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Post-Katrina Student Resilience: Perspectives of Nunez Community College Students

A Dissertation

Submitted to the Graduate Faculty of the
University of New Orleans
in partial fulfillment of the
requirements for the degree of

Doctor of Philosophy
in
Educational Administration

by

Jacqueline Jones

B.S. Nicholls State University, 1983
M.Ed. McNeese State University, 2000

May, 2010

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Abstract

This study examines the phenomenon of student resiliency as it relates to Nunez Community College students who returned to attend school in the community of St. Bernard Parish following Hurricane Katrina. Nunez Community College is located in Chalmette, Louisiana, fifteen miles east of the City of New Orleans. The community is adjacent to the Lower Ninth Ward. This study seeks to answer the questions of why the students returned to a disaster-stricken area to continue their studies and how the students coped in the aftermath. There is a significant gap in the literature on post-disaster resiliency and in particular, the role of education in post-disaster recovery. Twelve students who returned to Nunez Community College post-Katrina were interviewed using a Student Resilience Model as a conceptual framework. The perceptions of the students' post-disaster experiences resulted in five themes which included Individual Resilience, Post-Disaster Academic Integration, Post-Disaster Social Integration, Determination, and Anxiety About the Future. The study concludes with implications for theory, policy, practice, and recommendations for further study.

Key Words

Crisis Management	Natural Disasters	Resilience
Disaster Preparedness	Nunez Community College	St. Bernard Parish
Hurricane Katrina	Post-Disaster Recovery	Urban Resilience

CHAPTER ONE: Introduction

My name is Jacqueline Jones and on August 29, 2005, I witnessed through the eyes of the media and my own eyes, the human drama unfold both during and after Hurricane Katrina. I reside in a city two-and-a-half hours west of New Orleans where the population doubled virtually overnight in the days following the storm. As the evacuees struggled to obtain the basic necessities such as food, water, clothing, and shelter, my thoughts turned to the college and university students who found themselves suddenly without a home, without a campus, and seemingly without the ability to continue their academic pursuits. Their social networks were completely disrupted and their lives would never be the same. There were some students who relocated to the campus where I was employed in Lafayette, Louisiana.

Although efforts were made to secure their physical comfort, I wondered if the students would be able to experience psychological healing and if such healing had a relationship to education. I was also curious about the students who returned to the New Orleans area and their particular desire to finish an educational program which was started pre-Katrina. The schools they returned to had little infrastructure and damaged buildings. This study explores the reasons why students chose to return to a disaster-stricken area to persist and how they dealt with the effects of the disaster. As there is no formal conceptual framework to address such an inquiry, it is my hope that the framework designed for this study can be useful to researchers who wish to study similar circumstances in the future. Most of the literature on post-disaster recovery focuses on bureaucratic systems of leadership which do not seem to be effective on the ground level. Perhaps the students themselves can reveal ways in which we as educators can be enlightened innovators capable of navigating during predictable and unpredictable times.

Hurricane Katrina

The aftermath of natural disasters similar to Hurricane Katrina has interrupted thousands of lives. The United States has experienced seventy weather-related disasters during the 1980-2006 period. The total damage and costs of these weather-related disasters met or exceeded $1 billion at the time of the event (United States Department of Commerce, 2007). The weather-related disasters included the following: tropical storms/hurricanes; non-tropical floods, heat waves/droughts; severe weather; fires; freezes; blizzards; ice storms; and noreasters. The highest frequency event at 34.2% was attributed to tropical storms/hurricanes and between 1980-2006, there were twenty-four tropical storms/hurricanes in seven states creating $308 billion in damages. According to the United States Department of Commerce (2007), this number reflects a summation of damages for each state affected and larger multi-billion dollar events which caused over $1 billion in damages in one or more states.

As a result of Hurricane Katrina in August 2005, the entire Gulf Coast region of the United States was devastated. The event resulted in hurricane conditions in southeastern Louisiana, southern Mississippi, and southwestern Alabama. Tropical storm conditions happened along the northern Gulf Coast as far east as the coast of the western Florida Panhandle in addition to the Florida Keys. Hurricane Katrina was responsible for a storm surge along the coasts of Mississippi and Louisiana causing widespread destruction. The storm surge overtopped and breached levees in the New Orleans metropolitan area including the eastern suburbs (National Hurricane Center, 2008). During and after Hurricane Katrina, more than 500,000 residents of Louisiana and Mississippi were evacuated, and more than 100,000 people were housed in temporary shelters throughout the country (Harvard Medical School, 2005).

In Louisiana, both Delgado and Nunez Community Colleges were closed following the event as well as three technical college campuses in the metropolitan New Orleans area. According to the Association of Jesuit Colleges and Universities, the physical damage to the technical and community colleges in the New Orleans area exceeded $184,000,000 (Mangan, 2005). Four-year educational institutions in New Orleans impacted by Hurricane Katrina include Dillard University, Louisiana State University Health Sciences Center, Loyola University, Our Lady of Holy Cross College, Southern University at New Orleans, Tulane University, University of New Orleans, and Xavier University of Louisiana. From an educational perspective, it is significant to study how institutions can utilize lessons from this experience to assist in disaster preparedness as well as to help students heal. Furthermore, the examination of resiliency in an academic context after a natural disaster might reveal information relating to why the students persist in a disaster-stricken environment.

In St. Bernard Parish, an area east of New Orleans, a community college chancellor witnessed the raging water coming in with all the forces of nature behind it to obliterate the Nunez Community College campus and the surrounding community near it. Dr. Thomas Warner chose to remain at the campus during Hurricane Katrina and experienced the destruction first-hand. He watched as the entire parish was ravaged by a gigantic tidal surge. The Federal Emergency Management Agency's (FEMA) estimate of the cost for debris removal, emergency work, and the repair of public property in St. Bernard Parish is $929 million (Warren, 2007).

The return of students to St. Bernard Parish represents a particular set of circumstances unique to the field of education. The physical campus of Nunez Community College reopened five months after Hurricane Katrina which provided the opportunity to restore the academic

and social experiences normally provided by the college prior to the storm and subsequent flooding. A mini-semester enrolled students in online classes, at Slidell High School, and in other locations within weeks of the disaster (Nunez Community College, 2009). Before the hurricane struck, student enrollment was 2,339 in the Fall 2004 semester at Nunez Community College (Louisiana Community and Technical College System [LCTCS], 2007). In the Fall 2009 semester, 1,836 students were enrolled representing 78% of the college's pre-Katrina enrollment (Pope, 2009). Enrollment numbers for the Spring 2010 semester increased to 1,848 students (LCTCS, 2010).

The exploration of the post-Katrina academic and social environment could reveal significant characteristics attributed to resilience. Resilience is defined as the process of adapting well in the face of adversity, trauma, tragedy, threats, or even significant sources of stress such as family and relationship problems, serious health problems, or workplace and financial stressors. It means "bouncing back" from difficult experiences (Masten, 1994). The examination of resiliency in an academic context after a natural disaster might reveal information relating to how the students heal from such an event, why the students persist in a disaster-stricken environment, the role of education in recovery, and how institutions can utilize this information in their disaster preparedness.

Are the students seeking to identify with their own "culture" which could in some way psychologically help them heal from the trauma of the event? Are students seeking a safe haven in chaos through college return or are they trying to recapture some part of their former lives in a devastated community? In order to comprehend their reasons for returning, it is necessary to understand the community itself.

Community Profile

The parish of St. Bernard was founded under the Spanish system of government in 1790. The Counties of Orleans Territory were drawn by the Territorial Legislature on April 10, 1805. Orleans County originally included the parishes of Orleans, St. Bernard, Plaquemines, and Jefferson (Encyclopedia Louisiana, 1998). The community has maintained a unique identity stemming from the Canary Islanders, known as Islenos, who settled in the lower portion of the parish after they joined French pioneers in the 1720s.

The Spanish colonists from the Canary Islands survived over many generations and have successfully preserved their heritage and language. The Islenos museum, a 30-acre site dedicated to the history of the Islenos, was heavily damaged during Hurricane Katrina. The site is being reconstructed with $1.7 million financing from FEMA (The Times-Picayune, 2009). The parish is also the site of the Battle of New Orleans where the U. S. fought against the British in the last major battle in the War of 1812 (St. Bernard Parish, 2009). The early settlers fought to preserve their heritage in the same way residents are now fighting to restore their community post-Katrina.

St. Bernard Parish sits below sea level, is surrounded by water, and was one of the most devastated areas struck by Hurricane Katrina. The four service areas of Nunez Community College (St. Bernard, Plaquemines, Lower Ninth Ward, and New Orleans East) were the hardest hit areas during Hurricane Katrina. In addition, 90% of the faculty and staff live in the service area of the college (D. Clark, personal communication, March 22, 2008). Among the educational institutions in the New Orleans metropolitan area, Nunez Community College is the smallest and the only institution where 100% of the population was affected by Hurricane Katrina (D. Clark, personal communication, March 22, 2008).

Prior to Hurricane Katrina, St. Bernard Parish's population consisted of 67,000 residents in 26,000 households with 92% of residential structures occupied (St. Bernard Parish, 2007). According to the United States Census Bureau (2008), an estimate of the 2008 population of St. Bernard Parish is 37,722. The 2009 population of St. Bernard Parish is approximately 40,000 with about 65% of residents returning to the parish post-Katrina (Ames, 2009). The 2007 population consisted of the following: White (85.8%), Black (10.2%), American Indian and Alaska Natives (0.7%), Asian (1.6%), Native Hawaiian and Other Pacific Islanders (0.1%), persons reporting two or more races (1.7%), and persons of Hispanic or Latino origin (7.5%) (United States Census Bureau, 2007).

The fact that 100% of the population was affected is significant because the entire parish of St. Bernard was effectively destroyed. A 30-foot tidal surge on August 29, 2005, destroyed eight of the thirty miles of levees. All 26,000 homes in St. Bernard Parish were damaged or destroyed according to parish officials. Over 92% of residential structures in the parish were occupied pre-Katrina and many of the neighborhoods in St. Bernard served as home to multiple generations of families; approximately 17,000 homes are in various stages of reconstruction (St. Bernard Parish, 2008). Although all FEMA trailer group sites have been closed, FEMA provided 9,206 temporary trailers to residents of St. Bernard post-Katrina (St. Bernard Parish, 2008). Schools, churches, retail stores, restaurants, homes, businesses, telecommunications, electricity, government infrastructure, roads, water systems, sewer systems, bridges, and other structures were all impacted by Hurricane Katrina. Furthermore, street signs and lighting were also severely damaged. Law enforcement buildings and ten fire houses were totally flooded or destroyed as well as more than 3,000 businesses (St. Bernard Parish, 2008).

Recovery efforts were further compounded by a second storm, Hurricane Rita, which flooded parts of the parish once again. In addition, St. Bernard Parish experienced the largest residential oil spill in the history of the United States when a Murphy Oil storage tank spilled approximately one million barrels of oil into more than 2,000 houses and the surrounding area (St. Bernard Parish, 2008). Individuals who are most likely to experience serious and lasting psychological problems following a disaster include those living in disrupted or traumatized communities (Norris, Byrne, and Diaz, 2006). With 100% of the population being affected and damage to more than 3,000 businesses and 26,000 homes, St. Bernard Parish is a highly traumatized community.

According to the U. S. Census Bureau, St. Bernard Parish was the nation's fastest growing community between July 2006 and July 2007 (Rioux, 2008). However, this explosion comes one year after St. Bernard Parish was at the top of list of communities with the largest population losses post-Katrina. Rioux found the 42.9% increase was one of the largest population gains making it a statistical abnormality.

In spite of the Census Bureau's findings, St. Bernard Parish continues to have a high number of blighted and unoccupied residences. According to Liu and Plyer (2009) of the Brookings Institution, there are 14,372 unoccupied residences in St. Bernard Parish. Although there are still a large number of unoccupied residences, a survey in St. Bernard Parish by the University of New Orleans, Department of Geography (2009) found 62% of commercial enterprises are open for business. It is possible that businesses have returned to provide services to support the individuals who work and attend schools in the region.

The forces of nature not only decimated a community, it also delayed the promise of a hopeful future. The widespread devastation of Hurricane Katrina left citizens without homes,

health care, schools, places of worship, and employment (Warren, 2007). The death toll in St. Bernard Parish as a result of Hurricane Katrina was 163 (St. Bernard Parish, 2008). The students who returned to Nunez Community College when the college reopened in January 2006 were impacted by the loss of relatives and friends, loss of pets, loss of employment, loss of housing, and homes that were inadequately insured. According to the Insurance Information Institute (2006), 68.4% of residents in St. Bernard Parish had flood insurance policies prior to Hurricane Katrina. However, the policies did not reflect the entire cost of rebuilding or replacement of contents for residences or educational institutions. Residents without insurance attempted to secure FEMA trailers for temporary housing. Additional background information on the college and the surrounding community after Hurricane Katrina is included in the next section.

Background

Nunez Community College was created in 1992 as a result of a legislative act which merged Elaine P. Nunez Technical Institute and the St. Bernard Parish Community College (Nunez Community College, 2007). Nunez Community College is located in St. Bernard Parish which is considered part of the metropolitan New Orleans area. The comprehensive community college was positioned to offer vocational and technical training as well as arts and sciences programs. Ironically, when the new college was scheduled to open, Hurricane Andrew arrived in New Orleans on the same day registration was to begin for the upcoming semester. The local community supported the college and Nunez opened its doors to students three days after the arrival of Hurricane Andrew (Nunez Community College).

Geographically, Nunez Community College is located in Chalmette, Louisiana. Two-thirds of the parish of St. Bernard is surrounded by water formed by the Mississippi River Delta

marshlands. The parish is bisected by the Mississippi River Gulf Outlet which is a shortcut for ships traveling between the Port of New Orleans and the Gulf of Mexico (Encyclopedia Louisiana, 1998). The waterway was blamed for much of the flooding in St. Bernard Parish as well as parts of New Orleans. As a result of Hurricane Katrina, the Mississippi River Gulf Outlet will be closed after forty-five years of operation. The Army Corps of Engineers will construct a barrier which will block the waterway off from the Gulf of Mexico (Warren, 2009a).

As in the case of many areas in and around New Orleans, the campus suffered major damage from flooding during Hurricane Katrina. Efforts to restore the campus were hampered by Hurricane Rita which immediately followed Hurricane Katrina. Parts of St. Bernard Parish were flooded once again as a result of the event. The college suffered water damage from flooding with up to eight feet of water. The ground floor of each building was completely submerged. More than $21 million has been appropriated to rebuild the campus (Cannizaro, 2007). Students chose to return to Nunez Community College under dire circumstances. The twelve students in this study collectively relocated twenty-two times including far away locations such as Florida, Texas, Arkansas, and North Carolina. Students who remained in the region attended classes in Slidell, Louisiana, and commuted from across the New Orleans Metropolitan area.

Some students at the college temporarily relocated to Baton Rouge and Mississippi. Internet access was limited and for many students, online learning was not a viable option. The students returned to find the campus had sustained substantial flooding and all of the classrooms and buildings on the first floor were not accessible. Classes were held in temporary trailers and FEMA trailers were located on the grounds for faculty, staff, and students to reside

in. Some classes and offices were moved to upper level floors. At the time of the students' return, there were no restaurants, retail outlets, grocery stores, medical facilities, places of worship, employers, or houses to reside in. Nolan (2007) states 43% of pre-Katrina church congregations have not returned to St. Bernard Parish and as a result, major religious denominations have been forced to cluster surviving congregations together until the outlook for recovery improves.

In addition to the loss of church congregations, one private school and five Catholic schools were also destroyed. St. Bernard Parish Public School System lost fifteen schools in the district. However, one unified school was opened in portable classrooms on the football field parking lot of Chalmette High School (CHS) and on the second floor of the school in November, 2005, just eleven weeks after the storm (St. Bernard Parish School System, 2008). With the assistance of the CHS principal, Wayne Warner, and school system faculty and staff, School Superintendent Doris Voitier opened the school without the help of the state or federal government.

The superintendent borrowed money to hire disaster clean-up crews, secured portable classrooms, and rented trailers to house a small teaching staff. Initially, 334 students returned to attend the K-12 Unified School (St. Bernard Parish School System, 2008). For her efforts, Doris Voitier was awarded the John F. Kennedy Profile in Courage Award in 2007 for her astounding leadership and resolve to bring the children back to the community of St. Bernard (Carney, 2007). The ability of the St. Bernard Parish Public School System to rebound could influence the return of college students with school-age children.

The St. Bernard Parish public school enrollment went from 8,872 in October 2004 to 1,670 in February 2006 (St. Bernard Parish School System, 2008). In October 2006, the enrollment grew to 3,536 students. According to Warren (2009b), 4,816 students have returned to St. Bernard Parish Public Schools post-Katrina representing approximately 55% of the district's pre-Katrina enrollment. The area also suffered major losses in businesses. According to Liu and Plyer (2007), 48% of pre-Katrina employers returned post-Katrina to the area although seventy new employers moved in or began new businesses since the hurricane. Prior to Hurricane Katrina, the unemployment rate in St. Bernard Parish was 3.4% which was lower than the national rate of 3.7% (Greater New Orleans Community Data Center, 2009). In December 2008, the unemployment rate in St. Bernard Parish was 6.8% (North Carolina Department of Commerce, 2009). The unemployment rate for the parish increased to 9% in December 2009 (CityBusiness, 2009). The effect of Hurricane Katrina, particularly in an academic context, is a topic worthy of a resilience investigation.

Studying Resiliency at Nunez Community College

I chose to study resiliency at this site because Hurricane Katrina has been considered the most destructive and most expensive natural disaster in the history of the United States (Harvard Medical School, 2005). At no other time in U. S. history has there been a declared disaster area approximately the same size as the land mass of the United Kingdom (Harvard Medical School). As a result of Hurricane Katrina, the United States has experienced the largest dispersal of Americans since the dust bowl in the 1930s.

The devastation was so widespread in St. Bernard Parish, it presented an opportunity to understand resiliency in an academic context after a natural disaster. In particular, the study of resilience at a two-year college has the potential to add to existing theory regarding how

individuals deal with traumatic events. Hurricane Katrina was certainly a traumatic event and although certain natural disasters have temporarily closed educational institutions, there has never been such extensive long-term damage or displacement of thousands of residents. Students were forced to give up their academic pursuits, transfer, or continue under dire circumstances. A Brookings Institution study two years after Hurricane Katrina found only 36% of residents returning post-Katrina (Liu & Plyer, 2007). Barrow (2007) states St. Bernard Parish is the single largest contributor to increased population in adjacent St. Tammany Parish. As a result, between one-quarter and one-third of St. Bernard's pre-storm residents moved to this area.

Connor, Vaishnavi, Davidson, Sheehan, and Sheehan (2007) state there has been some interest in resilience; however, this concept has been mostly overlooked. Physicians often examine psychosocial stressors and possible treatment effects of perceptions of and reactions to stress. According to Connor et al. (2007), these perceptions vary among individuals as well as the severity and duration of the event. They contend that resilience is a factor in one's ability to handle stress but resilience is a "neglected aspect of psychiatric and medical therapeutics" (p. 253). Perhaps this is because there are no periods in an individual's life when they are completely free of stress (Connor et al.). Resilience has been shown to be effective in protecting against posttraumatic breakdown (Connor, 2006).

Neria, Nandi, and Galea (2007) suggest a review of the literature emphasizes many areas are underexplored in the area of Posttraumatic Stress Disorder following disasters. They found research over the past three decades has validated Posttraumatic Stress Disorder among persons exposed to disasters. Consequently, research thus far has yet to completely discover what psychological, cultural, and biological factors could determine vulnerability to traumatic events

(Neria et al., 2007). Some of the most recognized predictors of posttraumatic stress are the magnitude of the exposure to the event in terms of physical injury, immediate risk of life, severity of property destruction, and frequency of fatalities. Neria et al. also stated progress is needed in all areas of measurement to enable comparisons between studies and to develop interventions which would identify the populations at risk.

Is it possible that resiliency can diminish the effects of post-disaster posttraumatic stress? Did institutional and individual factors influence the students' resiliency? Did college return have a role in the students' personal recovery? Were students seeking an education due to lost jobs as a result of the hurricane? According to the United States Census Bureau (2005), the percent of the population twenty-five years and older who possess a bachelor's degree or higher is 10.9% for the entire parish of St. Bernard. The percent of Louisiana residents twenty-five years and older with a bachelor's degree or higher is 20.6% and the percent of the nationwide population twenty-five years and older with a bachelor's degree or higher is 27.2% (United States Census Bureau). The number of "first generation" students attending Nunez is 56% (D. Clark, personal communication, February 10, 2009). The students who are experiencing massive chaos in their personal and academic lives have the potential to reveal meaningful resiliency data.

Problem Statement

Although some students returned to the area, there could have been non-academic reasons for student return to classes. For example, the college provided an anchor or a safe haven in chaos, the college represented some type of normalcy from the past, or there could have been a desire to identify in some tangible way with their home community. In addition, social integration could have contributed to the persistence of the students. For the purpose of this

study, a persistence decision is used synonymously with a departure decision in reference to Tinto's (1993) Longitudinal Model of Institutional Departure. Tinto and other researchers have developed theories regarding student behavior, however, the post-Katrina challenges administrators had to contend with presented unique problems worthy of an inquiry.

Hurricane Katrina forced institutional closures longer than any previous record (Pope, 2005) and posed many challenges for postsecondary students in Louisiana. Students in the Gulf Coast region faced difficulties due to the devastation of their communities and the interruption in services. The displacement of students and interruption in services forced students to make a decision whether to persist in their studies elsewhere or wait for the reopening of institutions they previously attended. Students could have enrolled at other institutions yet many students chose to continue their original course of study in places without the necessary infrastructure such as roads, housing, hospitals, retail outlets, schools, electricity, and telecommunications to accommodate them. Temporary classes resumed at Slidell High School, in buildings leased to businesses, and online courses were made available to community college students in St. Bernard Parish following the storm. A fall mini-semester was operational within weeks of the disaster (Nunez Community College, 2009).

At Nunez Community College, students chose to continue their education in spite of the obstacles posed by Hurricane Katrina. Forty-five percent of students returned to the campus one year after the hurricane (Louisiana Board of Regents, 2006). Return rates one year after Hurricane Katrina at other New Orleans educational institutions are as follows: Delgado Community College 69%; Dillard University 46%; Louisiana State University Health Sciences Center 99%; Loyola University 86%; Our Lady of Holy Cross College 84%; Southern University at New Orleans 64%; Tulane University 77%; University of New Orleans 68%; and

Xavier University of Louisiana 72% (Pope, 2009). It is possible that the students continued their studies because of academic and social experiences provided by the college which enabled them to finish what they started. Tinto (1993) proposed student departure decisions are based in part on academic performance and faculty/staff interactions as well as peer group interactions.

This study examined resilience which is defined as the process of adapting well in the face of adversity, trauma, tragedy, threats, or other sources of stress such as family and relationship problems, serious health problems, or workplace and financial stressors (Masten, 1994). I took a qualitative phenomenological approach by interviewing twelve Nunez Community College students who were enrolled, were displaced, and subsequently persisted in their studies post-Katrina.

Research Questions

Displaced students who left and then returned to Nunez Community College as a result of Hurricane Katrina were interviewed for the study. The study investigated the following question: Why did students return to a disaster-stricken environment to continue their studies at Nunez Community College? The secondary question was as follows: How did the students deal with the effects of the disaster? The criteria for participant selection consisted of students who were enrolled at least two semesters prior to Hurricane Katrina, who were displaced, and who returned to college. The research methodology formed the basis for the research questions as valuable data was obtained from the students regarding the influence of resilience characteristics. The research questions served as a basis to identify the significance for post-disaster practice in higher education.

Significance of the Study

The significance of this study is to acquire more empirical data regarding what factors influenced student resilience in post-disaster circumstances. The students' post-disaster experiences may inform disaster preparedness in the future by providing a model for post-disaster policy to share and implement at other institutions. The National Academy of Sciences (2006) found more is known about immediate post-disaster responses of groups, organizations, and social networks than about mitigation or disaster recovery policies. Other colleges and universities will likely be faced with natural disasters and the students' experiences could provide useful in the development of student recovery planning throughout higher education.

Research Methods

A qualitative methodology using phenomenology was utilized to discover the perceptions of displaced community college students. Phenomenology was influenced by Edmund Husserl (1859-1938). Phenomenology contributed to the early existentialism movement by developing a philosophic method which did not include presuppositions (Smith, 2003). Husserl was concerned with what is known as opposed to how it is known. Phenomenology acknowledges the presence of an object and illuminates the meaning of the object through intuition (Smith). This approach seeks to understand a participants' perspective and their view of a social reality.

In this study, I attempted to understand the individual experiences of students returning to college in post-disaster circumstances. I wanted to explore what the students felt in their post-Katrina experiences by having them describe the concrete situation as it appears from the people who are living it. I consider the students to be reliable sources of information because they are self-interpreting their unique situations. In essence, my goal was to find out the meaning of their lived experiences.

The students were asked questions during an interview with reference to resilience characteristics, desire to continue at Nunez, and coping strategies. The impact of Hurricane Katrina on higher education students is a topic ripe for exploratory research because of the potential to discover how academic and social integration occurs in a place where the normal learning and social environments have been disrupted. Therefore, phenomenology was a logical approach to examine the post-Katrina educational experiences of returning students.

Overview of the Research Project

This research project encompassed the quest to examine post-disaster resilience characteristics of community college students following a natural disaster. With the use of existing literature and a conceptual framework revolving around a Student Resilience Model, a qualitative methodology was utilized to discover the phenomenon behind factors of post-disaster resiliency. Chapter one is followed by a review of the current literature which begins with natural disasters and their themes, post-disaster education studies, and students as evacuees. The next section of the literature consists of organizational theory including institutional cultures, disaster preparedness, and crisis management. The review of the literature concludes with a section on urban, individual, and academic resilience as well as the conceptual framework for the study. Chapter three describes the methodology utilized in this study including the rationale for the choice of qualitative research as the method of inquiry. In addition, each step in the methodology process is carefully detailed. Chapter four explains the study's findings using the participants' own words as they depicted their post-disaster experiences. Chapter five, the last chapter, is a discussion of the study conclusions as well as a justification for a revised conceptual framework. Chapter five concludes with implications for theory, policy, and practice as well as recommendations for further research.

Conclusion

An estimated 100,000 higher education students were displaced from their original institutions as a result of Hurricane Katrina (Fields, 2005). There is no doubt that students were forced to deal with post-disaster circumstances which had an effect on college attendance. This particular post-disaster environment provides a rare opportunity to identify resilience characteristics in students as well as the chance to explore resiliency in an academic context after a natural disaster. The next chapter consists of a review of the literature.

CHAPTER TWO: Review of the Literature

Introduction

The study of natural disasters and their effect on human populations has captured the attention of researchers (Ashenbrener, 2001). While most of the attention on the effect of post-disaster circumstances focuses on leadership and crisis management perspectives, this research project seeks to investigate resilience from the perspective of the student. The literature review is categorized into the following three clusters: natural disasters, organizational theory, and types of resilience. The first cluster consists of natural disasters. Natural disasters destroy infrastructure such as large-scale public systems, services, facilities, power and water supplies, transportation, roads, telecommunications, housing, and schools. Students in the Gulf Coast region faced difficulties in persisting due to the devastation of their communities and the interruption in services. A description of disaster themes, post-disaster education studies, and students as evacuees is included in the cluster on natural disasters.

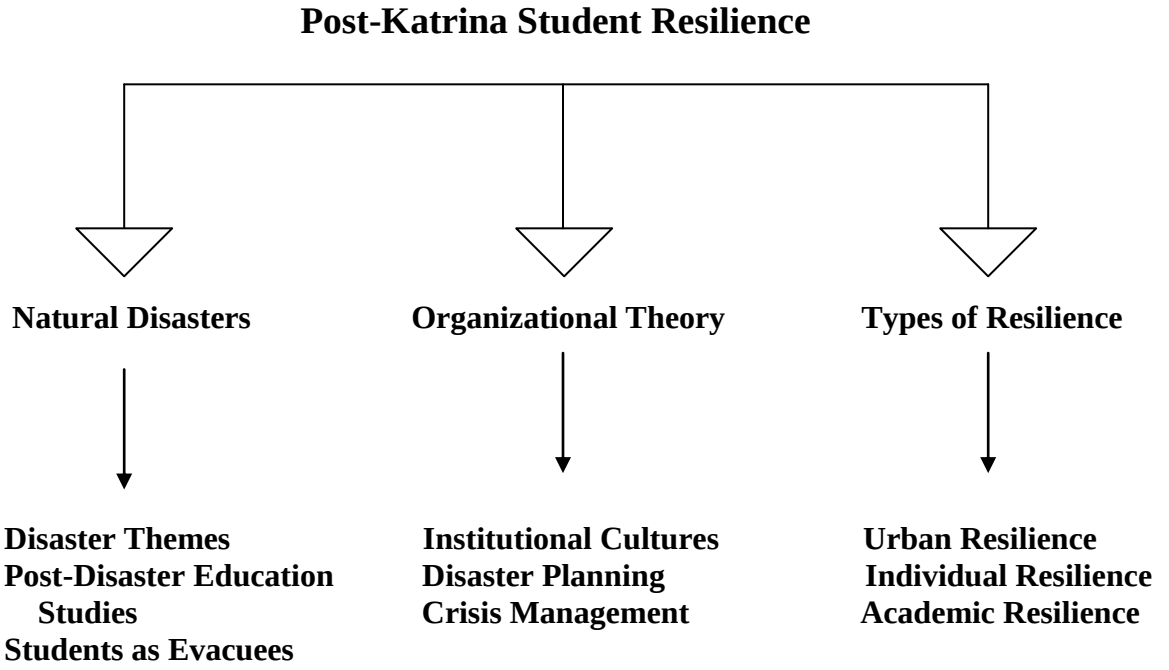
The second cluster, organizational theory, describes institutional cultures, disaster preparedness, and crisis management. Institutional cultures such as clan, adhocracy, market, and bureaucratic shape the decision-making capability in management approaches. Disaster preparedness includes facing hazards and disasters, a personal behavior change model, and the human factor in crisis mitigation. Crisis management deals with leadership challenges such as public leadership, the nature of crisis, the ubiquity of crisis, leadership perspectives, and the critical tasks of leadership in crisis. In addition, the crisis management section includes natural disaster distinctions, bureaucratic and emergent norms, and the disaster victims' panorama.

The third cluster, types of resilience, explores the possibility that students who continued their studies exhibited characteristics of resilience. Urban resilience, individual resilience, and

academic resilience are described in the last cluster. At Nunez Community College, many students chose to continue their education in spite of the obstacles posed by Hurricane Katrina. A literature map is provided in Figure 1.

Figure 1

Literature Map



The literature map is organized to facilitate understanding of the many factors involved in a study of this type. Numerous natural disasters in the past have propelled studies revealing the actions taken to recapture former student populations. In previous natural disasters, educational institutions have endured temporary closures and relocation. However, in the case of Hurricane Katrina, students were forced to vacate their residences as they faced the loss of loved ones as well as their houses, cars, and other possessions. The students became known as "evacuees" and had to leave the area to seek shelter elsewhere. While some students were preparing for their return, college administrators struggled to promote institutional effectiveness in a post-disaster environment. The institutional culture, the level of disaster preparedness, and the

ability to manage a crisis each had an organizational impact on post-storm recovery. Upon their return, students became part of the "urban pioneer" movement which provided them with the opportunity to demonstrate individual and academic resilience. A Student Resilience Model was used as the conceptual framework for this study. The following section describes Nunez Community College and its role in the structure of two-year colleges in the state.

Study Context

The context of this study is situated in a college operated by the Louisiana Community and Technical College System (LCTCS). The LCTCS became operational on July 1, 1999, and brought together a group of institutions to create the System. The colleges consist of the Bossier Parish Community College, Delgado Community College, Elaine P. Nunez Community College, River Parishes Community College, South Louisiana Community College, Louisiana Delta Community College, and Baton Rouge Community College.

The System also oversees the L. E. Fletcher Technical Community College, Sowela Technical Community College, and the Louisiana Technical College with thirty-eight campuses throughout the state. According to LCTCS (2008), the mission of the organization is to improve the quality of life of Louisiana's citizens through educational programs offered in the colleges. A major goal is to offer workforce training and to provide citizens with the opportunity to learn continuously. The LCTCS is comprised of open-admissions institutions offering degrees that assist people move directly into the workforce, provides job training and retraining, and prepares students to transfer to four-year colleges and universities. The LCTCS is dedicated to teaching courses in geographical areas based on market demand and available resources. Resources (or the lack thereof) following Hurricane Katrina was a challenge for

LCTCS administrators. Existing literature lacks a step-by-step plan for colleges and universities following a disaster of the magnitude of Hurricane Katrina.

Literature Gaps

Hurricane Katrina was a traumatic event with life-changing consequences for students enrolled in higher education. Resilience is significant to the exploration of mental health issues including posttraumatic stress following a life-changing event. Resilience is measured in terms of posttraumatic stress to examine neurochemical responses in drug treatment (Connor, 2006). Connor also states the impact of posttraumatic symptoms on a person's coping ability is unknown and that an individual's perception of stress could reflect their resiliency in the face of hardship. Connor recommends longitudinal studies to evaluate the impact of characteristics associated with resilience. Moreover, Connor suggests that in order to understand the relationships between resilience and the impact of posttraumatic stress on coping, more study in the field is needed. I concur with Connor's recommendation that more investigation is needed to explore characteristics associated with resilience, especially in a post-disaster environment.

Posttraumatic stress is defined as a mental disorder resulting from exposure to an extreme, traumatic stressor (U. S. Department of Veterans Affairs, 2006) whereas one who is capable of coping is dealing and attempting to overcome problems and difficulties. Kessler, Galea, Jones, and Parker (2006) found a majority of Katrina post-storm survey respondents met the criteria for trauma exposure and posttraumatic stress. Although posttraumatic stress has been studied following catastrophic events, existing studies overlook student resiliency in the aftermath of natural disasters. When individuals are capable of building their own levels of competence, it makes stressful events less threatening therefore strengthening one's resiliency (Brooks & Goldstein, 2004).

In a study of K-12 educators' experiences post-Katrina in the Orleans Parish Public School System, a study was launched to examine the phenomenology of disaster in educational settings. According to Beabout (2008), post-Katrina reforms are complex due to the volatile rebuilding environment which has significantly influenced reopening processes. Although the study on K-12 experiences revealed post-disaster educators' perceptions, little attention is given in other literature regarding the circumstances community college students must overcome in a post-disaster environment. The students who return persist academically while dealing with extraordinary conditions. Tinto (1993) found classrooms can serve as an opening to more involvement in other intellectual endeavors on the campus. Academic integration has the potential to influence resilience in students.

Academic Integration

Integration in the academic sense results from sharing common information, perspectives, and values with other members of a scholastic community (Tinto, 1993). Academic integration (as well as social integration) may contribute to student persistence. Pascarella and Terenzini (2005) used the term "interaction" to describe student contact with faculty members outside the classroom environment. This contact results in student persistence, educational attainment, and degree completion. According to Pascarella and Terenzini, a bond develops between student and institution when students have positive interactions with faculty members.

In particular, resiliency in an academic context following a natural disaster might reveal academic experiences the students feel influenced their resilience. Tinto (1993) studied the impact of student-faculty contact and student withdrawal. Tinto concluded student-faculty positive encounters (which go beyond the formal academic setting to more expansive intellectual and social issues) are closely aligned with student persistence. For example, faculty

behavior can influence academic performance as well as creating the opportunity for continued contact outside of the classroom.

Tinto concentrated on the factors which lead to student departure. For the purpose of this study, Tinto's use of the longitudinal model is not to examine student departure, but to examine students who return to the college post-disaster. This research project identifies some of Tinto's factors which ultimately may contribute to the students' return to college. Tinto has proposed reasons why students leave college, however, I desired to examine the post-disaster influences of factors which contribute to why students remain in school. Consequently, I am applying the work of Tinto in a way which considers persistence as the alternative to departure. In particular, Tinto emphasized that in campuses in nonresidential settings, contact could come from interactions within the classroom which is a primary catalyst for student-faculty interaction. Tinto also stressed that the meaning students attach to community membership is related to a particular institution's culture and the value the institution places on student persistence. Community membership also means the students are socially integrated.

Social Integration

In addition to academic integration, this study also investigates the potential influence of social integration and the experiences students believe influenced their resilience. Integration in the social sense occurs when an individual develops strong and effective social ties primarily as a result of daily interactions with other members of a community (Tinto, 1993). Social integration (as well as academic integration) may lead to student persistence. Astin (1993) states interaction with peers has an impact on growth and matriculation during the undergraduate years resulting in both psychological (individual) and sociological (group) influences.

Astin (1993) found the psychological impact deals with identification and affiliation with those who share similar beliefs. The sociological impact refers to the peer influence to follow the group's power to include or deny membership based on conforming to the group's beliefs and behaviors. Goldstein (2006) suggests social connections provide psychological and material resources which help to deal with stress. Brooks and Goldstein (2004) contend connectedness is a "life force" and is associated with resilience. An individual who is "connected" has a sense of security and feels safe. Hallowell (1999) expands the definition of connection going past the association with interpersonal relationships. Hallowell notes connectivity is beyond one's own self and involves being a part of a larger phenomenon. This larger phenomenon of connectivity involves family members, community organizations, and colleagues.

According to Brooks and Goldstein (2004), characteristics of the social environment include social support (assistance in the form of friendship and nurturing); emotional support (expressions of empathy, caring, and trust); and a stable social structure (which protects and assists in the regulation of behavior). Following Hurricanes Katrina and Rita, Brooks and Goldstein (2005) offered suggestions to deal with despair, frustration, and anger for those whose lives were shattered in the hardest hit areas by the disasters.

Brooks and Goldstein (2005) suggest moving away from the "why me" attitude by focusing time and energy on those things which one has influence and control over; maintaining connections as a basis for comfort and strength by connecting with other people, religion, ideas, and causes; and providing oneself with the opportunity to assist others by re-enforcing compassion, responsibility, and resilience. Their suggestions recognize the journey

to reach resilience and recovery is long and painful, but necessary for one's emotional and physical health in disaster recovery.

The academic and social integration of Nunez Community College students following Hurricane Katrina could have contributed to their resilience. Academic integration gave them the opportunity to share values commonly held by other members of society such as the increased occupational value of an education after a natural disaster. Social integration provided students with personal affiliations and daily interactions among different classmates to share their experiences after a natural disaster.

Natural Disasters

Neria, Nandi, and Galea (2007) concur that there is no universal or widely used definition of what constitutes a disaster. Definitions differ between the use of "extremes" resulting in inconsistency in disaster studies. The range of extremes is somewhere between the loss of life, disruptive events, restrictions in time, and status of repeated exposure to massive trauma (Neria et al.). Although Hurricane Katrina was an unprecedented disaster for higher education, natural disasters have occurred at campuses throughout the nation. For example, wildfires near California State University's San Bernardino campus in the Fall 2003 semester forced an immediate evacuation of the entire campus (Lipka, 2005).

The October 2007 wildfires in California forced a complete evacuation at Pepperdine University. An estimated 500 firefighters fought the wildfires driven by destructive Santa Ana winds and worked to protect the 830-acre Pepperdine campus (Dalton, Gentile, and Adelman, 2007). Ironically, months before the October 2007 fire, Pepperdine University officials closed its own campus fire department after it was decided the program was not beneficial to the students' safety (Albertson, 2007). Although the program's participants were trained in fire

safety procedures, administrators found the individuals were not licensed or certified. Moreover, the program gave the students and faculty a "false sense of security" when fires erupted near the campus.

As a result of the October 2007 fires, volunteer students assisted over the semester break with clean-up and relief efforts. Students also started a clothing drive to replace items for those individuals who suffered losses during the fires, assisted the Malibu Presbyterian Church in rebuilding efforts, established a fund to aid Malibu fire victims through the Student Government Association, provided moving assistance to students and faculty who suffered damages to their homes, and hosted a fund raising barbeque to raise money for charities that help fire victims. During the fires, updates were posted on the campus emergency Web page regarding class cancellations and students were urged to continue to remain cautious in commuting to and from the campus. Faculty and staff were urged to familiarize themselves with the Disaster Preparedness section of the faculty/staff telephone directory.

Unlike Hurricane Katrina, the Pepperdine campus was not completely destroyed or closed for operation indefinitely. Moreover, the recovery efforts were not hampered by a second event (i.e. Hurricane Rita). Students at Pepperdine continued to commute to and from the campus and classes were relocated to safer areas. Student records remained undamaged and not all students/faculty/staff suffered structural damages. Those who had the ability worked as volunteers to assist and host fund raising activities.

In the case of Nunez Community College, every student, faculty/staff member, and administrators all found themselves without a campus and an efficient means of effective communication. The losses were so monumental (people, pets, cars, houses, community, schools) the recovery was much longer. The academic and social integration was much harder

to accomplish without classrooms and without being connected with their social networks. Furthermore, Nunez Community College students have a strong identification with their community which was effectively destroyed.

As in the case of fires or earthquakes, natural disasters arrive in various ways and impact numerous communities. Too little water in a wildfire scenario results in a serious threat; too much water remains a serious threat in coastal areas. Following Hurricane Katrina, colleges and universities have started strategies to resume business by supporting a variety of recovery time and recovery point objectives such as data storage collaboration with other institutions, data protection, and business applications such as the restoration of payroll (Shah & Gerrity, 2006). Recovery time objectives are allowable downtime or how much time after a data center failure the institution can regain service. Recovery point objectives refer to the amount of data that is acceptable for loss and recovery after service is restored.

These activities minimize the impact on students by making it easier to re-enroll following a disaster. Shah and Gerrity (2006) also found the higher education community is no longer able to view the ability to resume business functions as a "luxury" and that a "failure of imagination" will not excuse institutions for being unprepared for natural disasters. In the case of Nunez Community College, an Emergency Recovery Plan was developed post-Katrina which addresses the following objectives: plan activation; media response; objectives and recovery time requirements; crisis management/recovery/facility/recovery teams; recovery strategy; business resumption; command center operations; disaster recovery; and salvage vendors. The plan also includes recovery priorities for information technology, retrieval of off-site back-ups; system office notification; business impact analysis process; command center locations/checklist/resources; and procedures for information technology/voice recovery/media

crisis management (Nunez Community College, 2008). Recovery plans seek to mitigate the effects of a disaster. The following section includes disaster themes, post-disaster education studies, and students as evacuees.

Disaster Themes

The United States Census Bureau reported more than half of the nation's two-hundred ninety-seven million people live in coastal areas (Stehr, 2006). In fact, Stehr stated seven of the top ten fastest-growing states are considered coastal. Coastal areas are more prone to hurricanes; however, there are numerous types of natural disasters as the forces of nature are at times completely uncontrollable. The earthquake which buried the ancient city of Pompeii, the eruption of Mount St. Helens, and the earthquake which destroyed the Iranian city of Bam are just some examples of notable natural disasters (Vale & Campanella, 2005a). The earthquake on January 12, 2010, which devastated the Caribbean island of Haiti has been described as horrific in terms of human suffering and physical losses (Kluger, 2010). Another example is the tsunami induced by an earthquake destroying the Indonesian city of Banda Aceh on Sumatra, devastating countries from Thailand to Somalia in December 2004 (Vale & Campanella).

According to Schultz (2007), members from the International Rescue Committee (IRC) invited to Aceh following the 2004 tsunami observed notable characteristics from an educational perspective. IRC members observed that teachers and students who gathered together right after the tsunami showed signs of resiliency and demonstrated the community's ability to bounce back. The classroom environment became a place to build resilience for the students who felt more optimistic when they interacted with the teacher thus forgetting about the devastation. This finding was attributed to being connected and sharing ideas. Natural

disasters have and will continue to occur in virtually every region of the world (Vale & Campanella, 2005a).

In the New Orleans area, the physical damage to the technical and community colleges was more than $184 million (Mangan, 2005). FEMA's estimate of the cost for debris removal, emergency work, and the repair of public property in St. Bernard Parish is $929 million (Warren, 2007). The total scale of destruction in the wake of Hurricane Katrina was approximately $75 billion in damage in the New Orleans and the Mississippi Gulf Coast areas and set a record as the costliest hurricane in the United States (National Hurricane Center, 2008). The death toll and the disruption of lives were difficult to comprehend by those who suffered losses as well as those who witnessed the saga unfold in the national media. The presumed cause, a hurricane and subsequent flooding, meant the students' personal and academic lives were temporarily suspended.

Vale and Campanella (2005b) state catastrophic events such as hurricanes and other disasters can be categorized. As a result of the September 11, 2001, terrorist attacks, researchers wanted to inquire about the kinds of questions others had asked when faced with a disaster and how they had managed to persevere. A colloquium titled "The Resilient City: Trauma, Recovery, and Remembrance" was held at the Massachusetts Institute of Technology (MIT) which resulted in the publication of the book, *The Resilient City: How Modern Cities Recover From Disaster*. Vale and Campanella view urban disasters from the scale of destruction, from the measurement of death, the disruption of lives, and from their presumed cause. When a natural disaster strikes, Vale and Campanella found there are certain predictable patterns of recovery identified by the following themes:

- Narratives of resilience are a political necessity

- Disasters reveal the resilience of governments
- Narratives of resilience are always contested
- Local resilience is linked to national renewal
- Resilience is underwritten by outsiders
- Urban rebuilding symbolizes human resilience
- Resilience benefits from the inertia of prior investment
- Resilience exploits the power of place
- Resilience casts opportunism as opportunity
- Resilience, like disaster, is site-specific
- Resilience entails more than rebuilding

The themes identified by Vale and Campanella (2005a) regarding disasters are closely aligned with urban resilience. For the purpose of this study, urban resilience is defined as a city which adapts well to adversity, trauma, tragedy, or threats. *Narratives of resilience being a political necessity* are crucial because governments must protect its citizens from disaster. Moreover, the government must restore confidence in its ability to handle the destruction of a community. *Disasters reveal the resilience of governments* is vital as a theme because citizens examine leaders' responses and call for political change if their elected officials are not held accountable for their actions. *Narratives of resilience are always contested* refers to the manipulation of voices carrying the greatest influence who simultaneously ignore groups and individuals identified as insignificant.

Local resilience being linked to national renewal is evidenced by disasters which connect communities to the national arena. The increase in oil prices following Hurricane Katrina was attributed to the destruction of oil producing facilities in the Gulf region. The impact of the

hurricane became a matter of national importance as former residents of the region were dispersed across the country. *Resilience being underwritten by outsiders* occurs when financial support is provided from outside a federal system. This was prevalent in the emergency allocation of assistance from governments both within and outside of the United States following Hurricane Katrina.

Urban rebuilding symbolizes human resilience means rebuilding occurs to ensure a future and to provide a distraction from loss and suffering. Such distraction could help survivors deal with depression brought on as a result of traumatic experiences. The theme, *resilience benefits from the inertia of prior investment*, is due to a city's inability to correct past problems even with the severe destruction of urban areas. New plans cannot curtail future events regardless of how well a city is rebuilt. The next theme, *resilience exploits the power of place*, demonstrates the social and psychological losses of rebuilding cities. Social relations that are inherit in schools, workplaces, retail shops, places of worship, and recreation are part of the reconnection process. As Vale and Campanella (2005a) state, rebuilding is just as much about networks of people as it is about replacing bricks.

Sometimes disasters propel organizations to capitalize on events to pursue other improvements when *resilience casts opportunism as opportunity*. Entire communities are razed and other structures are built in its place. *Resilience, like disaster, is site-specific* because of the appeal to victimize entire cities when referring to one geographic area. Other hurricanes have occurred in the Gulf Coast region, even immediately following Hurricane Katrina, but it is the hurricane named "Katrina" that is most associated with the greatest natural disaster in the history of the United States. The last Vale and Campanella (2005a) theme states *resilience entails more than rebuilding* because the process of rebuilding is necessary, but not sufficient

in enabling recovery. Hurricane Katrina was not the first natural disaster to destroy a region or to disrupt higher education institutions.

Natural Disasters Summary

Although catastrophic events can be categorized, it is too early to measure the long-term effects of Hurricane Katrina. Unlike other disasters, the devastation in the wake of Hurricane Katrina made this event unparallel to any other in United States history. Hurricane Katrina is estimated to have resulted in $75 billion in damage, making it the costliest natural disaster in the history of the United States (National Hurricane Center, 2008). The impact on educational infrastructures from natural disasters is far reaching. However, Vale and Campanella's (2005a) themes reveal certain predictable patterns of recovery.

In particular, there is a relationship between student resilience and three of the following themes: Urban rebuilding, resilience being site-specific, and resilience entailing more than rebuilding. Nunez Community College students were distracted by searching for suitable housing or by making decisions to tear-down or rebuild their homes. The students were relocating, rebuilding, and in some instances, re-enrolling simultaneously. Some of the returning students previously enrolled at Nunez Community College have decided to resume their studies at a specific site which geographically was one of the hardest hit areas. Moreover, even though the students are attempting to rebuild their pre-Katrina lives, rebuilding does not necessarily enable psychological recovery after a weather-related disaster.

Vale and Campanella (2005b) found trauma continues long after the physical elements of a disaster have been fixed. Many people suffer long-term emotional effects after disasters and it is also possible to think of cities as traumatized. A multitude of social, economic, and cultural factors determine the rate of recovery and no two cities have recovered at the same pace (Vale

& Campanella). For example, in Orleans Parish, the population is far below its pre-Katrina level with more than 150,000 jobs lost in the storm (Schulte, 2008). The New Orleans school district post-Katrina lost control of over 95% of its schools which were placed in a state-operated Recovery School District (Beabout, 2008). The nearby St. Bernard Parish School District reopened a K-12 Unified School in November 2005 and has subsequently opened a total of nine schools maintaining control of the school district (Warren, 2009b). It would seem that communities are capable of recovering from a natural disaster. Individuals, groups, and government appear to dictate the recovery rate (Vale & Campanella, 2005b).

Post-Disaster Education Studies

Weather-related disasters have captured the attention of the media and the public-at-large due to the wake of destruction left after Mother Nature calls (Vale & Campanella, 2005a). In addition, such events provide an opportunity for research as evidenced in post-disaster higher education studies. The following section includes a post-disaster cross-case analysis of four-year institutions; a post-disaster study by East Carolina State University; the effect of posttraumatic stress at medical schools following Hurricane Ivan in the Caribbean; a post-Katrina study by the Brookings Institution Metropolitan Policy Program; a post-Katrina survey by the University of New Orleans; a study of Perceptions of New Orleans Educators Post-Katrina; and a post-Katrina study conducted by the Southern Education Foundation. These studies inform the problem by demonstrating how students continue their education in spite of weather-related obstacles.

Cross-Case Analysis of Four-Year Institutions

Studies have been conducted regarding how educational institutions handle natural disasters in the United States. A cross-case analysis was conducted by Aschenbrener (2001)

using four-year institutions which experienced natural disasters between 1998 and 2000. The analysis focused on steps taken by the institutions within the first forty-eight hours after a disaster, institutional priorities following the disaster, and the one to three-year effects of the disaster on the institution. The institutions were Gustavus Adolphus College in St. Peter, Minnesota (tornado); East Carolina State University in Greenville, North Carolina (hurricanes); and Kentucky Wesleyan College in Owensboro, Kentucky (tornado). Both Gustavus Adolphus and Kentucky Wesleyan colleges are private institutions whereas East Carolina State University is a public institution.

The cross-case study analysis examined how the university's administrators handled the situation using crisis management theory as a conceptual framework. Major findings revealed safety and security were priorities immediately following a disaster; communication was difficult but essential; problems needed appropriate and resourceful solutions; and staff issues were important such as burnout and physical exhaustion. Moreover, institutional cultural changes were attributed to the disaster response being coordinated by a few individuals (as opposed to the normal chain of command), the value of using symbols increased, and there was a need to assign meaning to the event (Aschenbrener, 2001). For example, the replanting of trees to replace destroyed ones at East Carolina State University had a symbolic meaning.

As each of these institutions recovered in a relatively short period of time, questions remained dealing with the lost perspective of the faculty and students in the case studies. The faculty and students were viewed as "not as intimately involved in the recovery process" compared to administrators (Aschenbrener, 2001, p. 256). One of the surprising findings was that healing (the process of becoming well spiritually) occurred much faster than anticipated. Aschenbrener discovered mental health issues at each of the three institutions were prevalent,

but the students and staff used few professional counseling services. The disasters did not affect all individuals in the same way; therefore, personal recovery was not viewed as a primary issue.

The physical repair of buildings was performed quickly with minimal inconveniences for the students at the institutions. However, Aschenbrener (2001) found the students did become more dependent on administrative programs where a strong, hands-on approach by university administrators was visible in the students' lives such as running a phone bank to meet/greet and keep track of people, and establishing a relief center so that all resources were located in a central location. This might suggest the social integration provided by the staff had an impact on the individual recovery of the students. Perhaps academic and social integration factors played a part in student recovery and are a predictor of individual resiliency. Unlike the private institutions in the cross-case analysis, East Carolina State University was also the subject of a quantitative post-disaster study.

East Carolina State University

During the period August 30 until September 6 in 1999, Hurricane Dennis arrived in North Carolina traveling along the northeastern North Carolina coast. The hurricane hit the region two times and then moved into the central region of the state. On September 16, 1999, Hurricane Floyd made landfall along the North Carolina coast. Both hurricanes caused record rainfall ranging between fifteen and twenty inches. Before the region had time to recover from the hurricanes, a third storm, Hurricane Irene, targeted the East Coast and made its way toward the Carolinas. The October storm was a Category 2 hurricane and went to the Outer Banks of North Carolina. The storms were followed by catastrophic flooding. Up to 55,000 homes were impacted, 8,000 homes were destroyed, 44 counties suffered damages, 52 people died,

agriculture losses totaled $800 million, and the effect on employment resulted in the loss of 30,000 jobs (Maiolo, Whitehead, McGee, King, Johnson, and Stone, 2001).

A quantitative study using a random stratified cluster sample design was launched to understand how students experienced natural disasters at East Carolina State University following the hurricanes. Approximately 900 graduate and undergraduate students participated in the survey. The areas explored were different types of impacts such as evacuation, living situation changes, personal property losses, sources of assistance (including financial), physical, and psychological impacts. Hurricane Floyd displaced approximately 10,620 of the 18,000 East Carolina State University students for an average of ten days (Maiolo, Whitehead, McGee, King, Johnson, and Stone, 2001). Sixty-six percent of the students who participated in the survey stated they experienced no property damage. Approximately 4,500 students had property damage which was repairable while they remained in their homes while 16% of the students lost personal property outside of their homes. The loss of textbooks and related school materials was so prevalent the university bookstore established a loan program (Maiolo et al., 2001).

According to Maiolo, Whitehead, McGee, King, Johnson, and Stone (2001), the average reported loss at East Carolina State University was $6,000 with half of the respondents having less than $1,000 in damages. Financial losses incurred represented 26% of those who participated in the survey. Hurricane Floyd resulted in 7% of the student body having to relocate. From a physical perspective, headaches, cold, or flu was reported in 46% of the students. Some students were exposed to floodwaters while rescuing people, animals, and personal items. From a psychological perspective, 63% of the students revealed their Hurricane Floyd experience made them readjust their life priorities. Positive changes included

less focus on material items and an increased importance in family and friends. Surprisingly, students stated school became less important and that they were "less likely to listen to experts during the next disaster" (Maiolo et al., 2001, p. 229). Perhaps this is because 911 operators told students to remain in their apartments when flood waters later climbed to the second floor.

Approximately 49% of the East Carolina State University students expressed they were having a difficult time keeping up academically post-Floyd (Maiolo, Whitehead, McGee, King, Johnson, and Stone, 2001). The lack of any systematic research on how students differ from other members of the community in their post-disaster responses means it is not possible to learn how students are likely to recover (Maiolo et al., 2001). Some students felt the faculty was not responsive enough while others noted faculty went to extreme lengths to be helpful. The students were also affected by the losses of family and friends. Students who resided off-campus were more affected by property damages than students who resided on-campus and homeowners were more negatively impacted than renters.

Gender did influence whether or not the natural disaster made students re-evaluate their life priorities. According to Maiolo, Whitehead, McGee, King, Johnson, and Stone (2001), female students were more likely than male students to desire a change. In addition, female students also reported experiencing more physical illness since the hurricane. The percentage of female students attending Nunez Community College is 60.6% (National Center for Education Statistics, 2008). The East Carolina State University study was a small examination of the effect of a natural disaster.

St. George's and St. Matthew's Medical Schools

On Grand Cayman Island in September 2004, Hurricane Ivan traveled across the Caribbean and struck the islands of Grenada and Grand Cayman. The hurricane resulted in 40

deaths, left residents homeless, closed universities, and caused the medical schools located on the islands to relocate to the United States (Ceaser, 2005). According to university officials, St. George's and St. Matthew's medical schools resumed classes on the islands in May 2005 with little impact on student enrollment. Officials admitted that Hurricane Ivan did injure the psyches of students which have not entirely healed. However, a psychologist at St. George's, Dr. Terry Ruthrauff, stated there was no treatment related to Posttraumatic Stress Disorder (Ceaser). According to Ceaser, Dr. Ruthrauff attributes this to the fast evacuation following the hurricane which ultimately avoided the students having to deal with the post-disaster environment. A study of a much larger scale was conducted post-Katrina by the Brookings Institution Metropolitan Policy Program.

Brookings Institution Metropolitan Policy Program

In a review of key indicators of recovery two years after Hurricane Katrina, the Brookings Institution Metropolitan Policy Program examined social, economic, health, public services, and infrastructure in the New Orleans region (Liu & Plyer, 2007). The study found the population of New Orleans and the surrounding region is rebounding with demographic shifts. For example, there are fewer black students in the city and larger groups of Hispanic children in the nearby parishes including Jefferson and St. Tammany. According to Liu and Plyer, the housing market has stabilized particularly in the parishes with the least damage. Home prices are still high along with rent levels. However, in Orleans and St. Bernard Parishes, home sales and prices have plummeted. Housing repairs and construction is continuing, however, the lack of repairs to much-needed infrastructure is slow or has not occurred and public services are few (Liu & Plyer).

In St. Bernard Parish, the site of this study, the Brookings Institution Metropolitan Policy Program discovered only 36% of the pre-Katrina population was living in the area two years after the hurricane. In St. Bernard Parish, 70 new employers moved into the parish or started a new business since Hurricane Katrina. Although new businesses have opened in St. Bernard Parish, the housing response to recovery has been slow. The overall Road Home closings designed to help homeowners remain small.

The Road Home program is designed to provide compensation to Louisiana homeowners impacted by Hurricanes Katrina and Rita for the damage to their homes. The Road Home program gives eligible homeowners as much as $150,000 in compensation for their losses to move back into their homes. This program allows homeowners who qualify to stay in their homes, purchase another home in Louisiana, or sell their homes and choose not to remain a homeowner in the State of Louisiana (Office of Community Development, 2008). Liu and Plyer (2007) found only 39% of the 15,700 applicants from St. Bernard Parish intend to use their Road Home funds to remain in their homes. Nine of fifteen K-12 schools in St. Bernard Parish are currently operating (Warren, 2009b). Progress in the opening of K-12 schools in St. Bernard Parish would affect college students who have school age children.

As a result of the investigation, recommendations were made for the long-term recovery of the region. The Brookings Institution Metropolitan Policy Program recommended a federal-state-local partnership to sustain the recovery of the region; the removal of barriers to existing dollars while committing additional federal investments; identification of the appropriate standard for creating a formal and continued federal presence in the Gulf Coast; and the restoration of affordable housing, essential services, and infrastructure to attract and keep employers and families in the region (Liu & Plyer, 2007). Infrastructure was just one of many

challenges faced by technical and community colleges following Hurricane Katrina as discovered in a University of New Orleans survey.

University of New Orleans Study of Storm-Affected Colleges

In a post-Katrina survey conducted by the University of New Orleans of major community and technical college issues, community college administrators in Louisiana and Mississippi rated the top concerns as stabilizing enrollments, financial impact on budgeting and future funding, and personal issues of students, faculty, and staff (Killacky & Rhoe-Collins, 2008). In addition to dealing with the issues of enrollment and financial stability, college administrators in the Gulf Coast area have been forced to deal with personal issues such as deciding to repair their homes or relocate elsewhere. Very little housing is available and construction costs have skyrocketed (Killacky & Rhoe-Collins, 2008). In St. Bernard Parish, almost every home, business, school, religious institution, and retail shop suffered irreparable damage from a tidal surge followed by massive flooding (Warren, 2007). Survey respondents (including Nunez Community College employees) indicated the faculty and staff had to deal with the same issues as the students including the loss of relatives, friends, pets, homes, and possessions.

The faculty and staff, the "traditional" helpers and providers, found themselves needing just as much support as the students themselves. Faculty and staff members stated they had to divide their energies between their personal lives, the needs of their students, and the gigantic efforts it took to reopen their campuses following the hurricane. The respondents revealed a large percentage of the students, faculty, and staff lived in the service areas of their colleges. According to the respondents, it has been difficult to attempt to handle the usual work issues while simultaneously going through the same psychological, financial, and social displacement issues as the students (Killacky & Rhoe-Collins, 2008).

The aforementioned issues combined with an extreme enrollment decline could mean an impending fiscal crisis. According to Killacky and Rhoe-Collins (2008), community and technical college administrators stated the financial impact on budgeting and future funding was enormously impacted by the decrease in student population. The low post-Katrina enrollment and questionable increases in student enrollment in the future produced concern over the financial stability of their colleges.

Respondents in the survey indicated the initial loss of funds as a result of student withdrawals has lasted longer than expected. Consequently, the funding of new and existing programs remains questionable. The situation is further compounded by the significant delay in insurance settlements to rebuild facilities destroyed during the storm. Several buildings were lost which are critical to serving the students and the surrounding community. It would appear the continuation of post-Katrina studies posed many obstacles for students. One of the obstacles was the lack of funding to support education recovery which was investigated by the Southern Education Foundation (2007).

Southern Education Foundation

The Southern Education Foundation based in Atlanta, Georgia, published the first independent overall assessment of education in the Gulf Coast region since Hurricane Katrina. Although the cost of hurricane destruction in K-12 and higher education was estimated at $6.2 billion, only 2% of the federal government's funding related to recovery went toward education recovery. According to the Southern Education Foundation (2007), nearly one out of every six students in Louisiana's public colleges and universities dropped out for the 2005-2006 academic year. During the 2006-2007 academic years, almost 9,000 Mississippi college

students remained out of school. In Louisiana, more than 26,000 students from Louisiana's public colleges did not return the year following the hurricane.

Public and private colleges were forced to respond to the emergency needs of over 80,000 college students including students displaced from their homes as well as their schools. The Southern Education Foundation (2007) found the federal government's decision to provide only $10 million to address the needs of over 80,000 college students excluded a large number of low-income students without the resources to persist in their studies after the hurricane struck. This means that a number of low-income students were not able to continue their studies because of the sparse allocation of federal dollars.

Institutions which do not have to rely heavily on federal funding are able to reopen quickly and continue service to all students, including low-income students. Private institutions such as Gustavus Adolphus and Kentucky Wesleyan colleges were able to reopen in a relatively short amount of time as did East Carolina State University, which is a public four-year institution. Unlike these institutions, colleges and universities in the Gulf Coast region took a much longer time to recover and some institutions had to relocate their student population to other facilities such as hotels. In New Orleans, K-12 schools also experienced many post-Katrina challenges.

Perceptions of New Orleans Educators Post-Katrina

A study of the perceptions of New Orleans educators on the process of rebuilding the New Orleans School System post-Katrina explored the phenomenology of post-disaster school reform. According to Beabout, Carr-Chellman, Alkandara, Almeida, Gursoy, Ma, Modak, and Pastore (2008), a theoretical framework of the chaos theory applied to K-12 schools reveal this particular example of school reform is strongly impacted by the day-to-day challenges of life in

post-Katrina New Orleans. Chaos theory assists individuals view schools through the lens of an "organic" whole as opposed to a bureaucratic organization (Heckscher & Donnellon, 1994). Both "strange attractors" (minute-to-minute unpredictability) and "morphic fields" (new students, teachers, principals) appear visible in post-Katrina New Orleans schools (Beabout et al., 2008).

The educators' post-disaster perceptions in the process of school reform were collected and analyzed. As a result, the findings reveal many factors influenced educators' perspectives in post-disaster school reform. Factors such as district communication, leadership, a need for accountability, concerns about the pre-Katrina school system, and the anxiety regarding working conditions were found to be consistent with the view of schools as a complex social system (Beabout, Carr-Chellman, Alkandara, Almeida, Gursoy, Ma, Modak, and Pastore, 2008). The dominant themes which emerged from the study include a culture of uncertainty in New Orleans, a mix of hope and anxiety for the future, and a lack of revolutionary change (Beabout et al., 2008). It was determined that both teachers and administrators change their focus when a school is in a state of turmoil and that schools represent the "best hope of social renewal" (Beabout et al.).

In spite of the fact the teachers' social networks were disrupted and their lives filled with chaos, the school is representative of a community and a place where both teachers and students have an opportunity to experience a sense of belonging. Beabout, Carr-Chellman, Alkandara, Almeida, Gursoy, Ma, Modak, and Pastore (2008) found that although school culture is generally applied to a particular school building, there is a bond between students and teachers which can spread across geographical boundaries.

Post-Disaster Education Studies Summary

Although natural disasters have been the subject of research over the years in the field of education, the studies generally examine the disasters from a crisis management perspective at four-year institutions. As a result, it was necessary to examine four-year institutions because two-year institutions have not been explored indepth in a post-disaster environment. Moreover, the studies are more quantitative than qualitative and are examined from an administrative response perspective. The general trend in post-disaster education research is to measure institutional responses and community recovery with quantitative data. In the study of post-Katrina perceptions of K-12 New Orleans educators, a qualitative study identified reforms in a turbulent rebuilding environment. Perhaps additional qualitative studies could be launched post-disaster as the frequency of natural disasters increase in number and severity thus creating a new category of students as "evacuees."

Students as Evacuees

Students enrolled in colleges and universities became "involuntary" evacuees as a result of their circumstances. Without housing, transportation, and the basic necessities for survival, it is possible that educational dreams were thwarted. In light of an event of this proportion (Hurricane Katrina), it is not known if community college students are less likely to continue their studies as opposed to students attending four-year colleges and universities.

There were 21,000 Louisiana community college students displaced by the storm (Pope, 2005). According to state officials, at least half did not temporarily re-enroll at other institutions. Dr. Thomas Warner, Nunez Community College chancellor, stated only one-third of the 2,400 students at Nunez were enrolled at another institution as of October 7, 2005 (Pope). Following the hurricane, the students were seeking temporary housing outside of the

parish and in other states. Some students investigated alternative educational options in the cities they relocated to following the storm. In Mississippi, all but one of the ten community college campuses that sustained damage reopened (Pope), but thousands of students did not return. At the six campuses of the Gulf Coast Community College, enrollment was down 25%.

It is reasonable to assume that the subsequent evacuation of the students from their communities had a negative impact on the continuation of their studies because of the lack of housing and basic necessities for survival. Evacuees had to determine if they were willing to overcome the obstacles required to return to their pre-Katrina lives. A temporary alternative in the form of online courses was made available to community college students; however, the lack of academic and social integration could have resulted in the high withdrawal rate. In a pilot study previously conducted at Nunez Community College, students revealed they could not concentrate while taking an online class post-Katrina and that they have to be physically in the class to be motivated and to understand the instructional material.

In an examination of the influence of online courses at Delgado Community College post-Katrina, the following challenges were revealed: inexperienced faculty; unprepared students for this mode of learning; high attrition rates; limited technical support; no face-to-face student/faculty interaction; and student unfamiliarity with the use of a computer for the purpose of online instruction (Jarrell, Dennis, Jackson, and Kenney, 2008). Some students had the potential to earn credit for online coursework; however, this was possible only if the Internet was accessible. Moreover, some students who registered for online courses either withdrew or were withdrawn by the instructor (Jarrell et al., 2008).

Past studies launched by institutions provided an overview of disaster responses. From the perspective of crisis management, the valuable information obtained will be helpful as other

educational service providers plan their emergency responses. However, the studies did not cover the kinds of challenges faced by administrators in the Gulf Coast region following Hurricane Katrina. For example, the institutions reviewed in the literature did not have to deal with the dislocation of the entire student body as well as the faculty and staff who were unwilling evacuees. The studies also explored administrative procedures in emergency preparedness thus overlooking the voice of the student.

Unlike other post-disaster studies, the Brookings Institution Metropolitan Policy Program continues to investigate the social, economic, health, public services, and infrastructure in the New Orleans region (Liu & Plyer, 2007). These areas are vital to the recovery in the areas affected by Hurricane Katrina. In particular, the Brookings Institution recommendations for a federal-state-local partnership and the identification of an acceptable standard for creating a formal and continued federal presence in the Gulf Coast region are noteworthy.

The study launched by the University of New Orleans is also significant because the research resulted in a special edition published by the *Community College Journal of Research and Practice* featuring post-Katrina enrollment management issues. Case studies of colleges and universities impacted by Hurricane Katrina were detailed along with specific recommendations for other institutions. These institutions all had to deal with students who were unwilling evacuees. In addition to the research conducted by the Brookings Institution and the University of New Orleans, the Southern Education Foundation was also effective in exploring the first independent overall assessment of education in the Gulf Coast region since Hurricane Katrina. It is evident from the literature that post-Katrina educational issues continue to be a challenge, especially for student evacuees.

Students as Evacuees Summary

It is reasonable to assume that the subsequent evacuation of the students from their communities had a negative impact on the continuation of their studies because of the lack of housing and basic necessities for survival. Evacuees had to determine if they were willing to overcome the obstacles required to return to their pre-Katrina lives. It appears that the perspective of the student as an evacuee is lost in past post-disaster education studies. One reason might be due to the fact Hurricane Katrina was the largest natural disaster in the history of the United States. Prior disasters were concentrated in smaller areas and the impact on educational institutions was such that operations were only temporarily suspended.

In post-disaster studies thus far, the general trend is to examine institutional responses rather than exploring the dislocated students. The Brookings Institution, the University of New Orleans, and the Southern Education Foundation have devoted efforts to address new social issues as a result of the mass dispersal of residents in the New Orleans region. Perhaps a different theme will emerge as we begin to look at students as evacuees and the effect of academic and social integration in a post-disaster context. The next section of the review of the literature consists of organizational theory.

Organizational Theory

Smart, Kuh, and Tierney (1997) state the effectiveness of a college or university is a result of how it responds to both external forces and internal pressures. Hurricane Katrina was a natural disaster which shaped the future of many organizations. According to Adger, Hughes, Folke, Carpenter, and Rockstrom (2005), many vital sources of resilience may be disregarded as inefficient or unnecessary and are allowed to decline and in some cases, categories of resilience are not fully appreciated until a crisis occurs. Unexpected events such as Hurricane

Katrina and the prolific circumstances which accompany them provide learning opportunities for organizations. Disaster management requires multilevel governance systems to handle such events when they occur (Adger et al., 2005). The next section will describe institutional cultures, disaster preparedness, and crisis management which all have an impact on how organizations respond to disasters.

Institutional Cultures

The organizational effectiveness of a college is impacted by institutional culture and its approach to decision-making (Smart, Kuh, and Tierney, 1997). Farmer (1990) defines institutional culture as the collective total of assumptions, beliefs, and values which members of an organization share and express through their actions. According to Cameron and Ettington (1998), there are four measures of institutional culture. The first institutional culture is *clan*. A clan culture is described as the norms and values that encourage member participation in decisions and focuses on talent development as an institutional goal. Campuses are held together by loyalty and tradition with a leader who is a mentor, father, or mother figure. Motivation in this type of culture includes a faculty and staff inspired by tradition, trust, and a commitment to the organization. Decisions are made by consensus and an interpretive strategy is put into practice.

Cameron and Ettington (1998) assume that change is inevitable in a culture of *adhocracy*. Participants are encouraged by the value of an ideological appeal of the task to be accomplished. The adhocracy culture is characterized by a commitment to innovation where people are willing to take risks and have an emphasis on being first to acquire new resources. The organization stresses creativity and growth and is led by an innovator. The strategic orientation is one of a prospector-type which is utilized to obtain resources to make certain the

institution is both vital and capable. Interpretative strategies which are adaptable are used to make decisions.

Unlike the clan and adhocracy cultures, a *bureaucratic* culture desires a stable environment which maintains the status quo. All roles are formerly described and dictate the activities to be performed by individuals. There are clear rules and regulations which maintain individual and organizational compliance with a linear approach. Bureaucratic procedures govern what individuals do to maintain a smooth operation. Cameron and Ettington (1998) state the last category, *market culture*s, is based on achievement and highlight planning, production, and efficiency. Faculty and staff performance is underscored by rewards for competence and contributions to the effectiveness of the organization. In a market culture, the leader is perceived as a producer and stresses competitive actions, achievement, and measurable goals.

Each of these four culture types demonstrate an "ideal" form, however, they are different in terms of the level at which they draw attention to people or the organization, stability/control or change/flexibility, and means or ends (Cameron & Ettington, 1998). It is possible that an institution can embrace more than one type of culture depending upon its decision-making approach.

Keup, Walker, Astin, and Lindholm (2001) state reforms have been attempted in the past two decades in American higher education based on the assumption that intentional change efforts in colleges and universities can succeed in spite of the prevailing culture. Furthermore, Keup et al. (2001) found culture is an important component in comprehending the process of planned change in today's colleges. Institutions can be transformed in relation to the culture of an organization; the transformation occurs in the processes of readiness and responsiveness, resistance to planned change, and the results of the transformation process (Keup et al.).

Readiness and responsiveness refer to the critical understanding of the values and personal meanings which define an organization's culture. At times members can take culture for granted and do not necessarily recognize its impact on decisions and behaviors; they do not consider symbols and structural boundaries of an organization's culture until it is tested by external forces (Keup, Walker, Astin, and Lindholm, 2001). Trust among the campus community is a vital cultural condition for change to occur. Trust can be achieved through open channels of communication between individuals and groups and decision-making in ways which present a clear and "sensitive" understanding of the campus culture (Farmer, 1990). Ways of developing institutional readiness include promoting a culture of trust and the use of open planning strategies which includes the organization's members. While it is admirable to promote such strategies, organizations may encounter resistance in their efforts to promote change (Keup et al., 2001).

Although it is possible for leaders to encounter resistance to planned change, colleges and universities consist of a variety of sub-cultures based on organizational role, institutional position, or disciplinary affiliation (Keup, Walker, Astin, and Lindholm, 2001). These sub-cultures support their own set of beliefs and practices and at times are opposite of the position of the college or university. Some faculty members are considered the "gatekeepers" of campus traditions and perceive change as threatening, however, resistance can be positive and although conflict exists, resistance is a part of institutional transformation (Keup et al., 2001). Once resistance occurs, it serves as proof that a transformation has occurred. The next step is a measurement of results. Results in higher education are measured by profitability, enrollment, graduation rates, and other factors. Keup et al. state institutions expand their cultural boundaries to embrace change. As a result, the change becomes part of the institutional culture.

Organizational Theory Summary

The effectiveness of a college or university is a result of how it responds to both external forces and internal pressures (Smart, Kuh, and Tierney, 1997). Hurricane Katrina was a natural disaster which shaped the future of many organizations. Cameron and Ettington (1998) assume that change is inevitable in a culture of *adhocracy*. Participants are encouraged by the value of an ideological appeal of the task to be accomplished which seems to be applicable to Nunez Community College. The adhocracy culture is characterized by a commitment to innovation where people are willing to take risks which was a necessity post-Katrina. The emphasis was to find ways to acquire new resources in spite of the campus destruction.

An adhocracy organization stresses growth and is led by an innovator which was in this case, the chancellor of the college. The post-Katrina strategic orientation was one of a prospector-type which was utilized to obtain resources to make certain the institution was vital and capable of addressing student needs. As with the case of many organizations, members can take culture for granted and they do not consider symbols and structural boundaries of an organization's culture until it is tested by external forces (Keup, Walker, Astin, and Lindholm, 2001). Hurricane Katrina was the external force which tested the organizational culture of Nunez Community College. Organizations which prepare for such disasters are more inclined to resume normal operations after a catastrophic event has occurred.

Disaster Preparedness

Throughout history there have been threats and perceived threats to humans in every part of the world. Natural disasters, wars, terrorism, pandemics, and other such threats promote a heightened awareness among us. The National Academy of Sciences (2006) recommended studies are needed to compare the unique circumstances of disastrous events so that societal

responses can be explored as well as how those responses coincide with planned and improvised actions. Most citizens possess a basic knowledge of their own vulnerability to some hazards. For example, people who reside in flood-prone areas often purchase flood insurance in addition to a homeowner's insurance policy.

On the contrary, some disasters come completely without warning and the scope and duration can have lasting impacts on society. As previously stated, the National Academy of Sciences (2006) found more is known about immediate post-disaster responses of groups, organizations, and social networks than about mitigation or disaster recovery policies. The organization concedes more attention has been focused on the immediate aftermath and post-disaster responses than on the influence of pre-disaster mitigation policies and practices. The next section of the literature review focuses on social responsibility and in particular, the human factor in disaster preparedness.

Personal Behavior Change Model

FEMA has implemented a "Citizen Corps" as a grassroots strategy to strengthen collaboration between the government and community leaders in community preparedness, planning, mitigation, response, and recovery (U. S. Department of Homeland Security, 2006). The group studies personal preparedness utilizing social science theory tested in other related risk areas by looking at personal factors which might act as motivators for personal preparedness such as age, education, or income.

As a result, the Citizens Corps Personal Behavior Change Model for Disaster Preparedness (PDP) was developed to comprehend the many factors which could predict whether or not a person will engage in disaster preparedness. According to the U. S. Department of Homeland Security (2006), the model serves as a framework to conduct further

research to learn what factors propel personal preparedness as well as what factors serve as barriers to preparedness. The PDP Model examines population segments based on their own perceptions of threat using two familiar theories of social science. The theories include the Extended Parallel Process Model (EPPM) and the Stages of Change/Transtheoretical Model.

The EPPM assesses how people process threats and their ability to take protective action (Witte, 1998). Personal threats are in the form of threat severity and threat susceptibility. In addition, an individual's assessment of the value of a suggested protective action is composed of self-efficacy and response efficacy. For example, individuals ask themselves "Am I able to protect myself from a disaster?" and "Will the suggested preparedness actions help me in the event of a disaster?"

According to the U. S. Department of Homeland Security (2006), the EPPM theory suggests that individuals who feel threatened respond through either "danger control" (prepare or protect) or through "fear control" (denial, escapism, or rationalization). If a person does not believe they are vulnerable to danger, they subsequently take little action. Conversely, if a person experiences fear through denial, they either do not know what the recommended actions are to be taken or they do not believe the suggested protective measures will be helpful. The U. S. Department of Homeland Security labels this segment of the population as unmotivated to "engage in sustained preparedness activities."

Unlike the EPPM, the Stages of Change/Transtheoretical Model contends people will attempt to display varying degrees of readiness to change in five stages (Prochaska & DiClemente, 1982). These stages include precontemplation, contemplation, preparation, action, and maintenance. For example, people in the Gulf Coast States might watch the approaching path of a hurricane; decide whether or not to evacuate; secure their homes and

belongings; make the decision to "ride the storm out" or leave the area; and monitor their plan of action. However, government officials acknowledge individual factors might also contribute to a desire to be prepared.

Individual factors consist of age, sex, race/ethnicity, education/income, language/culture, trust in the government, civic engagement experience, prior experience with disasters, and religiosity (U. S. Department of Homeland Security, 2006). For such individuals, there must be external motivation to engage in preparedness behavior. The U. S. Department of Homeland Security recommends the continuation of social outreach to accomplish greater personal preparedness in households. The PDP Model is an effort to assist leaders in identifying barriers and motivators to ensure more people take responsibility for their personal preparedness.

The Human Factor

In a post-Katrina report prepared by the Council for Excellence in Government and the American Red Cross (Hart, 2005), a shocking 38% of Americans stated that Hurricanes Katrina and Rita gave them absolutely no motivation to prepare for an emergency. For these individuals, Hurricane Katrina did not serve as a motivator to engage in disaster preparedness. In spite of the horrible images portrayed in the media following the storm, only 36% of adults report that they have a communication plan to contact loved ones in the event of an emergency. Hart also found the public-at-large has a "detached" sense of reality when it comes to disaster preparedness with 54% of people admitting that one reason they choose not to be more prepared is due to the fact they believe that a disaster will have no impact on them personally.

Other post-Katrina findings reveal 44% of Americans have not done more pre-disaster preparations because they are not aware of what actions to take. It is interesting to note that 52% of people who live in the Midwest report doing a great deal or some things to prepare for a

disaster whereas 58% of people who live in the Northeast have done a great deal or some things to prepare for a disaster. In the West, the percentage of people who have done a great deal or some things to prepare is 64%. The highest percentage is the South with 74% representing the most people who have done a great deal or some things to prepare for a disaster. In addition, Southerners (49%) along with Westerners (50%) are less likely to think that they will escape a disaster (Hart, 2005). Perhaps this example of response efficacy is due to the perceived threat level.

Disaster Preparedness Summary

An individual's own perception of a potential threat could influence their motivation to plan actions necessary for their safety. Consequently, the threat perception determines whether or not a person is motivated for preparation. If a threat is perceived as severe, the motivation to act will be stronger than a low threat perception. Individuals exhibit both self-efficacy and response efficacy. Examples of self-efficacy and response efficacy were prevalent during Hurricane Katrina. Some individuals attempted to evacuate in their own vehicles based on evacuation recommendations from previous hurricanes; however, gasoline shortages, stranded cars, and gridlock could have impacted their self-efficacy. Their response efficacy may have changed to stay home and forego evacuation plans.

Perhaps one reason why Southerners are the most prepared is because they believe they are less likely to escape a disaster. Regardless of the reason, individuals, including the students in this study, demonstrated self-efficacy and response efficacy by believing in their ability to perform actions to mitigate the effects of the threat and by engaging in preparedness actions to lessen the impact of the disaster. Disaster preparedness greatly enhances the ability of leaders to effectively manage a crisis.

Crisis Management

Leaders who manage public systems face a unique set of circumstances. They must exercise purposeful action while simultaneously mobilizing assets, resources, individuals, and organizations (Adger, Hughes, Folke, Carpenter, and Rockstron, 2005). Whether a threat comes in the form of terrorism, man-made accidents, or natural disasters, it is inevitable that disasters will continue to occur and people will continue to look to their leaders for inspiration. In particular, Boin, Hart, Stern, and Sundelius (2006) identify five leadership challenges of crisis management in political systems. The challenges include crisis management and public leadership; the nature of crisis; the ubiquity of crisis; crisis management leadership perspectives; and five critical tasks of leadership during a crisis.

Crisis Management and Public Leadership

The first challenge involves crisis management and public leadership. According to Boin, Hart, Stern, and Sundelius (2006), crisis management refers to "extraordinary governance challenges which are interrelated while providing a test of political systems" (p. 2). The way a crisis is handled can actually determine who lives and who dies as in the case of Hurricane Katrina. Under the watchful eye of the media, leaders are examined for their decisions and held accountable to their stakeholders.

The entire world witnessed the aftermath of Hurricane Katrina as the events occurred. A crisis is accompanied by threats, urgency, and uncertainty. Boin et al. (2006) state the strategic challenges for leaders when handling threats are the same as tactical and operational challenges which include preventing or minimizing the impact, dealing with social and political results, and the restoration of the public faith.

The Nature of Crisis

The second crisis management challenge refers to the nature of crisis. A crisis means an undesirable and unexpected situation which usually has a negative impact on people, groups, organizations, cultures, and society (Boin, Hart, Stern, and Sundelius, 2006). When life-sustaining systems of a community are threatened, this constitutes a crisis. The safety and security of Gulf Coast residents was portrayed in real-time by the media. As a result, the welfare of entire communities was at stake as people witnessed violence, damage, and destruction. A crisis is also characterized by a sense of urgency. Boin et al. (2006) believe some situations do not appear pressing, however, leaders must understand the urgency of decision-making at the operational level for without this understanding, it could be the difference between life and death for some individuals. Boin et al. also state the perception of a threat during a crisis is associated with uncertainty regarding what happened, how bad the situation is, and what can be done about it. Families who lost their residences during Hurricane Katrina are still, five years later, making decisions about whether or not they will rebuild in the area.

The Ubiquity of Crisis

The third challenge of crisis management identified by Boin, Hart, Stern, and Sundelius (2006), refers to the "ubiquity" of crisis because leaders will continue to be tested as disruptions in systems cannot be prevented. Policy leaders cannot fully comprehend a crisis until the extent of the crisis is experienced (Boin et al., 2006). Both natural and man-made disasters will happen; however, the problem arises from the inability to deal with the occurrence. For example, residents were warned to evacuate prior to Hurricane Katrina but some individuals did not have transportation or funding to leave the area. Some residents with

the means to evacuate still chose to remain in spite of the threat of an approaching hurricane. Boin et al. present an interesting point regarding modern features of society. They contend although contemporary systems might be equipped to handle breakdowns, people suffer disproportionally when necessities such as electricity or telephone connectivity cannot be restored. Technological systems fail and often take long periods of time to be fully restored. Moreover, people continue to return to reside in the Gulf Coast states and in some areas, people choose to live below sea level which increases the risk.

Leadership Perspectives

The fourth crisis management challenge is leadership perspectives. People expect both government and private agencies to keep them safe and have high expectations of the "people in charge" (Boin, Hart, Stern, and Sundelius, 2006). People seek direction from their leaders during a crisis and their expectations have real political consequences. At this time leaders may engage in situational leadership which refers to managers using different leadership styles depending on the situation. Managers analyze the needs of a particular situation, and then use the most appropriate leadership style consisting of telling/directing, selling/coaching, participating/supporting, or delegating (Hersey & Blanchard, 1993).

Telling/directing managers make decisions with a high focus on task and a low focus on relationships (Hersey & Blanchard, 1993). Leaders seek to define the follower's roles and tasks with supervision. Hersey and Blanchard also state selling/coaching places a high focus on task and a low focus on relationships, however, decisions are two-way and leaders seek ideas and suggestions from the followers. Participating/supporting leaders have a low task on focus but a high focus on relationships. According to Hersey and Blanchard, the leader facilitates and takes part in decision-making, however, the control lies with the followers. The

last characteristic of situational leadership is delegating which consists of a low task and low relationship focus. The follower decides when and how the leader will be involved although the leaders are still involved in solving problems and making decisions. The charismatic bond between leaders, followers, and policy makers could be relevant in the identification of how leadership tasks are accomplished (Boin, Hart, Stern, and Sundelius, 2006).

The Critical Tasks of Leadership

The last crisis management challenge identifies the critical tasks of leadership which are sense making, decision making, meaning making, terminating, and learning. *Sense making* forces leaders to deal with the situation as it unfolds. Boin, Hart, Stern, and Sundelius (2006) state leaders must decide the severity of the threat and then determine their operational and strategic parameters. The next task, *decision-making*, means limited resources must be prioritized. In ordinary circumstances, leaders have time to analyze and consider the options. Decision-making moments during a crisis are time sensitive.

In the case of Nunez Community College, decisions were made to close the facility as the storm approached; identify key personnel to remain at the campus during the storm; secure the campus after the storm; locate the faculty/staff and students; locate academic and financial records; restore technological operations; offer an online mini-semester; reopen the campus; obtain housing for students/faculty/staff; locate temporary buildings for use as classrooms; and negotiate assistance from insurance companies and government officials.

While Nunez Community College officials handled decision-making tasks, they also had to *make meaning* of the situation. It was necessary to allow the community to understand the events and determine what the college would do to protect their interests. College officials sought to reduce the uncertainty of the situation and assure students the college would indeed

reopen. Boin, Hart, Stern, and Sundelius (2006) refer to this as situational appraisal by placing "meaning" to the crisis which ultimately enhances strategic policy choices. Once meaning has been assigned, the next task is *terminating*. Eventually, there must be a return to routine to establish a sense of normalcy. The last task identified by Boin et al. (2006) is *learning* which encompasses the political and organizational lessons drawn from the crisis. In theory, the crisis provides a blueprint for future preparedness and training (Boin et al.). However, in some instances, the crisis is viewed as an opportunity for change as in the New Orleans Public School System Recovery School District.

Natural Disaster Distinctions

While leaders deal with the political and organizational lessons from natural disasters, there are some commonalities in severity, range, and visability (Schneider, 1995). Natural disasters can result in severe physical injuries, psychological trauma, and perhaps death. Schneider states disasters generate billions of dollars in damages, have a vast range of injury in the amount of geographic range and circumstances, and impact small and large numbers of people. Events such as Hurricane Katrina are widely broadcast by the media. As a result, general awareness in such a catastrophe can make the event become a public issue. Consequently, disasters encompass substantial components of politics which allow leaders to demonstrate concern for its citizens (Schneider).

Political leaders make an effort to respond to disaster victims who are overcome by circumstance. For example, government leaders attempted to help people obtain resources such as FEMA trailers for housing post-Katrina. Another natural disaster distinction is the symbolic aspect. According to Schneider (1995), the symbolic nature of a disaster is due to its unpredictability, potential threat to vulnerable citizens, and difficulty in managing. Natural

disaster victims, such as those who experienced Hurricane Katrina, need to be helped which provides more justification for government assistance. When government assistance arrives, it is usually in the form of a bureaucracy.

Bureaucratic Norms

Bureaucratic organizations exist to explore specific problems and to achieve goals which are clearly outlined (Schneider, 1995). Such organizations prevail to achieve objectives for people, plans, and regulations. Schneider contends bureaucratic organizations also have a clear division of labor which brings together individuals to achieve prescribed goals where individuals are assigned to handle specific functions in their areas of expertise. Thus, the organization's goals are completed with rationality and efficiency. A chain of command exists where decisions are made "at the top" and carried out by lower-level workers. According to Schneider, this type of organization results in an inflexible bureaucratic structure where goals are achieved through specific modes of operation designed to reduce indecision.

Standard operating procedures dictate what is to be carried out in a particular state of affairs. However, in a post-disaster situation, a bureaucratic government response seeks to mitigate the disaster or prevent one; prepare areas for potential emergencies; provide immediate post-disaster relief; and help people and communities recover from the damage (McLoughlin, 1985). Disaster response systems usually consist of a formal structure with separate emergency management systems at local, state, and federal levels. Full-time professionals are engaged as well as reservists who are called upon to assist in a disaster scenario. Each has a specific responsibility with a specific division of labor based on formal policies linked with other governmental entities.

Schneider (1995) states although there is flexibility built into the process, officials do have some choices regarding how the process is delivered, nevertheless, these processes are capable of breaking down if officials stray from specific responsibilities. In an interview for the *New York Times,* St. Bernard Parish Sheriff Jack Stephens commented on the minimal federal assistance immediately following Hurricane Katrina. According to Chan and Alford (2005), Stephens stated, "I have Royal Canadian Mounties who have gotten here faster than the federal government" (p. 3). Stephens was referring to the members of a search-and-rescue team sent from the municipal government in Vancouver, British Columbia. In addition to the comments made by the sheriff in 2005, the Fire Chief of St. Bernard Parish, Thomas Stone, stated, "I will never again tell people that help is on the way. It's not coming" (p. 1). It is evident that the bureaucratic norm present during and after Hurricane Katrina was ineffective.

As a result of the need to study leadership, organizational strategy, crisis management, and financial management, the Harvard Kennedy School launched a project titled "Acting in Time" which was started by Dean David Ellwood. This project explores multiple policy areas where leaders can isolate a challenge or opportunity before it arrives, work to anticipate the challenge, figure out a useful solution before as opposed to after, and then mobilize the necessary resources to take action (Leonard, 2008). The research seeks to apply "Acting in Time" principles to crisis management to address large-scale disaster and recovery. The experiences after the 2004 tsunami in Banda Aceh and in New Orleans during Hurricane Katrina in 2005 were large-scale disasters which provided an opportunity to employ a greater understanding of recovery.

Leonard (2008) states the recovery process after the tsunami was too centrally controlled although outside agencies were on the scene and took actions deemed appropriate. In the

opinion of Leonard, the agencies trying to assist did not spend enough of time figuring out priorities with the local communities. Unlike Banda Aceh, New Orleans was almost the "exact opposite" in that community groups organized and attempted to figure out how to repair, rebuild, and reconstruct their neighborhoods without practically any help from the larger governing authorities. Leonard found Banda Aceh was too centralized whereas New Orleans was too decentralized. According to Leonard, in a too centralized system, trying to create a single unified organization that is going to command everyone (such as a military agency) would not work because states are independent of the federal government. Conversely, in a too decentralized system, individuals are seeking to locate their own resources without the benefit of larger formal structure.

Leonard (2008) emphasizes individual states create and enforce their own laws, ordinances, and regulations which need to be coordinated and collaborated with the federal government and so he asks, "What can we do that would create conditions in which decentralized action could constitute a superior performance in terms of disaster response?" The proposed answer, according to Leonard, is a shift from a heavy and slow response to a decentralized, rapid, and creative approach in which individual units are able to take action on their own. Actions would be coordinated with one another through a centralized agency, but units would not have to wait for instructions regarding a plan of action. The words used to describe this approach are "fast and light" and an example used by Leonard during Hurricane Katrina is the Coast Guard. This unit was highly effective in moving assets to the area pre-Katrina, was self-contained, and was extremely helpful after the hurricane struck.

In addition, Leonard (2008) offers valuable insight on post-Katrina leadership lessons in terms of why some areas of New Orleans are responding and recovering faster than others. He

acknowledges the local leadership which brought people together and began to solve problems. Leaders evaluated the challenges, set priorities, and figured out what actions they needed to take. The skills were developed as they "went along." Leonard contends rapid recovery is achievable with existing local leadership combined with an infrastructure of leadership. In his view, the key to an effective response is the talent of local leaders to come together, figure out what to do, evaluate progress, reach out to outside organizations, and get the valuable resources they need to advance the recovery efforts. Unexpected events create interactions by people which go beyond the regular norms of society thus resulting in emergent norms. Emergent norms are prevalent in post-disaster circumstances.

Emergent Norms

Natural disasters upset the "normal" order of human behavior. Dramatic changes in scenery like the aftermath of Hurricane Katrina are usually unexpected propelling individuals into shock and disbelief. Traditional social norms of behavior prevail, however, when people are faced with unimaginable surroundings, the natural response is to attempt to figure out what has happened in search of answers (Schneider, 1995). Disasters "do not give participants a choice about their involvement" (Schneider, 1995, p. 50).

The only choice individuals had in the Gulf Coast States prior to Hurricane Katrina involved whether to evacuate or remain during the storm. Regardless of their choices, the widespread destruction left many with no homes to come back to. Many people questioned the importance of their existing norms and values. People have to comprehend their environment and "make meaning" to develop reasonable explanations for their dilemma (Schneider, 1995). New activities and behaviors are necessary to adjust to the new environment as they cope with the situation.

In the post-Katrina environment, the "new normal" became an emerging norm. The initial disaster triggered other events which required innovation regarding relocation and rebuilding. Individuals who sustained losses from Hurricane Katrina had to attempt to understand the full scope of what happened to them. As they assessed their conditions (loss of relatives, homes, communities), they also sought reassurance needed to cope and make decisions about the future. People had to decide a course of action for the future and look for traditional norms such as returning to their community or returning to college. Schneider (1995) found factors such as the magnitude of the disaster and the amount of interpersonal interaction among the population most affected can have an effect on the return to normalcy. Some people have strong ties to their communities having dealt with previous disasters.

Disaster Victims' Panorama

Communities which are close-knit with a tradition of cooperating with each other are more likely to provide mutual support in a disaster situation (Schneider, 1995). One factor which influences disaster victims' panorama is their experience with previous disasters. Earthquakes, floods, hurricanes, tornadoes, and snow storms occur on a regular basis in some parts of the country. Schneider states members of such communities learn how to cope with the disasters and use their experiences to make informed decisions regarding such events.

In these communities, most people understand what has happened to them and take necessary preventive steps or they know how to respond to the situation. For example, in rural Louisiana, the "Cajun" communities have experienced disaster-type situations with Hurricanes Lili, Rita, Gustav, and Ike. Flooding also occurred in coastal areas of the community. Schneider (1995) found this community usually can deal with the disruption in a way that other communities would not be able to endure because the close ties and internal solidity contribute

to the internal norms which impact social order following a disaster. However, in populations where the residents are temporary and have high mobility, they have no close ties to each other and are less likely to ask for support from each other (Schneider).

Crisis Management Summary

Crises are inevitable and will continue to occur throughout the world. I acknowledge that no community could ever be completely prepared for a catastrophic event. As a result, those individuals who manage public systems must act quickly to mobilize assets, people, resources, and organizations with a social mission. As Schneider (1995) contends, natural disaster victims need to be helped and the prevailing form of bureaucratic organization attempts to identify formal structure to deal with emergency situations. Separate emergency management systems at the local, state, and federal levels work to handle tactical and operational challenges. According to Schneider, each of these systems operates as a bureaucratic organization with a separate and clear division of labor to manage people, plans, and regulations. However, the bureaucratic norm is mostly inflexible which impacts how post-disaster services are delivered. The lack of resources and available aid for people following Hurricane Katrina was witnessed from across the entire world.

Schneider (1995) predicts emergent norms will develop as ordinary and automatic effects of all disasters. Perhaps policy leaders should examine the emergent norms which will inevitably unfold as humans respond to disasters. Leadership strategies employed by individuals in organizations are crucial to recovery in a post-disaster environment. Disaster preparedness as well as crisis management techniques can influence both community and individual post-disaster resiliency. The last cluster of the review of the literature describes types of resilience including urban, individual, and academic resilience.

Types of Resilience

Resilience is defined by Masten (1994) as the process of adapting well in the face of adversity, trauma, tragedy, threats, or even significant sources of stress such as family and relationship problems, serious health problems, or workplace and financial stressors. Bonanno (2004) estimates that the majority of the United States population has been exposed to at least one traumatic event using criteria of an event outside of the range of normal human experience. At the same time, Bonanno found trauma theorists have examined Posttraumatic Stress Disorder rather than the effect of resiliency.

A pathway to resilience was identified by Bonanno (2004) in the form of "hardiness" which consists of the following three aspects: Being committed to finding a meaningful life purpose; the belief that one can influence one's surroundings and the outcome of events; and the belief that one can learn and grow from both negative and positive life experiences. Hardy individuals assess potentially stressful events as less threatening and as a result, minimize the occurrence of distress (Bonanno).

According to Stephenson (2006), Dr. Dennis Charney revealed the following characteristics of resilient patients at the Anxiety Disorders Association of America's 26th Annual Conference: a positive attitude; cognitive flexibility; a personal moral compass with core beliefs from which they cannot be shaken; a role model to whom they can look up to; an ability to face their fears; active coping skills; and a good social network.

Three types of resilience will be examined in this research project. The first type, urban resilience, explores resilient cities and the factors which sustain them in natural and environmental factors. The second type of resilience, individual resilience, describes the resilient mindset and one's ability to overcome stress in trying situations. The last type of

resilience, academic, refers to the possible effects of academic and social integration on a student's post-disaster performance. For the purpose of this study, academic resilience relates to educational studies pursued in a post-disaster context.

Urban Resilience

Godschalk (2003) defines a resilient city as a "sustainable network of physical systems and human communities" (p. 137). He found physical systems in cities include both natural and constructed environmental factors. Examples of physical systems encompass roads, buildings, infrastructure, communications, topography, and other natural systems such as coastal wetlands. As Godschalk stated, the physical systems of a city must be able to withstand and perform under the worst of conditions. Otherwise, the city is subject to weaken during natural disasters with incredible losses and a slow recovery rate, much like the post-Katrina environment. Urban resilience, therefore, can be defined as a characteristic of a city which adapts well to adversity, trauma, tragedy, or threats.

Stehr (2006) suggests that resiliency is a common factor in both coastal and noncoastal cities where natural disasters have occurred. In spite of the fact there are few post-disaster resilience studies in academia, there have been many case studies of post-disaster reconstruction in individual cities. Most of these studies deal with post-war reconstruction. However, there is an emerging interest in examining urban resilience in the face of natural disasters (Vale & Campanella, 2005a). For example, at Iskandarmuda University in the tsunami region, there is a rising cost of living, longer commutes, and no money for tuition fees (Overland, 2005). Fajar, an electrical engineering student, questions whether to continue his studies. He states, "I hope I can find the spirit and the will to stay in school" (Overland, p. 3).

Existing research suggests there are few studies examining the persistence level of students such as Fajar following a natural disaster.

It is necessary for communities to survive and operate under unique and often intense conditions after a disaster. Hurricane Katrina demonstrated the necessity for social and institutional networks. As Godschalk (2003) found, when breakdowns occur, it impedes the ability of organized efforts to create an identity and establish a plan for recovery. Godschalk concludes, "Human communities are the social and institutional components of the city" (p. 137). Godschalk's human communities are both social and institutional and include the following: formal and informal; stable and ad hoc groups; schools; neighborhoods; agencies; organizations; and task forces.

Two vivid examples of resilient communities provided by Godschalk (2003) include the cities of Berkeley, California, and Tulsa, Oklahoma. Berkeley developed a community plan for safety following the 1989 Loma Prieta earthquake and the 1991 East Bay Hills wildfire whereas the city of Tulsa initiated improvements after massive floods during the 1970s and 1980s. At the time, Tulsa led the nation in the amount of federally declared natural disasters. As a consequence, a flood control project was launched which ultimately reduced the threat of flooding, opened recreational space, and restored wetlands (Godschalk). In addition, these disasters were followed by the restoration and rebuilding of the communities impacted. Godschalk stated resilience is vital because technological and social systems are not capable of being predicted. Furthermore, both people and property would be better protected resulting in fewer deaths and injuries.

In addition to Godchalk, Vale and Campanella (2005a) also provided vivid examples of urban resilience in the past. As history has revealed, the cities of Atlanta, Columbia, and

Richmond all survived destruction as a result of the Civil War as did the city of Chicago which suffered during the 1871 fire. San Francisco suffered from the earthquake and fires of 1906. Contemporary cities rebuild and urban resilience takes on many forms (Vale & Campanella). Disasters, both manmade and natural, follow a pattern of rescue, restoration, rebuilding, and remembrance (Vale & Campanella). Immediately following a disaster, the primary mission is rescue and to keep individuals from further harm. Once citizens are out of danger, plans are made to restore what can be salvaged and to rebuild what was destroyed. The last step in the pattern, remembrance, consists of memorial parks, days of reflection, and monuments to remember victims.

In addition to Godchalk's resilience examples, Vale and Campanella (2005a) discovered several disaster recovery themes previously described. Some of their themes have particular significance in the recovery efforts in Louisiana. One of their themes states *narratives of resilience are a political necessity*. They believe that the destruction of a community usually reflects poorly on whoever is in power as the chief purpose of government is to protect citizens from harm (Vale & Campanella) and that following the disaster, developing a plan for recovery and progress remains a governmental priority. Saltman (2007) described a new form of educational privatization in New Orleans public schools post-Katrina in the form of a "Recovery School District."

At Nunez Community College, the narratives of resilience post-disaster were created by administrators, faculty, and staff who took the lead in helping students schedule online courses, locating transcript and financial aid records, securing help with housing and food, and waiving residency requirements. In St. Bernard Parish, it appears the narrative actions taken by college

leaders resembled what was happening on the ground level. This informs the problem because of the difficulty students faced in the region due to the need for rebuilding.

Besides political necessity, *disasters reveal the resilience of governments*. Vale and Campanella (2005a) appropriately refer to this theme as the "rhetoric" of resilience, and remind us this rhetoric is never free from politics. In other words, politicians make promises of progress and claim authorship while other groups and individuals are deemed insignificant. The last Vale and Campanella theme which relates to student resilience is that *urban rebuilding symbolizes human resilience*. Like survivors of other disasters, the activity of rebuilding provides a distraction from the suffering and loss and possibly helps survivors to overcome traumatic experiences. Vale and Campanella also contend we open our institutions as both a symbolic gesture and to rescue ourselves as well as the educational ambitions of our students. The next section describes individual resilience and how people cope with obstacles.

Individual Resilience

Why are some individuals capable of overcoming post-Katrina adversity while others fall into a state of hopelessness and despair? How is it that some people who face tremendous obstacles rebuilding their post-Katrina lives are capable of attaining success? Brooks and Goldstein (2004) define resilient individuals as those whose attitudes about themselves determine their actions and skill development. As a result, behavior and skills constantly evolve into a "resilient mindset." Brooks and Goldstein (p. 3) contend this mindset is comprised of the following features:

- Feeling in control of one's life
- Knowing how to fortify one's "stress hardiness"
- Displaying effective communication and other interpersonal capabilities

- Possessing solid problem-solving and decision-making skills
- Establishing realistic goals and expectations
- Learning from both success and failure
- Being a compassionate and contributing member of society
- Living a responsible life based on a set of thoughtful values
- Feeling special (not self-centered) while helping others to feel the same

Brooks and Goldstein (2004) remind us that possession of a resilient mindset does not make an individual free from conflict, pressure, and stress. On the contrary, a resilient mindset enables people to productively cope with conflict, pressure, and stress. Brooks and Goldstein recommend the following steps for resilient living: changing the words of life through the rewriting of negative scripts; choosing a path to achieve stress-hardiness as opposed to being stressed-out; viewing life through the eyes of others; communicating effectively; accepting oneself and others; making connections and showing compassion; dealing with mistakes; building "islands" of competence; and developing self-discipline and self-control.

The first recommendation, changing the words of life through the rewriting of negative scripts, refers to defining short-term as well as long-term goals and considering new plans of action. The second recommendation, choosing a path to achieve stress-hardiness as opposed to being stressed-out, suggests some people have the capability to manage stress and pressure because of their temperament. Temperament, according to Brooks and Goldstein (2004), is capable of being influenced by numerous life encounters which involve interactions with other people. Viewing life through the eyes of others, the third recommendation, refers to relationships and the ability to empathize with other people. The fourth recommendation, communicating effectively, stresses active listening and perceiving messages.

A resilient individual also has the capacity to accept themselves as well as others which is the fifth recommendation for resilient living. Resilient individuals have learned to accept themselves while acknowledging their own strengths and weaknesses. They seek to have authentic and balanced lives which mirror their own life values and goals. The sixth recommendation, making connections and showing compassion, deals with emotional attachments where one gathers strength from having an emotional connection with others who are charismatic and provide hope to others.

Having emotional attachments helps resilient individuals deal well with mistakes, which is the seventh recommendation for resilient living. Dealing effectively with mistakes enables resilient individuals to build "islands of competence" encompassing the eighth recommendation for resilient living. Brooks and Goldstein (2004) use islands of competence to refer to the identification of an area of strength to experience dignity and a sense of accomplishment. As a result, a resilient mindset is achieved by developing self-discipline and self-control, the last of the recommendations for resilient living. Resilient individuals seem to have the capacity to bounce back from adversity. However, what happens to individuals who do not possess resilience characteristics?

Posttraumatic Stress Disorder

For people without individual resiliency, community destruction results in feeling less positive about their surroundings, less enthusiastic, less energetic, and unable to enjoy life after being exposed to trauma (Norris, Byrne, and Diaz, 2006). People who survive such events often experience guilt which is a characteristic of a phenomenon known as survivor syndrome. The survivor syndrome experience could result in Posttraumatic Stress Disorder. Posttraumatic Stress Disorder (PTSD) is defined as a mental disorder resulting from exposure to an extreme,

traumatic stressor (U. S. Department of Veteran Affairs, 2006). In other words, adults who survive a traumatic event might experience survivor syndrome and feel guilt after trauma exposure. As a result, they feel less enthusiasm, they are without energy, and have trouble enjoying "normal" life experiences such as college attendance. Survivor syndrome symptoms could affect a student's individual resilience characteristics.

Research has been conducted following Hurricane Hugo to evaluate symptoms associated with PTSD. However, the research subjects were children. Evans (1984) states most of the research on the effects of trauma in adults has concentrated on adult veterans of war. Studies on adult responses to potentially traumatic events focus almost exclusively on PTSD. Even though little research exists on the absence of traumatic symptoms, available data suggests that resilience after a traumatic event may be more prevalent than previously recognized (Bonanno, Galea, Bucciarelli, and Vlahov, 2006).

In a study by Norris, Byrne, and Diaz (2006) of within-sample factors that influence who is most likely to experience serious and lasting psychological distress following a disaster, the results indicate that psychological distress increases with the following factors: female gender; little previous experience or training consistent with coping with a disaster; being an ethnic minority; low socioeconomic status; children present in the home; psychiatric history; secondary stress and resource loss; living in a highly disrupted or traumatized community; and severe exposure to the disaster such as injury or life threat. Norris et al. (2006) also found disasters have an effect on entire communities and not just selected individuals. Furthermore, over the last twenty years, research has been published regarding risk factors for adverse outcomes in natural and human-caused disasters. The research base is larger for the adult population. In a survey of trauma exposure and PTSD among survivors of Hurricane Katrina,

Kessler, Galea, Jones, and Parker (2006) found a vast majority of the post-storm survey respondents with serious mental illness met criteria for PTSD.

Williamson (2008) states women experience PTSD approximately twice as often as men. Many of these characteristics were prevalent in the post-Katrina environment of Nunez Community College students. For example, 64.5% of students attending the college are female in gender (National Center for Education Statistics, 2009) and few of the students have experienced coping with a disaster of the magnitude of Hurricane Katrina. Moreover, the loss of a home is a source of secondary stress as well resource loss of financial resources from former employment. Another characteristic is living in a completely destroyed community with no evidence of a familiar past. It is possible the students were seeking a bridge to the past by returning to Nunez Community College and perhaps college attendance helped the students deal with PTSD.

Can This Mind Be Saved?

Following Hurricane Katrina, colleges and universities (including Nunez Community College) announced offers of counseling for students from the Gulf Coast region. In addition, the American Psychiatric Association had announced a campaign during the months preceding Hurricane Katrina titled, "Healthy Minds, Healthy Lives." This initiative was part of an awareness effort targeting the mental health of college students and included a college depression fact sheet. According to Williamson (2008), mental health is defined as the state of successful performance of mental function which results in engaging in productive activities, satisfying relationships with other people, the ability to adapt to change, and dealing with hardship.

Fields (2005) found the "Healthy Minds, Healthy Lives" initiative revealed nearly half of all college students stated feeling so depressed at some time, that they experienced difficulty in functioning. Moreover, 15% of college students meet the criteria for clinical depression which untreated, can lead to suicide. Williamson revealed approximately 90% of the people who commit suicide have one or more mental illnesses with the most common one identified as depression.

Suicide is the second leading cause of death of college students (Fields, 2005). Durkheim (as cited by Tinto, 1993) found one form of suicide occurs when individuals are not able to become integrated members within societal communities. Using Durkheim's theory of suicide, Tinto believed membership can be attained through two forms of integration, namely social and intellectual. Furthermore, the personal day-to-day interaction with others results in the sharing of common values. Post-disaster students who demonstrate academic resilience have something in common in that they believe in the value of an education. Conclusions were drawn from college students in general and not from students associated with disasters.

Mills, DeWulf, Levitan, Macht, Afonso, Avegno, and Mills (2007) reveal the loss of a loved one and simply remaining in New Orleans during the hurricane were found to be factors associated with PTSD symptoms. In a study of people who visited an interim hospital facility in New Orleans following Hurricane Katrina, 38% of those patients were diagnosed with PTSD. According to Mills et al. (2007), this finding is more than ten times higher than the 3.6% prevalence in the general U.S. population.

Mills, DeWulf, Levitan, Macht, Afonso, Avegno, and Mills (2007) launched the study as a result of the thousands of people who were exposed to human violence, desperate conditions, and catastrophic destruction. The researchers hypothesized that there was a higher incidence of

PTSD in the general population of the greater New Orleans metropolitan area following Hurricane Katrina. During randomly selected six-hour shifts, all adults in the waiting room in the public hospital system were approached for consent to participate in a survey. The criteria included people over the age of eighteen and residing in New Orleans at the time of the hurricane. The study found interim or temporary mental health response is not adequate for the population of people suffering from PTSD. Mills et al. (2007) also state the enormity and extent of mental health care following Hurricane Katrina displays the need for a long-term and organized mental health response in disaster planning.

Evidence of PTSD was also found in a study of principals' perceptions of school leadership in post-Katrina New Orleans. Beabout (2008) states "the extreme nature of the psychological trauma inflicted by Katrina on many public school students was a special case that strained even those public schools who were taking steps to address student mental health" (p. 63). According to Beabout, very few recommendations from a Children's Defense Fund report suggesting the need for the treatment of traumatized children following the storm were enacted. In addition, school leaders found the teachers also suffered from high stress levels as a result of their personal losses combined with a city wrought with destruction.

In another study of mental health service for Hurricane Katrina survivors eight months following the disaster, of those who used mental health services, 60% had stopped seeking treatment. According to Wang, Gruber, Powers, Schoenbaum, Speier, Wells, and Kessler (2007), undertreatment was the most among participants who were younger, older, never married, members of racial or ethnic minority groups, uninsured, and of moderate means. Reasons cited by Wang et al. (2007) for not seeking care included low need (they thought the problem would get better by itself); lack of enabling factors (no financial means, available

treatments, personnel, or transportation); and a lack of predisposing factors (stigma of being treated or thought the problem was not severe). Neria, Nandi, and Galea (2007) state the evidence suggests that exposure to PTSD is significant among populations exposed to disasters.

Young, Ford, and Watson (2006) also reveal disaster survivors have the greatest risk for severe stress symptoms (and continuing readjustment problems) after witnessing experiences during or after a disaster. Severe stress symptoms include the following: loss of loved ones or friends; life threatening danger or physical harm; exposure to gruesome death, bodily injury or dead bodies; extreme environmental or human violence or destruction; loss of home, valued possessions, neighborhood, or community; loss of communication with or support from close relations; intense emotional demands; extreme fatigue, weather exposure, hunger, or sleep deprivation; extended exposure to danger; and exposure to toxic contamination (Young et al., 2006). Severe stress symptoms are indicative of the types of experiences Nunez Community College students are facing on a daily basis. It is possible their individual resilience characteristics can be a determining factor in academic resilience.

Academic Resilience

Academic resilience relates to a student's ability to utilize education to recover quickly from setbacks by continuing to attend class in the face of adversity. Evidence suggests "that real quality in undergraduate education resides more in an institution's educational climate and in what it does programmatically than in its stock of human, financial, and educational resources" (Terenzini & Pascarella, 1994, p. 3). Research supports the premise that an institution's educational climate, such as the actions taken by faculty and staff following Hurricane Katrina, had an impact on individual student resilience. The institutional climate assists students in reaching their academic goals. Academic resilience enables students to focus

on educational goals in spite of the difficulty. The students' readjustment strategy includes returning to their pre-Katrina studies to regain a sense of purpose and self-esteem.

In my opinion, the absolute sense of uncertainty following Hurricane Katrina left people with very strong emotions. However, some people are capable of adjusting over time to life-changing situations by being resilient. According to the American Psychological Association (2006), research has demonstrated that resiliency is an ordinary characteristic of an individual. People are capable of demonstrating resiliency; however, being resilient does not mean they are excluded from stress or difficulty.

Schoon (2006) contends resilience is different from general positive adjustment because it considers the ways and circumstances positive adjustment occurs. There must be an association between having experienced adversity and the adjustment thereafter. In other words, Schoon suggests an individual cannot discuss resilience in the absence of adversity. Students attending Nunez Community College chose to overcome adversity through academic resilience. Their attempt to adjust to the post-Katrina educational environment was an example of academic resiliency as they handled a life-changing situation.

Although students had to deal with Hurricane Katrina and its aftermath, some students exhibited academic resilience characteristics. The students chose to return to college in spite of the obstacles. Characteristics of a resilient person include having caring and supportive relationships that create love and trust (American Psychological Association, 2006). Resilient people also have role models capable of offering encouragement. According to the American Psychological Association, the development of resilience is a personal journey. Some individuals cope by making realistic plans and then taking steps to implement those plans.

These individuals have a positive view and have confidence in their strengths and abilities. Academic fulfillment is a part of their personal journey.

Mental health specialists who assist survivors in the wake of disaster have recommended ways to assist in the reduction of stress symptoms and to promote post-disaster readjustment. Suggestions to reduce stress include focusing on protection, direction, connection, and selection (Young, Ford, and Watson, 2006). An example of "protection" is finding a safe haven that provides shelter and privacy. An example of "direction" is working on immediate personal and family priorities to regain a sense of hope, purpose, and self-esteem. An example of "connection" is maintaining and re-establishing community with family, peers, and counselors to discuss experiences. An example of "selection" is identifying key resources to assist with housing and emergency assistance (Young et al., 2006) such as seeking Road Home assistance.

Through their efforts to seek housing and assistance from the Road Home program, to maintain relationships with family and peers, to seek outside resources for help, and to regain a sense of hope and purpose through educational persistence, the students are exhibiting resilience characteristics suggested by Young, Ford, and Watson (2006). These activities assist in the reduction of stress symptoms and promote post-disaster readjustment. The students are in essence reducing stress by focusing on their own protection, direction, connection, and selection through educational persistence.

Student Persistence

Persistence is defined as a student's postsecondary education continuation behavior that leads to graduation (Arnold, 1999). Tinto's (1993) Longitudinal Model of Institutional Departure will be used in this study; however, for the purpose of this research, Tinto's use is

not to examine student departure, but to examine students who return to the college post-disaster.

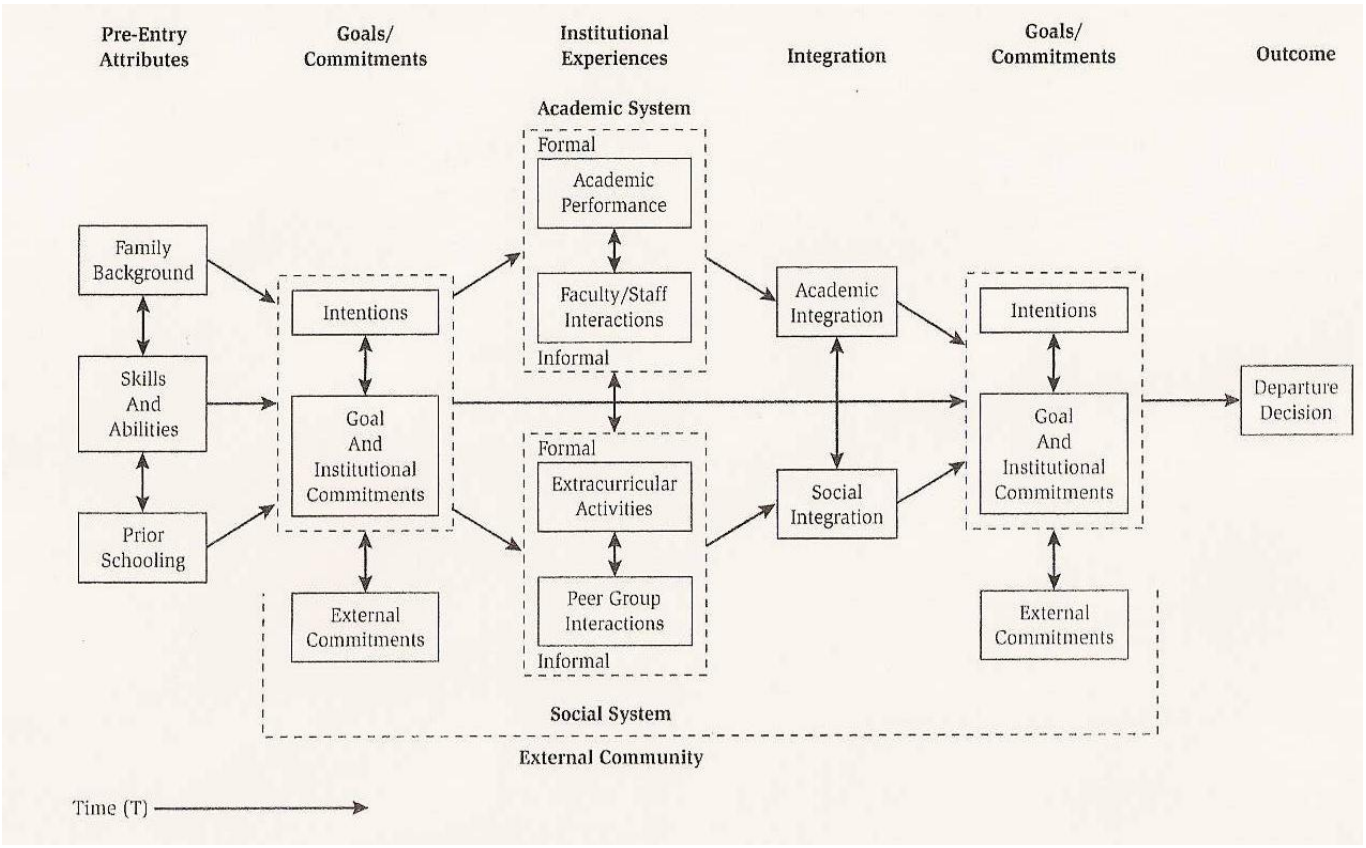
This research project identifies some of Tinto's factors which ultimately may contribute to the students' return to college. Consequently, the researcher is substituting persistence for a departure decision and it is intended that the use of student departure is synonymous with the use of student persistence. I am applying the work of Tinto in a way which considers persistence as the alternative to departure. For further clarification, academic plus social integration equals persistence. According to Tinto (1993), the academic system consists of a formal element such as academic performance and an informal element which includes faculty and staff interactions. The social system comprises a formal element which refers to extracurricular activities and an informal element including peer group interactions.

Tinto's (1993) Longitudinal Model of Institutional Departure involved five specific factors that contributed to student persistence: (1) a student's pre-entry attributes such as prior schooling and family background; (2) goals and commitment relating to the student's individual aspirations in the institution; (3) experience at the institution including academics as well as faculty and peer interactions; (4) integration both socially and academically; and (5) external commitments while at the institution.

Tinto was especially interested in the link between persistence and the integration of social and academic factors. Tinto's (1993) Longitudinal Model of Institutional Departure (Figure 2) reveals numerous links between social and academic integration.

Figure 2

Longitudinal Model of Institutional Departure



Source: Vincent Tinto (1993). *Leaving college: Rethinking the causes and cures of student attrition, 2nd ed.*, 114. Chicago: The University of Chicago Press. Reprinted with permission.

The first factor, pre-entry attributes, deals with a student's prior schooling and family background. In St. Bernard Parish, 56% of the students attending Nunez Community College are first-generation college students (D. Clark, personal communication, February 10, 2009). According to the United States Census Bureau (2005), the percent of the population twenty-five years and older who possess a bachelor's degree or higher is 10.9% for the entire parish of St. Bernard. The second factor, goals and commitments, concentrates on a student's goals and commitment and the desire to become a part of the institution. For example, student workers

are earning income while they meet their academic and financial commitments. The third factor, institutional experiences, focuses on the students' institutional experiences in both the formal and informal context. A post-disaster example includes efforts by faculty and staff to contact the students following Hurricane Katrina such as calling cell phone numbers and notifying students about online course offerings and a mini-semester. College administrators called students to notify them of online courses and offsite locations until the campus reopened. The fourth factor, social and academic integration, relates to the experiences of students in peer groups or campus affiliations, and academic experiences inside the classroom. The last factor external commitments, could be job or family commitments which might impact a student's ability to persist.

Tinto (1993) stated students who become involved with other students and faculty are more inclined to develop values related to involvement with other individuals. As a consequence, it increases the likelihood that students will appreciate the need to be involved in the future. Membership in formal and informal student organizations as well as mentoring by faculty are examples of social and academic integration. Tinto (1997) also found high amounts of involvement prove to be an independent predictor of gains in achievement. However, Tinto (1997) argued that we have not discovered how involvement is situated within the educational experiences of students at different institutions. In other words, the connection between persistence and student learning outcomes in the classroom has not been fully explored. As a result, Tinto launched a multi method, quantitative and qualitative study of Seattle Central Community College to explore the classroom experiences of the students. The research concentrated on collaborative learning communities and strategies.

The purpose of the study was to examine the role of classroom experience from the perspective of learning and persistence. Since learning is often a passive experience for students, Tinto (1997) was interested in discovering how the experience of the classroom matters and how this experience over time shapes student persistence. Students participated in a first-year learning community which helped them to create a network of supportive peers. Faculty worked together as a team and attempted to model instruction so that the students could be active participants in the learning process. The goal was to empower the students to take personal responsibility in their quest for knowledge. Learning communities also attempted to address the academic-social divide often experienced by students. According to Tinto, higher levels of involvement proved to be an independent predictor of learning gain and learning communities assisted in joining both the academic and social worlds. Furthermore, Tinto found the restructuring of student experiences in the classroom resulted in greater student achievement.

The basis of the Tinto (1975) model was academic and social integration, where the student is involved in many activities of college life. Tinto's (1975) student departure theory concentrated on the four-year college student and examined completers, transfers, and departers. According to Tinto (1993), completers are persons who have obtained their four-year degrees; transfer refers to persons who leave and obtain degrees elsewhere; and departers are persons who drop out without having earned a four-year degree. In the post-Katrina environment at Nunez Community College, normal academic and social environments were disrupted. Regular college life activities were replaced with daily survival struggles such as locating loved ones and securing suitable housing. Four-year institutions have been previously

examined, however, researchers began to recognize the significance of studying persistence in two-year colleges as well.

Persistence in Two-Year Colleges

Unlike earlier researchers, Halpin (1990) was among the first to suggest Tinto's model could be applied to two-year colleges. Halpin suggests additional variables, such as academic major, be included as influences on student persistence. In addition, Pascarella and Terenzini (1991) recognized previous research focused on the four-year college. They noticed the exclusion of the two-year college as a missing component to earlier studies. Pascarella and Terenzini suggested studies be focused on nonresidential colleges to determine those factors that influence degree attainment and persistence at two-year colleges, both public and private as well as large or small. Nunez Community College is a small, nonresidential public institution. They also recommend new studies should investigate the interrelationship between social and academic integration and how these factors might influence persistence, retention, and goal achievement. Terenzini and Pascarella reveal differences throughout institutions in levels of performance are directly attributed to the types of students who enroll and not the institutions themselves. Moreover, it was not possible to label the most educationally effective institutions by examining resources designed to "rank" educational quality. According to Terenzini and Pascarella (1994), educational impact could not be identified in such listings.

Conklin (1992) also tracked community college students by supporting the inclusion of personal educational goal attainment as proposed in Tinto's model. Furthermore, Conklin (1997) studied course attrition at a suburban community college to determine which classes were most often dropped and why. Findings indicated the most frequently stated reasons for dropping classes were work schedule conflicts and personal problems. Both areas are difficult

to control by an institution. Hurricane Katrina, just as the personal problems cited by the students in the Conklin study, was an event which could not be controlled.

In another community college study, Sturtz (1995) investigated why students leave and re-enter college with an emphasis on institutional, situational, and psychological factors affecting a student's decision to leave college and then perhaps return to college. Sturtz recognized the importance of student goal achievement in attrition. As students attend institutions for a variety of reasons, educators should not assume that degree or certificate completion is the primary measure of success. According to Sturtz, the personal goals of students are often the reason for attending college. The pursuit of a degree or certificate is not necessarily the reason for enrolling in an institution. Sturtz states attrition should only include students who do not achieve their prescribed goals. Unlike previous studies on student persistence, there is a deficiency in the literature on the continuation of studies following a natural disaster of this magnitude.

Types of Resilience Summary

The first type of resilience is urban which can be viewed from many perspectives. Some examples of Godschalk's (2003) social and institutional communities following Hurricane Katrina include private religious organizations, Habitat for Humanity, Coalition to Restore Coastal Louisiana, Louisiana Recovery Authority, Louisiana Disaster Recovery Foundation, Louisiana Family Recovery Corps, FEMA, Office of Risk Management, and the Office of Planning and Control. According to Godschalk, communities are the center and act as a network from which to direct activities and resilient communities make it possible to recover from disasters, both natural and manmade. Vale and Campanella's (2005a) themes are also applicable to this study because there is evidence of political necessity, local resilience being

linked with national renewal, and resilience being underwritten by outsiders. Vale and Campanella found the reopening of an institution serves as a symbol of recovery which helps to rescue ourselves, the educational ambitions of our students, and the community at-large. The post-disaster resurrection of a campus represents some type of normalcy and connectivity to the past.

There are other activities associated with post-disaster themes which are contradictory such as disasters revealing the resilience of governments. Is the legitimacy of government threatened by the opportunity for citizens to observe first-hand the disaster response? The theme relating to the narratives of resilience always being contested is certainly relevant post-Katrina. Are key figures claiming authorship of the post-recovery plan while individuals and private volunteer groups are being ignored? Perhaps post-Katrina rebuilding will carve a new imprint in urban renewal.

Although an urban resilience framework follows a pattern of restoration, citizens are forced to accept the changes brought about by rebuilding activities. Bonanno (2004) estimates that the majority of the United States population has been exposed to at least one traumatic event using criteria of an event outside of the range of normal human experience. Some individuals were traumatized when they returned post-Katrina to find a concrete slab where a home previously existed or when they observed the marks upon a rooftop where their neighbors tried to escape but did not survive. Spray paint on the outside of houses made by search teams indicated the number of bodies found inside of a home. Based on previous data collection, the individual experiences of students during and after Hurricane Katrina reveal exposure to trauma. Perhaps college return was significant to individual resilience, the second type of resilience presented in the literature.

Resilient individuals are successful in overcoming obstacles because they choose to live with a resilient mindset. Individuals who do not demonstrate resiliency are capable of suffering from PTSD. With posttraumatic stress symptoms in the New Orleans area being more than ten times higher than the 3.6% prevalence in the general U.S. population (Mills, DeWulf, Levitan, Macht, Afonso, Avegno, and Mills, 2007), it is possible that Nunez Community College students could be experiencing posttraumatic stress symptoms. It is also possible that individual resilience in a post-disaster environment acts as a buffer to the events occurring outside of the institution. There may be a link between individual resilience and the last type of resilience in the literature review which is academic. Tinto (1993) discovered personal day-to-day interaction with others results in the sharing of common values. Education might be a common catalyst for social and intellectual membership. This informs the problem because students chose to continue their education in spite of the obstacles posed by Hurricane Katrina thus contributing to academic resilience.

It is probable academic and social integration is grounded in the educational ambitions of the students as well as the faculty who teach them. Tinto's (1993) research on institutional experiences and particularly academic and social integration could prove to be very relevant in a post-disaster context from the perspective of academic resilience. This study seeks to identify post-disaster resilience characteristics, including academic and social integration, which can be generalized to other institutions to assist students in future recovery scenarios. In my opinion, the examination of individual students at a single institution, Nunez Community College, has the potential to enhance a greater understanding of urban, individual, and academic resilience. The following section describes the conceptual framework utilized in this study.

Original Conceptual Framework

The point of a conceptual framework is to provide a model to guide the research project. This study utilized a Student Resilience Model as the conceptual framework. The framework revolves around institutional factors and individual factors. The *institutional factors* are academic as well as social integration and commitments including institutional and educational. *Individual factors* deal with thoughts/feelings, membership, values, spirituality, adaptability, strength, bouncing back, and best efforts. These factors inform the problem because collectively they support healing by connecting and coping with others in similar circumstances thus resulting in student return.

The first group of institutional factors, academic and social integration, was studied by Tinto (1993) who proposed student departure decisions are based in part on academic performance and faculty/staff interactions as well as peer group interactions. In particular, Tinto emphasized that in campuses in nonresidential settings, contact could come from interactions within the classroom which is a primary catalyst for student-faculty interaction. An example in this model is *academic performance* which is *valued* by the student and could lead to the *demonstration of best effort under any condition*. *Faculty/staff interaction* allows students to experience *membership* which in turn contributes to their *adaptability*. *Extra-curricular activities*, such as working on campus, could appeal to a student's *thoughts/feelings* which enable the student to *bounce back.* Conversely, *peer group interactions* might assist a student's *spirituality* and provide *strength.*

In addition to integration, the next group of institutional factors includes institutional commitment and educational goals. Students who have positive experiences strengthen their commitment to the institution which thereby heightens the goal of college completion (Tinto,

1993). Commitments refer to institutional and educational. Individuals attend institutions which indicate the degree to which they are committed to the attainment of educational goals. The goal of an individual refers to the level and type of education and a selected occupation (Tinto, 1993). These factors support the processes of connecting, coping, and healing. Brooks and Goldstein (2004) contend connectedness is a "life force" and is associated with resilience.

As in the case of Tinto (1993) who proposed academic and social integration factors, Goldstein (1984) discovered factors relating to an individual's personal quest to make sense and meaning in their existence. Individuals do this by internalizing, personalizing, and reflecting on their experiences. This journey begins with one's own family of origin and makes people face their own personal demons and social challenges in an effort to find themselves. As a result, their success enhances self-worth while simultaneously revitalizing culture by their interactions with others they are committed to.

Individual factors (thoughts/feelings, membership, values, and spirituality) help people cope with adversity. Brooks and Goldstein (2005) suggest those whose lives were shattered in the hardest hit areas should focus time and energy on those things which one has influence and control over and which connect individuals with other people, religion, ideas, and causes. The factors reveal that students may return in spite of their displacement and interruption in services. Although Hurricane Katrina forced institutional closures longer than any previous record (Pope, 2005) and posed many challenges for postsecondary students in Louisiana, the students chose to continue their original course of study in places without the necessary infrastructure to accommodate them.

Goldstein (1984) describes integral parts of the self as a method for coping. The first self is the "Person of Mind" which consists of one's thoughts, feelings, and representations of

experience. Goldstein found representations of experience are intentional and help us to make sense and cope with life combining our personal, familial, and cultural interpretation in the way we formulate an experience. The second self is the "Person of Community" which is how the social self gains shape. The person of community represents our identity as a member of a family and cultural group. The sense of belonging influences one's self perception and how we are perceived individually as members of a larger social collective thus enabling a person to cope. The third self is the "Person of Principle" which means the value-based process we engage in to make decisions. Based on culture, the person of principle is an advocate of the ideology and morality learned as family members. The last self is the "Person of Faith" and refers to spirituality. First expressed to us as a member of a family, this aspect of self guides us how to live and find meaning in the present. Through guidance and hope, spirituality helps people to cope with the difficult challenges in life and connects them with culturally similar people.

According to Goldstein (1981), social learning is a goal-directed experience which means individuals gravitate toward learning activities which mean something for them with regard to an immediate or future purpose or reward. In the case of the students, social learning provides an opportunity for a future and the ability to focus on something outside of the devastation. Goldstein also found the close proximity of human contact and the chance to exchange and confirm thoughts and feelings are likely to be satisfying. Goldstein stated the "group" can become an alternative for the "emptiness of daily living." As a result, groups with a set of commonly shared ideas and beliefs provide a feeling of identification and a sense of camaraderie that is seldom experienced elsewhere (Goldstein). A study participant stated,

"But this is home for me. It's not home, but it's home. It's hard to explain, but I guess you can understand."

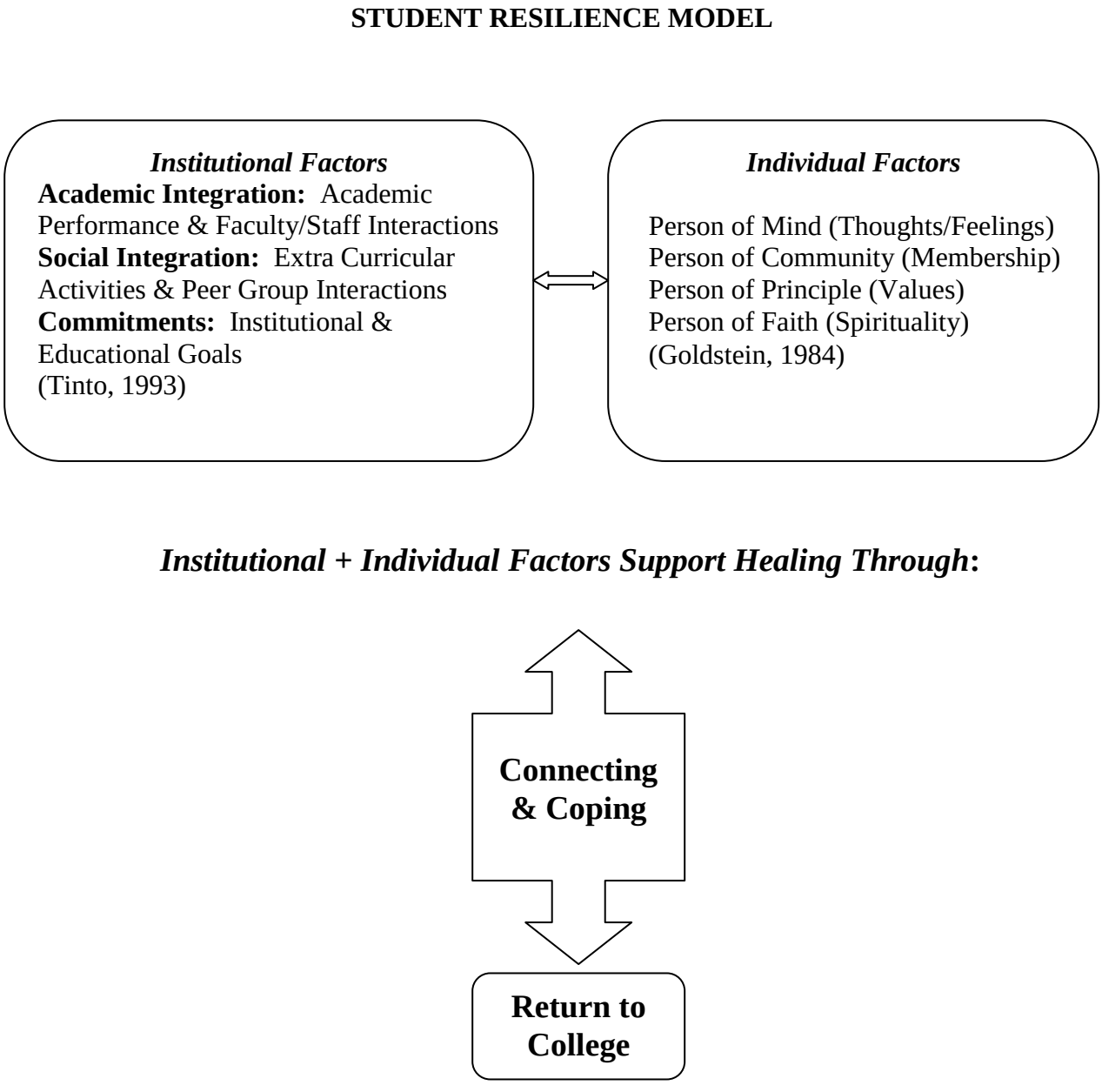
Goldstein (1981) also revealed "personal involvement in a human network can provide unique opportunities for the expression and elaboration of the many aspects of the self and a greater feeling of worth and purpose can emerge as the group encourages the altruistic self to find that it can extend help to others as well as get something helpful back" (p. 102). The students attending Nunez Community College are culturally similar people who are coping with post-disaster challenges with their minds, their communities, their principles, and their faith. The students have a strong identification with their former community. Returning students prefer to repair rather than abandon their previous lives and be near people going through similar circumstances. Walljasper (2007) stated that the neighborhood is a place of emotional and spiritual awakening. Perhaps this is why the students feel being in this locale has offered them some level of healing from the devastation of their former neighborhoods. It might also explain why students who enrolled at other institutions eventually returned to the Nunez campus. Just being in the same area, even though it is significantly changed, has meaning to the students. Home was representative of being in a familiar yet unfamiliar place and was a reference to their former community of which Nunez Community College was a part of. Collectively, both groups of factors (institutional and individual) support the healing process which is achieved through connecting and coping. Student return is the end result.

Institutional and individual factors demonstrate that the Student Resilience Model is an appropriate conceptual framework for a study of this magnitude because it serves as a picture of how I view the problem under investigation. A Student Resilience Model is listed in

Figure 3. The conceptual framework is followed by the next chapter which describes the methodological procedures utilized in this phenomenological study.

Figure 3

Original Conceptual Framework



CHAPTER THREE: Methodology

Introduction

The purpose of this study was to explore post-Katrina student resilience at Nunez Community College and the perceptions of the students who returned to the college after being displaced. Through the use of individual interviews, this study will contribute to the existing body of literature by examining the resilience qualities of students following a natural disaster. The students' perceptions regarding the factors which influenced their academic resilience, why they returned, and how they coped with the catastrophic losses were the topics of exploration. This chapter categorizes the qualitative research design and details essential elements used in this study. Chapter three begins with the research questions.

Research Questions

Using a Student Resilience Model as the conceptual framework, students who were enrolled at least two semesters, were displaced, and then returned to Nunez Community College as a result of Hurricane Katrina were explored in the study. The primary research question is as follows: Why did students return to a disaster-stricken environment to continue their studies at Nunez Community College? A secondary research question is as follows: How did the students deal with the effects of the disaster? The rationale for a qualitative approach is described in the next section.

Rationale for a Qualitative Approach

The purpose of this study was to determine the perceptions of displaced community college students regarding their post-Katrina educational experiences, therefore, a qualitative methodology was a logical approach. The role of the researcher was to obtain in-depth data by listening to the experiences of the displaced students. Tinto (1997) used a qualitative

methodology to identify the underlying forces which connect classroom engagement to student persistence and found there is a "rich line of inquiry of the linkage between learning and persistence that has yet to be pursued" (p. 619). Returning students at Nunez identified with their instructors because they were all dealing with the same issues as a result of their circumstances. The students in the study revealed in some classes, their post-disaster experiences became incorporated into the academic instruction.

Denzin and Lincoln (2003a) state qualitative research is practiced in social and behavioral science disciplines, education, business, history, political science, social work, and communications as well as the field of medicine. The investigation of students in a post-disaster environment will present another aspect in education literature. Furthermore, Miles and Huberman (1994) suggest qualitative data reveal comprehensive descriptions with a realistic and truthful context resulting in a strong impact on the reader. The students' individual and academic experiences as a result of Hurricane Katrina were very real and they provided ample details of their familiarity with the post-disaster environment. Miles and Huberman also state effective qualitative researchers have some familiarity with the phenomenon and the setting under study as well as strong conceptual interests. The study assumed participants might have been eager to speak to me because of my confidence in understanding their profound experiences. Consequently, I approached the study with certain assumptions.

Assumptions Underlying the Study

This study was based on a series of assumptions. I speculated the students might have demonstrated individual resilience characteristics which would have contributed to their academic resilience. In addition, in order for the students to be studied, they would had to have

been enrolled at least two semesters prior to the hurricane, displaced from their residences, and sought temporary housing in order to return to Nunez Community College. According to the vice chancellor for student affairs, there were students who were enrolled at least two semesters prior to Hurricane Katrina, were displaced from their residences, and returned to the college (D. Clark, personal communication, March 22, 2008). After compiling a series of reports, it was determined by the vice chancellor for student affairs that there were 100 students who fit the sample population criteria and whose contact information was made available to me. I also assumed there would be students willing to share their post-Katrina experiences which could influence the researcher's role.

The Researcher's Role

As a qualitative researcher, the point of view is that of a person who is present to discuss the personal experiences of the students. It is up to the researcher to examine the larger picture and to search for an understanding of the "whole" as Denzin and Lincoln (2003b) suggest. It was necessary for me to monitor my own subjectivities while simultaneously building a rapport with research participants in a face-to-face environment. This was necessary because I used to live in St. Bernard Parish. I also had to examine relationships within an educational system. For example, the Nunez administrators, faculty, and staff were instrumental in assisting me throughout this research project. However, due to the confidentiality of the study participants, I had to be vigilant regarding ethical concerns. It was also vital to develop a coding process so that once the students' opinions were revealed, I could create specific themes relating to their experiences. Consequently, I constructed authentic and compelling accounts of the students' post-disaster stories.

The information gathered from the students was synthesized and analyzed using data analysis procedures. I had to conduct the investigation so that ultimately, with the use of a conceptual framework, the research questions could be answered. Miles and Huberman (1994) recommend qualitative researchers possess "good investigative skills including doggedness, the ability to draw people out, and the ability to ward off premature closure" (p. 38). Such techniques were helpful in obtaining answers to the research questions. In my experience as an educator, it is very important to have the ability to listen and to prevent premature closure in my encounters with students. During the interviews with the students, I listened carefully and asked probing questions. I provided the students with the opportunity to elaborate on the issues they wanted to speak about. I was also careful to prevent premature closure during the interviews. Prior to the execution of this research project, a pilot study was conducted at Nunez Community College. As a result, valuable knowledge was obtained from the pilot study participants.

Pilot Study Lessons

A pilot study was launched at Nunez Community College prior to this research project which focused on Post-Katrina Student Persistence. I was attempting to determine if student persistence was a catalyst for individual recovery and if education played a role in coping after a natural disaster. A qualitative study of the findings revealed that student persistence is a catalyst for recovery and that college attendance is a stabilizing force in the disrupted lives of the students. Furthermore, academic persistence represented tangible proof that the students were capable of overcoming this disaster. The students in the pilot study were eager to speak about their post-Katrina experiences. As I examined evidence of individual factors which led to their persistence, it appeared there needed to be an investigation of why students returned to

persist in a particular environment and what, if any, resilience characteristics contributed to their academic success. The pilot study suggests the students exhibited resilience traits based on the following comments during the interviews:

> "Had you never been from here, how could you understand where I'm coming from? How could you know?" (*Person of Mind*)

> "And school helps you because it gives you a goal to reach. Your other life is complete and utterly total chaos. And here you are sure of at least one thing you can depend on....you can depend on that instructor being in class." (*Person of Community*)

> "It was like my zest, my zeal to come to school, I wanted that. I wanted to be able to finish something I started. And that's important to me." (*Person of Principle*)

> "Within these walls I find there's a lot of, you know, good things that can happen." (*Person of Faith*)

The aforementioned examples are factors Goldstein (1984) attributes to resilience and relates to an individual's personal quest to make sense and meaning in their existence. If a student returns to a disaster-stricken place, then do they possess certain resilience factors which enable them to continue with their educational goals? I found student persistence is a piece of a larger resilience picture which deserves further study in the students' lived experiences.

Qualitative Research Design

This research project investigated the students' lived experiences as they encountered Hurricane Katrina, being displaced, and their subsequent return to college. Hermeneutical phenomenology permitted me to identify my own method of interpretation using the research protocol as a guide. Marcelle (2002) states hermeneutical phenomenology is derived from the method established in Heidegger's *Sein und Zeit* from which human existence is interpretative. I wanted to identify the phenomenon behind resilience characteristics of students returning to St. Bernard Parish post-Katrina. Marcelle also states phenomenologists prefer to believe that ideal objects (not only objects in the natural and cultural worlds) can be made evident.

According to Marcelle, phenomenologists acknowledge the role of description in "universal" terms and believe that inquiry should focus on what is referred to as "encountering."

Phenomenology was developed by Edmund Husserl (1859-1938) and centers on descriptions of how people experience and how they perceive their experience of the phenomena under study (Glesne, 1999). I was seeking descriptions of how the students experienced Hurricane Katrina and how they perceived the influence of the hurricane on their decision to return to school. Creswell (2002) found qualitative research is used to study research problems which seek an understanding of a particular phenomenon. In this study, I was looking to identify the phenomenon surrounding the return of students to Nunez Community College. Miles and Huberman (1994) state phenomenology is the comprehension of the meaning of text/action, the discerning of themes (commonalities and uniqueness), and reflection resulting in heuristic research. The commonalities and uniqueness of the students' post-disaster experiences were captured in the interviews and their words were transcribed for data analysis.

The investigation identified central themes and supporting themes surrounding the decision by students to return to a disaster-stricken area to continue their studies. The emerging themes were analyzed by contrast and comparison. The research questions served as the basis for the construction of the interview protocol used during the research. The site selection, Nunez Community College, suffered significant damage during Hurricane Katrina and provided an excellent opportunity to observe student resiliency.

Site Selection

I chose Nunez Community College because of the severity of the post-disaster environment. I wanted to explore the influence of institutional and individual factors on

student resilience and determine if such factors supported the psychological healing of the students. Moreover, the students' normal academic and social networks were disrupted. I desired to examine the effects of such networks and its capacity to have a positive impact on student return to college by interviewing students who were willing to share their experiences.

Gaining Access

The process used to launch and conduct the study consisted of obtaining permission by the institutional gatekeepers. The process began with getting clearance from the president of the Louisiana Community and Technical College System (Appendix A). Once approval was obtained from the system office (Appendix B), it was necessary to notify Dr. Thomas Warner, Nunez Community College chancellor (Appendix C). Appendix D is permission from the chancellor to conduct the study. Appendix E is permission from the Nunez Community College chancellor to use the college name in the study. I also notified Donna Clark, vice chancellor for student affairs, and Mary Kane, counseling director, who provided me with a list of potential participants for the study.

Participant Selection

The participants in this study were selected by purposeful sampling. Students from Nunez Community College were chosen for this study because the college resides in a community where 100% of its residents were impacted by damage. Among the educational institutions in the New Orleans metropolitan area, Nunez Community College was the only institution where 100% of the population was affected by Hurricane Katrina. Moreover, the four service areas of the college (St. Bernard, Plaquemines, Lower Ninth Ward, and New Orleans East) were the hardest hit areas during the hurricane. Ninety percent of the faculty and staff live in the service area of the college (D. Clark, personal communication, March 22, 2008). The return of

students to this community represents a particular set of circumstances unique to the field of education.

Twelve students who were enrolled, who were displaced, and then returned to pursue their education were interviewed for the study. Displaced is defined as the loss of a primary dwelling which is not habitable as a result of a natural disaster. The students in this study had to have been enrolled at least two semesters prior to Hurricane Katrina; displaced; returned to college post-Katrina to continue their studies; currently enrolled; and not graduated. This criterion was necessary to measure resilience traits before and after the hurricane. After compiling a series of reports, it was determined by the vice chancellor for student affairs that there were 100 students who fit the sample population criteria and whose contact information was made available to me.

Contacting Participants

After obtaining clearance from the institutional gatekeepers, I asked the vice chancellor for student affairs for a list of contact information on students who might have an interest in participating in the research project. The information consisted of names, mailing addresses, telephone numbers, and e-mail addresses. The students were selected by purposeful sampling. This method helped me to intentionally select individuals and a site to comprehend a phenomenon.

I relied on the vice chancellor for student affairs and the counseling director to assist me in identifying students to investigate. I provided the vice chancellor for student affairs and the counseling director with a checklist to ensure the population met the research criteria (Appendix F). The students in this study had to have been enrolled at least two semesters prior to Hurricane Katrina; displaced; returned to college post-Katrina to continue their studies;

currently enrolled; and not graduated. The vice chancellor for student affairs, Donna Clark, confirmed 100 potential candidates via e-mail on November 22, 2008 (Appendix G).

The process began by randomly selecting 27 participants from the list of 100 potential candidates. I realized that since the list was printed, some of the students could have graduated in the Fall 2008 semester. I chose to initially call the potential participants because many of the addresses could have been invalid due to the number of times the students kept relocating. Three of the students informed me of their graduation and were eliminated from the list of potential participants. From the remaining 24 names, I called the students to inquire if they would be interested in participating in the study. As a result, there were 17 students who expressed interest in being a study participant and could meet with me on the days of the scheduled interviews. The students were sent a participation solicitation letter listed in Appendix H. Students were also solicited via e-mail in the event mailing addresses were no longer valid (Appendix I).

I followed up by telephone to answer any potential questions regarding the research project and then proceeded to schedule a time for the interviews. During the actual interviews, I requested each of the participants read and sign a consent form listed in Appendix J. A copy of the consent form was sent to the counselor in advance of the interviews. Although I had verbal commitments from 17 potential participants who had been sent participation solicitation letters, 12 students arrived on their scheduled date and time. The interviews were scheduled with the participants during the Spring 2009 semester and an interview protocol was created.

Interview Protocol

The interview protocol used in the research project provided me with a guide to follow during the interviews with the participants. The interview protocol listed in Appendix K states

the research questions, participants' names and majors, demographic information, and the number of semesters at the college prior to the hurricane. The protocol also contains a series of questions asking the students to reveal their post-Katrina educational experiences, to describe how they arrived at the decision to continue their studies, and their level of expectation as to the type of services the college could provide upon their return. In addition, the participants were asked specific questions regarding resilience and how they dealt with the effects of the disaster.

Protocol questions were developed based on the research questions of the study. Demographic information provided details on the study participants. The student selection criteria included students who were enrolled at least two semesters prior to Hurricane Katrina, who were displaced as a result of the hurricane, and who returned to the college post-Katrina. Most of the questions were designed as open-ended questions to provide the participants with the opportunity to elaborate on specific topics during the individual interviews.

Individual Interviews

The research subjects consisted of twelve students who were enrolled, who were displaced, and who returned to Nunez Community College. The scheduled times of the interviews were confirmed (Appendix L) and took place February 9-10, 2009. Individual interviews took place lasting approximately forty to fifty minutes after obtaining the necessary clearance from the institutional gatekeepers. Gatekeepers included the Louisiana Community and Technical College System, the Nunez Community College chancellor, the vice chancellor for academic affairs, the vice chancellor for student affairs, and the counseling director. After obtaining permission from the gatekeepers, participants were asked the questions listed on the interview protocol. The data was collected using questions referring to individual resilience, desire to

return to a disaster-stricken area for college, and how the students dealt with the effects of the disaster. Data collection methods are described in the following section.

Data Collection

The method of data collection consisted of individual interviews with students who were enrolled, who were displaced, and who returned to the Nunez Community College campus. Denzin and Lincoln (2003b) reveal interviewing is one of the most powerful ways in which we attempt to understand other humans. Individual interviews with twelve students took place in the Spring 2009 semester. The sessions lasted approximately forty to fifty minutes and were tape recorded using established qualitative research methods. An interview protocol was utilized in the study. The purpose of the interviews was to obtain the perspective of the student as to what role resilience has in their decision to return to college. Furthermore, I searched for a possible connection between student resilience and academic and social integration. As a researcher, I sought to elicit responses which revealed a deeper understanding of the students' present academic environment following a devastating natural disaster such as a hurricane. A matrix for displaying participant perspectives was designed to facilitate comparison and synthesis of the data obtained during the interviews.

Notes were kept in a field journal, observations were recorded, and a peer de-briefer was utilized in the research project. Specific quotes from the participants were documented as I searched for emergent themes. I also sought written documents from administrators which authenticated the reopening of the college. After the interviews, the audio tapes were transcribed. Upon receipt of the participants' transcripts, the information was carefully coded and analyzed using an open coding method. The transcripts were carefully examined for

dominant themes and supporting themes. The procedures for audio taping are described in the subsequent section.

Tape Recording

The interview sessions were tape recorded using a Sony recorder along with an additional recorder as a back-up device. Individual ninety-minute tapes were used for each session and recorders were tested before each session by having the participant speak into the microphone. I labeled each tape with an alias for the participant and noted if the tape was utilized on both sides to assist the transcriptionist. Additional batteries were on hand in the event of an equipment failure. I carefully packaged and mailed the tapes to the transcriptionist (located in Houston, Texas) and kept the other set of tapes for myself.

Transcriptionist

Prior to the pilot study, I secured the services of a person who was trained in court reporting. I sent copies of transcripts as a sample format in advance of the study. I was careful to denote ways the transcriptionist could assist me such as listing the participants' aliases in bold and by distinguishing the difference between my questions and the responses of the participants. I instructed the transcriptionist to number the pages, to leave wide margins for my notes, and to note the importance of confidentiality in the research project. Upon receipt of the transcripts, I examined the participants' responses while listening to the tapes again to note any words the transcriptionist may have misinterpreted. On a few occasions, the word the participant said was different than what was indicated on the transcript. However, I made the correction so I would have the own words of the participants' via verbatim transcripts. In addition to the notes taken during the transcription process, it was also necessary to take field notes for the purpose of documentation.

Field Notes

The role of researcher is a serious responsibility. I arrived at Nunez Community College armed with a journal to document my experiences. Upon my arrival there, I noted ongoing reconstruction and repair work. I toured the campus to observe if any students were still living in FEMA trailers. I observed flyers posted throughout the campus advertising free counseling and tutoring services for the students. I became embedded at the college as both an observer and a researcher. During each interview, I took notes on the interview protocol for each participant. Between the interviews, I documented patterns among the participants such as dealing with the deaths of immediate family members and friends since the hurricane, housing progress, job, or other issues. As I documented patterns among the study participants, ethical behavior was adhered to throughout the research project which is described in the next section.

Ethical Considerations

Ethical considerations were practiced in the study as required by the University Committee for the Protection of Human Subjects in Research. The study was approved by the committee in advance as indicated in Appendix M. It was also necessary to receive a certificate of completion of the "Protecting Human Research Participants" course by the National Institutes of Health Office of Human Subjects Research (Appendix N). It was vital to establish trustworthiness with administrators and participants in the study prior to the start of the research project. On November 20, 2008, Dr. Thomas Warner, chancellor of Nunez Community College, provided me with verbal consent to conduct interviews with students during the Spring 2009 semester. At times, the participants experienced slight emotional distress recalling events from the Katrina experience. I, too, have experienced loss as a result of Katrina. This fact made the interviews a more comfortable experience for the interviewees.

According to Weiss (1994), it is the responsibility of the interviewer to respect the integrity of the participants in the research project and to anticipate handling difficult questions.

Questioning respondents about sensitive issues required a certain level of sensitivity and diplomacy. Weiss (1994) suggests the interviewer be familiar with the purpose of sensitive questions and thoroughly believe in the research. Positive and negative experiences were discussed in a private and confidential setting. The identity of the students was kept confidential at all times through the use of aliases. The environment provided an opportunity for students to reveal heartfelt emotions thus providing a meaningful perspective. If a participant became emotional, I immediately stopped the questioning and gave them an opportunity to take a break. As some students were recalling disturbing events, I reminded them that participation is voluntary and that they may choose to conclude the interview at any time without consequence. Due to the fact I formerly lived in St. Bernard Parish, a researcher profile is described in the next section.

Researcher Profile

As a former resident of St. Bernard Parish, I am emotionally invested in this research project. I attended St. Bernard Parish Public Schools through high school graduation and I resided in the parish of St. Bernard until 1993. My family survived Hurricane Betsy in 1965 and we suffered through the loss of a family home prior to Hurricane Katrina. Two of my three siblings worked in the St. Bernard Parish Public School System as well as my late father. Like many individuals, I searched for relatives and friends before, during, and after Hurricane Katrina from the safety of my home outside of the devastation.

Individuals who assist in post-disaster recovery have had to monitor their emotions while simultaneously offering help. Shultz (2007) in her work in the Aceh region following the

tsunami raised an interesting question about the role of listening across cultural differences in disaster-stricken areas. Shultz proposes "When we go some place to 'help' what do we bring from our own context and how do we garner our expertise to listen and hold onto a stance of not knowing?" (p. 17). Is it possible to deny one's own emotional involvement in such a circumstance? What does a qualitative researcher bring from their own context? The use of such insight can result in positive benefits provided the researcher maintains subjectivity.

Researcher Subjectivity

Although I am emotionally involved in this research project, there are positive contributions which can result from this affiliation. As a former resident of St. Bernard Parish, I represent someone "who gets it" as stated by more than one participant in the study. In fact, one student stated, "You've walked the walk and now you're talking the talk." The students were very willing to speak to me because they knew I understood their losses and they trusted me to handle their emotions with the proper level of sensitivity. According to Glesne (1999), qualitative researchers are aware that subjectivity is prevalent in their research projects. Once recognized, subjectivity can be monitored and can play a valuable part. As Glesne states, one's emotions are part of their subjective lenses and rather than suppressing feelings, researchers should use them to acquire viewpoint. I recorded my emotions in a "subjectivity journal" and was careful to monitor them throughout the study. Through monitoring my own subjectivities, I was aware of its capacity to contribute to the research project. For example, my choice of a research topic was completely embedded in my desire to look for the greater good in this tragedy. This yearning was the basis for the story I am revealing. My first-hand knowledge of the suffering and hopelessness students are experiencing equips me with perspective and

insight unlike any other researcher. This example is typical of the "Subjective I" and is part of how I view the situation from multiple lenses.

The first lens, the personal lens, comes from my past and is the most prevalent one. It is derived from my relationship with family, friends, and a once-thriving community which served as my home until 1993. The second lens, the justice lens, comes from my desire to assist a vulnerable community ravaged by nature and the failure of man's efforts to protect it. The third lens, the caring lens, comes from my concern to see students rebuild and repair their lives through educational endeavors. I consider the use of my insight as instrumental in understanding what the students are experiencing in their day-to-day post-Katrina lives. After my subjectivity was addressed, the next step was analyzing the data collected.

Data Analysis Procedures

The purpose of a phenomenological approach is to understand the issue or topic from the everyday knowledge and perceptions of a specific respondent (Glesne, 1999). I had initial knowledge about the particular topic and was interested in developing a greater understanding or clarification from previous data. I was seeking the perceptions of individual students on the factors which enabled them to be resilient in a post-disaster environment. As a researcher, I wanted a greater understanding of their coping strategies and the role of education in their ability to overcome adversity. Furthermore, there was a desire to reveal a connection between the students' resiliency and academic and social integration. I searched for dominant themes and supporting themes in the interviews which could provide insight to determine if Tinto's academic and social integration theories have a role in the students' individual recovery.

The process began initially by reading through the transcripts, dividing the text into segments of information, and labeling the segments using open coding. I reduced overlapping

codes, developed a description from the data, and collapsed the codes into themes. After I collapsed the data into specific codes and examined the results of a word use frequency program, I created data displays which identified the major themes. The graphic mapping of text into data displays enabled me to identify the emergent phenomenon. The data displays also enabled me to reduce data into a condensed format which made it easier to interpret, draw conclusions, and verify the results. Saturation occurred when nothing new could be added to a theme thus providing evidence of the existence of a theme when no new data could be extracted. The reduction of data was accomplished through the use of "codes" described in the subsequent section.

Data Reduction

Data provided by the participant interviews was segmented into categories and labeled with open codes. I was careful not to utilize any predetermined codes used in the pilot study. In fact, I realized that most of the codes used in the pilot study had no significance to this particular group of students. After reading the transcripts eight times, I looked for recurring patterns among the students' comments. I reduced the data into specific codes and defined the codes. In addition, the overlapping codes were reduced. Next, I developed a description from the data. A complete description of the codes utilized in the study is listed in Table 1.

Table 1

Data Reduction

Data Reduction		
+AI	Academic Integration (Pos)	The result from sharing common information, perspectives, and values with other members of a scholastic community (Tinto, 1993).
-AI	Academic Integration (Neg)	Includes a number of factors that influence a student's negative performance in the classroom such as a change in teaching style or loss of faculty.
Anx	Anxiety	Doubtful about a positive future.
BBack	Bouncing Back	The ability to overcome circumstances and resume normal activity.
Dev	Devastation	Community wreckage and debris resulting from the hurricane.
EduG	Educational Goals	Seeking the continuance of postsecondary schooling.
Fam	Family	Biological family members or extended family members.
FStren	Forced Strength	Being forced to face adversity regardless of an individual's readiness.
HM	Home	An individual's residence or community prior to being displaced.
MLoss	Material Losses	Tangible losses sustained during the hurricane such as cars, homes, and personal belongings.
+Mot	Motivation (Pos)	Desire to achieve a positive outcome.
-Mot	Motivation (Neg)	Unable to achieve a positive outcome.
NFam	Nunez Family	Nunez Community College faculty, staff, and administrators.
NNOR	New Normal	Experiencing a difference in a formerly familiar environment such as a community, home, school, or workplace.
Occup	Occupational Goals	Desire to achieve workplace skills to ensure employability.
+OnL	Online (Pos)	The use of the Internet for communication and in courses for which credit is earned.
-OnL	Online (Neg)	The use of the Internet in courses for which credit is not earned due to student withdrawal.
Relig	Religion	Belief in and reverence for a supernatural power.
Reloc	Relocation	Moving to more than one locale to find suitable housing.
Resil	Resilience	The process of adapting well in the face of adversity, trauma, threats or even significant sources of stress such as family and relationship problems, serious health problems, or workplace and financial stressors; it means "bouncing back" from difficult experiences (Masten, 1994).
RChal	Return to Chalmette	Return to Chalmette, Louisiana.
RNun	Return to Nunez	Return to Nunez Community College.
RReg	Return to Region	Return to a particular geographic region in New Orleans.
+SI	Social Integration (Pos)	When an individual develops strong and effective social ties primarily as a result of daily interactions with other members of a community (Tinto, 1993).
-SI	Social Integration (Neg)	Includes a number of factors that contribute to a student's lack of ability to develop relationships with other students and student groups outside an academic setting.
SSyn	Survivor Syndrome	A characteristic group of symptoms, including recurrent images of death, depression, persistent anxiety, and emotional numbness, occurring in survivors of disaster; survivor guilt (Infoplease Dictionary, 1997).

Verification Methods

In the field of qualitative research, the practice of validation is a required component. It was necessary to validate the findings by ensuring credibility. One of the ways to accomplish this is through the use of strategies such as triangulation, member checking, and external auditing. According to Creswell (2002), the process of triangulation confirms the research findings from different people, different data types, and different data collection methods. This is desirable so that findings will be drawn from more than one source of information. Member checking was performed by research participants who checked the accuracy of the findings. Triangulation procedures which were utilized in the research project are described in the following section.

Triangulation

Mathison (1988) reveals triangulation is using multiple methods, sources of data, and other researchers to ensure the validity of research results. Furthermore, it is the duty of a researcher to practice proper methods to guarantee the credibility of the results. In addition, Denzin and Lincoln (2003b) state triangulation clarifies meaning and verifies the repeatability of the findings. This research was conducted through the use of individual interviews, observation, field notes, and member checking. My focus as an observer was on how the students acted upon their experiences. Denzin and Lincoln also state researchers should observe their subjects as if they are separate and distinct from themselves. As a courtesy, research participants were provided with the opportunity to verify my interpretation of their perspectives. I requested their assistance in helping me to develop new ideas. This procedure enabled me to confirm the credibility of the themes discovered during the interviews.

While it was necessary to utilize triangulation, I also had to demonstrate the study findings are indeed credible.

Credibility

According to Glesne (1999), the credibility of findings as well as the interpretation of the findings is directly attributable to the presence of trustworthiness. It was necessary for me to acknowledge my own biases and subjectivities. By revealing my own subjectivity, I looked beyond my own emotions and navigated through the field of discovery. Triangulation contributed to the credibility of the findings through the cataloging of recurring themes using different methods to ensure transferability.

Transferability

Transferability refers to how a study's findings are capable of being applied to other situations. The central method utilized in this investigation to confirm transferability was detailed description. Individual interviews provided rich and meaningful data from which themes were developed. The detailed description I provided will enable others to generalize the study to other situations. For example, the factors which influence the resilience of the students in a post-disaster environment can be generalized for other students who experience natural and man-made disasters provided the results are dependable.

Dependability

As a researcher, it was necessary to describe the changes which ultimately affect the approach of the study (Feldman, Bell, and Berger, 2003). I had to be dependable in my methods so that the study can be replicated by others. Specific documentation such as a field journal, a subjectivity journal, a methodology journal, audio tapes, interview transcripts, data analysis records, data notes from peer debriefing, and member checking were utilized to ensure

dependability. This behavior was necessary so that actions taken can be tracked by an independent examiner.

Confirmability

As a result of qualitative research, each writer provides a distinct perspective. According to Feldman, Bell, and Berger (2003), confirmability is the degree to which the findings can be substantiated by others. Specific procedures utilized throughout the research were checked and rechecked. A data audit was executed examining the data collection as well as data analysis procedures. Moreover, conclusions were provided to research participants for their feedback. Results were evaluated for evidence of bias or subjectivities. A definition of terms is provided in Appendix P for clarification. It was also necessary to record entries in a methodological research journal.

Methodological Research Journal

All methodological processes were recorded in a methodological research journal. Each procedure was recorded to assist me in data analyses and in the discovery of potential theme development. I used the journal to explore a potential link between the themes and the conceptual framework. As a result, a revised conceptual framework had to be developed to address new factors significant to student return. Glesne (1999) found limitations are consistent in social research. Part of my trustworthiness is realizing the delimitations and limitations of the study. The delimitations and limitations section will assist readers in interpreting the findings in this research project.

Delimitations and Limitations

I studied students who were enrolled at Nunez Community College, who were dislocated, and then returned to the college. I wanted to grasp the before and after environmental changes

which influenced the ability of the students to demonstrate individual resilience at the college. A delimitation of this study was the exclusion of private colleges. Another delimitation in this research project was the omission of public and private four-year colleges and universities.

The most obvious limitation was locating students who chose to return post-Katrina who met the research criteria. With a severe housing shortage and the increased availability of online courses for students, it could have been difficult to find students to interview who were available and who had not already graduated. After meeting with the Nunez Community College director of counseling and the vice chancellor for academic affairs on March 22, 2008, I was assured there were students available to participate in this research project. In fact, there were 100 students who met the research criteria.

Conclusion

The rationale for the selection of a qualitative research design as well as the methods and procedures of this investigation were addressed in this chapter. In addition, an explanation was provided for the role of the researcher, ethical considerations, participant selection, and steps for verifying the research which contributed to the phenomenological approach of this study. Data analysis procedures were followed to ensure verification and a definition of terms was also provided for clarification. Although delimitations and limitations of the study exist, research participants had the potential to reveal rich data which could be generalized to other post-disaster populations. Chapter four presents the findings as a result of this research endeavor.

CHAPTER FOUR: Findings

Introduction

The findings in this chapter reveal the themes which were developed from the data analysis. Data reduction was utilized to collapse the information into specific categories. Once the codes were defined, the transcripts were segmented into clusters of data which assisted in the identification of themes. A matrix with clusters of data was developed to present a visual representation for analysis. Five themes emerged as a result of the analysis thus resulting in a phenomenon. The following section identifies the participants' views with supporting quotes verbatim from the students. The themes are discussed in detail with reference to the literature as well as the participants' comments. The findings section concludes with a summary of the study results.

Study Participants

The students who volunteered for this study are male and female and include both traditional and nontraditional students. Their ages range from twenty-two to fifty-seven. Each of the students had pre-Katrina experiences and returned to the region after Hurricane Katrina. For some students, it took at least a year to return because they had to relocate and get their personal lives situated. Collectively, this group of twelve students relocated twenty-two times. Some of the students did try to enroll in courses at colleges in the places they relocated to, however, the difficulty of getting transcripts combined with concerns about their community and families made it difficult to concentrate. The students' majors include computer technology, nursing, business technology, computer information, general studies, mass communication (upon transfer to a four-year university), and process technology. Table 2 includes demographic data on the study participants.

Table 2

Study Participants

Study Participants

Name	Age	Gender	Ethnicity	Major
Jeffrey	23	Male	White	Computer Technology
Alice	24	Female	White	Nursing
Margaret	57	Female	White	Business Technology
Feng	24	Male	Asian	Computer Information/ Business Technology
Ahmed	24	Male	Black	Nursing
Harold	35	Male	Black	Business Technology
Bobbie	39	Female	Black	General Studies
Brad	22	Male	White	Business Technology
Chris	43	Male	White	Business Technology
Pamela	42	Female	Black	Nursing
Mark	22	Male	White	Mass Communication
Troy	22	Male	Black	Process Technology

Participant One: Jeffrey

The first student interviewed, Jeffrey, was a 23 year-old male majoring in Computer Technology. He returned to Chalmette two years after relocating five times. Jeffrey realized he needed knowledge to pursue better employment opportunities and wanted to come back to Nunez because of the good teachers and the one-on-one environment. He admitted before Hurricane Katrina, he did not take academics as seriously as he does now. Although Jeffrey participated in an online course immediately following the hurricane, he feels his performance was impacted by the lack of a classroom environment with live student-teacher interaction. Jeffrey also stated the hurricane forced everybody to be a little bit stronger and he attributes bouncing back to his family and friends. However, he has witnessed his parents suffer over the loss of their home. He feels in similar circumstances, other institutions should do as much as they can to get the students enthusiastic about coming back and getting them on the right track.

Even though Nunez is not like it used to be in terms of the physical campus, he believes coming back to his friends as well as familiar teachers will increase his employment opportunities in the future.

Participant Two: Alice

Alice is a 24 year-old female majoring in Nursing. She evacuated to Destin, Florida, lived on the West Bank of New Orleans, lived in Luling, and then moved into a FEMA trailer. She likes Nunez because the teachers provide one-on-one time and she enjoys small classes. Alice feels because of Hurricane Katrina, her career ambitions have been delayed and she is currently employed in an unrelated field which may lead her to a different occupation. Alice also stated, "I love St. Bernard even though it's a little town nowhere. I just, you know, I still love it." She came back to St. Bernard because she considers it her home.

Alice was happy to be contacted by the college as a prior student and also heard about the reopening status from radio and billboard advertisements. It was hard to focus on school worrying about her kids and about not having enough of money, however, she feels school kept everything off of her mind and brought her somewhere else to attempt to pursue what she wants but has not yet achieved. She feels it would have been helpful to place more pressure on the students to attend counseling sessions because many students felt they did not need the extra help to cope with the losses and could get through it on their own. However, Alice believes if the students have a place to go and talk to somebody and reveal their emotions, this would have helped in their individual recovery.

Participant Three: Margaret

The third participant was Margaret, a 57 year-old female majoring in Business Technology. Although Margaret did not return to school immediately, she appreciated being

contacted within days of the hurricane and having the opportunity to chat online with professors over the Internet and through Blackboard. She feels that the entire staff has always been there both before and after the hurricane. She was too emotionally involved in "just surviving" to return to school immediately. Margaret had to take care of housing problems, deal with insurance agencies, figure out how to rebuild her profession, and determine how to go about earning a living. The insurance she purchased on both her home and business helped in putting her life "back together again." When she returned to St. Bernard Parish, she felt as though she was on another planet upon viewing the devastation.

Margaret feels that the hurricane was much more traumatic for people in her age group and she knows people who suffered more, lost more, and had less to rebuild their lives. At Nunez, students were allowed to discuss their feelings and write about them in some classes. Her family was all that mattered to her and she credits them as a motivation in coping with the post-storm recovery. She feels Hurricane Katrina has made people realize what matters most in life such as survival and one's health and one's family. Margaret also noted one can learn from trauma such as this or one can suffer more. Once a person has accepted the loss, then they can learn from it. Margaret returned to Nunez to finish her studies because it is important to her to learn the latest accounting and bookkeeping practices. She feels the online courses she enrolled in required much more concentration than a regular class where you show up and can immediately address any problems without having to wait for a response.

Margaret stated the Nunez faculty and staff endured like champions and the core people on the staff returned to assist students in spite of the space inconveniences. In addition, they wanted the students to succeed and she thinks they are definitely special people. She was so attached to Nunez, that she needed to be there to see faculty and staff faces because she wanted

that type of support as Nunez employees were struggling just as much as anyone else to create normalcy and to create a feeling that it was going to be O.K.

Participant Four: Feng

The fourth participant, Feng, is a 24 year-old male majoring in Computer Information and Business Technology. He expected a lot when he returned to Nunez and was disappointed the classes he needed were not offered. Initially, Feng did not return to school immediately but enrolled in online classes, however, he found it was too hectic and he dropped one course. Feng did not lose much in terms of material losses so he feels his stress level was not as high as others who suffered more as a result of the hurricane. Education for Feng was a definite goal regardless of the hurricane; he did find out that he wanted to pursue business courses in addition to computer courses because he discovered he is more suited for the field of business. Feng feels if it was not for the hurricane, he does not think he would have stepped into the business field. He also stated he is close to his advisor as well as other students at Nunez.

Participant Five: Ahmed

The next participant, Ahmed, is a 24 year-old male majoring in Nursing who attended a college in Texas after he was forced to leave. It was difficult to obtain transcripts from Nunez after the hurricane. His siblings convinced him to return to Louisiana as well as the desire to be with other family members who returned to the area. Upon his return, he was undecided about a career path and found out he really liked the field of nursing. His post-Katrina expectations of the services Nunez could deliver were minimal and he considered if the lights were "on" that was a measure of some success. Ahmed found a fluid transition with ups and downs which eventually ended. Ahmed's mentality changed after the hurricane to one of anxiety. He has a suitcase next to his bed at all times so that he can be prepared to leave at a moment's notice.

Ahmed experiences hesitation in purchasing decisions for items which cannot accompany him during an evacuation. He also stated it is hard to rebuild from scratch when you are at 90% or 100% and then go to zero but God never put anything on your shoulders that you could not bear. In addition, what Katrina taught him is that in order to survive, you have got to grow bigger shoulders. Ahmed agrees the classroom environment acted as a coping mechanism and it was actually healing for him to be in a place where everybody had the exact type of post-Katrina experiences. He further added all of the experiences shared were tragic, but that knowing other people around you went through the exact same things helps a lot.

Participant Six: Harold

Harold is a 35 year-old male majoring in Business Technology who returned to the area to be with his daughter. He found it difficult after losing everything, trying to get everything back into perspective, working, and trying to figure out how to get around because a lot of areas were still closed off after the school reopened. Harold came back to college because the hurricane gave him a reason to want to learn more and secure an education in the case an event of this type occurs again. He feels he would have a better chance of finding a decent job elsewhere if necessary. When questioned regarding online learning, he stated he passed those courses, but prefers the classroom environment because of the personal interaction with the teachers after dealing with the stress of losing a home.

Harold believes school has given him an outlet to help cope and has kind of added fuel to the fire and made him get over a lot more things. He states he has a strong will and that he sees people that let the hurricane keep them down and they get depressed when they talk about it. Harold's view is life goes on and you have to keep going. He also said other institutions recovering from a disaster should offer online courses right away to keep everything going and

that Nunez was one of the first places in St. Bernard to reopen. Harold stated the faculty and staff are very welcoming to everyone who registers at Nunez and it is a wonderful learning environment. Furthermore, the campus has a home-type atmosphere where everybody treats you pretty much like a family environment. Harold also believes a lot of people at Nunez wanted to finish their education because "once you start in one place, you tend to want to finish up in that place."

Participant Seven: Bobbie

Bobbie is a 39 year-old female majoring in General Studies. During Hurricane Katrina, a loved one drowned even though she made a rescue attempt. She was also present in a facility where people died without the ability to make provisions with an undertaker. Bodies had to be wrapped and placed in an unused section of the facility. Bobbie feels the hurricane made her more appreciative of the things she has as opposed to crying about the things she does not have. One of the things she does not have is an education but she feels her persistence will prevail. With regard to Nunez, she believes the college has always been a great community college and that the staff will try to work with you because everybody was also going through the same recovery process. It was hard when she returned and Bobbie eventually had to withdraw from four classes. It was difficult working, attending school, and trying to rebuild a house. Online learning is not agreeable to her because she likes to get the one-on-one experience with the teacher and she has never participated in an online course.

Bobbie feels a person cannot grow if they do not adapt to change and that although she was already a strong person, this experience has made her stronger. Returning to college has given her a goal and it has helped Bobbie deal with the disaster because she knew she was not the only one going through it. Her advice to colleges post-disaster is to be there for the students as

a number one priority. The college has to open their hearts to students because after they do this, they set a pattern and the word goes out that these people really care and are going to be there for you.

Participant Eight: Brad

Brad is a 22 year-old male majoring in Business Technology. He evacuated and eventually ended up in North Carolina where he enrolled in a college there. It was a difficult adjustment and painful to witness the losses suffered by his parents. Brad has changed majors because reality set in when Hurricane Katrina hit. He needed a sustainable career so he switched to business. Brad attended Southeastern Louisiana University but chose to return to St. Bernard Parish because he loves it there. He loves the community and he considers it his home. Brad feels the people in this particular place are special and he misses a quality he refers to as "the sameness of it" and the fact that no matter where one goes in the entire world, there is nowhere that even comes close to the feeling that he gets when he is there. Brad has lived in other countries around the world and feels no other place can ever replace the region although he acknowledges deep down it will never be the same.

Hurricane Katrina forced Brad to face a lot of realities that he wanted to keep buried and as far away possible until the day came when he finally had to accept it. He returned to Nunez and was pleased to be welcomed by his former teachers. The storm has had negative effects on his life such as a slight decline in academic performance, difficulty in focusing on studies, and a loss of interest in pre-Katrina activities he used to enjoy. Brad has participated in online courses at other universities but prefers interaction with the teacher in a classroom environment. He plans to pursue a four-year degree upon completion of his associate degree and considers the time spent at Nunez as a watermark in his life.

To him, Nunez is an icon and will remain an essential bookmark in his life experiences. Furthermore, Brad considers the college has always been a staple in the community and the school has helped out so much in everyone's recovery efforts. He credits Dr. Thomas Warner, chancellor, as a large influence in St. Bernard Parish recovery due to his efforts and contributions to restore Nunez Community College. Brad added he thinks he is a stronger person because of this and that Katrina has affected him psychologically so much that it pulled him out of the ruts of his life and placed him on a serious career path. He wonders about his own mortality and what will be next if another Katrina comes. Brad feels school gives him a reason to stop thinking about the negatives.

Participant Nine: Chris

Chris is a 43 year-old male who is majoring in Business Technology. In 2003, he relocated his family to Slidell, Louisiana, and was spared the loss of a home. After years in management positions, Chris decided to join his family's business and obtain a college degree. Initially, after Hurricane Katrina struck, he was impressed with the recovery efforts of the college. He acknowledges one has to be mentally and physically prepared for college and after the storm, Chris was concerned his school ambitions might get delayed. However, he was able to enroll in classes temporarily housed at Slidell High School. Although he declined the opportunity to enroll in online classes following the storm, he felt certain the college would rebound because the institution is deeply embedded in the community. Chris believes the college cares about the community and resolutions would be achieved to assist the students.

Due to the fact Chris was spared the loss of a home unlike the rest of his family members, he has experienced "survivor guilt." His home in Slidell was close to damaged areas and he attributes his good fortune to his strong religious beliefs. He extended his home to others in

need of shelter and in thanksgiving for the opportunity to help people in need. As a result of the hurricane, he now manufactures crosses made of material he salvaged from the storm in his shop. He also regularly visits the Adoration Chapel in his Catholic church. The pursuit of a college degree is a personal goal for Chris and feels he has come full circle with his years of management experience complemented by a formal education.

Chris was moved by the students from other colleges and universities sacrificing their spring break to assist a community in great need and feels this could be a precedent for similar catastrophic events. He also feels it is important for a college in a post-disaster environment to get up and running immediately to service the students who need to get back to normality. Chris revealed Nunez actively pursued the students after the hurricane and he thinks that action was wonderful. Initially, he was contacted through e-mail. In Chris' words, "The college is for the community and about the community, you know, so they showed that. They really did." He finds that people in St. Bernard Parish are different in the fact they are experiencing more depression than he has ever noticed before; he attributes this to the slow pace of recovery in St. Bernard Parish. He also notices a lot of people are just going through the motions and getting by on a day-to-day basis. Chris hopes they will find their "fire" again. He feels getting back to normal as the employees in his shop were able to do and have a routine is really important in people's lives so they can get back to where they need to be.

Chris also believes Hurricane Katrina pushed people into desperateness and as a result, has provided them with the opportunity to make decisions about the future based on their experiences with this event. He mentioned prior to Hurricane Katrina, if his wife was cut, she would "bleed" Chalmette. Now it is very difficult for her and when she returns to the area, she gets severely depressed.

Participant Ten: Pamela

Pamela is a 42 year-old female majoring in Nursing. Although she relocated to Texas, she found it hard to enroll at a college in Houston because the institution would not accept her credits. Home is everything to Pamela so she knew she was coming back to the area. She feels Hurricane Katrina has made her re-evaluate her life goals and this event has given her a different outlook on how things can be turned upside down so fast. Pamela was made aware of the reopening of the college through e-mails and billboards. She believes when the college contacted her, it confirmed that the college was really concerned about their students. Pamela also realized that the faculty also went through this terrible experience and they still were interested in helping them so it made her feel really good. Being normal was important to Pamela because when she looked around and saw all of the wreckage, it was a flashback that made her think she could not deal with the situation at the present moment.

When she noticed new construction going on at the campus, she thought it was really great. For Pamela, college attendance was a distraction from what she had to deal with at home. Classes kind of took her "away" from things so it played a big part of her personal healing. She has not enrolled in an online class and prefers to be with the teacher and fellow classmates because of the interaction. Pamela revealed it was easier to get the school back up and running than it was to get the personal things done referring to finding a place to live. In addition, she attributes her personal healing to prayer, her family and friends, and being able to reach out and talk to someone she had not heard from. It was comforting to communicate with friends and classmates that they had survived the storm. She recommends a phone network for students to call in after a disaster, back-up records for student data, and some type of "to go"

records so that students can locate their own data and make sure it gets to another institution if they choose to enroll elsewhere.

Participant Eleven: Mark

Mark is a 22 year-old male who intends to eventually resume his studies at a four-year institution. He feels Hurricane Katrina has created academic and financial hardships on the students. Some of his friends had to remain out of college for extended periods while they were focused on rebuilding their community. He believes Louisiana institutions were the least helpful in catering to Katrina-affected students. In fact, following Hurricane Katrina Mark reconsidered his plans to re-enter college. He eventually realized with a weakening economy, it was necessary to sharpen his entrepreneurial skills. Mark also believes St. Bernard Parish is a very resilient community with a large need for a community college to address workforce demands in the area.

With regard to online classes, he did not enroll but understands the usefulness of technology connecting students with the college. Mark stated Hurricane Katrina was of such magnitude, he realized the widespread impact on people and also recognized how disposable people are. He added you need to be diverse and a college degree gives you that leading edge to have more opportunity and that is why he returned to college.

Mark believes school is part of a larger community even if it is an elementary school, middle school, high school, or college. He feels if you are in a particular town, then that is the town you grew up in and that is your sense of normalcy. In Mark's opinion, if you do not have a sense of normalcy, then you are not going to succeed in school. He has no problem adapting to change, but said change is different when it is forced upon you. Hurricane Katrina opened his eyes while at the same time, broke him down physically and mentally. Mark thinks it is

going to take a couple more years to bounce back after this hardship. He copes by surrounding himself with the people he loves, but admits it is hard having so many of them in distant places. Mark would like to see specific programs designed to address the counseling and academic needs of post-disaster students. He added, "Don't forget us down here. It's certainly not over."

Participant Twelve: Troy

Troy is a 22 year-old male majoring in Process Technology. He returned to Nunez for occupational reasons and his grandmother formerly resided in the Lower Ninth Ward. She returned there and he worries about her because few people have returned and there are no street lights at night. Troy stressed the historical value of the Lower Ninth Ward and desires to see the area appreciated for the uniqueness of the people who resided there. Troy is concerned about the negative image that some people portray in the Lower Ninth Ward. He stated that there are many good families who used to live there. Troy said the people there took care of each other and there was a strong and close social network. Troy evacuated and eventually came back to the area. He was glad to return to Nunez, but comprehends the everyday struggles people are still experiencing. He worries about his neighborhood not coming back. Troy stated, "Just don't forget us."

Emergent Themes and Analysis

Five themes emerged from the study participants. The themes are as follows: Individual Resilience; Post-Disaster Academic Integration; Post-Disaster Social Integration; Determination; and Anxiety About the Future. It appears just being in the same locale in spite of the devastation has meaning to the students. Their immediate and extended family members were instrumental in their decision to return to the region and contributed to their resiliency. In addition, the Nunez Community College faculty, staff, and administrators were considered a cohesive unit which

facilitated the students' return to college. The classroom experiences of the students were also important elements in their own coping strategies as well as being near people who understood the difficulty of their present circumstances. The students' comments indicated they did feel the college would resume at some point and opportunities would be made available for them to continue their studies. Furthermore, the students were extremely motivated post-Katrina to finish what they started before the hurricane struck the area. Although the students' comments stressed the meaning they attach to academic persistence, the students remain quite anxious regarding the future and the possibility they could find themselves in similar circumstances again. The next section describes each of the themes as revealed by the students in the study.

Individual Resilience

The students in the study demonstrated resilience as defined by the literature and this concept contributes to their strength and ability to bounce back. Academic success became a part of the students' individual "islands of competence" and school had an increased relevance as a result of the hurricane. The students feel they can learn and grow from this experience and this viewpoint makes stressful events less threatening. The students stated their families, educational goals, religion, adaptability, and motivation all contributed to their resiliency. Evidently, education plays a role in providing the students with an area of strength to experience dignity and a sense of accomplishment.

I acknowledge that education could serve this role without the presence of a devastating hurricane. However, a post-disaster scenario raises the following question: Did returning to college in a disaster-stricken area have a positive psychological impact on the students' resilience? The answer is an institution can have a positive psychological effect on individual recovery in a post-disaster environment. In fact, such membership is vital to providing students

with a way to remain connected with others. People are capable of demonstrating resiliency traits with or without a disaster, but returning to a disaster-stricken area to recapture a part of their previous lives requires extraordinary levels of resiliency. Both institutional and individual factors are significant to reaching such resiliency levels.

In addition to institutional factors, there were individual factors such as one's family which had a positive effect on the students. The biological and extended family members of the participants in the study are very important to them and contributed to the students' resiliency. In some instances, it was family members who urged them to return to the region. Hallowell (1999) expands the definition of connection beyond the association with interpersonal relationships to include family members, community organizations, and colleagues. Families also contributed to the students developing a resilient mindset which enables people to productively cope with conflict, pressure, and stress. Families helped reinforce the stress hardiness of the students. By making connections and showing compassion, the students were able to gather strength from their emotional attachments thus contributing to their individual resilience. Goldstein (1984) found people cope with life by combining their personal, familial, and cultural interpretations in the way they formulate experiences. These experiences represent their identity as a part of a family and cultural group and might explain why the students chose to continue their studies in St. Bernard Parish.

Initially, the students' decisions following Hurricane Katrina focused primarily on their families. Once their families were situated, then school return became a viable option. For example, Jeffrey attributes friends and family as a big factor in contributing to bouncing back. Another student, Margaret, stated, "All that mattered to me was my family and I think that's why I was able to cope with it much more easily than others because material things are

replaceable; people are not." As in the case of Margaret who was focused on her family, Harold admitted the only reason he came back to the New Orleans area was because of his daughter.

Other participants in the study also gathered strength from their emotional attachments. For example, Feng stated "Most people would, like, probably move on unless they have something to come back to, like family." As in the case of Feng, Pamela revealed, "Well, actually to get through everything that I went through, it was prayers, family, and friends. Mainly being able to reach out and talk to someone you haven't heard from or you didn't know exactly where they were." Ahmed said, "I just wanted to come back—I had a lot of family down here still." Brad spoke of the importance of returning to Chalmette when he stated the following:

> My parents came back. My friends all came back to Chalmette. The instant, the second I found out that, like, six of my friends were back in Chalmette, I moved back. I'm like, I'm coming back. I want to come back. Hands down, nothing's going to stop me.

In addition, Ahmed returned as a result of the urging of family members:

> I was finding it kind of hard because, you know, I was trying to get an apartment in Texas, get food, and get a job all at the same time. So I ended up having to leave but after a while my brothers convinced me to come back down here. And a whole lot of my family came back, so I came back just to be with more of my family.

Family members influence the parts of the "self" identified by Goldstein (1984). The first self, the person of "mind," consists of one's thoughts, feelings, and representations of

experience. Our representations of experience are intentional and help us to make sense and cope with life. The students relied heavily on their families to cope with their post-Katrina losses.

The second self, the person of "community," represents one's identity as a member of a family and cultural group. The third self, the person of "principle," refers to the value-based process we engage in to make decisions. The last self, the person of "faith," refers to spirituality. The students' family members helped them formulate their post-Katrina experiences; gave them a sense of belonging as members of a larger social collective; assisted them in decision-making based on the ideology and morality learned as family members; and spiritually helped them to cope with the difficult challenges and find meaning in their present circumstances.

In addition, individual resilience was identified as a theme because the students exhibited the steps recommended by Brooks and Goldstein (2004) for resilience living. The steps are as follows: (1) Rewriting negative scripts; (2) Choosing a path to achieve stress-hardiness as opposed to being stressed-out; (3) Viewing life through the eyes of others; (4) Communicating effectively; (5) Accepting themselves and others; (6) Making connections while showing compassion; (7) Building their own islands of competence; and (8) Developing self-discipline and self-control.

Research findings indicate resilience characteristics were identified in the students' comments. For example, the students rewrote negative scripts by envisioning a fully functioning college campus whereby they could proceed with their educational goals. One of the study participants, Chris, felt certain the college would rebound because the institution is

deeply embedded in the community. Moreover, Chris emphasized the college cares about the community.

The students chose a path to achieve stress-hardiness (as opposed to being stressed-out) by surrounding themselves with family members and other extended family members. As a result, the students were able to view life through the eyes of others by sharing their perspectives. The students also communicated effectively with faculty and staff, accepted the chaos that they were experiencing along with other individuals, and remained compassionate throughout the process. The students attempted to create a scenario where they could build their own "islands of competence" to experience strength and a sense of dignity. This effort required self-discipline and self-control.

In addition to emotional connections as a source of strength, individual resilience was identified as a theme because of the necessity for the students to identify an area of strength to experience dignity and a sense of accomplishment by fulfilling their educational goals. In this case, the students created their own islands of competence through academic pursuits. They recognized the journey to reach resilience and recovery is long and painful, but necessary for one's emotional and physical health in disaster recovery. The students spoke repeatedly of their ability to bounce back, their individual strength, and how Hurricane Katrina has made them stronger individuals. However, the students acknowledged some of their strength was a type of "forced strength" which was imposed upon them regardless of their readiness to endure their present circumstances. One of the study participants, Ahmed, explained forced strength as follows:

> I was forced to adapt to change. Everybody that went through Katrina learned that it's hard to rebuild your life from scratch. I'm at a hundred

> percent or ninety or whatever. And then go to zero. So then we rebuild from zero. That's hard. I heard someone recently saying, 'God never put anything on your shoulders that you couldn't bear.' What Katrina has taught you is that in order to survive, you've got to grow bigger shoulders.

Ahmed's comments were similar to Jeffrey who stated, "In a lot of ways the hurricane kind of forced everybody to be a little bit stronger. It was pretty hard at first." In addition, Bobbie revealed the following:

> I just had it in my mind and said, hey, this is what I need to do. And that's what I did. You can't grow as a person if you don't adapt to change. I was always a strong person. I'm a stronger person.

Mark's comments also reflected his need to be professionally diverse:

> Even though college lost its lure to me after Katrina, I understood what was going on with the economy and I realized I really needed to go back. It's [Hurricane Katrina] a thing of such magnitude and realizing how far it affects people, not just from where it actually hit, you start realizing how disposable you are. You need to be diverse and a degree gives you that leading edge. Katrina opened my eyes. I wouldn't say it made me stronger because if anything, it broke me down physically and mentally. But I know how to prepare myself. It's different when change is forced.

Goldstein (2006) suggests social connections provide psychological and material resources which help to deal with stress. The students gained strength by connecting with others who also believe in the value of an education. In some cases, categories of resilience are not fully appreciated until a crisis occurs (Adger, Hughes, Folke, Carpenter, and Rockstrom, 2005). In the

transcripts, individual resilience was coded seventy-six times. In fact, Harold revealed the following:

> Well, I was going through a lot of things before Katrina that, you know, Katrina just kind of added fuel to the fire and just made me have to get over a lot more things. I see a lot of people that, you know, let it keep them down and like you said, it might depress them to talk about it. I mean, life goes on. You have to keep going.

Students built their own islands of competence which helped them adjust to a rapidly changing environment. The students in the study displayed their own degrees of readiness to change based on the five stages of the Stages of Change/Transtheoretical Model. The stages are precontemplation, contemplation, preparation, action, and maintenance (Prochaska & DiClemente, 1982). Examples include the students' consideration of coming back to the region, their decision to resume classes, contacting the college to check course availability, course enrollment, and class participation. The students also had strong ties to the community and were seeking a return to normalcy or as the students stated, the "new normal." For example, Mark revealed the following:

> Nunez is part of the community. So even if you're in elementary, middle, high school, or college, if you're in that particular town, that's the town you grew up in and that's your sense of normalcy. If you don't have that sense of normalcy, you're not going to succeed in school. At least for me.

Bonanno (2004) found the pathway to resilience is identified in the form of hardiness consisting of the following three aspects: being committed to finding a meaningful life purpose; the belief that one can influence one's surroundings and the outcome of events; and the belief

that one can learn and grow from both negative and positive life experiences. Through the students' ability to view the potentially stressful events as less threatening, they were able to minimize the occurrence of distress. An example of minimizing the occurrence of distress was provided by Margaret who stated as follows:

> Many people were talking about their experience and the pain was still fresh at that time so I would say, for me, to a lesser degree because I got back into my life a lot more easily than most. I feel like God closes one door but he opens a window. That was all I needed to give me strength to continue on with my life and do whatever I had to do to work problems out. You have to put it [Katrina] into perspective. You have to realize what matters most in life. That's what a tragedy like Katrina does to people. It makes them realize because if they don't, they suffer more . . . what really matters here, survival? And I feel like any kind of trauma, you can either learn from it or can suffer more. So, once you've accepted the loss, then you can learn from it. I said I have to get back. I'm close to finishing. I can't just not finish. So it was very important for me to finish this stuff, especially at my age.

An example of the belief that one can learn and grow from both negative and positive life experiences was provided by Chris who said:

> I feel faith can help you bounce back, you know, if you can make sense of it all. I think there's times where I feel beat up and just exhausted and tired, but you know, if you have the faith to fall back on, then it's just one more little thing that helps you. I wanted to take something negative and make something good so I opened up another business and I make a lot of stuff like

> a Katrina cross made from castings that were once under water and damaged and rusty. And it's proof right here that you can do something positive from something negative. It's been rough, but you know, we're getting by.

Brad also shared his views regarding negative and positive experiences:

> Katrina forced me to face a lot of realities that I really wanted to deny and keep buried and as far away as possible. Without a doubt, I feel that Katrina has affected me psychologically so much that it pulled me through the ruts in my life. Now I think after Katrina, it's kind of slapped me in the face and it's kind of like, hey, wake the hell up and do something.

The comments made by Margaret, Chris, and Brad are examples of Goldstein's (1984) person of "principle" which refers to the ideology and morality learned as family members which in many instances, resulted in a renewed sense of spirituality with regard to the students' current circumstances. Another student, Chris, revealed:

> We were pushed to desperateness in a lot of ways. Our business was flooded and we rebounded from that. And, I think it gives you skills. It's given us skills to decide if something happens in the future, whether it's as big as Katrina or bigger, you know how to make a definitive decision.

Collectively, the students' comments coincide with Brooks and Goldstein's (2004) definition of resilient individuals which include those whose attitudes about themselves determine their actions and skill development thus providing justification that individual resilience is a valid theme. The students' individual resilience was helpful in their post-disaster academic integration which is discussed in the subsequent section.

Post-Disaster Academic Integration

Post-disaster academic integration refers to the students' learning experiences post-Katrina. The students suggested to me post-disaster academic integration occurred as a result of their post-disaster academic experiences because they shared common information, their post-disaster perspectives, and their educational values with other members of the Nunez scholastic community. The students' learning experiences contributed to their academic resilience which is defined as the ability to utilize education to recover quickly from setbacks by continuing to attend class in the face of adversity. This theme is validated by researchers such as Tinto (1993) who found integration in the academic sense results from personal affiliations and the daily contact among different members of society; in nonresidential settings, contact comes from within the classroom which serves as a primary catalyst for student-faculty interaction. In this particular situation, the classroom contact came from the post-disaster environment. For example, Brad stated the following:

> Nunez to me itself is an icon and, uh, a watermark in my life. It'll always be this essential bookmark. Every college is pretty much the same. It's a building, you have your books, but your teachers make the campus. It's definitely about keeping the familiarity.

In addition, the Web Frequency Index of Words revealed the following: the word "classes" was mentioned 75 times; the word "school" was mentioned 118 times; and the word "Nunez" was mentioned 54 times. The context of the words "classes" and "school" specifically referred to attendance at Nunez Community College. An example of post-disaster academic integration is provided by Alice who stated:

> I do like coming here [Nunez] because it's little classes and that's what I

need. School kept everything off my mind and you know, brought me somewhere else to keep me focused and try to pursue what I wanted, but I never got there yet.

The students' learning experiences included both classroom and online courses. The responses to online learning were both positive and negative. In fact, there were just as many positive as negative responses regarding online learning. The courses offered online immediately following Hurricane Katrina symbolized that the college was indeed operational and attempting to resume operations. Technology was a means of communication to locate students and did have an impact on the ability to "connect" with the campus. Due to the fact there were just as many positive as negative responses to online learning, it is reasonable to assume online courses did play a role in the return of the students to the college. Resuming studies was a vital link in helping students adjust to the new environment as they coped with their post-Katrina lives. Although the students tried to regain a sense of normalcy after the hurricane, it is significant to note that many students stated they preferred to be in an actual classroom as opposed to online courses.

Regarding online classes, a majority of the students who participated revealed that they had difficulty concentrating online, they preferred being with the teacher and other students in a physical classroom, grades were impacted negatively, or they did not have regular access to a computer or the Internet. Some students withdrew from the classes. For those students who had never participated in an online course prior to Hurricane Katrina, they were forced to navigate through the online experience if they wanted to resume their studies until the campus was fully operational. Margaret stated:

You have to study twice as hard for online classes and learn how to get

> around on the BlackBoard properly to take your exams and get your lecture notes and keep up with everything you're assigned. It took a bit more concentration and time on my part. When you go to a regular class, you show up, get what you need and can immediately address any problems without having to wait for an e-mail response.

Students such as Harold preferred the traditional classroom experience because it is more personal. He stated, "I really like the interaction with the teachers." In addition, Bobbie commented she does not like online classes because there is no one-on-one experience with the teacher. Tinto (1993) found students who become involved with other students and faculty are more inclined to develop values related to involvement with other individuals. As a consequence, it increases the likelihood that students will appreciate the need to be involved in the future. Tinto (1997) also found high amounts of involvement prove to be an independent predictor of gains in achievement.

When the campus reopened five months after the hurricane, students who commuted from other parts of the metropolitan area had difficulty getting to class upon return to the campus because some roads were still not accessible. There was difficulty in acquiring textbooks, locating classrooms in trailers, studying in FEMA trailers, and locating their friends. It was a huge relief to the students to be in the company of many of their former teachers.

In the region where the tsunami struck in 2004, Schultz (2007) stated members from the International Rescue Committee observed that the teachers and students who gathered together right after the tsunami showed signs of resiliency and an ability to "bounce back." The classroom environment became a place to build resilience for the students who felt more optimistic when they interacted with the teacher thus forgetting about the devastation. This

finding was attributed to being connected and sharing ideas which is also applicable to the students who returned post-Katrina. For example, Pamela stated:

> Katrina gives you a different outlook on how things can be turned upside down so fast. To go somewhere else and to live where you haven't lived before, it's different. When I returned to school, it took me away because of all you had to deal with back home. It kind of took you away from things. One of the classes I had was a speech class so I was able to voice my opinion and write stories and talk about it and get other people's input. School was a distraction. It played a big part.

Other researchers also validate the value of rebuilding activity. Vale and Campanella (2005a) contend rebuilding occurs to ensure a future and to provide a distraction from the loss and suffering. The students in the study revealed by sharing common information and their first-hand perspectives of post-disaster recovery with their peers in the classroom, it increased the value placed on their educational and occupational goals. Post-Katrina student return to college was also a distraction from the loss and emotional pain the students were experiencing.

Schneider (1995) found people have to comprehend their environment and "make meaning" to develop reasonable explanations for their dilemma. New activities (such as resuming studies) and behaviors are vital to adjust to the new environment as individuals attempt to cope with the situation. The students in the study made meaning of this particular dilemma through resuming their studies and creating new or continuing pre-Katrina academic goals. Boin, Hart, Stern, and Sundelius (2006) revealed once meaning is assigned to the event, eventually the next task becomes "terminating" which is returning to a routine and a sense of normalcy. Regular class attendance post-Katrina was a sign of establishing some type of

normalcy in spite of the surrounding chaos. It represented the "terminating" phase for the students.

In this study, student return represents more than the attainment of a certificate or a degree. It is symbolic of resilience characteristics which demonstrate to themselves and to the rest of the world that they have achieved under impossible circumstances. According to the American Psychological Association (2006), the development of resilience is a personal journey. The students chose to cope by making realistic plans and choosing academic fulfillment as a part of their personal journeys. Vale and Campanella (2005a) state resilience entails more than rebuilding because the process of rebuilding is necessary, but not sufficient in enabling recovery.

In examining the students' academic experiences, an unexpected finding was that the students placed many of their hopes and expectations for a brighter outlook on the institution. By viewing a single educational facility as a sort of "lifeboat" it places a tremendous burden on the college. In a post-disaster environment, it is not easy to replicate the kinds of services required by students in a normal scenario. The students' academic experiences resulted in the identification of post-disaster academic integration as a theme. The next theme, post-disaster social integration, describes the students' social experiences following Hurricane Katrina.

Post-Disaster Social Integration

The theme, post-disaster social integration, refers to the social integration the students experienced by being with others who also experienced the disaster. According to Tinto (1993), when an individual develops strong and effective social ties primarily as a result of daily interaction with other members of a community, social integration occurs. The students suggested to me that connecting with others was an important part of their healing process,

therefore, post-disaster social integration qualifies as a theme. For example, Margaret stated the following:

> I was so attached that I needed to be here and see their faces because I needed that type of support—that they were struggling as much as anyone else was struggling, to create normalcy, to create a feeling of, it's going to be O.K.

Margaret's views were shared by Ahmed who said:

> I didn't realize that being around people was actually healing for you. For me to be in a place, to be in a classroom where everybody in the classroom would do the exact same thing. Minor variances were there but basically everybody had their Katrina stories. All were tragic. I mean knowing that other people around you went through the exact same stuff and are going through the same things, that helps a lot.

Social integration was a recurring theme throughout the students' comments and this finding is supported by research. Tinto (1993) contends integration in the social sense comes from sharing values commonly held by other members of society. Bobbie stated, "School gave me a goal and it helped me to deal with the disaster because I knew I wasn't the only one going through it." Astin (1993) also found interaction with peers has an impact on growth and matriculation during the undergraduate years resulting in both psychological (individual) and sociological (group) influences. Astin refers to the psychological impact as dealing with the identification and affiliation with those who share similar beliefs and sociological impact as the peer influence to follow the group based on conforming to the group's beliefs. Pamela provided an excellent example of identification and affiliation in the following statements:

> When Nunez got in touch with me, it was good. It was something good to say that the school was back up and they were trying to get in touch with everybody and find out if you were coming back to school. It made me think that they were really concerned about their students, you know, to let you know that the faculty also went through this terrible storm and they still kept us in mind. So it made me feel good.

In addition, Bobbie stated:

> Nunez has always been a great community college and I knew in my heart that the staff will try to make something work. And they also work with you because, you know, everybody was going through it. Being here for your students is number one. You have to have an open heart to your students because after you do that, you set a pattern and the word goes out that, hey, these people really care and they're going to be there for you.

The psychological and sociological impact of peer interaction had a positive influence on the students in the study. The students were all trying to adjust to the "new normal" of post-Katrina life by sharing their individual experiences which helped them deal with the effects of the disaster. Brooks and Goldstein (2005) offered suggestions to deal with the despair, frustration, and anger for those whose lives were shattered in the hardest hit areas of Hurricane Katrina. They suggest moving away from the "why me" attitude focusing time and energy on those things which can be controlled. As a result, the students who returned to college were able to obtain comfort and strength by connecting with other people, religion, ideas, and causes. This theme is also validated by Vale and Campanella (2005a) who found social relations that are inherit in schools, workplaces, shops, places of worship, and recreation are all part of the

reconnection process. They believe rebuilding is just as much about networks of people as it is about building bricks.

According to Stephenson (2006), characteristics of a resilient individual include a positive attitude; cognitive flexibility; a personal moral compass with core beliefs from which they cannot be shaken; a role model to whom they can look up to; an ability to face their fears; active coping skills; and a good social network. The students' post-disaster social experiences at the college did provide students with a social network. Alice stated, "Sometimes they [students] need to go to talk to somebody and need to get it out." Brad provided the following example of facing one's fears:

> School definitely helped me deal with the effects of the disaster. It makes me focus my time at school. I sit there reading my books and my notes. It gives me something to do besides sit around and wonder what's next, you know, what happens if another Katrina comes. What would I do? What happens? I sit around and all these negative thoughts go through my head. School – it's definitely given me a reason to not stop and think about the negatives.

The personal day-to-day interaction with others provided the students with a sense of belonging, gave them a sense of strength, and gave them hope thereby making education a common catalyst for social membership. The post-disaster social integration provided by the faculty, staff, and other students is an integral part of the students' individual recovery. The students were comforted by being in the company of others who also shared their frustrations adjusting to a post-Katrina world.

Due to the fact there are few studies to examine students in post-disaster circumstances, Maiolo, Whitehead, McGee, King, Johnson, and Stone (2001) believe the lack of any

systematic research on how people differ from other members of the community in their post-disaster experiences means it is not possible to learn how people are likely to recover. This study suggests the social networking provided by the college enabled the students to persist in their educational and occupational goals which had a positive psychological impact on student return. Post-disaster social integration appears to assist people in recovery and is a topic worthy of further exploration.

According to Brooks and Goldstein (2004), connectedness is a "life force" and is associated with resilience. Moreover, an individual who is connected has a sense of security and feels safe. The students in the study experienced social integration and as a result, felt a sense of connectedness with the college. Such connections provide psychological and material resources which assist in dealing with stress (Goldstein, 2006).

Both academic and social integration have been explored in the literature. However, Tinto (1997) believes academic involvement appears to be more important than social involvement for older students attending two-year institutions. The students' interview transcripts indicated an almost equal level of importance of their academic and social experiences. It would seem in a post-disaster environment, social integration has an elevated role in student return thus contributing to the students' determination which is discussed in the next section.

Determination

The next theme, determination, refers to the students' desire to achieve their educational goals, their occupational goals, and their motivation to achieve such goals. Determination also encompasses the confidence the students had in college administrators to resume campus operations so that they could continue their programs of study. The students' comments justified determination as a theme. For example, Feng stated, "I was almost done, so, I thought

I might as well come back and finish it. There were some issues with course availability, but I've pretty much got it done already." Brad also demonstrated his determination when he said, "My education is the most important thing to me right now and finishing and finally picking a major and actually sticking through it."

The disaster victims' panorama included an understanding of what happened. Literature states the magnitude of the disaster and the interpersonal interactions among the population affected contribute to the desire to return to normalcy. The students took the necessary steps to respond to the situation such as returning to traditional norms including college attendance. As a result, the students' comments indicated proof that determination is indeed a theme of this study. The students demonstrated determination through their individual resilience characteristics as described by Brooks and Goldstein (2004) in the following areas: feeling in control of one's life, fortifying their own stress hardiness, possessing solid problem-solving and decision-making skills, and establishing realistic goals and expectations.

The students who returned to college took control of their lives and fortified their stress levels by deciding to finish their academic goals. The students fully believed the college would return in some capacity and view the college as an anchor of the community. Once the college resumed operations, the students were confident they would be able to reach their educational and occupational goals. Academic fulfillment is part of their personal recovery journey. An example of fortifying one's stress hardiness can be found in the statements by Ahmed:

> I think education to me just means going forward. I'm always trying to go forward. So that's why I always thought school and an education was going forward rather than staying where I'm at or stand still or even go backwards like a lot of people do.

In addition to Ahmed, Margaret said, "Getting back to school was always on my mind; it was just deciding when." Furthermore, Feng stated, "If it wasn't for the hurricane, I don't think I would have stepped into the business field."

Determination also refers to the confidence the students had in Nunez Community College leaders in their efforts to rebuild the campus. According to Pascarella and Terenzini (2005), a bond develops between student and institution when students have positive interactions with faculty members. Another factor which could have contributed to the students' determination is the charismatic bond of Nunez leaders. Boin, Hart, Stern, and Sundelius (2006) found the charismatic bond between leaders and followers might be relevant in the identification of how leadership tasks are accomplished. Moreover, Tinto (1993) stressed the meaning students attach to community membership is related to a particular institution's culture and the value the institution places on student persistence. However, Hurricane Katrina was an external force which tested the organizational culture of the college. Nunez Community College administrators exhibited what Vale and Campanella (2005a) refer to as "narratives of resilience being a political necessity." In essence, the government must restore confidence in its ability to handle the destruction of a community. This action is vital because urban rebuilding symbolizes human resilience thereby ensuring a future and providing a distraction from the loss and suffering (Vale & Campanella). Chris stated the following:

> I never had the fear that they [Nunez Community College] would stop running. Maybe the building, but not overall. I knew that they would be up and running in some form or another. They're too much in the community. I feel like they care about the community, so I feel that they would have found a solution to the problem.

Nunez Community College leaders were determined, willing to take risks, and used innovation in acquiring resources following Hurricane Katrina. There was an emphasis on being the first to acquire new resources to make certain the institution was both vital and capable. Cameron and Ettington (1998) refer to such interpretative strategies as a culture of "adhocracy." It would appear in this case, the culture of adhocracy, where innovative leaders are creative and utilize a prospector-type strategic orientation, was effective.

In addition, Leonard (2008) believes some post-recovery areas after Hurricane Katrina were successful because existing local leadership possessed the talent to come together, figure out what to do, evaluate progress, reach out to outside organizations, and get the valuable resources they needed to advance the recovery efforts. As a result, the students were able to resume their pre-Katrina educational plans when the campus was partially restored. The students and faculty were encouraged by the ideological appeal of the reopening task. The participants in the study believe the college's determination in continuing on for the students influenced them to reflect that same determination to continue on as well. Students such as Harold revealed the following regarding his return to Nunez:

> I've always been the type of person that strives to just learn more things and to get a higher education. I think they [Nunez Community College] did a pretty good job because it was, honestly, one of the first places down here that reopened. I think there were a lot of people here who wanted to finish their education. It's like anything - once you start in one place, you tend to want to finish up in that place. And people coming back to do that made more people able to work around in the area.

Mark also showed his confidence in the college by stating:

> I think it's a very resilient community [St. Bernard Parish]. Obviously, with the community so large and all of our refineries, you need a trade school and you need a community college. So I knew it was going to come back; it was just a matter of time.

Even with the inconveniences, Jeffrey was determined to return to Nunez Community College to better himself by seeking an education to improve his employment choices. Moreover, Alice believes the college came back in a timely manner and was impressed by the college's determination to contact former students following the hurricane. She understands that progress is hard and one can only do so much in so little time.

Following Hurricane Katrina, every building of Nunez was damaged by water and the college was forced to rebuild its campus while continuing academic programs at the same time. However, the students revealed a level of determination relating to their educational and occupational goals and their desire to achieve them. The students had confidence the college would reopen in some capacity. Once this occurred, the students were confident they would be able to reach their educational and occupational goals. This could be attributed to the students' desire to achieve their own personal recovery of which education was a part of along with their institutional and educational commitments.

Evidence of the students' determination can be found in a *Community College Week* publication where Nunez Community College was named the eighth fastest growing two-year public college in the "under 2500" category with a 35.5% increase in students from Fall 2006 to Fall 2007 (Payton, 2008). Between Fall 2007 and Fall 2008, Nunez recaptured 71.1% of its pre-Katrina student enrollment as indicated in Table 3.

Table 3

Nunez Community College Student Enrollment

Nunez Community College Student Enrollment

Fall 2004	Fall 2005	Fall 2006	Fall 2007	Fall 2008
2,339	----------	1,064	1,372	1,664

Source: La. Board of Regents' Statewide Student Profile System

In the Fall 2009 semester, 1,836 students were enrolled representing 78% of the college's pre-Katrina enrollment (Pope, 2009). Enrollment numbers for the Spring 2010 semester increased to 1,848 students (LCTCS, 2010). This statistic could suggest students are focused on their academic pursuits which might be helping them deal with the catastrophic losses.

The students' confidence in the college was reinforced by the results of the reaccreditation efforts of college administrators in August 2009. The Commission on Colleges of the Southern Association of Colleges and Schools (SACS) reaffirmed the accreditation of Nunez Community College (Payton, 2009). The chancellor, Dr. Thomas Warner, credited the hard work and dedication of the Nunez faculty, staff, and administration as well as their team effort. He also acknowledged the resiliency of the community of which Nunez played a substantial role in its recovery. Although the students resumed their studies at the college, this action did not prevent the students from experiencing anxiety concerning the future.

Anxiety About the Future

The last theme of the study, anxiety about the future, was the result of the students' skepticism regarding perceived impending events resulting from the storm and its aftermath. Post-Katrina students in this study are experiencing anxiety about the future. This finding supports the resilience traits exhibited in the students' islands of competency and personal

expectations of themselves and the college. Due to the fact the students are filled with anxiety concerning the future, it makes them more academically resilient and strengthens their personal goals. The human factor in disaster threats cannot be ignored and is prevalent in the students' views.

According to the U. S. Department of Homeland Security (2006), the Extended Parallel Process Model (EPPM) suggests that individuals who feel threatened respond through either danger control (prepare or protect) or through fear control (denial, escapism, or rationalization). The students seem to be engaged in the danger control mode where they are preparing and protecting themselves against another hurricane in the future. It might be useful to have homeowner's insurance and flood insurance as protective measures. However, education represents "occupational" insurance to ensure long-term sustainability should their lives be disrupted in a similar manner. The students are focused on their occupational goals in a way which was not as prevalent before the hurricane struck.

Prior to Hurricane Katrina, the students made choices regarding their courses of study based on their interests at the time. However, Hurricane Katrina was a life-altering event which gave them a real sense of urgency to plan for the future. The students' prior educational goals were challenged and they reconsidered their plans for the future. This action is indicative of a personal preparedness plan.

The students suggested to me they are anxious about the future due to the loss of their homes, possessions, and general chaos. Moreover, the students are still traumatized by the devastation of the community and feel they are in danger of being forgotten. Mark stated, "Don't forget us down here. It's not over." Furthermore, Troy is also concerned and said, "Just don't forget us."

Research indicates the students who did not experience as much personal devastation are suffering from "survivor guilt." According to the U. S. Department of Veteran Affairs (2006), adults who survive a traumatic event might experience survivor guilt and feel less enthusiasm, have no energy, and have trouble enjoying normal life experiences. In the Web Frequency Index of Words, "Katrina" was mentioned 109 times and the word "hurricane" was mentioned 43 times. Vale and Campanella (2005b) found trauma continues long after the physical elements of a disaster have been fixed. Norris, Byrne, and Diaz (2006) also found disasters have an effect on entire communities and not just selected individuals.

Brad's views describe just how anxious he is about the future:

> My grades did go down right after Katrina. I was attending an out-of-state college and I couldn't focus on anything. I couldn't study. I couldn't spend six minutes in a book. I was always looking online at pictures of Chalmette and Meraux. It was a horrible semester. Because of Katrina, I realize now the mortality of my life as well. I mean I could wake up tomorrow and be dead. There could be another Katrina coming, you know.

In addition to Brad who remains anxious regarding future events, Chris noticed the effect of Hurricane Katrina on the entire community when he said:

> I just find the people are a lot different in St. Bernard. A lot different. I mean I'm sure we are all different from going through it, but I find personalities are different with more depression than I've seen before. And St. Bernard just has not come back as quick as it should. It's the death of a city. I think a lot of the people that made St. Bernard are not here anymore and a lot of people have moved

> in, but not happy, perky people. A lot of people are going through the motions, just kind of getting through on a day-to-day basis. So hopefully, they'll find their fire again.

Pamela added, "But the truth of the matter is I'm kind of cautious now. I mean more so than I ever was before. About anything. I'm very cautious."

In Louisiana, more than 26,000 students from Louisiana's public colleges did not return the year following the hurricane (Southern Education Foundation, 2007). Furthermore, according to the U. S. Department of Homeland Security (2006), if a person experiences fear through denial, they either do not know what the recommended actions are to be taken or they do not believe the suggested protective measures will be helpful. This finding is in reference to how people process threat severity and threat susceptibility. Post-Katrina students feel threatened by the possibility of another hurricane. In fact, Ahmed revealed the following:

> I don't know what I was thinking, but the whole people's mentality changed afterward. I saved up some money and I was going to buy an expensive product which was a TV and I automatically said to myself, if I have to leave fast, I don't think I'm going to be able to take this with me. After Katrina, I have a suitcase next to my bed at all times. But the truth of the matter is I'm kind of cautious now. More so than I ever was before. About anything. People were in denial about a lot of things and I guess I was with those people. You kept pretending that it was like, oh, my life was the same, where I should have been before.

A post-Katrina report on pre-disaster planning prepared by the Council for Excellence in Government and the American Red Cross revealed a noteworthy theme. According to Hart

(2005), the highest percentage in the U. S. of people who have done a great deal or some things to prepare for a disaster are those who reside in the South with 74% of people indicating they have made preparations in advance of a potential threat. Moreover, 49% of Southerners feel they are less likely to think that they will escape a disaster (Hart). The students' comments indicated they feel it is likely another hurricane will occur and disrupt their lives.

Young, Ford, and Watson (2006) found disaster survivors have the greatest risk for severe stress symptoms and continuing readjustment problems after witnessing experiences during or after a disaster. Examples of experiences include extreme environmental or human violence or destruction; loss of home, valued possessions, neighborhood, or community; loss of communication with or support from close relations; intense emotional demands; extreme fatigue, weather exposure, hunger, or sleep deprivation; extended exposure to danger; and exposure to toxic contamination.

Each of the students in the study had traumatic experiences including some of the experiences described above as a result of the hurricane which could have contributed to their anxiety about the future. Harold stated that Hurricane Katrina gave him a reason to want to learn more and to obtain an education so that if a hurricane happened again and he had to relocate, he would have a better chance of finding a decent job.

It is possible the students' anxiety is an extension of the views of local leaders during Hurricane Katrina. In an interview for the *New York Times*, St. Bernard Parish Sheriff Jack Stephens commented on the minimal federal assistance immediately following Hurricane Katrina. According to Chan and Alford (2005), Stephens stated, "I have Royal Canadian Mounties who have gotten here faster than the federal government" (p. 3). Stephens was referring to the members of a search-and-rescue team sent from the municipal government in

Vancouver, British Columbia. In addition to the comments made by the sheriff in 2005, the Fire Chief of St. Bernard Parish, Thomas Stone, stated, "I will never again tell people that help is on the way. It's not coming" (p. 1). Although the students indicated their confidence in the leaders of the college, their disaster victims' panorama regarding the future is filled with anxiety.

Anxiety about the future was the last of five themes which resulted from the data collected in the study. The analysis of the five themes led me to conclude that when the students returned to the area to persist in their studies, they were seeking some type of connection to the past and a means to experience coping which supports the conceptual framework. Hallowell (1991) states connectivity is beyond one's own self and involves being part of a larger phenomenon. The results of the study indicate there is a link between connectivity and resiliency.

I found it necessary to create a table which displays the themes from the data analysis, examples of how each theme is represented in the conceptual framework, and the literature which validates the findings. As a result, a thematic analysis was developed. Table 4 is a thematic analysis which demonstrates the links between the themes derived from the data and the institutional and individual factors listed on the conceptual framework. The table is followed by a detailed explanation of how each of the above-mentioned areas is linked with the findings of the study.

Table 4

Thematic Analysis and Resiliency

Themes	Original Conceptual Framework	Supportive Resilience Literature
1. Individual Resilience	Person of Faith (*Spirituality*) (**Goldstein, 1984**)	Ability to face one's fears by feeling in control of one's life (**Brooks & Goldstein, 2004**)
2. Individual Resilience	Person of Mind (*Thoughts/Feelings*) (**Goldstein, 1984**)	Building islands of competence (**Brooks & Goldstein, 2004**)
3. Post-Disaster Academic Integration	Academic Integration (*Academic Performance*) (**Tinto, 1993**)	Cognitive flexibility for problem-solving and decision-making; active coping skills (**Brooks & Goldstein, 2004**)
4. Post-Disaster Academic Integration	Academic Integration (*Faculty/Staff Interactions*) (**Tinto, 1993**)	Role models to look up to (**Brooks & Goldstein, 2004**)
5. Post-Disaster Social Integration	Social Integration (*Peer Group Interactions*) (**Tinto, 1993**)	Good social network (**Brooks & Goldstein, 2004**)
6. Post-Disaster Social Integration	Person of Community (*Membership*) (**Goldstein, 1984**)	Displaying effective communication capabilities (**Brooks & Goldstein, 2004**)
7. Determination	Person of Principle (*Values*) (**Goldstein, 1984**)	Commitment to a meaningful life purpose (**Bonanno, 2004**)
8. Determination	Person of Principle (*Values*) (**Goldstein, 1984**)	Personal moral compass with core beliefs and values (**Stephenson, 2006**)
9. Anxiety About the Future	Commitments *(*Occupational Goals*)	Establishing realistic goals and expectations (**Brooks & Goldstein, 2004**)
10. Anxiety About the Future	Commitments *(*Occupational Goals*)	Belief that one can influence one's surroundings and the outcome of events (**Bonanno, 2004**)

*Revised Conceptual Framework

The first theme listed in the thematic analysis is *individual resilience* which is represented in the conceptual framework as a "Person of Faith." Faith is a characteristic of the "self" described by Goldstein (1984) as a method for coping. This aspect of self guides us how to live and find meaning in the present. Through guidance and hope, spirituality helped the students to cope with the difficult challenges of a post-Katrina environment. As a result, the students used their spirituality to face their fears and establish control of their lives. They took control by returning to college and deciding to finish their academic goals.

The second theme in the thematic analysis also includes *individual resilience* and is represented in the conceptual framework as a "Person of Mind" which encompasses an individual's thoughts and feelings. Goldstein (1984) found this aspect of the self deals with one's intentional representations of experience combining personal, familial, and cultural interpretation. The students built their own "islands of competence" (Brooks & Goldstein, 2004) which identified an area of strength to experience dignity and a sense of accomplishment. The students accomplished this by fulfilling their educational goals.

The third theme in the thematic analysis, *post-disaster academic integration*, is identified on the conceptual framework as "Academic Integration." Tinto (1993) defines academic integration as the result from sharing common information, perspectives, and values with other members of a scholastic community. Academic performance is a vital factor in student success. Brooks and Goldstein (2004) found resilience characteristics include cognitive flexibility for problem-solving and decision-making as well as active coping skills. Post-Katrina students had to overcome many barriers to attend classes and maintain academic success. Students had to secure suitable housing, find transportation, locate textbooks, and figure out how to resume their studies.

The fourth theme in the thematic analysis, *post-disaster academic integration*, refers to faculty and staff interactions and is symbolized on the conceptual framework as "Academic Integration." Faculty and staff assisted the students as they coped with the chaos of the surrounding environment. Brooks and Goldstein (2004) found people with a resilient mindset have role models they look up to. People gather strength from having an emotional connection with others who are charismatic and provide hope. Nunez Community College faculty and staff fulfilled this role for the returning students.

The fifth theme in the thematic analysis, *post-disaster social integration*, is represented on the conceptual framework as "Social Integration" which is defined by Tinto (1993) as when an individual develops strong and effective social ties primarily as a result of daily interactions with other members of a community. The students interacted with their peers who shared similar goals while simultaneously bonding with others who were facing the same day-to-day challenges. The students suggested to me that connecting with others was an important part of their own healing process. Brooks and Goldstein (2004) believe the establishment of a good social network is a desirable resiliency trait.

The sixth theme on the thematic analysis, *post-disaster social integration*, signifies a "Person of Community" on the conceptual framework. Goldstein (1984) believes a person of community symbolizes membership which is how the social self gains shape. According to Goldstein, the person of community represents our identity as a member of a family and cultural group. This sense of belonging influenced the students' self perception as well as how they are perceived as members of a larger social collective consisting of people who have experienced the effects of a natural disaster. As members of this group, the students displayed effective

communication capabilities. Brooks and Goldstein (2004) recognize effective communication as a characteristic of a resilient individual.

The seventh theme on the thematic analysis, *determination*, is identified on the conceptual framework as a "Person of Principle." A person of principle refers to the value-based process we engage in to make decisions. Based on culture, the person of principle is an advocate of the ideology and morality learned as family members (Goldstein, 1984). A number of students in the study indicated it was important to them to be near their family members as a support structure. Bonanno (2004) found being committed to a meaningful life purpose is a pathway to resilience. The students in this study are committed to their academic goals and value an education so much that they were willing to endure a severe lack of community infrastructure in order to resume their studies. The students' families helped to reinforce their stress hardiness.

The eighth theme on the thematic analysis, *determination*, is also represented on the conceptual framework as a "Person of Principle." However, the values referred to in this theme deal with a personal moral compass with core beliefs. The students were coping by making realistic plans and then taking steps to implement those plans. These individuals have a positive view and have confidence in their strengths and abilities. School return has given the students meaning to this event. Academic fulfillment is a part of their personal journey.

The ninth theme on the thematic analysis, *anxiety about the future*, required a revision to the original conceptual framework which is included in a subsequent section following the study conclusions. It was necessary to include occupational goals as part of the students' "Commitments" on the framework. The students' post-Katrina experiences resulted in a new emphasis on occupational goals which was not present pre-Katrina. As a result of the hurricane,

a sense of urgency immerged as a means to prepare for the future. Businesses were closed and jobs were lost as a consequence of the hurricane. The college campus provided support of the students' new occupational ambitions. Brooks and Goldstein (2004) contend establishing realistic goals and expectations are helpful in achieving resiliency.

The tenth theme on the thematic analysis, *anxiety about the future*, is represented again as part of a student's "Commitment." However, the students have a new emphasis on occupational goals because they feel threatened by the possibility of another hurricane. The Extended Parallel Process Model suggests that individuals who feel threatened respond through either danger control or fear control (U. S. Department of Homeland Security, 2006). The students in this study are engaging in danger control where they seek to "prepare or protect" through occupational security. This action is typical of a resilience characteristic suggested by Bonanno (2004) whereby individuals subscribe to the belief that one can influence their surroundings and the outcome of events. The following section includes a summary of the results.

Summary

The results of the study after data analysis revealed the college is a catalyst for resilience. Initially, I believed that academic and social integration was a factor in student return to college. However, the literature had not demonstrated the influence of institutional factors as well as individual factors on student resilience in a post-disaster environment. Results from analysis of the themes indicate student resilience is attributed to both institutional and individual factors thus college attendance became a stabilizing force in the disrupted lives of the students because of the integration of academic and social factors.

Institutional factors refer to academic and social integration. Institutional factors also refer to commitments such as institutional and educational goals as suggested by Tinto (1993). For example, the positive experiences with faculty, staff, and class members strengthened the students' commitment to the institution and heightened the goal of college completion. Individual factors deal with thoughts/feelings, membership, values, spirituality, adaptability, strength, bouncing back, and best efforts which Goldstein (1984) attributes to the integral parts of the "self." For example, the students used college attendance as an intentional representation of their experiences to help them make sense and cope with post-disaster life. Both institutional and individual factors inform the problem of educational interruption because collectively they influence a student's decision to return to college. The study findings suggest that resilience is operating in the post-disaster environment of Nunez Community College as a result of both institutional and individual factors.

Tinto (1997) contends students in two-year institutions may be more influenced by academic involvement as opposed to social involvement. Contrary to Tinto's opinion, the findings of this study suggest academic and social integration are equally important in a post-disaster environment. Academic and social integration are important institutional components in the students' post-disaster decision making and have increased significance following a disaster. For example, when students have been displaced, their perception of integration in their institutional community is one which closely mirrors what they previously experienced. Student return to college then becomes a coping mechanism for psychological distress and represents tangible proof that the students in the study are capable of overcoming this disaster. In the view of the students in this research, their studies also provide the ability to ensure occupational security if another hurricane occurs.

The research investigated the students' lived experiences as they encountered Hurricane Katrina, being displaced, and their subsequent return to college. Hermeneutical phenomenology permitted me to identify my own method of interpretation using the research protocol as a guide. Marcelle (2002) states hermeneutical phenomenology is derived from the method established in Heidegger's *Sein und Zeit* from which human existence is interpretative. I wanted to identify the phenomenon behind resilience characteristics of students returning to St. Bernard Parish post-Katrina and whether academic and social experiences provided by the college had an impact on their individual resilience.

The phenomenon revealed in the study is that student return is the result of the students' desire to experience the safety of controlled intimacy. Goldstein (1981) found when people return repeatedly to encounter groups, it is because the group can become the alternative for the emptiness of daily living; the group has commonly shared ideologies which offer a feeling of identification and camaraderie that cannot be experienced elsewhere. Participation in a human network provides opportunities for the expression of the self as well as the opportunity to help others (Goldstein). The students integrated themselves academically and socially to confirm their sentiments and to participate in the closeness of human contact which they had experienced at the college prior to the hurricane.

In addition to the challenges faced by the students, Hurricane Katrina was a challenge of monumental proportions for Nunez Community College leaders. College officials handled "the ubiquity of crisis" in such a manner they were able to recapture the former student population and restore their disrupted academic and social networks. Their rapid recovery actions enabled students to persist academically and achieve their academic and occupational goals. Intellectual fulfillment is the last and perhaps only dominion left which cannot be conquered by Hurricane

Katrina and its aftermath. The following section concludes the last chapter of the dissertation, discussion and implications. The chapter begins with the study conclusions as well as support for a revised conceptual framework. Chapter five concludes with implications for theory, policy, and practice as well as recommendations for further research.

CHAPTER FIVE: Discussion and Implications

Introduction

The final chapter of this dissertation, discussion and implications, begins with the study conclusions as well as a revised conceptual framework. It was necessary to add occupational goals under individual factors to the original conceptual framework. The students' experiences revealed the necessity of modifying the original conceptual framework. Next, numerous theoretical implications are suggested with reference to studies in the past and the potential of the contribution of this body of literature. Chapter five also includes implications for policy and practice. The chapter ends with recommendations for further research.

Study Conclusions

The results of the study revealed post-Katrina students exhibited resilience traits consistent with the characteristics described in the literature. This study suggests institutional and individual factors significantly contribute to a student's resiliency. College attendance is a stabilizing force in the disrupted lives of the students because of the integration of academic and social factors. Furthermore, academic and social integration are equally important in a post-disaster environment. The concept of resilience allows the students to return to college where they experience connectivity through the safety of controlled intimacy. As a result, there is a positive psychological impact which helps the students to cope while they deal with the post-disaster environment. In the view of the students, the college also provides the ability to acquire occupational security if another hurricane occurs.

The study investigated the following question: Why did students return to a disaster-stricken environment to continue their studies at Nunez Community College? The secondary research question was as follows: How did the students deal with the effects of the disaster?

The primary research question is answered as follows:

Why did the students return to a disaster-stricken environment to continue their studies at Nunez Community College? The students returned to finish what they started; they wanted to feel safety in a controlled environment; they wanted to experience something normal; they wanted to prove they could overcome this disaster and complete something that could not be destroyed by a hurricane; they wanted tangible evidence of recovery in an effort to rebuild their lives; they wanted an anchor to act as a beacon for a hopeful future; they wanted the familiarity of the Nunez Community College faculty and staff as well as fellow classmates; they wanted to return to their former community of St. Bernard Parish even if some students no longer reside there; and college attendance represents some type of occupational security in the event another natural disaster occurs.

The secondary research question is answered as follows:

How did the students deal with the effects of the disaster? The students dealt with the effects of the disaster by sharing their experiences with people who understood their losses; by class attendance; by using the classroom as a distraction to deal with psychological distress; by using an educational goal to give them something to strive for which could not be measured in terms of physical losses; by their spiritual beliefs; by relying on charismatic leaders of the college; by relying on the values instilled in them by their immediate and extended family members; and by exhibiting resilience characteristics which enabled them to build their own islands of competence.

The following section discusses the necessity of revising the original conceptual framework.

Revised Conceptual Framework

This study utilized a Student Resilience Model as the conceptual framework. The purpose of this conceptual framework was to provide a model to guide the research project. In my attempt to understand the impact of resiliency on the students' return to college, I found it necessary to modify the original conceptual framework.

The original framework revolved around institutional factors and individual factors. *Institutional factors* refer to academic and social integration. *Institutional factors* also refer to commitments such as institutional and educational goals as suggested by Tinto (1993). *Individual factors* deal with thoughts/feelings, membership, values, spirituality, adaptability, strength, bouncing back, and best efforts which Goldstein (1984) attributes to the integral parts of the "self." These factors inform the problem of educational interruption because collectively they influence a student's decision to return to college. However, the study results revealed there was indeed another factor which needed to be considered as influencing such a decision. The data suggests *occupational goals* became an individual factor which needed to be included in the framework.

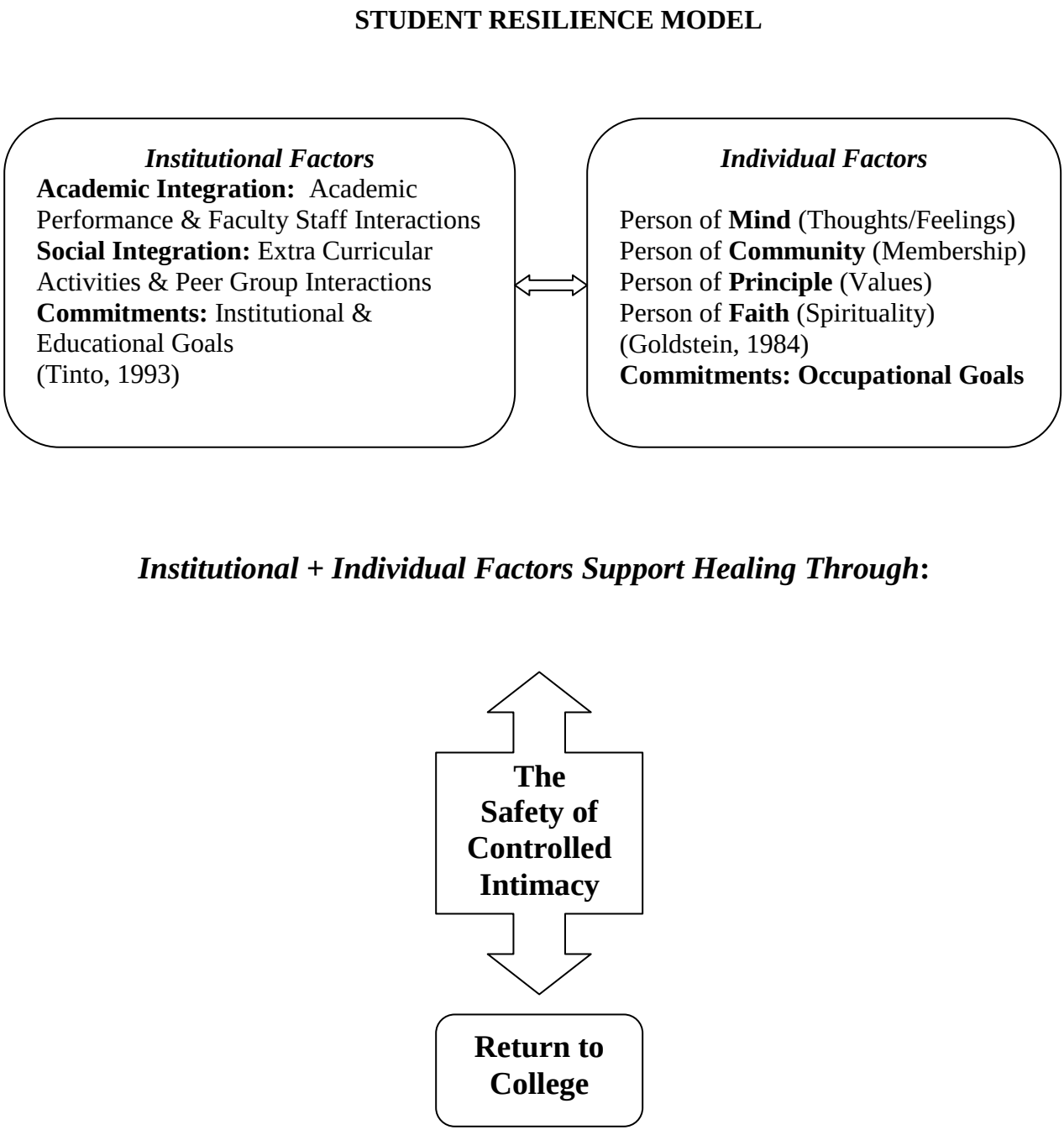
Post-Katrina students are skeptical regarding the future and their anxiety led me to explore the role of occupational goals in their decision-making. The students believe an education acts as "occupational insurance" to insulate themselves against future destructive events. The students have placed a new emphasis on occupational goals because of their anxiety about the future. For example, businesses closed and jobs were lost following Hurricane Katrina and occupational choices increased in relevance. The students believe they must be adequately prepared in the event there is another episode of the magnitude of Hurricane Katrina.

It is necessary, however, to delineate between educational and occupational goals in the framework. An educational goal is referred to by Tinto (1993) as part of a student's commitment. Prior to Hurricane Katrina, the students' educational goals were well defined. They were presented with choices and selected courses of study based on their interests at the time. However, Hurricane Katrina was a life altering event which catapulted the students into making critical decisions about their future occupational choices. For many students, Hurricane Katrina gave them a sense of urgency to plan for the future. Serious consideration was given to their personal fulfillment which completely altered some of the students' pre-Katrina plans.

The revised conceptual framework is a better depiction of the students' experiences which emerged from the themes within this research. Moreover, the healing occurs not just by connecting and coping, but through the safety of controlled intimacy provided by the post-disaster college environment. Goldstein (1981) found when people return repeatedly to encounter groups, it is because the group can become the alternative for the emptiness of daily living; the group has commonly shared ideologies which offer a feeling of identification and camaraderie that cannot be experience elsewhere. Participation in a human network provides opportunities for the expression of the self as well as the opportunity to help others (Goldstein). The revised conceptual framework is a more accurate representation of the students' experiences than the original model. The revised conceptual framework is listed in Figure 4.

Figure 4

Revised Conceptual Framework



Jacqueline C. Jones (2010)

Study Implications

After a natural disaster, the long-term effects on people continue long after the buildings are repaired. The following sections describe theoretical implications regarding the experiences of post-disaster students, policy implications which will assist college administrators in their disaster preparedness efforts, and practice implications based on valuable lessons learned as a result of Hurricane Katrina.

Theoretical Implications

This study addressed a gap in the literature regarding two-year institutions. Gaps in the study of student persistence at two-year institutions have been identified by researchers such as Pascarella and Terenzini (1991). They recommend studies should investigate the interrelationship between social and academic integration and how these factors might influence persistence, retention, and goal achievement. In particular, literature is scant on the post-disaster experiences of students, especially in two-year institutions. Maiolo, Whitehead, McGee, King, Johnson, and Stone (2001) revealed the lack of any systematic research on how people differ from other members of the community in their post-disaster experiences means it is not possible to learn how people are likely to recover. This study indeed shed light on how an academic community can provide a recovery vehicle for its students in a post-disaster context. Perhaps additional studies on individual and academic resilience will extend what was found here to create a more complete picture of how students are likely to recover in post-disaster contexts.

In the quantitative study at East Carolina State University, 66% of the students who participated in the survey stated they experienced no property damage and only 7% of the student body was forced to relocate (Maiolo, Whitehead, McGee, King, Johnson, and Stone,

(2001). Surprisingly, students in the survey stated school became less important to them unlike the students at Nunez Community College where education increased in importance post-Katrina. Perhaps this difference can be attributed to the fact that most of the students at East Carolina State University suffered no property damage, were not forced to relocate, and were quickly able to reconnect with their academic and social networks. The results of the Nunez study reveal reconnecting with academic and social networks post-disaster has significant influence on resiliency. However, Maiolo et al. (2001) did find gender influenced whether or not the natural disaster made students re-evaluate their life priorities as female students were more likely to desire a change than male students. In the study of students at Nunez Community College, both male and female students were equally motivated to re-evaluate their life priorities.

In the Aschenbrener (2001) case analysis of post-disaster recovery of four-year institutions, the campuses recovered in a relatively short period of time unlike Nunez Community College. The physical repair of buildings was performed quickly and with minimal inconveniences for the students attending the institutions. As a result, healing occurred much faster than expected. Students used few professional counseling services and because not all individuals suffered personal losses, personal recovery was not viewed as a primary issue. However, the students at Nunez did suffer personal losses and personal recovery was indeed a primary issue which extended the healing period. In the Nunez situation, membership in an academic community was crucial to student demonstration of resiliency.

Using Durkheim's theory of suicide, Tinto (1993) believed membership can be attained through two forms of integration, namely intellectual (academic) and social. Academic and social integration did prove to be themes in this study. Tinto (1997) also recommended further

exploration of the connection between persistence and student learning outcomes in the classroom. Tinto (1997) concluded for older students who commute to two-year institutions, early academic involvements may be more important than social involvements because the students are immersed in external communities of work and family. According to the findings of this study, social integration is just as important as academic integration in a post-disaster environment. Tinto's theory is not only applicable to the study of student departure, but also applicable to factors which keep students persisting under unusual circumstances.

Unlike the students who were relocated following Hurricane Ivan at St. George's and St. Matthew's medical schools, Nunez Community College students were forced to deal with the post-disaster environment. A psychologist at St. George's stated there was no treatment related to posttraumatic stress disorder in part because the students were immediately relocated and did not return to the campus until nearly one year after the hurricane (Ceaser, 2005). The students at the medical schools were not exposed to a post-disaster educational climate. Norris, Byrne, and Diaz (2006) found disasters have an effect on entire communities and not just selected individuals. Furthermore, those likely to experience serious and lasting psychological distress following a disaster include individuals (including Nunez Community College students) with minimal previous experience or training in coping with a disaster, secondary stress and loss of resources, and living in a highly disrupted or traumatized community.

It is apparent the post-Katrina educational climate at Nunez Community College impacted the students' resiliency. The students who participated in this study demonstrated resiliency characteristics. One of the characteristics of a resilient person is having caring and supportive relationships as well as role models capable of offering encouragement. Young, Ford, and Watson (2006) have suggested ways mental health specialists who assist survivors in the wake

of disaster reduce stress systems. Their suggestions include focusing on protection, direction, connection, and selection. An example of "protection" is when the students in the study stated they felt "safe" in the college which provided them with a sense of normalcy and a goal to focus on. Their goals provided the students with a sense of "direction." As a result, the students "connected" with others going through similar experiences. The students are, in essence, "selecting" their future by continuing their studies even while the community has not fully recovered. The educational climate which provides the opportunity to protect, direct, connect, and select contributes to student resiliency.

This study could also be useful in filling a gap in the area of the effect of individual resiliency on the impact of posttraumatic stress. Researchers such as Bonanno (2004) found that the majority of the United States population has been exposed to at least one traumatic event using criteria of an event outside of the range of normal human experience. Hurricane Katrina was a traumatic event for the students in this study. At the same time, Bonanno revealed trauma theorists have examined Posttraumatic Stress Disorder rather than the effect of resiliency. A pathway to resilience was identified by Bonanno in the form of the following three types of hardiness: being committed to finding a meaningful life purpose; the belief that one can influence one's surroundings and the outcome of events; and the belief that one can learn and grow from both negative and positive life experiences.

Other researchers have also acknowledged the necessity of examining the post-disaster environment. Vale and Campanella (2005a) reveal there have been few studies to examine urban resilience in the face of nature disasters. Their finding has numerous ramifications. For example, what is the role of technology in a post-disaster environment? What is the role of education in disaster recovery? Godschalk (2003) found the physical systems of a city must be

able to withstand and perform under the worst of conditions thus jeopardizing a slow recovery rate. Are the forced social and institutional networks following Hurricane Katrina contributing to a resilient community? Are the returning Nunez Community College students playing a historical role in urban recovery? Is student resilience following a catastrophic event part of a larger urban resilience phenomenon? Continued research in the realm of post-disaster student resilience has the potential to add an additional element to existing theoretical frameworks and impact policy.

Implications for Policy and Practice

Hurricane Katrina presented a unique set of challenges for Nunez Community College administrators. Officials had to contend with the loss of critical business functions, damage assessment, damage mitigation, salvage operations, and the physical restoration of the entire campus. Administrators had to also restore technological capabilities, maintain security, deal with insurance vendors, navigate through governmental bureaucracy, restore communications, and secure valuable reconstruction and human resources. The college's Post-Katrina Emergency Recovery Plan explores the possibility of establishing a secondary site in the event the primary site for the college is inoperable following a disaster. The plan also includes instructions for recovery time requirements, media responses, business resumption, teams for crisis/management/recovery/facility, recovery strategy, and a process for command center operations (Nunez Community College, 2008).

In addition to the aforementioned Nunez Emergency Recovery Plan, the development of policies at the state level for public institutions would be very useful in helping higher education respond to disasters. For example, post-disaster plans should include provisions for the sharing of facilities and efficient ways to cross-enroll students across public institutions.

The ability to cross-register students and a fair resolution for tuition payment between institutions would also be helpful. A common database of electronic recordkeeping would enable access to vital student records. Without the ability to recapture the student population, decreased enrollment can result in a severe loss of revenue. Institutions should be capable of locating students who desire to return to college, providing adequate facilities for a proper learning environment, and rethinking how classes are offered.

To further assist higher education institutions in their post-disaster responses, I propose all databases containing higher education student records have alternative back-up sites which could be accessed from a remote location. Older "paper" records should be scanned and converted to digital files. Faculty should be adequately trained to maintain student contact information on electronic devices such as BlackBoard or Moodle to facilitate communication in an emergency situation. Online instruction was a viable alternative as a "virtual" classroom while the Nunez campus was being reconstructed. Moreover, I suggest "Rapid Response" teams of volunteers be organized to assist students with their social needs to facilitate their school return. For example, the airline industry is known for their volunteer employees who travel to crash sites to assist the victims' families. If institutions had Rapid Response teams in place prior to a disaster, the teams could immediately organize counseling services, assist with connecting the students with their teachers, help in the acquisition of textbooks, and search for ways federal agencies might be able to assist with food/housing/transportation. Once strategic policies are developed to assist in post-disaster recovery, it has the potential to influence practice implications.

A study of post-disaster student resilience has many practical implications. Shah and Gerrity (2006) found the higher education community is no longer able to view the ability to

resume business functions as a "luxury" and that a "failure of imagination" will not excuse institutions for being unprepared for natural disasters. For example, academic institutions can be better prepared to handle challenges in student return following a disaster. By recapturing the former student population, it might be possible to help entire communities in their recovery as well as contribute to the return of the previous population. Disasters are occurring with greater frequency and the role of education in urban resilience must be not overlooked.

Perhaps policy leaders should examine the emergent norms which will inevitably unfold as humans respond to disasters. Creative leadership strategies employed by individuals in organizations such as "Adhocracy" and "Acting in Time" principles are crucial to recovery in a post-disaster environment. For example, adhocracy was evidenced by innovative college administrators who secured FEMA trailers and arranged to have them placed on the campus to house faculty, staff, and students. College officials also offered students part-time campus employment which was especially beneficial to students without transportation. An example of acting in time included the college's reaching out to other organizations for assistance in temporarily hosting college classes in remote locations.

Following Hurricane Katrina, Nunez officials had to secure the facilities. Once the facilities were secured, administrative staff also had to utilize their organizational abilities to assist students outside of the context of normal college enrollment. After the faculty, staff, and students were located, officials had to deal with immediate issues such as securing food, housing, and transportation (D. Clark, personal communication, March 22, 2008). A nonresidential two-year college is not responsible for these tasks under normal operating procedures. Furthermore, urgent needs immerged as a result of the students' return. For example, administrators found themselves searching for transcripts of students and trying to

verify financial aid records as well as graduation eligibility. There were issues dealing with articulation agreements, transfer rules, residency rules, and cross-enrollment which had to be addressed by the student services staff.

As a result of identifying the needs of post-disaster students, a Student Recovery Plan was developed and is listed in Appendix Q. In observing institutional disaster plans presently used, the focus is on building recovery as opposed to student recovery. The Student Recovery Plan begins with the declaration of a disaster. After a disaster is declared, the next step in the plan is to recapture the former student population. This might be achieved by establishing contact with students online or by use of a telephone. Once the students are contacted, it is necessary to secure student transcripts for return to the site or to advance registration elsewhere.

Presuming the buildings are inoperable, the next step in the plan is to establish an online presence to continue academic courses. Once the students make the decision whether or not to resume their studies, the students who choose to return would benefit from a "Student Relief Center." The center would assist students with their unique needs following a disaster. Unique needs are divided into the following two categories: academic needs and social needs. Examples of academic needs include transcripts, financial aid, graduation verification, articulation agreements, transfer rules, residency rules, and cross-enrollment. Examples of social needs include counseling, enrollment, acquiring textbooks, food, housing, transportation, and applying for federal help. The last step in the Student Recovery Plan is to solicit outside organizations with a social mission to aid the students. The implementation of this plan would be a great service to the students as post-disaster connectivity is vital to the well being of individuals who find themselves in disaster circumstances.

In a post-disaster environment, students view education as a "lifeboat" which is how they choose to deal with psychological distress. Moreover, students and individuals who have never relied on upgrading their occupational skills may be suddenly faced with no option other than to pursue additional outlets for employment through education. The students are seeking an anchor for the lifeboat they suddenly find themselves adrift in. Conversely, the lifeboat in which the students seek shelter must, in turn, be supported as well. A summary of the discussion and implications of the extended roles of academic institutions in individual and community recovery is included in the following section.

Summary of Discussion and Implications

If a college's goal is to educate people, then does the college get the opportunity to do more than educate after a hurricane? Is the role of a college defined by being a provider of academic, social, and occupational goals? Can an educational institution become a symbol of a hopeful future? The answer is schools take on each of the above-mentioned roles in a post-disaster scenario. However, in a post-disaster situation, the roles have increased significance with a positive psychological impact. Institutional and individual factors contribute to school return which gives a student a sense of control over their own destiny. Education has a definite role in post-disaster recovery.

College officials have a role in post-disaster recovery as well. Leonard (2008) suggests "Acting in Time" principles as the key to an effective post-disaster response as administrators are forced to recover the past, manage the present, and plan for the future. Leonard recommends rapid recovery is achievable by exploring the talents of local leaders who convene, figure out what to do, evaluate their progress, and reach out to outside organizations to secure valuable resources.

Although education is a catalyst for recovery, it has different meanings to people. For some people, it represents a lifeline. For others, it represents an occupational goal or provides them with the opportunity to serve as a distraction from the chaos and wreckage. In addition, the resumption of academic activities represents a routine and for some, an opportunity to experience healing by being in a once-familiar locale. It appears individuals process threats in the form of threat severity and threat susceptibility. As a result, they engage in self-efficacy and response efficacy activities.

According to the U. S. Department of Homeland Security (2006), self-efficacy is the belief about one's ability to perform actions that will mitigate the effect of a threat and response efficacy is the belief that recommended preparedness measures will mitigate the personal impact of a disaster. Examples include the students who evacuated and then returned to continue with their academic goals. In the students' view, an education will provide occupational security if another hurricane occurs. Perhaps Student Recovery Plans will be included in disaster preparedness efforts as colleges and universities address their own institutional needs. Clearly, there is a need to concentrate just as much on people as the buildings which house them after a disaster and further research could be beneficial to the institutions as well as the populations they serve.

Recommendations for Further Research

Natural disasters are becoming more prevalent in the United States and the entire world. A comprehensive view of post-disaster challenges in colleges and universities will be of enormous help in servicing returning students. Comprehensive studies in both two and four-year colleges and universities are necessary to address the gaps in post-disaster student return. I recommend studying the impact of student resilience on posttraumatic stress; the effects of

individual and urban resilience on students and their institutions; the role of the recovering community on students and their institutions; and more study on how students academically and socially integrate themselves into their institutions in a post-disaster environment.

Studies of this nature have the potential to be of colossal benefit to society. Education plays a continuing role in post-disaster economic recovery as well. Students who choose to "homestead" require services which in turn provide a livelihood to the businesses which were destroyed. I also recommend economic impact studies to determine if the reopening of schools following disasters propels the recovery effort. The National Academies (2006) also suggest studies are needed to compare the unique circumstances of disastrous events so that societal responses can be explored as well as how those responses coincide with planned and improvised actions. The voices of the students who return must not be overlooked in post-disaster studies. The students are the vital link in the recovery of schools and entire communities. Education serves as a lifeboat and is a stabilizing force in the disrupted lives of the students. The sanctity of learning has transformed into the sanctity of survival where the institution provides refuge, comfort, and the inspiration to persevere.

References

Adger, W. N., Hughes, T. P., Folke, C., Carpenter, S. R., Rockstrom, J. (2005). Social-ecological resilience to coastal disasters. *Science, 309*(5737), 1036-1039. Retrieved February 26, 2009, from: http://www.sciencemag.org.ezproxy.uno.edu/cgi/content/full/309/5737/1036

Ahern, N. R., Kiehl, E. M., Sole, M. L., & Byers, J. (2006). A review of the instruments measuring resilience. *Issues in Comprehensive Pediatric Nursing*, *29*, 103-125.

Albertson, N. (2007). Fire season underway, 1-2. Retrieved April 21, 2008, from the Pepperdine University Web site: http://graphic.pepperdine.edu/news/2007/2007-08-27-fire.htm

American Psychological Association (2006). *Resilience after the hurricanes.* Retrieved July 18, 2006, from the APA Help Center Web site: http://www.apahelpcenter.org/articles/article.php?id=113

Ames, D. (2009). St. Bernard bouncing back four years later. Retrieved January 2, 2010, from http://www.wwl.com/pages/5100610.php?

Arjen, B., Hart, P, Stern, E., and Sundelius, B. (2006). The politics of crisis management: Public leadership under pressure. New York: Cambridge University Press.

Arnold, A. (1999). Retention and persistence in postsecondary education: A summation of research studies. *Texas Guaranteed Student Loan Corporation*, 5. Retrieved September 30, 2007, from http://www.tgslc.org/pdf/persistence.pdf

Ashenbrener, M. S. (2001). How colleges and universities respond to natural disasters (Doctoral dissertation, University of Kansas, 2001).

Astin, A. (1993). *What matters in college? Four critical years revisited.* San Francisco: Jossey-Bass.

Barrow, B. (2007). Survey shows shift in post-Katrina population. Retrieved June 16, 2009, from The Times-Picayune Web site: http://blog.nola.com/times-picayune/2007/08/survey_shows_shift_in_postkatr.html

Beabout, B. (2008). Principals' perceptions of school leadership in post-Katrina New Orleans (Doctoral dissertation, Pennsylvania State University, 2008).

Beabout, B., Carr-Chellman, A. A., Alkandari, K. A., Almeida, L. C., Gursoy, H. T., Ma, Z., Modak, R. S., & Pastore, R. S. (2008). The perceptions of New Orleans educators on the process of rebuilding the New Orleans school system after Katrina. *Journal of Education for Students Placed at Risk, 13*, 212-237.

Bonanno, G. A. (2004). Loss, trauma, and human resilience: Have we underestimated the human capacity to thrive after extremely aversive events? *American Psychologist, 59*(1), 20-28.

Bonanno, G. A., Galea, S., Bucciarelli, A., & Vlahov, D. (2006). Psychological resilience after disaster. *Psychological Science, 17*(3), 181. Retrieved July 10, 2006, from the Psychological Science Web site: http://www.blackwell-synergy.com/doi/abs/10.1111/j.1467-9280.2006.01682.x

Brooks, R., & Goldstein, S. (2004). *The power of resilience.* New York: McGraw-Hill.

Brooks, R., & Goldstein, S. (2005). Coping with a natural disaster: The aftermath of Hurricanes Katrina and Rita. Retrieved July 28, 2008, from the Sam Goldstein Web site: http://www.samgoldstein.com/template.php?page=postings&type=articles&id=75

Cameron, K. S., & Ettington, D. R. (1988). The conceptual foundations of organizational culture. In J. C. Smart (Ed.), *Higher education: Handbook of theory and research*. New York: Agathon Press.

Cannizaro, S. (2007). Nunez community college recovering with help from FEMA, 1-4. Retrieved October 2, 2007, from the official St. Bernard Parish Government Web site: http://www.sbpg.net/sep707e.html

Carney, B. (2007). Houston mayor and Louisiana school superintendent receive profile in courage award. Retrieved July 2, 2009, from the John F. Kennedy Library Foundation Web site: http://www.jfklibrary.org/Education+and+Public+Programs/Profile+in+Courage+Award/Announcement

Ceaser, M. (2005). Lessons learned by Caribbean universities following last year's big hurricane. *The Chronicle of Higher Education, 52*(5), A13. Retrieved July 13, 2006, from http://chronicle.com/weekly/v52/i05/05a01301.htm

Chan, S. & Alford, J. (2005). East of New Orleans, heavy damage, lost lives and pleas for help. *The New York Times*. Retrieved September 6, 2005, from: http://www.nytimes.com/2005/09/04/national/nationalspecial/04relief.html

CityBusiness (2009). N. O. area jobless rate drops in November. Retrieved January 2, 2010, from http://neworleanscitybusiness.com/blog/2009/12/22/no-area-jobless-rate-drops-in-november/

Conklin, K. A. (1992). *Community college students: Where do they go and what do they do? A 5-year statewide follow-up study. AIR Annual Forum.* Paper presented at the Annual Forum of the Association for Institutional Research, Atlanta, GA. (ERIC Document Reproduction Series No. ED 349 882)

Conklin, K. A. (1997). Course attrition: A 5-year perspective on why students drop classes.

Community College Journal of Research and Practice, 21(8), 1-5. Retrieved November 15, 2006, from the EBSCO Host database.

Conner, K. M. (2006). Assessment of resilience in the aftermath of trauma. *Journal of Clinical Psychiatry, 27*(2), 46-49.

Conner, K. M., Vaishnavi, S., Davidson, J., Sheehan, & Sheehan, K. H. (2007). Perceived stress in anxiety disorders and the general population: A study of the Sheehan stress vulnerability scale. *Psychiatry Research,151,* 249-254.

Creswell, J. W. (2002). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. Ohio: Merrill Prentice Hall.

Dalton, A., Gentile, G., & Adelman, J. (2007). California wildfires force evacuations at Pepperdine University, 1-2. Retrieved October 24, 2007, from the Associated Press at http://www.startribune.com/484/v-print/story/1498331.html

Denzin, N. K., & Lincoln, Y. S. (2003a). *Collecting and interpreting qualitative materials* (2nd ed.). California: Sage.

Denzin, N. K., & Lincoln, Y. S. (2003b). *Strategies of qualitative inquiry* (2nd ed.). California: Sage.

Encyclopedia Louisiana (1998). St. Bernard Parish economy, 1-10. Retrieved September 7, 2007, from the Encyclopedia Louisiana Web site: http://www.enlou.com/econ/stbernard_econ.htm

Evans, L. S. (1984). Theoretical constructs of posttraumatic stress disorder as assessed in children in a natural disaster involving tornadoes in their communities. *Dissertation Abstracts International.* (Digital Dissertations No. AAT 3080519)

Farmer, D. W. (1990). Strategies for change. In D. W. Steeples (Ed.), Managing change in higher education: New directions for higher education. San Francisco: Jossey-Bass.

Federal Emergency Management Agency (2008). FEMA, prepared, responsive, committed, 1-6. Retrieved February 26, 2010, from the U. S. Department of Homeland Security Web site: http://www.fema.gov/about/index.shtm#1

Feldman, M., Bell, J., & Berger, M. (2003). Gaining access: A practical and theoretical guide for qualitative researchers. California: AltaMira Press.

Fields, C. (2005). Higher education in Katrina's wake. *Change, 37*(6), 1-2. Retrieved March 9, 2006, from the Academic Search Premier database.

Glesne, C. (1999). *Becoming qualitative researchers: An introduction* (2nd ed.). New York: Longman.

Godschalk, D. R. (2003). Urban hazard mitigation: Creating resilient cities. *Natural Hazards Review, 4*(3), 136-143.

Goldstein, H. (1981). *Social and learning change: A cognitive approach to human services*. New York: Tavistock.

Goldstein, H. (1984). *Creative change: A cognitive-humanistic approach to social work practice*. New York: Tavistock.

Goldstein, S. (2006). Person to person: The extended benefits of social relationships. Retrieved June 26, 2008, from the Sam Goldstein Web site: http://www.samgoldstein.com/template.php?page=postings&type=articles&id=79

Greater New Orleans Community Data Center (2009). St. Bernard Parish: Employment. Retrieved June 16, 2009, from the GNOCDC Web site: http://gnocdc.org/st_bernard/employment.html

Gunnestad, A. (2003). Resilience: A new approach to children at risk in southern African situation. In A. Gunnestad (Ed.), *Children's rights in early childhood education report*. Trondheim: Queen Maud's College.

Hallowell, E. M. (1999). *Connect: Twelve vital ties that open your heart, lengthen your life, and deepen your soul*. New Jersey: Simon & Schuster.

Halpin, R. L. (1990). An application of the Tinto model to the analysis of freshman persistence in a community college. *Community College Review, 17*(4), 22-32. Retrieved March 1, 2006, from the Academic Search Premier database.

Hart, P. D. (2005). The aftershock of Katrina and Rita: Public not moved to prepare. Retrieved July 5, 2009, from the Council for Excellence in Government and the American Red Cross Web site: http://74.6.239.67/search/cache?ei=UTF-8&p=the+aftershock+of+Katrina+Rita%3A++public+not+moved+to+prepare&icp=

Harvard Medical School (2005). *Hurricane Katrina advisory group*. Retrieved April 21, 2008, from the Harvard Medical School Web site: http://www.huricanekatrina.med.harvard.edu/presentations.php

Heckscher, C., & Donnellon, A. (1994). *The post-bureaucratic organization: New perspectives on organizational change*. Thousand Oaks, CA: Sage.

Hersey, P., & Blanchard, K. (1993). *Management of organizational behavior: Utilizing human resources*. (6th ed.). New Jersey: Prentice Hall.

Infoplease Dictionary (1997). *Survivor syndrome psychiatry*. Retrieved July 10, 2006, from the Infoplease Web site: http://print.infoplease.com/dictionary/survivor+syndrome

Insurance Information Institute (2006). Flood insurance facts and statistics, 1-4. Retrieved March 26, 2008, from the Insure.com Web site: http://www.insure.com/articles/flood

Jarrell, C., Dennis, R., Jackson, M., & Kenney, C. (2008). Academic and student affairs issues post Hurricane Katrina. *Community College Journal of Research and Practice, 32*(3), 235-250.

Kessler, R. C., Galea, S., Jones, R. T., & Parker, H. A. (2006). Mental illness and suicidality after Hurricane Katrina. *Bulletin of the World Health Organization, 84*(12), 921-1000.

Keup, J. R., Walker, A. A., Astin, H. S., and Lindholm, J. A. (2001). Organizational culture and institutional transformation. (ERIC Document Reproduction Series No. ED 464 521)

Killacky, J., & Rhoe-Collins, K. (2008). Special issue: Community and technical colleges in Louisiana and Mississippi post Hurricane Katrina. *Community College Journal of Research and Practice, 32*(3), 163-250.

Kluger, J. (2010). Haiti: After the destruction, the emotional wreckage. Retrieved January 17, 2010, from the Time Web site: http://www.time.com/time/specials/packages/Article/0,28804

Leonard, D. (2008). Leadership, crisis management, and social responsibility. Retrieved May 23, 2008, from the Harvard John F. Kennedy School of Government Web site: http://www.hks.harvard.edu/news-events/publications/insight/management/dutch-leonard

Lipka, S. (2005). After Katrina, colleges nationwide take a fresh look at disaster plans. *Chronicle of Higher Education, 52*(8), 1-3. Retrieved March 9, 2006, from the Academic Search Premier database.

Liu, A, & Plyer, A. (2007). A review of key indicators of recovery two years after Katrina. *The Brookings Institution Metropolitan Policy Program,* 1-20. Retrieved September 10, 2007, from the Greater New Orleans Community Data Center Web site: http://www.gnocdc.org/NOLAIndex/NOLAIndex.pdf

Liu, A. & Plyer, A. (2009). The New Orleans index anniversary edition: Four years after Katrina. *The Brookings Institution Metropolitan Policy Program,* 1-23. Retrieved September 6, 2009, from the Brookings Institution Web site: http://www.brookings.edu/reports/2007/08neworleansindex.aspx

Louisiana Board of Regents (2006). Statewide student profile system, 2006-2007. Retrieved May 19, 2009, from the Louisiana Board of Regents Web site: http://www.regents.state.la.us/Reports/SSPS_Spring_2006-07.htm

Louisiana Community and Technical College System (2007). Office of Institutional Research, 1-2. Retrieved September 7, 2007, from the LCTCS Web site: www.lctcs.net/about-research.html

Louisiana Community and Technical College System (2008). About LCTCS, 1-2. Retrieved June 18, 2008, from the LCTCS Web site: www.lctcs.net

Louisiana Community and Technical College System (2010). About LCTCS, 1-2. Retrieved April 15, 2010, from the LCTCS Web site: www.lctcs.edu

McLoughlin, D. (1985). A framework for integrated emergency management. *Public Administration Review (45),* (Special Issue, January), 163-172.

Maiolo, J. R., Whitehead, J. C., McGee, M., King, L., Johnson, J., & Stone, H. (2001). *Facing our future: Hurricane Floyd and recovery in the coastal plain* (1st ed.). North Carolina: Coastal Carolina Press.

Mangan, K. S. (2005). Colleges say hurricanes dealt them $1.4 billion in physical damage. *Chronicle of Higher Education, 52*(14), 1-2. Retrieved March 9, 2006, from the Academic Search Premier database.

Marcelle, D. J. (2002). Seven widely accepted features of the phenomenological approach, 1-6. Retrieved April 15, 2008, from the Center for Advanced Research in Phenomenology Web site: http://www.phenomenologycenter.org/phenom.htm

Masten, A. S. (1994). Resilience in individual development: Successful adaptation despite risk and adversity. Retrieved July 13, 2006, from the National Network for Family Resiliency Web site: http://wwwagnr.umd.edu/nnfr/research/abstracts/masten.html

Mathison, S. (1988). Why triangulate? *Educational Researcher, 17*(2), 13-17. Retrieved September 30, 2007, from the American Educational Research Association Web site: http://edr.sagepub.com/cgi/content/abstract/17/2/13

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis* (2nd ed.). California: Sage.

Mills, L., De Wulf, A., Levitan, R., Macht, M., Afonso, N., Avegno, J., & Mills, T. (2007). Prevalence of posttraumatic stress disorder following Hurricane Katrina. *Academic Emergency Medicine*, (14), S134-a. Retrieved October 9, 2007, from the Academic Emergency Medicine Web site: http://www.aemj.org

National Center for Education Statistics (2006). Nunez Community College. Retrieved March 4, 2008, from NCES Institute of Education Sciences from: http://nces.ed.gov/globallocator/col_info_popup.asp?ID=158884

National Center for Education Statistics (2007). Definitions and data, 1-12. Retrieved November 25, 2007, from http://nces.ed.gov/pubs/web/97578e.asp

National Center for Education Statistics (2009). Nunez Community College. Retrieved January 2, 2010, from http://nces.ed.gov/globallocator/col_info_popup.asp?ID=158884

National Hurricane Center (2008). Hurricane preparedness: Hurricane history. Retrieved September 14, 2008, from the National Hurricane Center Web site: http://www.nhc.noaa.gov/HAW2/english/history.shtml#katrina

Neria, Y., Nandi, A., & Galea, S. (2007). Posttraumatic stress disorder following disasters: A systematic review. *Psychological Medicine,* 1-14.

Nolan, B. (2007). Storm-damaged churches recovering slowly. Retrieved June 16, 2009, from the Times-Picayune Web site: http://blog.nola.com/times-picayune/2007/07/stormdamaged_churches_recoveri.html

Norris, F. H., Byrne, C. J., & Diaz, E. (2006). Risk factors for adverse outcomes in natural and human-caused disasters: A review of the empirical literature. Retrieved July 10, 2006, from the United States Department of Veterans Affairs Web site: http://www.ncptsd.va/gov/facts/disasters/fs_riskfactors.html

North Carolina Department of Commerce (2009). Division of Policy, Research & Strategic Planning. Retrieved June 21, 2009, from the Economic Development Intelligence Systems Web site: https://edis.commerce.state.nc.us/docs/countyProfile/LA/22087.pdf

Nunez Community College (2007). History of the college, 1-2. Retrieved September 7, 2007, from the Nunez Community College Web site: http://www.nunez.edu/About%20Nunez.htm

Nunez Community College (2008). Emergency recovery plan, 1-47. Retrieved February 5, 2009, from the Nunez Community College Web site: http://www.nunezacademicaffairs.net/References/OtherClearinghouse/EmergencyRecoveryPlan%2008Jul.pdf

Nunez Community College (2009). The storm. Retrieved February 5, 2009, from the Nunez Community College Web site: http://www.nunez.edu/the_storm.htm

Office of Community Development (2008). The road home, 1-2. Retrieved April 2, 2008, from the Disaster Recovery Unit Web site: http://www.doa.louisiana.gov/cdbg/DRHousing.htm

Overland, M. A. (2005). Finding a way to go on. *Chronicle of Higher Education*, *52*(17), 1-4. Retrieved March 9, 2006, from the Academic Search Premier database.

Pascarella, E. T., & Terenzini, P. T. (1991). *How college affects students.* San Francisco: Jossey-Bass.

Pascarella, E. T., & Terenzini, P. T. (2005). *How college affects students: A third decade of research.* San Francisco: Jossey-Bass.

Payton, K. A. (2007). LCTCS fall enrollment numbers reflect system-wide growth, 1-2. Retrieved September 11, 2007, from the LCTCS Web site: www.lctcs.edu

Payton, K. A. (2008). Enrollment at community and technical colleges increases by 13 percent, 1-2. Retrieved September 26, 2008, from the LCTCS Web site: www.lctcs.edu

Payton, K. A. (2009). SACS accreditation reaffirmed at Nunez. Retrieved August 11, 2009, from the LCTCS Web site: www.lctcs.edu

Pepperdine University (2007). Pepperdine community joins fire recovery efforts. Retrieved April 27, 2008, from the Pepperdine University Web site: http://www.pepperdine.edu/pr/releases/2007/november/firerecovery.htm

Pope, J. (2005). College students ponder future after storm. *Associated Press Online,* Retrieved October 7, 2005, from the Yahoo news Web site: http://news.yahoo.com/s/ap/20051007/ap_on_re_us/katrina_community_colleges

Pope, J. (2009, September 15). College campuses are bustling again. *The Times-Picayune,* pp. A1, A8.

Prochaska, J. O., & DiClemente, C. C. (1982). Transtheoretical therapy: Toward a more integrative model of change. *Psychotherapy: Theory, Research, and Practice,* (20), 161-173.

Rioux, P. (2009). St. Bernard, New Orleans nation's fastest growing communities. *The Times-Picayune*. Retrieved June 16, 2009 from http://www.nola.com/news/index.ssf/2008/03/st_bernard_nations_fastest_gro.html

St. Bernard Parish (2007). St. Bernard Parish population. Retrieved September 15, 2007, from the St. Bernard Parish Official Web site: http://www.stbernardparish.net/

St. Bernard Parish (2008). Katrina three years later: Hurricane recovery progress report for St. Bernard Parish. Retrieved September 15, 2008, from the St. Bernard Parish Official Web site: http://www.sbpg.net/

St. Bernard Parish (2009). History of St. Bernard Parish. Retrieved April 19, 2009, from the St. Bernard Parish Official Web site: http://visitstbernard.com/aboutus/

St. Bernard Parish School System (2008). A plan of hope, a plan of restoration, a plan for the children: The rebuilding of the St. Bernard Parish public schools. Retrieved July, 2, 2009, from the St. Bernard Parish School System Web site: http://www.stbernard.k12.la.us/downloads/0809_RebuildingPlan.pdf

Saltman, K. J. (2007). *Schooling and the politics of disaster.* Routledge: New York.

Schneider, S. K. (1995). *Flirting with disaster: Public management in crisis situations.* New York: M. E. Sharpe.

Schoon, I. (2006). *Risk and resilience: Adaptations in changing times.* Massachusetts: Cambridge University Press.

Schulte, B. (2008). A quiet progress in New Orleans: Three years after Katrina, residents are finding new reasons to hope. *U. S. News & World Report Online,* Retrieved March 24, 2009, from the U. S. News & World Report Web site: http://www.usnews.com/articles/news/national/2008/06/11/a-quiet-progress-in-new-orleans

Schultz, K. (2007). Listening across cultural and linguistic borders: Learning from teaching in Banda Aceh, Indonesia, after the tsunami. *Journal of Educational Change,* Retrieved February 26, 2009, from the online Web site: http://www.springerlink.com/content/6253h190m364550j/fulltext.html

Shah, P., & Gerrity, J. (2006). Getting back to business in higher education, 1-5. Retrieved April 2, 2008, from the Computerworld Storage Networking World Web site: http://www.snwonline.com/case studies/highered 07-31-06.asp?article id=709

Smart, J. C., Kuh, G. D., & Tierney, W. G. (1997). The roles of institutional cultures and decision approaches in promoting organizational effectiveness in two-year colleges. *The Journal of Higher Education, 68*(3), 256-281.

Smith, D. W. (2003). Phenomenology, 1-23. Retrieved November 5, 2007, from the Stanford Encyclopedia of Philosophy Web site: http://plato.stanford.edu.entries/phenomenology/

Southern Education Foundation (2007). Education after Katrina: Time for a new federal response, 1-29. Retrieved October 9, 2007, from the Southern Education Foundation Web site: www.southerneducation.org

Stehr, S. D. (2006). The political economy of urban disaster assistance. *Urban Affairs Review, 41*(4), 492-500. Retrieved July 10, 2006, from Sage Publications Web site: http://uar.sagepub.com/cgi/content/abstract/41/4/492

Stephenson, M. (2006). Resilience is linked to illness severity in anxiety disorders. *NeuroPsychiatry Review, 7*(8), 1-4. Retrieved March 9, 2008, from: http://www.neuropsychiatryreviews.com/aug06/anxious.html

Sturtz, A. J. (1995). *Goal attainment: A new look at the meaning of attrition at a community college. AIR Annual Forum.* Paper presented at the Annual Forum of the Association for Institutional Research, Boston, MA. (ERIC Document Reproduction Service No. ED 386 987)

Terenzini, P. T., & Pascarella, E. T. (1994). Living with myths: Undergraduate education in America. *Change, 26*(1), 28-32. Retrieved March 1, 2006, from the Thomson Gale database: http:///www.findarticles.com/p/articles/mi_m1254/is_n1_v26/ai_15285623

The National Academy of Sciences (2006). Facing hazards and disasters: Understanding human dimensions, 1-4. Report in Brief of the National Academies.

The Times-Picayune (2009). Ground broken on reconstruction of Islenos Museum complex in St. Bernard Parish. Retrieved June 16, 2009, from the Times-Picayune Web site: http://www.nola.com/news/index.ssf/2009/06/ground_broken_on_reconstructio.html

Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research, 45*(1), 89-125. Retrieved March 1, 2006, from the JSTOR database.

Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition.* (2nd ed.). Chicago: The University of Chicago.

Tinto, V. (1997). Classrooms as communities: Exploring the educational character of student persistence. *The Journal of Higher Education, 68*(6), 599-623.

United States Census Bureau (2005). Selected social characteristics of the United States. Retrieved February 22, 2009, from the U. S. Census Bureau Web site: http://factfinder.census.gov

United States Census Bureau (2007). Population finder – St. Bernard Parish. Retrieved June 16, 2009, from the U. S. Census Bureau Web site: http://factfinder.census.gov/servlet/SAFFPopulation?_event=Search&_name=St.+Bernard

United States Census Bureau (2008). Population finder – St. Bernard Parish. Retrieved June 16, 2009, from the U. S. Census Bureau Web site: http://factfinder.census.gov/servlet/SAFFPopulation?_event=Search&_name=St.+Bernard

United States Department of Commerce (2007). Billion dollar U. S. weather disasters, 1-14. Retrieved October 7, 2007, from the National Climatic Data Center: http://www.ncdc.noaa.gov/oa/reports/billionz.html

United States Department of Homeland Security (2006). Citizen Corps personal change model for disaster preparedness: Community resilience through civic responsibility and self-reliance, 1-27. Retrieved July 5, 2009, from the Citizen Preparedness Review: http://74.6.239.67/search/cache?ei=UTF-8&p=disaster+preparedness+theory&icp=1&w=disaster+preparedness+theory

United States Department of Veterans Affairs (2006). Effects of traumatic stress in a disaster situation, 1-12. Retrieved July 10, 2006, from the USDVA Web site:

http://www.ncptsd.va.gov/facts/disasters/fs_effects_disaster.html

United States Geological Survey (1995). Southern Californians cope with earthquakes, 1-4. Retrieved April 21, 2008, from the USGS Web site: http://quake.wr.usgs.gov/prepare/factsheets/SoCal/

University of New Orleans (2009). UNO geographers survey: Most businesses back in Orleans, St. Bernard Parishes. Retrieved May 20, 2009, from: http://news.uno/Public/Index.asp?page_id=30&Content_ID=1415

Vale, L. J., & Campanella, T. J. (2005a). The city shall rise again: Urban resilience in the wake of disaster. *Chronicle of Higher Education, 51*(19), 1-6. Retrieved March 28, 2006, from the Academic Search Premier database.

Vale, L. J., & Campanella, T. J. (2005b). *The resilient city: How modern cities recover from disaster*. New York: Oxford University Press.

Walljasper, J. (2007). *The great neighborhood book.* Canada: New Society Publishers.

Wang, P. S., Gruber, M. J., Powers, R. E., Schoenbaum, M., Speier, A. H., Wells, K. B., & Kessler, R. C. (2007). Mental health service use among Hurricane Katrina survivors in the eight months after the disaster. *Psychiatric Services, 58*(11), 1403-1411.

Warren, B. (2007). St. Bernard still facing rebuilding challenges, 1-7. *The Times-Picayune.* Retrieved August 28, 2007, from: http://blog.nola.com/times-picayune/2007/08/st_bernard_still_facing_rebuil.html

Warren, B. (2009a). MR-GO going: Closure of waterway begins, 1-2. *The Times-Picayune.* Retrieved June 21, 2009, from: http://nola.com/news/index.ssf/2009/01/mrgo_going_closure_of_waterway.html

Warren, B. (2009b, August 9). A fresh start. *The Times-Picayune*, B1.

Weiss, R. S. (1994). *Learning from strangers: The art and method of qualitative interview studies.* New York: The Free Press.

Williamson, J. S. (2008). Depression. *Phi Kappa Phi Forum,* Winter/Spring, 18.

Witte, K. (1998). Fear as motivator, fear as inhibitor: Using the extended parallel process models to explain fear appeal successes and failures. In P. A. Andersen and L. K. Guerrero (eds.), The handbook of communication and emotion: Research, theory, applications, and contexts. New York: Academic Press, 423-450.

Young, B. H., Ford, J. D., & Watson, P. J. (2006). Survivors of natural disasters and mass violence, 1-4. Retrieved July 10, 2006, from the United States Department of Veterans Affairs Web site: http://www.ncptsd.va.gov/facts/disasters/fs_survivors_disaster.html

Appendices

Appendix A - Request to LCTCS to Conduct the Study

Request to LCTCS to Conduct the Study

4620 W. Congress, #32
Lafayette, LA 70506
April 18, 2008

Dr. Joe May
President
Louisiana Community and Technical College System
265 South Foster Drive
Baton Rouge, LA 70816

Dear Dr. May:

I am a member of the higher education cohort at the University of New Orleans and have been employed for the past fifteen years at the Lafayette Campus of Louisiana Technical College. As a doctoral student at the University of New Orleans, I am responsible for obtaining experience with the methods and procedures used to conduct independent research.

In accordance with doctoral research course requirements, I am pleased to be conducting a research project based on the experiences of post-Katrina returning students at Nunez Community College. Specifically, I am interested in learning about the resilience of students in a post-disaster environment. As a result of this research, I hope to contribute to the body of knowledge regarding the role of education in recovery. The results of this qualitative inquiry may be used to develop recommendations on strategies to help students following a disaster. This study is being conducted under the supervision of Dr. Marietta Del Favero, Department of Educational Leadership, Counseling, and Foundations, University of New Orleans, New Orleans, LA, 70148. Dr. Del Favero can be reached at (504) 280-6446.

I would like to respectfully request permission to conduct interviews with students who were enrolled for at least two semesters prior to Hurricane Katrina, who were displaced, and who returned to the college to pursue their studies post-disaster. I have worked with Dr. Thomas Warner, Dr. Curtis Manning, Ms. Donna Clark, and Ms. Mary Kane in a pilot study conducted on the campus last year and these individuals were most dedicated to assisting me with this endeavor.

In the event you act favorably regarding this request, it will be necessary for me to obtain permission from you in writing. You may reach me at (337) 981-6216 (home); (337) 262-5962 (LTC-Lafayette); or at jjones@ltc.edu if you have any concerns regarding this research project. Thank you for your consideration.

Respectfully yours,

Jacqueline Jones
Doctoral Student
University of New Orleans

cc: Dr. Thomas Warner

Appendix B - Permission from the LCTCS President

Permission from the LCTCS President

LOUISIANA COMMUNITY & TECHNICAL COLLEGE SYSTEM

June 3, 2008

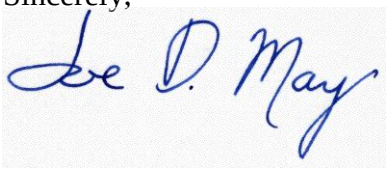
Ms. Jacqueline Jones
4620 W. Congress, #32
Lafayette, LA 70506

Dear Ms. Jones:

I am writing in response to your letter dated April 18, 2008, regarding your research project based on the experiences of post-Katrina returning students to Nunez Community College. I am pleased that you have been able to work with Dr. Warner and his staff in this endeavor, as they know first-hand the hardships that students, faculty and staff faced, in trying to get on with their lives after Katrina. You certainly have my permission to conduct interviews with students who returned to our colleges after Katrina, as I'm sure your work on this project will reflect the strength and resilience of our students.

I wish you success in your doctoral studies. If I can be of further assistance to you, please don't hesitate to contact me.

Sincerely,



Joe D. May, Ph. D.
President

Appendix C - Request to Nunez Chancellor to Conduct the Study

Request to Nunez Chancellor to Conduct the Study

4620 W. Congress, #32
Lafayette, LA 70506
November 18, 2008

Dr. Thomas Warner
Chancellor
Nunez Community College
3710 Paris Road
Chalmette, LA 70043

Dear Dr. Warner:

In accordance with doctoral research requirements at the University of New Orleans, I am seeking permission to conduct a research project based on the experiences of post-Katrina returning students at Nunez Community College. The research will utilize a qualitative methodology which will require interviewing students who were displaced as a result of Hurricane Katrina and returned to the campus to persist in their studies. Enclosed you will find a letter from Dr. Joe May granting me permission to access Nunez Community College for this research project.

As a result of this endeavor, I hope to contribute to the body of knowledge regarding the role of education in recovery. The dissertation is titled "Post-Katrina Student Resilience" and the results of this qualitative inquiry may be used to develop recommendations on strategies to help students following a disaster. This study is being conducted under the supervision of Dr. Marietta Del Favero, Department of Educational Leadership, Counseling, and Foundations, University of New Orleans, New Orleans, LA, 70148. Dr. Del Favero can be reached at (504) 280-6446.

I would like to respectfully request permission to conduct interviews with students who were enrolled for at least two semesters prior to Hurricane Katrina, who were displaced, and who returned to the college to pursue their studies post-disaster. I have worked with Dr. Curtis Manning, Ms. Donna Clark, and Ms. Mary Kane in a pilot study conducted on the campus last year and these individuals were most dedicated to assisting me with this research project.

In the event you act favorably regarding this request, it will be necessary for me to obtain permission from you in writing. You may reach me at (337) 981-6216 (home); (337) 262-5962 (LTC-Lafayette); or at jcjones1@uno.edu if you have any concerns regarding this research project. Thank you for your consideration.

Respectfully yours,

Jacqueline Jones
Doctoral Student
University of New Orleans

Enclosure

Appendix D – Permission from the Nunez Chancellor to Conduct the Study

Permission from the Nunez Chancellor to Conduct the Study

NUNEZ
COMMUNITY COLLEGE
3710 PARIS ROAD • CHALMETTE, LA 70043 • (504) 278-7468 • FAX (504) 278-7480

Chancellors Office

December 1, 2008

Ms. Jacqueline Jones
4620 W. Congress, #32
Lafayette, LA 70506

Dear Ms. Jones:

I was delighted to receive your letter requesting permission to conduct a research project based on the experience of post Katrina students at Nunez Community College. The use of qualitative methodology to interview students displaced as a result of Hurricane Katrina and their return to the campus to persist in their studies could be beneficial in developing recommendations on strategies to help students following similar disasters.

Moreover, your research could also be beneficial in determining the role of education in such disasters. You have my permission to conduct interviews with students who returned to our college after Hurricane Katrina. This project could also demonstrate the strength and resilience of students following such a catastrophic disaster.

I have conferred with Vice Chancellor for Academic Affairs, Dr. Curtis Manning; Vice Chancellor for Student Affairs, Ms. Donna Clark; and Director of Counseling, Ms. Mary Kane, and they have agreed to provide assistance to you in this research project.

Best wishes on your dissertation and success in your doctoral program.

Sincerely,

Thomas R. Warner

Thomas R. Warner, Ed. D.

A Member of the Louisiana Community and Technical College System

Appendix E - Permission from the Nunez Chancellor to Use the College Name

Permission from the Nunez Chancellor to Use the College Name

NUNEZ
COMMUNITY COLLEGE
3710 PARIS ROAD • CHALMETTE, LA 70043 • (504) 278-7497 • FAX: (504) 278-7480

Chancellor's Office

February 9, 2009

Dissertation Committee for
Jacqueline Carole Jones
(Hand delivery to candidate)

Dear Committee Chair:

Please accept this letter as my approval and permission for Ms. Jones to use the "Nunez Community College" name in her dissertation and research. This is a truly unique study that will address the extraordinary experiences of the students who witnessed and lived through both the incident and the aftermath of Hurricane Katrina.

Ms. Jones has also expressed her interest in working with the Vice Chancellor for Student Affairs, Donna Clark, and the Director of Counseling, Mary Kane, who will provide her with anecdotal information and student contacts. I am confident that these Nunez administrators will provide Ms. Jones with information, within FERPA regulations, that will be of use to her.

If you need additional information or have any questions, please contact me at (504)278-7468.

Sincerely,

Thomas R. Warner, Ed.D.
Chancellor

Cc: Jacqueline Carole Jones
Donna Clark, VCSA, Nunez
Mary Kane, Director of Counseling, Nunez

A Member of the Louisiana Community and Technical College System

Appendix F - Checklist for Sample Population Criteria

Checklist for Sample Population Criteria

_____ Attended at least two semesters prior to Hurricane Katrina

_____ Displaced as a result of the storm

_____ Returned to continue studies at Nunez Community College post-Katrina

_____ Currently enrolled

_____ Student has not graduated

Appendix G - Confirmation of Research Participants

Confirmation of Research Participants

From: Donna Clark [dclark@nunez.edu]
Sent: Sat 11/22/2008 11:20 AM
To: Jacqueline Carole Jones
RE: UNO Proposal Defense

Dear Jackie,

Mary and I have just looked at the records of half of 400 students who meet the criteria for your population. I'm confident in stating that you'll have about 100 potential candidates. Even if the contact information is not current on half of those, you'd still have about 50 potential subjects. One clarification is needed. You asked that the student will have not graduated. As you know, we have one-year certificates as well as two-year associate degrees. If a student was awarded the certificate but is still in school pursuing the degree, I've left them on the list. Also, some students returned for a couple of semesters after Katrina, but are not currently enrolled. Let me know if these students should stay on the list. I'm assuming that we should not screen them out.

Please let me know what our next step would be to help you move through the process.

Donna

Appendix H - Participant Solicitation Letter

Participant Solicitation Letter

February 11, 2009

Dear Potential Research Participant,

As a doctoral student at the University of New Orleans, I am responsible for obtaining experience with the methods and procedures used to conduct independent research. In accordance with doctoral research course requirements, I am pleased to be conducting a research project based on the experiences of post-Katrina returning students at Nunez Community College. Specifically, I am interested in learning about the resilience of students in a post-disaster environment. As a result of this research, I hope to contribute to the body of knowledge regarding the role of education in recovery. The results of this inquiry may be used to develop recommendations on strategies to help students following a disaster.

One of the goals of this project is to provide an account of your post-Katrina educational experiences in your own words. If you are interested in participating, **I would like to conduct an interview with you during my visit February 9-11, 2009, in the Nunez Community College Law Library where I will be available from 8:00 a.m.-9:30 p.m. on Monday and Tuesday and 8:00-12:00 p.m. on Wednesday**. Your participation in this project is entirely voluntary and confidential. If you choose to decline, I understand completely.

I really hope that you will choose to be a part of this meaningful work and I look forward to an opportunity to talk with you. Sharing your experiences will certainly contribute to this research. If you agree to participate, we can schedule a convenient time for our interview. I encourage you to contact me at (337) 981-6216 in the evening or (337) 288-8655 on my cell phone should you have any questions or concerns regarding this project. Thank you very much for your time and consideration.

Respectfully,

Jacqueline Jones, M.Ed.
Doctoral Student
University of New Orleans

Appendix I - Participant E-Mail

Participant E-Mail

UNO Research Project

Jacqueline Carole Jones

Sent: Tuesday, February 03, 2009 8:42 PM

Hello,

My name is Jackie Jones and I was provided with your name by Mary Kane, Nunez Community College counselor, with *Dr. Warner's permission*. I am a doctoral student at the University of New Orleans and am conducting a study of post-Katrina student resilience in St. Bernard Parish. I will be on the Nunez campus on February 9-11, 2009, and was hoping that you would be interested in speaking to me for about 30 minutes regarding your post-Katrina educational experiences. Your post-disaster experiences could help other institutions deal more effectively with students who continue their studies following a natural disaster.

Attached you will find a letter of introduction which provides details regarding the research project which has been approved by the University of New Orleans. **I would like to conduct an interview with you during my visit February 9-11, 2009, in the Nunez Community College Law Library. I'll be in the Law Library from 8:00 a.m. until 9:30 p.m.**

I am very eager to learn about the educational experiences of Nunez Community College students in a post-disaster environment and hope to hear from you in the near future to see if you would be willing to speak to me. My e-mail address is: jcjones1@uno.edu and my phone number is 337/981-6216 (home) or 337/288-8655 (cell) if you would like to call me about your potential involvement in my research. Thank you for your consideration.

Jackie Jones
Doctoral Student
University of New Orleans

Appendix J - Participant Consent Form

Participant Consent Form

1. **Title of Research Study**
   Post-Katrina Student Resilience

2. **Project Director**
   Jacqueline Jones, Doctoral Student, Department of Educational Leadership, Counseling, and Foundations, University of New Orleans, New Orleans, Louisiana, 70148
   Cell Phone: (337) 288-8655
   Evening Phone: (337) 981-6216
   E-mail: jcjones1@uno.edu

   This research project is in partial fulfillment of course requirements and is under the supervision of Dr. Marietta Del Favero, Department of Educational Leadership, Counseling, and Foundations, University of New Orleans, New Orleans, LA, 70148. Telephone: (504) 280-6446

3. **Purpose of this Research**
   The purpose of this research is to learn about the educational experiences of Nunez Community College students following Hurricane Katrina.

4. **Procedures for this Research**
   Participants will voluntarily participate in individual interviews lasting approximately 40-60 minutes. All interviews will be conducted in person by the Project Director and will be audio taped for transcription purposes. Tapes will be erased upon completion of this research project.

5. **Potential Risks or Discomforts**
   Due to the catastrophic nature of an event such as Hurricane Katrina, participants may be asked questions considered personal or sensitive. At times throughout the interviews, participants may experience emotional distress while recalling unpleasant or stress inducing experiences. There is also the

possibility that participants may become fatigued during the interview. Participants will be allowed to take breaks if needed and will be offered an opportunity to debrief issues brought up over the course of interviewing. In the event participants begin to show signs of distress such as crying, trying to regain composure, or if they demonstrate body language which indicates distress, the interview will be immediately stopped. The interviewees will be reminded that their participation is entirely voluntary and they may choose to end the interview at any time without consequence as part of the consent process. The tape recorder will be stopped.

If the students wish to continue the interview after a break, questioning will resume only after the student has regained emotional composure. At this point, the questioning which induced the distress will be avoided unless the participant is comfortable speaking about the issue. If a student chooses to end the interview, I will acknowledge my understanding and thank them for their participation.

Participants who would like to discuss these or other potential discomforts may contact the Project Director listed in #2 of this form. **If you have questions about your rights as a research participant, please contact Dr. Ann O'Hanlon (504/280-3990) at the University of New Orleans.**

6. **Potential Benefits to You or Others**
   The results of this study may be used to understand the role of education in recovery. This may enable higher education officials to deliver better services to students and ultimately lead to organizational efforts to assist students in a post-disaster environment.

7. **Alternative Procedures**
   Participation is entirely voluntary and individuals may withdraw consent and terminate participation at any time without consequence.

8. **Protection of Confidentiality**
   The names of participants, specific programs, and identifying information will be kept confidential at all times. The interview tapes will be transcribed by a professional under the supervision of the Project Director using aliases. The signed consent forms, audio tapes, interview transcripts, and any other materials related to this project will be maintained in a secure and confidential manner by the Project Director. Upon completion of the project, the audio tapes will be erased and the transcripts shredded. All e-mails to

participants will be deleted from the computer. If the results of this study are published, participants' names and identifying information will be disguised.

9. **Signatures and Consent to Participate**

I have been informed of all procedures, possible benefits, and potential risks involved in this investigation. By signing this form, I give my permission to participate in this study.

_____	_____	_____
Signature of Participant	Name of Participant (print)	Date

_____	_____	_____
Signature of Project Director	Name of Project Director (print)	Date

Appendix K - Interview Protocol

Interview Protocol

UNIVERSITY of NEW ORLEANS

PRIMARY RESEARCH QUESTION:

(1) Why did students return to a disaster-stricken environment to continue their studies at Nunez Community College?

SECONDARY RESEARCH QUESTION:

(1) How did the students deal with the effects of the disaster?

Participant: _____
Date of Interview: _____ Time of Interview: _____
Major: _____
Number of semesters attending prior to Hurricane Katrina: _____
Number of semesters until completion: _____
Traditional Student: _____ Nontraditional Student:_____
Student Worker: _____Yes _____ No
Male: _____ Female: _____ Age: _____ Ethnicity: _____

INTERVIEW QUESTIONS:

(1) Tell me about your educational experiences post-Katrina.
(2) Describe how you made the decision to continue your studies.
(3) What was your level of expectation as to what type of services Nunez Community College could provide upon your return?
(4) Were you able to maintain acceptable academic standards when you resumed your studies post-Katrina?
(5) Did you participate in any online courses post-Katrina?
(6) Do you feel you are able to adapt to change? If so, why?
(7) Do you think of yourself as a strong person? If so, why?
(8) Do you feel you can bounce back after this hardship? If so, why?
(9) Do you feel you can put forth your best effort under any circumstances as a result of your Hurricane Katrina experiences? If so, why?
(10) Are you a student worker? If so, was employment a factor in your return to the college?
(11) How did you deal with the effects of the disaster?
(12) What advice would you give to other institutions recovering from a natural disaster?
(13) Is there anything else you would like to tell me about your experiences at Nunez Community College post-Katrina?

Appendix L - Confirmation of Participant Interviews

Confirmation of Participant Interviews

Participant #1	February 9, 2009	9:00 a.m.
Participant #2	February 9, 2009	11:00 a.m.
Participant #3	February 9, 2009	1:00 p.m.
Participant #4	February 9, 2009	4:15 p.m.
Participant #5	February 9, 2009	5:15 p.m.
Participant #6	February 9, 2009	7:00 p.m.
Participant #7	February 10, 2009	1:00 p.m.
Participant #8	February 10, 2009	4:15 p.m.
Participant #9	February 10, 2009	5:30 p.m.
Participant #10	February 10, 2009	6:10 p.m.
Participant #11	February 10, 2009	9:00 p.m.
Participant #12	February 10, 2009	9:30 p.m.

Appendix M - University Committee for the Protection of Human Subjects in Research Approval

University Committee for the Protection of Human Subjects in Research Approval

University Committee for the Protection of Human Subjects in Research
University of New Orleans

Campus Correspondence

Principal Investigator: Marietta Del Favero

Co-Investigator: Jacqueline Jones

Date: January 22, 2009

Protocol Title: "Post-Katrina Student Resilience"

IRB#: 02Feb09

The IRB has deemed that the research and procedures are compliant with the University of New Orleans and federal guidelines. The above referenced human subjects protocol has been reviewed and approved using expedited procedures (under 45 CFR 46.116(a) category 7).

Approval is only valid for one year from the approval date. Any changes to the procedures or protocols must be reviewed and approved by the IRB prior to implementation. Use the IRB number listed on this letter in all future correspondence regarding this proposal.

If an adverse, unforeseen event occurs (e.g., physical, social, or emotional harm), you are required to inform the IRB as soon as possible after the event.

Best wishes on your project!

Sincerely,

Robert D. Laird, Chair
UNO Committee for the Protection of Human Subjects in Research

Appendix N - National Institutes of Health Certificate

National Institutes of Health Certificate

Certificate of Completion

The NIH Office of Human Subjects Research certifies that **Jacqueline Jones** successfully completed the National Institutes of Health Web-based training course “Protecting Human Research Participants”.

Date: 04/01/2008

Certification Number: 17148

Appendix O - Permission from Dr. Vincent Tinto

Permission from Dr. Vincent Tinto

Permission
Vincent Tinto [vtinto@syr.edu]
To: Jacqueline Carole Jones
Cc:
Date: 10/2/07

Dear Jacqueline:

Please excuse the delay in getting back to you. Too many things to do, too little time .... In any case, you have my permission to include a copy of the longitudinal model in the second edition of my book, Leaving College.

Please send me an abstract of your findings when they are available.

Sincerely

Vincent Tinto

Appendix P - Definition of Terms

Definition of Terms

Academic integration: the result from sharing common information, perspectives, and values with other members of a scholastic community (Tinto, 1993).

Academic resilience: relating to a student's ability to utilize education to recover quickly from setbacks by continuing to attend class in the face of adversity.

Culture: comprised of shared rules, beliefs, and attitudes which shape our perception and interpretation of life events (Goldstein, 1981).

Displaced: the loss of a primary dwelling which is not habitable as a result of a natural disaster.

Evacuee: an individual who is forced to vacate an area to seek shelter as a result of a severe threat.

FEMA (Federal Emergency Management Agency): leads and supports the nation in a risk-based, comprehensive emergency management system of preparedness, protection, response, recovery, and mitigation (FEMA, 2008).

Infrastructure: the large-scale public systems, services, and facilities of a country or region that are necessary for economic activity, including power and water supplies, public transportation, telecommunications, roads, and schools.

Institutional culture: the collective total of assumptions, beliefs, and values which members of an organization share and express through their actions (Farmer 1990).

Mental health: the state of successful performance of mental function (Williamson, 2008).

Nontraditional student: a student who has one or more of the following traits – is twenty-five years old or older, working full-time, attending school part-time, being independent, commuting to school, and having children (NCES, 2007).

Persistence: a student's postsecondary education continuation behavior that leads to graduation (Arnold, 1999).

Posttraumatic Stress Disorder: a mental disorder resulting from exposure to an extreme, traumatic stressor (U. S. Department of Veterans Affairs, 2006).

Resilience: the process of adapting well in the face of adversity, trauma, tragedy, threats, or even significant sources of stress such as family and relationship problems, serious health problems, or workplace and financial stressors; bouncing back from difficult experiences (Masten, 1994).

Response efficacy: belief that recommended preparedness measures will mitigate the personal impact of a disaster (U. S. Department of Homeland Security, 2006).

Road home program: a housing financial assistance program designed by the state of Louisiana to assist homeowners with rebuilding lost residences.

Self-efficacy: belief about one's ability to perform actions that will mitigate the effect of a threat (U. S. Department of Homeland Security, 2006).

Social integration: when an individual develops strong and effective social ties primarily as a result of daily interactions with other members of a community (Tinto, 1993).

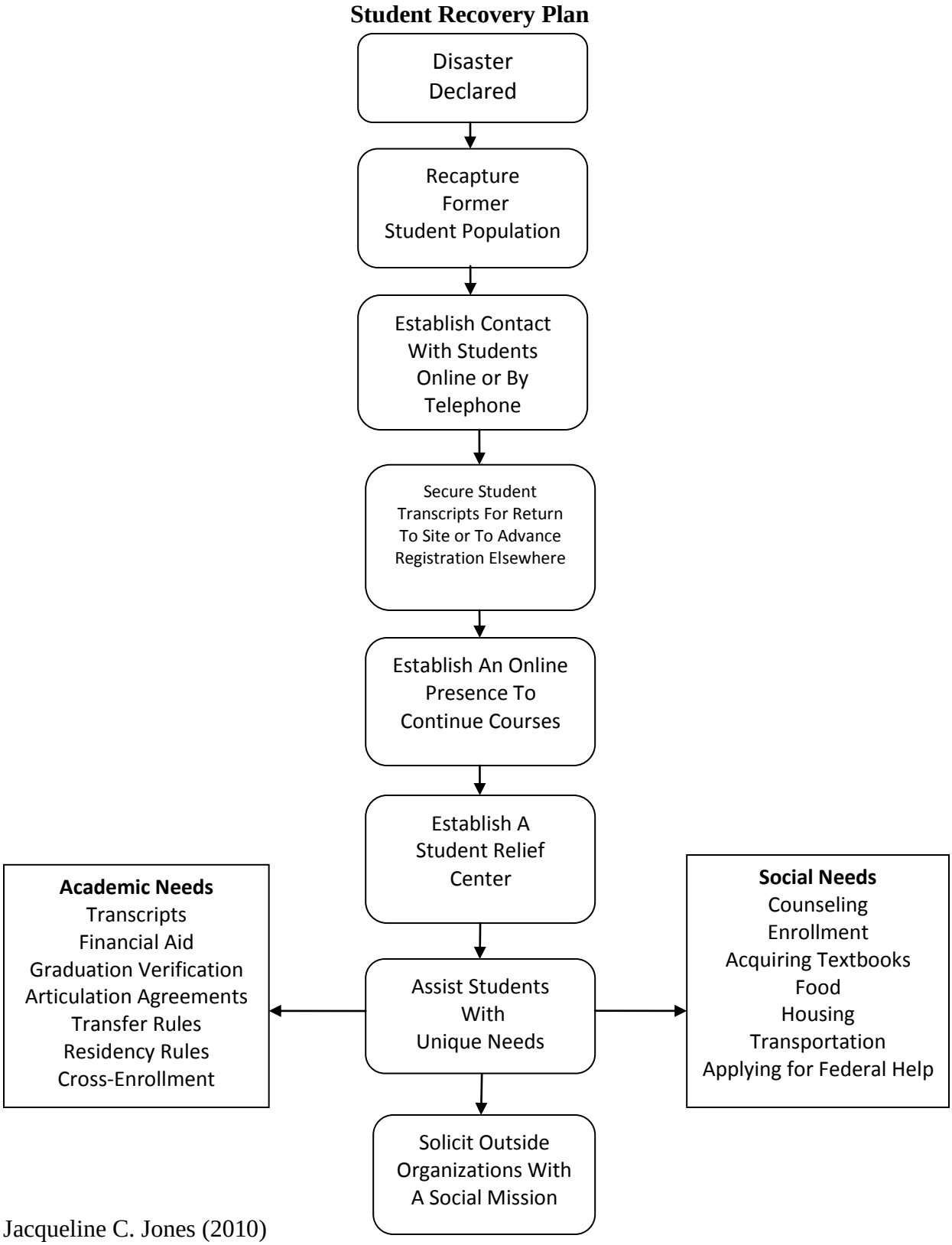
Student: an individual who was enrolled two or more semesters in a course of study at Nunez Community College prior to being displaced.

Survivor syndrome: a characteristic group of symptoms, including recurrent images of death, depression, persistent anxiety, and emotional numbness, occurring in survivors of disaster; survivor guilt (Infoplease Dictionary, 1997).

Traditional student: a student who is characterized by being between nineteen and twenty-four years old, attending school full-time, being a dependent, and working a few hours per week (NCES, 2007).

Urban resilience: located in a city which adapts well to adversity, trauma, tragedy, or threats.

Appendix Q – Student Recovery Plan



Jacqueline C. Jones (2010)

Vita

Jacqueline C. Jones was born in New Orleans, Louisiana. She received a B.S. degree in Business Administration from Nicholls State University in 1983 and began working for Exxon Company, U.S.A. The desire to pursue community service endeavors led Jacqueline to work as a marketing manager for Junior Achievement of Southeastern Louisiana working in the metropolitan area of New Orleans. The public relations experience obtained as a marketing manager provided Jacqueline with the opportunity to return to Nicholls State University to work as an executive assistant to the president. Event planning as well as working with governmental entities led Jacqueline in the direction of employment with French Quarter Festivals and subsequently working as a corporate sales manager of five Holiday Inn Worldwide hotels in New Orleans. Since 1993, Jacqueline was employed in vocational education as a Hospitality/Tourism professor. In 2000, she earned a M.Ed. degree in Instructional Technology from McNeese State University. For the past sixteen years, Jacqueline has been devoted to working with students and providing them with the ambition to pursue lifelong learning. As a result of this research project, she hopes to assist educational institutions ravaged by natural disasters and to suggest meaningful ways of achieving post-disaster resiliency.