead federal agency for the revision of the current guideline or for the development of a new one. The members of the working group should represent a broad cross-section of institutions of higher education with involvement by the U.S. Department of Education, FEMA, and other applicable stakeholders. Such a working group came together in 2007 resulting from the impact of Hurricane Katrina on institutions of higher education in New Orleans (University of Maryland, 2007). The recommendations that came from the 2007 working group relevant to continuity of operations planning for higher education were comprehensive and covered all the salient considerations.
- Pilot programs should be established with a focus on continuity of operations planning at institutions of higher education. In 2013, The U.S. Department of Homeland Security solicited participants for its Campus Resilience Pilot Program (Homeland Security News Wire, 2013). A total of seven institutions of higher education were chosen for the program with the intent of providing them with guidance on building disaster resiliency on their campuses utilizing FEMA's "whole community" concept. The guidance that ensued was light on continuity of operations planning and heavy on preparedness, protection, prevention, mitigation, response, and recovery. I served as a peer reviewer for the grant applications.

- The U.S. Department of Education and FEMA should incorporate more continuity of operations planning in training sessions that are geared to higher education. The U.S. Department of Education currently offers basic emergency operations planning training sessions at no cost through its contractor REMS TA Center. However, the training is mainly focused on preparation and response with very little information provided on continuity of operations planning. The U.S. Department of Homeland Security through FEMA offers a cost free workshop for institutions of higher education to assist them in revising and further developing their emergency operations plans. However, as with the training offered by the U.S. Department of Education, very little continuity of operations planning guidance is provided.
- The White House Initiative on Historically Black Colleges and Universities (White House Initiative) should take a greater interest in continuity of operations planning at HBCUs. The White House Initiative sponsors a yearly conference in Washington, D.C. that will provide a national platform for pushing planning in this regards to conference attendees who are generally presidents, provosts, and vice presidents of HBCUs.
- It would behoove all six regional accreditation agencies to establish a continuity of operations planning standard for accreditation and reaccreditation of institutions of higher education. Several of the regional accreditation agencies currently require that emergency operations plans be developed.

- The Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act require institutions of higher education to have emergency operations plans, and hold at least one annual exercise to test the plan. Institutions of higher education should be strongly encouraged to include comprehensive continuity of operations concepts in their plans and to devise exercises that test the implementation of these concepts during a disaster.
- The U.S. Department of Education and the U.S. Department of Homeland Security should join together to promote FEMA's continuity of operations planning training programs.

Implications for Social Change

My study has the potential for spurring federal agencies such as the U.S. Department of Education and FEMA to develop programs to increase continuity of operations planning at HBCUs through the White House Initiative on HBCUs.

This study has broader implications for social change above and beyond application to HBCUs. If appropriate guidance is developed by these two federal agencies on continuity of operations planning applicable to all institutions of higher education, increased disaster resiliency will occur to insure sustainability of these institutions in our communities.

Furthermore, institutions of higher education throughout the nation can benefit from this study which provides a step-by-step model for continuity of operations planning. Increasing the stability, sustainability, and viability of all our institutions of higher education will insure that individuals seeking a college education will be able to do so without interruptions caused by disasters.

Conclusion

The plight of Historically Black Colleges and Universities has been well-documented in this study. It is unknown as to whether their situations will improve over time. However, everything humanely possible must be done to increase the resiliency of these institutions. As outlined in this study, an increased emphasis on continuity of operations planning will augment their current propensity for resiliency which has contributed to their longevity. As we have seen with the study participants, even in the absence of comprehensive written continuity of operations plans, they have weathered disasters by resolving how to perform mission essential functions such as food service and instruction. Support for this initiative must come from the U.S. Department of Education and FEMA in concert.

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Appendix A: Acronyms

CAQDAS	Computer Aided Qualitative Data Analysis Software
CINAHL	Cumulative Index to Nursing and Allied Health Literature
COOP	Continuity of Operations Planning
ERIC	Education Resources Information Center
FEMA	Federal Emergency Management Agency
FERPA	Family Educational Rights and Privacy Act
HBCU	Historically Black Colleges and Universities
HBCU-LEEA	Historically Black Colleges and Universities Law Enforcement Executives and Administrators
ICS	Incident Command System
HIPAA	Health Insurance Portability and Accountability Act
IHE	Institution of Higher Education
MEF	Mission Essential Function
NASA	National Aeronautics and Space Administration
NFPA	National Fire Protection Association
NIMS	National Incident Management System
PWI	Predominantly White Institution

Appendix B: Interview Questions

Extent of Continuity of Operations Planning at Historically Black Colleges and Universities in the State of Alabama

INTERVIEW QUESTIONS

The following questions will be used to guide the semi-structured interviews of the participants:

1. What is your understanding of continuity of operations planning in an academic environment?

2. What has been your training and experience in continuity of operations planning?

3. Where can continuity of operations planning documents and information be found?

4. Who is the person(s) tasked with continuity of operations planning and how is planning accomplished?

5. What will be the institution's response to a pandemic that will require student isolation or quarantining? How will students be taught, fed, and cared for?

6. What plans are in place to care for laboratory animals and continue research during and after a disaster?

7. What requirements are in place for vendors such as food service providers to continue or quickly resume operations during and after a disaster?

8. What responsibility do departments have for continuity of operations planning?

9. What disruptions in the educational process have occurred within the past seven (7) years?

10. How has your institution responded to a disruption in the education process in the past?

11. What support does administration provide for continuity of operations planning?

12. What can be done to strengthen continuity of operations planning at your institution in terms of training, financial resources, equipment, and overall institution support?

13. What support have you obtained from your local emergency management agency in your continuity of operations planning?