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## Students' Perceptions of Entrepreneurship at a Historically Black University in Central Mississippi

Mercidee Curry

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STUDENTS' PERCEPTIONS OF ENTREPRENEURSHIP AT A HISTORICALLY  
BLACK UNIVERSITY IN CENTRAL MISSISSIPPI

By

Mercidee Curry

A Dissertation  
Submitted to the Faculty of  
Mississippi State University  
in Partial Fulfillment of the Requirements  
for the Degree of Doctor of Philosophy  
in Instructional Systems and Workforce Development  
in the Department of Instructional Systems and Workforce Development

Mississippi State, Mississippi

May 2012

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Candidate for Degree of Doctor of Philosophy

The purpose of this study was to examine students' perceptions of entrepreneurship at a historically black university in central Mississippi. The study examined five areas of students' perceptions: entrepreneurship, an entrepreneur, entrepreneurial opportunities, entrepreneurship education, and entrepreneurship and technology, and demographic characteristics (i.e., age, sex, academic unit, work status, first generation to attend college, and first in immediate family to attend college). The research design for this study was cross-sectional and descriptive. A 50-item survey was used to collect the data.

The research used descriptive statistics, frequencies, and percentages to describe the data. An independent t-test and the ANOVA were used to address the five research questions. When significant statistical differences were reported, a multiple comparison *post hoc* test (Tukey's Honestly Significant Difference test [HSD]) was computed to determine where the differences occurred between groups. All data analyses were performed at a .05 significance level. The population for this study was 425 students

enrolled in classes in the College of Business and School of Engineering. A total of 351 student surveys were analyzed and used in the study.

Findings in this study indicated that age and work status impact how students' perceive entrepreneurship. Also, students' academic unit impacts how they perceive an entrepreneur. Additionally, students' generation first to attend college plays a role in their perceptions of entrepreneurial opportunities. Further findings revealed that students from different academic units have similar perceptions of entrepreneurship education and entrepreneurship and technology. Also, students' work status plays a role in their perceptions of entrepreneurship education.

Based on the findings in this study, it was recommended that future research should be conducted to address factors contributable to students' perceptions of entrepreneurship based on age and work status. Further research should also address faculty perceptions of entrepreneurship and the educational process. Research should be undertaken to replicate this study in other academic units at the university.

## DEDICATION

This dissertation is dedicated to my family, especially my beloved mother, the late Mae Ruth Johnson Curry, and my father, Sam Curry. My mother always encouraged her children to strive for the best in life and insisted that a good education was the best way to start. For their unquestionable confidence and belief in me during this process, this dissertation is also dedicated to my oldest sister, Lula Curry, for her unwavering faith and confidence; my sister, Mary Magdalene Hayes; and my niece, Crystal Croft. Without their continuous encouragement and faith in me, this achievement would not have been completed. In addition, this dissertation is dedicated to a long time true friend. The full support of this friend and confidant during this journey gave me the strength to press onward in pursuit of earning this degree.

I also dedicate this work to all of my colleagues and supporters at work. Without the belief and faith of these loved ones, I would not be in the position to receive this prestigious degree. I will always be grateful to my family members, colleagues, and friends. I love and respect all of you.

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## CHAPTER I

### INTRODUCTION

Since the 1990s, the increased interest of college students in becoming entrepreneurs has spurred research about this interest and students' perceptions of entrepreneurship. Much of the entrepreneurial growth can be attributed, but not limited to, factors such as the decline in the number of jobs available with Fortune 500 corporations for graduating seniors, the introduction of business ownership to students in high school, and the growing number of student entrepreneurs on the many college and university campuses throughout the United States (Muske & Stanforth, 2000).

The new economy, used to describe changes that have taken place in the business world since the overwhelming adoption of Internet technology (*New Economy-Defining the Economy*, 2009), has impacted how college students make decisions about their careers and commitment to lifelong learning. In addition, it has been projected erroneously that the new economy would be “characterized by low inflation, low unemployment, increasing productivity and higher growth rates” (Gallop-Goodman, 2000, para. 7) with a technology-enabled business model. Students will be expected to operate in the realm of globalization, more innovation, customization, fast and unstable situations, and conditions (Gardner, Jewler, & Barefoot, 2006). Therefore, this generation will need tools to assist in career advancement, employment risk, and future planning by taking advantage of opportunities presented through technology and business.

The 2006 Minority Business Development Agency (MBDA) *State of Minority Business Enterprise* reported that during 1997 to 2002, the growth of firms owned by African Americans grew in annual gross receipts by 25%. This growth was at a faster pace than all U.S. firms. During this same period, the number of small minority business enterprises grew by 36%. In addition, “African American-owned firms hired a workforce that was predominantly minority, while non-minority firms employed more non-minorities than minorities” (MBDA, 2006, p. 11). More recent statistics reported by the Kauffman Foundation (2010) on entrepreneurship activity showed that African Americans experienced the largest increase in activity between 2008 and 2009. Entrepreneurship growth was highest among the 35- to 44-year-olds while the oldest group, 55- to 64-year-olds, experienced a large increase in business creation rates from 2008-2009, contributing to a two-year upward trend. The states with the highest entrepreneurial activity rates were Oklahoma, Montana, Arizona, Texas, and Idaho. The states with the lowest activity rates were Mississippi, Nebraska, Pennsylvania, and Minnesota.

The Intuit Future of Business Series (2007a), first installment, noted that the face of entrepreneurship in 2017 is predicted to have both older and younger entrepreneurs, be more feminine, and be more global than it is today. The Intuit prediction means that the population of business ownership will be more active at each of the extreme ends of the entrepreneurial spectrum. Entrepreneurs will come from the workers in the marketplace such as Baby Boomers and workers just entering the market such as the retiring Baby Boomers’ children. An increase in immigrant entrepreneurs is projected over the next decade, fueled by U.S. immigration policy and the outcome of the current immigration debates. This increase will help drive a new wage of globalization. Further, “immigrants



are increasingly turning to entrepreneurship as a way to steer around traditional barriers of entry to the workplace” to become productive individuals (The Intuit Future of Small Business Series, 2007a, p. 8). In addition, “immigrant entrepreneurs also have the skills, contacts, and technology to exploit the global marketplace” (The Intuit Future of Small Business Series, 2007a, p. 8).

Demographics for individuals born after 1982 (referred to as Generation Y) showed that this segment of the population modify and customize everything associated with their daily existence. Generation Y wants, and insists, on being independent with career paths (The Intuit Future of Small Business Series, 2007b). Since Generation Y members are so digitally connected, they will be the most entrepreneurial generation ever. Their world is Web-based and information rich and they believe that all outcomes are possible. Generation Y is not afraid to take risks, enjoys trying new things, and is willing to make mistakes and learn from them. These characteristics are important for entrepreneurship.

Uslay, Teach, and Schwartz (2002) found that U.S. students were the most likely to believe that entrepreneurship led to riches, and U.S. males were twice as likely to be active in entrepreneurship as women. It is important to note that Uslay et al. (2002) also found that more should be done to promote and focus on females regarding the rewards of owning a business and that this focus should be addressed from a public policy perspective. Mentoring opportunities, internships, and involvement with start-ups should be provided for females and males. Opportunities such as these should increase the number of entrepreneurs.

The liberal arts and entrepreneurship educators are finding a medium in their curricula to meet the needs of students and to attract them. These educators recognize that

they are committed to self-expression, debate, creativity, problem-solving, and ongoing articulation of the mutuality of social responsibility and personal identity. The integration of the two curricula and their co-curricular activities frequently lack a coherent rubric to assist in defining and evaluating the integration. The design of a template that can be used in cross campus initiatives is needed. The template should give special attention to preserving disciplinary integrity. Once the two faculties agree that the content and context, as exemplified by the template, ensure that objectives and outcomes of the course offerings are consistent with the values and goals of liberal arts education, all parties will reap the benefits of graduating successful students (Godwyn, 2009).

Kirby (2004) pointed out that entrepreneurs can be found in all walks of life—academic, civic, social, and technological. In this study, United Kingdom Master of Business Administration (MBA) students were found to be less entrepreneurial than the people responsible for teaching and training them. The students appeared to possess a relatively high need for achievement, autonomy, and belief that they control their own destinies, creativity, and preparedness to take risks. This information suggested that these attributes can be developed in the individuals. However, there is a need for more innovative and radical approaches to entrepreneurship education if business schools are to maintain their leading role and if their students are to receive a positive return on their educational investment. According to Kirby (2004), “developing entrepreneurs in the classroom is about developing the enterprising environments and approaches to learning in which entrepreneurial aptitudes and capabilities can flourish, alongside business acumen and understanding” (p. 517).

A review of previous work in the entrepreneurship field developed a profile of students enrolling in courses or selecting to major in entrepreneurship. Findings from the

research review indicated that positioning more courses at the first and second year levels of students' college education would attract more students to entrepreneurship. Many of the subjects' parents owned or operated a small business. While many of the subjects had prior work experience with large firms, it was concluded that they should be encouraged to gain experience in businesses that mimic, or do business in, an area in which they would like to start a firm. Additionally, it was suggested that students' heritage and experience could make them candidates for majoring in business and, thereby, increase student recruiting efforts. Several reasons students cited for launching a new business were profit, independence and opportunity for the future, and family motivation (Peterson & Limbu, 2010).

Research conducted on the new realities in entrepreneurship education at Historically Black Colleges and Universities (HBCUs) reported on the trends in entrepreneurship education. The deans of business schools and colleges at the HBCUs reported that they and their students would be active participants in the new economy. The forecast was that student enrollment, new course offerings, entrepreneurship concentrations/majors, training programs for small business owners, hiring qualified faculty, use of entrepreneurs to teach, use of small business incubation, and use of e-commerce technology will increase in importance over the next five years (Andrews, Jackson, No, & Yigletu, 2010).

### **Statement of the Problem**

The number of African American students attending HBCUs interested in entrepreneurship continues to show growth. Observation of students (business majors, engineering majors, and mass communications majors) taking courses in

entrepreneurship at the university revealed that students are not connecting the process of entrepreneurship with business creation. Insight into how students' view entrepreneurship, entrepreneurs, entrepreneurial opportunities, entrepreneurship education, and technology should offer deeper insight into the factors that influence students' desire to become business owners. In addition, little research about African American students' perceptions of entrepreneurship has been conducted. Additionally, a study of factors that influence students' perceptions should help with the development of innovative teaching modules or lessons for the students.

Postsecondary students are pursuing entrepreneurial opportunities while attending a traditional postsecondary senior level institution (Baron & Shane, 2005). Small business skills are being taught to artists, musicians, and other nontraditional individuals not exposed to business education. As such, the entrepreneurial surge is being driven by Generation Y, Baby Boomers, and mid-careerists looking to enter the small business market.

Through physical sensation, emotional sensation, social participation, and educational participation, students should be inspired, informed, and totally involved with their environment. In order to enhance the learning environment, it is the responsibility of educators at any level to continuously gauge students' perceptions or beliefs in the information they are receiving. The enhancement of the learning environment through students' perceptions, beliefs, motivations, and attitudes should empower students with an entrepreneurial mindset. Understanding students' perceptions of entrepreneurship and their mindset should also assist them in applying fundamental aspects of entrepreneurial thinking across disciplines and also serve as a means of personal empowerment.

Reynolds, Carter, Gartner, Greene, and Cox's (2002) study of entrepreneurial dynamics suggested that African Americans are about 50% more likely to engage in entrepreneurship activities than Europeans. Hispanic women are less likely to participate in start-up activities than African American women. Reynolds et al. (2002) also reported that education significantly predicts nascent (beginning to grow or develop a business) entrepreneurship, particularly for African Americans and Hispanics. They found that approximately 26 of every 100 African American male with graduate education reported efforts to start a new business. In addition, the impact of where a person lives directly affects the rates of nascent entrepreneurs. The tendency then to initiate start-ups for African Americans and Europeans is greatest among those living in urban areas.

A study conducted by Dabbagh (2006) found that perceptions of the engineering profession improved after students had experienced an engineering course designed to introduce them to entrepreneurial skills and principles. However, students' perceptions of technical engineering skills did not change. Quantitative analysis reported that overall students' perceptions of the engineering profession improved near the end of the semester. Additionally, significant improvement was reported in students' perceptions of professional skills that were a component of the engineering entrepreneurship course, such as leadership, communication, and creative thinking. In this study, "entrepreneurship skills were defined as the combination of business management and professional skills" (Dabbagh, 2006, Discussion, para. 3).

In a 2004 study, van Wyk and Boshoff found that entrepreneurial attitudes (achievement, innovation, perceptions of personal control, and perceived self-esteem) should be used in businesses to improve corporate entrepreneurship. The research also concluded that the entrepreneurial attitudes should be applied to educational systems. The

application of the entrepreneurial attitudes would assist in advancing the proficiency and propensity towards entrepreneurial behavior.

Research (Bernstein, 2011; Dabbagh, 2006; Miller, 2007; van Wyk & Boshoff, 2004; and Wilson, Kickul, & Marlino, 2007), has been conducted on entrepreneurship and students' perception, beliefs, and self-efficacy. The studies cover economics, the sciences, socioeconomic, and political levels. Entrepreneurship and students' perceptions specifically have been addressed in reported research at the collegiate level. However, little attention has been devoted to students' perceptions of entrepreneurship at a HBCU. Therefore, the primary purpose of this study was to examine students' perceptions of entrepreneurship at a major research intensive HBCU in central Mississippi.

### **Purpose of the Study**

The purpose of this study was to examine students' perceptions of entrepreneurship at a HBCU in central Mississippi. Despite the recognition entrepreneurship is receiving in the business and academic arenas and the increased interest of African American students, these students' perceptions of entrepreneurship have remained relatively untested. Understanding the process of entrepreneurship is important if students are going to be successful in sustaining their businesses from start-ups to mature profitable ventures. Knowing how students perceive entrepreneurship will assist with developing innovative course assignments and innovative curriculum that will better equip the millennium entrepreneurs.

The benefits of entrepreneurship and business ownership continue to be reported as positive for the country's economic stability and growth. The way in which African American students view entrepreneurship and its process would strengthen the

millennium African American business success record, while adding to the overall survival of the communities they service and the country. Formally addressing the field itself will provide a foundation for the students, curriculum developers, and institutions of higher learning.

This study is of interest to the researcher because of the increased number of college students interested in entrepreneurship and the increased number of student entrepreneurs on college campuses. With the creation of entrepreneurship programs and centers and the offering of an undergraduate major in entrepreneurship by more institutions, information reported about the knowledge base of the students will be crucial for the development of an appropriate curriculum. The information in this study could assist in the development of an effective entrepreneurship curriculum with a focus on understanding the local, national, and global needs for business creation and growth. The curriculum would include classroom, experiential experiences, and online courses.

### **Research Questions**

This study focused on students' perceptions of entrepreneurship. The study answered the following research questions:

1. Is there a statistically significant difference in students' perceptions of entrepreneurship based on demographic characteristics (i.e., age, sex, academic unit, work status, first generation to attend college, and first in immediate family to attend college)?
2. Is there a statistically significant difference in students' perceptions of an entrepreneur based on demographic characteristics (i.e., age, sex, academic

unit, work status, first generation to attend college, and first in immediate family to attend college)?

3. Is there a statistically significant difference in students' perceptions of entrepreneurial opportunities based on demographic characteristics (i.e., age, gender, academic unit, work status, first generation to attend college, and first in immediate family to attend college)?
4. Is there a statistically significant difference in students' perceptions of entrepreneurship education based on demographic characteristics (i.e., age, sex, academic unit, work status, first generation to attend college, and first in immediate family to attend college)?
5. Is there a statistically significant difference in students' perceptions of entrepreneurship and technology and demographic characteristics (i.e., age, sex, academic unit, work status, first generation to attend college, and first in immediate family to attend college)?

### **Definition of Terms**

The following definitions were used in this study:

*Entrepreneur*—an individual who risks his or her wealth, time, and effort to develop for profit an innovative product or way of doing something (Ferrell, Hirt, & Ferrell, 2009).

*Entrepreneurship*—the process of creating something new with value by devoting the necessary time and effort; assuming the accompanying financial, psychic, and social risks; and reviewing the resulting rewards of monetary and personal satisfaction and independence (Hisrich, Peters, & Shepherd, 2008).



*Entrepreneurship Education*—the process of providing potential entrepreneurs the knowledge, skills, networks, and motivation to start a business and increase the likelihood of success in business ownership (Entrepreneurship Education, 2010).

*HBCU*—an acronym for historically black colleges and universities. This acronym was adopted in 1965 when the Higher Education Act of 1965 was amended and defined HBCU as any “historically black college or university that was established prior to 1964, whose principal mission was, and is, the education of black Americans, and that is accredited by a nationally recognized accrediting agency, or association determined by the Secretary of Education to be a reliable authority as to the quality of training offered or is, according to such an agency or association, making reasonable progress toward accreditation” (White House Initiative on Historically Black Colleges and Universities, para. 2, July 25, 2009).

*Entrepreneurial Opportunity*—the potential to create something new (new products or services, new markets, new production processes, new raw materials, new ways of organizing existing technologies, etc.) that has emerged from a complex pattern of changing conditions (knowledge, technology, economic, political, social, and demographic conditions), as defined by Baron and Shane (2005).

*Generation X*—individuals born in the early 1960s through the early 1980s but no later than 1982 (Zimmerer, Scarborough & Wilson, 2005).

*Generation Y (the millennium)*—individuals born in the early 1980s to the early 2000s are children of Baby Boomers and are referred to as the digital generation because they are the first generation to grow up with digital technology (Intuit Future of Small Business Report, 2007a).

*Perception*—the awareness of one’s environment through physical sensation, emotional sensation, social participation, and educational participation (Merriam-Webster, 2005).

### **Limitations and Delimitations**

Generalizations should be limited to the reported findings from this study and cannot be applied to any other group. The study does not explore race and ethnicity because the research was conducted at a historically black university and these were not focuses of the study. This study does not explore why students from other areas were enrolled in classes in the units used in this research. This study does not focus on where students were specifically in their college level of study.

This study was delimited to the 351 students enrolled in classes in the College of Business (COB) and the School of Engineering (SOE) at a historically black university in central Mississippi during the 2010 fall semester. The study was delimited to variables (perceptions, entrepreneurship, entrepreneur, entrepreneurial opportunities, entrepreneurship education, and entrepreneurship and technology) and the instrument used in the study.

### **Justification for the Study**

The research in the field of entrepreneurship has slightly increased over the last several years, and significant strides have been made in predicting factors that promote entrepreneurial success. In addition, the growth among student entrepreneurs has been phenomenal since the 1990s (Kauffman Center for Entrepreneurial Leadership Staff, 2001; Spors, 2007). Still, there is a paucity of research available addressing students’ perceptions of entrepreneurship among African Americans. According to Gibson,

Walker, Harris, and Harris (2010) college-age African Americans possess strong entrepreneurial attributes. Those strong attributes make it crucial for colleges to offer entrepreneurship programs to accommodate the needs of these young adults.

The courage of students to major or take elective coursework in entrepreneurship and the ability to succeed in it depends on a combination of personal and psychological factors (Plattner, Lechaena, Mmolawa & Mzingwane, 2009). Knowledge about entrepreneurship does not guarantee success. However, “the ability to choose the way we respond to our circumstances is fundamental to an entrepreneurial mindset” (Taulbert and Schoeniger, 2010, p. 7). It is important that students understand that entrepreneurship is about focusing on ideas, things, and opportunities that will change their lives rather than focusing on those things they cannot change. The transformation of students’ mindset from just wanting to seek employment with a business can be accomplished through their understanding of entrepreneurship and the process. Because the entrepreneurial process involves the functions, activities, and actions associated with perceiving opportunities, it is important that students’ perceptions of the field be explored.

United States colleges and universities have experienced overwhelming interest in entrepreneurship from students over the last 30 years. The increased number of students on campuses starting businesses has been growing faster than educational institutions can effectively develop courses and programs to accommodate their interest and demand (Locke, 2004). There are students coming to campuses with working businesses and business ideas. They are demanding formal education offerings that will strengthen their skills in sustaining their ventures. Additionally, the millennial student recognizes that he or she is in need of additional tools or of retooling current skills in order to successfully sustain a business. Specifically, African Americans are about 50% more likely to start a

business than Europeans, and they profit the most from formal entrepreneurship education (Reynolds et al., 2002). A better understanding of students' perceptions of entrepreneurship in the African American population can contribute substantially to the body of research in this area. Further, the newly created entrepreneurship department at the university is positioned to fulfill its mission, meaning that a study on students' perceptions at a HBCU is timely.

## CHAPTER II

### REVIEW OF RELATED LITERATURE

This study examined students' perceptions of entrepreneurship. This chapter begins with a review of related literature and research regarding students' perceptions of entrepreneurship, entrepreneurship and motivational factors, and entrepreneurship education and technology. The chapter concludes with a summary of the review of related literature.

#### **Students' Perceptions of Entrepreneurship**

Students' perceived knowledge of entrepreneurship is changing because of courses geared toward linking entrepreneurship and college majors. Entrepreneurship has moved beyond schools of business to other academic units. In recent years, it has not been uncommon to find entrepreneurial courses and programs in other units of the university (Miller, 2007; Parcell, 2005), such as engineering.

Miller (2007) reported the challenges of music conservatories moving curricula, faculty, and students into the twenty-first century with an entrepreneurial mindset. Three challenges identified were (a) the stigma of entrepreneurship as a career path, (b) converting the mindset of music educators from training musicians to training music business people, and (c) securing funding for entrepreneurship programs in the arts. Some prominent conservatories and music schools have seen some success in integrating entrepreneurship courses and seminars in a packed curriculum with funding from wealthy

foundations such as Price and Coleman (Miller, 2007). Positive changes have taken place with conservatories' curricula, students, and faculty over several years.

Bell and Palmer (2007) conducted research on *Entrepreneurial Perceptions and Knowledge Held by College Students Majoring and Minor in Business versus Students Completing Entrepreneurship Classes*. In this study, significance in pre-and post-survey results for students in entrepreneurship and management were reported. Findings showed that students who started a business to make more money and students who started their own business were of vital importance to the U.S. economy. Findings also showed significance in students' perceptions and expectations when taking entrepreneurship courses. Bell and Palmer (2007) believed that their reported findings can be valuable for entrepreneurship professors in adding legitimacy to the field.

Peterman and Kennedy (2003) reported that secondary students' exposure to entrepreneurship through participation in enterprise education showed higher perceptions of desirability and feasibility for starting a business. Findings showed that individuals with low positiveness of entrepreneurial experiences prior to the program reported significant changes in their perceptions toward business ownership after the program. Even though short-term exposure to entrepreneurship was beneficial to increasing students' knowledge and skills, continued exposure to entrepreneurship and enterprise education, as well as their experiences, will improve their longevity for success in the area.

In their study on promoting entrepreneurship for economic development analyzing the United States, Turkish, and Spanish business students, Uslay et al. (2002) found that "U.S. students were most likely to consider that entrepreneurship led to riches while the Spanish students were the least likely" (p. 114). Findings showed that United

States respondents perceived a significant favorable social and cultural environment for entrepreneurship. The Spanish and the Turkish respondents did not perceive a significant favorable social and cultural environment for entrepreneurship. No differences were found for the perceived importance of taking control of one's destiny as a reason for being an entrepreneur. Findings also suggested that educational initiatives should address female students and the rewards of owning their own business, and mentoring initiatives for both male and females in order to increase the number of entrepreneurs (Uslay et al., 2002).

### **Entrepreneurship and Motivational Factors**

The motivational factors that continued to be associated with entrepreneurship research are demographic variables such as age, gender, ethnicity/race, work status, education, and income. Further, factors that continued to fuel this growth are downsizing of large corporations, leading to loss of employment for Generation X and Generation Y. These generations viewed entrepreneurship as the ideal way to create jobs and control their destinies and futures. The Millennium Generation showed high levels of interest in entrepreneurship and enjoyed taking the risk associated with starting a business. However, the millennial generation felt “confident they can achieve great results...by going into business for themselves” (Garsombke, Hanks, Prince, & Zaino, 2006, Introduction, para. 1). The millennial generation showed traits of self-awareness, astuteness, and creativity; and were comfortable taking risks involved with business.

In a study on teens' attitudes and motivation across gender and ethnic identity, Wilson, Marlino, & Kickul (2004) concluded that would-be entrepreneurs' goals and motivations differ significantly across subgroups. Girls were reported more likely to seek

positive social and relational factors, while boys were more likely to seek autonomy and financial rewards. Hispanic and African American teens (across ethnic/racial and gender) were mostly motivated by factors related to autonomy and were the most enthusiastic potential entrepreneurs. In addition, the researchers reported that making a lot of money was important for all groups of would-be entrepreneurs except for European girls, because the groups believed they would be providers for themselves and their families.

According to Wilson et al. (2004) the assessment of programs designed to encourage and train future entrepreneurs should incorporate measures of self-efficacy in domains specific to being a successful entrepreneur and business owner,” (p. 195). The researchers’ findings were summarized as follows: “knowledge needed by a future entrepreneur should (a) encompass role-models capable of imparting information about career choices (achievable and desirable), (b) provide basic information on starting or owning a business, and (c) raise the perceptions of entrepreneurship as a career option” (Wilson et al., p. 194).

Collins, Hanges, and Lock (2004) used the random effects meta-analysis method to test the relationship of achievement motivation to entrepreneurial behavior. Achievement motivation showed a relationship with occupational choice and performance in an entrepreneurial role across the studies included in the study. Reported findings did not indicate whether “achievement motivation strength would predict career choice better than it predicted performance” (Collins et al., 2004, p. 111).

The Global Entrepreneurship Monitor (GEM) “is a major research project aimed at describing and analyzing entrepreneurial processes within a wide range of countries” (Bosma & Harding, 2006, Introduction section, para. 2). The GEM focuses on measuring differences in the level of entrepreneurial activity among countries, uncovering factors



determining the levels of entrepreneurial activity, and identifying policies that may enhance the level of entrepreneurial activity. Entrepreneurship scholars in a number of disciplines concur that age, gender, work status, education, household income, and perceptions are all significant socioeconomic factors in a person's decision to launch a business (Bosma & Harding, 2006, Characteristics of Entrepreneurial Activity section, Entrepreneurial Demographics).

## **Entrepreneurship Education and Technology**

### **Entrepreneurship at the Higher Education Level**

The chronology of entrepreneurship reported that entrepreneurship was first introduced in the university setting in 1947. The first MBA concentration in entrepreneurship was launched in 1971 and the first undergraduate program was launched in 1972 (Katz, 2003). Since then, the new field has continued to emerge with its own identity. In addition, Baron and Shane (2005) noted that, as a branch of business, entrepreneurship has important roots in several older and more established fields such as economics, behavioral science, and sociology. As a field of study, entrepreneurship is a process of creating something new with value by devoting the necessary time and effort while accepting the financial, psychic, and social risks accompanying the end results (Hisrich et al., 2008).

The proliferation of entrepreneurship degree programs and certificate programs at the collegiate level has presented challenges for administrations in the development of effective programs to meet students' needs (Loten, 2006). Challenges for the field of entrepreneurship are the development of existing programs, personnel, and the lack of commitment on the part of institutions. Additionally, colleges and universities are

challenged with both policy development for emerging entrepreneurial campuses and meeting student interest and needs in course and program development.

A study conducted by Seymour (2001) described the number of community colleges, universities, and business schools in the U.S. offering entrepreneurship training and education in various forms—courses for credit and non-credit, associate degree programs, and certificates. The community college foci are preparation for further education, workforce training, and community development. Community colleges offer a variety of entrepreneurship opportunities including seminars, workshops and small business development. However, there is a certain value in learning the materials from the coursework offered at a four-year institution, but employers normally value the fact that employees have demonstrated their ability to learn and solve problems.

Many careers and jobs require a four-year degree for employment or advancement. Graduation from college demonstrates the ability to be able to produce quality work on the first day on the job. It also gives enough general background to help strengthen personal, professional, networking and communication skills. As such, Seymour (2001) stressed that for higher education to meet the supply and demand for formal training and education in this area, the higher education system will need to expand or develop entrepreneurship education programs.

The number of colleges and universities in the United States offering a course or a major in entrepreneurship has grown to over 2,000 and more than 200,000 students are enrolled in courses (Rifkin, 2008, para. 4). In 1985, there were approximately 253 institutions offering a class or course of study with approximately 16,000 students enrolled. Today, there are approximately 203 accredited online colleges, universities, and schools (eLearners, 2011) accessible to individuals seeking to continue their education, to

upgrade their skills for the job market, or to start a business. Thus, the rise in the growth of entrepreneurship has opened the door for educational institutions to serve as formal training grounds for the twenty-first century entrepreneur.

### **Entrepreneurship Educational Developments**

Charney and Libecap (2000) found that emerging companies owned by or employing entrepreneurship graduates had five times the sales and employment growth than those with non-entrepreneurship graduates. Entrepreneurship graduates' average annual income was 27% higher and they accumulated 62% more in personal income than non-entrepreneurship graduates. Additionally, entrepreneurship graduates earned approximately \$23,000 per year more than other business graduates. They were likely to be involved in developing new products, and entrepreneurship education enhanced the transfer of technology from the university sector setting to the private sector (Chaney & Libecap, 2000).

Research conducted by Minniti (2001) on self-employment and organization creation was done with students attending their final year of high school in Italy. The results and implications in the study showed that the personality characteristics and the attitude towards the entrepreneur and entrepreneurship had a significant influence on the attention to entrepreneurship. Concerns were the possibility of establishing a theoretical model that explains the process of choice towards entrepreneurial work in the transition from school to work, the active policies of incentive of the entrepreneurial choice through orientation activities, and career counseling at the end of the scholastic experience.

The GEM U.S. Team comprised of Minniti, Bygrave, Zacharakis, and Cole (2003) reported on global entrepreneurship assessment and indicated that individuals

between the ages of 25 and 34 were the “most active in entrepreneurial activity with a total entrepreneurial activity index (TEA) rate of 17.3%” (p. 6). The specialized professional, technological, or business school degrees exhibited the highest total TEA rate of 17.8% and the highest proportion of opportunity-driven entrepreneurship at 13.3%. The highest TEA (16.5%) was exhibited by African Americans, with Hispanic Americans exhibiting a TEA rate of 15.2% (Minniti et al., 2003).

A study by Volkmann (2004) concluded that none of the economic and business related subjects had developed as dynamically as the field of entrepreneurship at universities over the past decade. Such growth for a new field of study has faced challenges and problems as it has struggled to mature. Two conclusions drawn from the research were that “entrepreneurship education is important for the health of any university and any economy” (Volkmann, 2004, p. 185) and the “innovative concepts for academic entrepreneurship education are vital for universities” (Volkmann, 2004, p. 185) because an individual becomes an entrepreneur by education and by experience.

The teaching of entrepreneurship is multifaceted. It involves providing instruction across a wide range of topics such as running a business. A “significant minority of respondents did not believe that entrepreneurship was an ‘academically rigorous’ subject” (Bennett, 2006, p. 179). According to Bennett (2006), the majority of the respondents concurred that entrepreneurship was more a learned competency rather than an innate trait. Additionally, they believed that a person’s creativity and innovativeness would be improved through attending an educational program.

Research by Garsombke et al. (2006) sought to bring together learning strategies and constructs that would merge creativity and self-discipline traits needed by young millennial African American entrepreneurs in new business development. Several of the

millennial entrepreneurial student traits indicated that the student (a) is digitally involved, (b) is concerned about the environment, (c) seeks interaction with others, (d) has high moral beliefs/attitudes on most issues, (e) has shorter attention spans, and (f) uses the Internet professionally and socially. Garsombke et al. (2006) noted that teaching strategies should incorporate digital technology, group projects, topics on the environment and linkage, debates on issues facing students, experiential learning, and Internet assignments. Based on these findings, teaching strategies should also incorporate technology with testing and communicating with students.

Strides in advancing entrepreneurship in higher education have been positive at many African universities. In an examination of entrepreneurship education, desire to start a business, social responsibility, role models, and knowledge of entrepreneurship, Brijlal (2011) found that entrepreneurial perception and knowledge of African students in their final year of university study indicated that they wanted to start a business. Science students expressed more of an interest in starting a business versus economic and management students. Of the four races (Africans, Coloreds, Indians, and Whites) represented in Brijlal's (2011) study, Africans reported the greatest desire for wanting to start a business.

In a study on entrepreneurship programs and entrepreneurial intention of science and engineering students, Souitaris, Zerbinati, and Al-Laham (2007) reported that universities interested in the effectiveness of their programs needed to capture how much their students learned about entrepreneurship, students' satisfaction with courses, and whether students were inspired from the program curriculum and faculty. Even though Souitaris et al. (2007) reported that inspiration rather than textbook knowledge raised the entrepreneurial intention of engineering students, research needed to explore the kinds of

emotions that were experienced after participation in events associated with courses during an entrepreneurship program. In addition, curriculum developers and faculty needed to understand how these emotions link with the construct of entrepreneurial passion and how the emotional stimulation affects cognitive rationality.

Historically black colleges and universities have traditionally been firmly grounded in their historic missions and experiences of educating African American students. As such, many of these institutions have provided excellent and affordable educational programs to a population reflective of social, economic, educational, and cultural backgrounds (Mahoney, 2009). If they are to continue to attract future leaders and entrepreneurs, these institutions must recognize and accept the role of change-makers for the development of minority businesses. These institutions are in a unique position to be change catalysts in the development and promotion of minority businesses regardless of the political and economic climates impacting the economics of the population they service (Adebayo, Adekoya, & Ayadi, 2001).

The institutions that are able to transition the mindset of vested stakeholders and the curricula for the economic survival of the university and its major clients (students) are likely to thrive. The main reason they will thrive is that students will seek out programs offering the best preparation for them to handle the challenges of “operating entrepreneurial ventures in the creative economy that are global and technologically linked” (Andrews et al., 2010, p. 32). These institutions must re-educate their human resource capital into thinking entrepreneurially, develop evaluation processes that will reward faculty and staff for output delivery, and work diligently to enhance institutional resources and services to remain effective and competitive (Andrews et al., 2010).

## **Entrepreneurship and Technology**

In the 1980s, sophisticated computers ushered in sweeping changes in production processes and consumer markets. The new economy claims to include high technology equipment and consumer products, e-commerce in all its forms, innovative IT-led financial services, high tech telecommunication services, and other IT goods and services. “Entrepreneurs and small business will need to successfully navigate and use the connected world to survive and thrive” (The Intuit Future of Small Business Report, 2007b, p. 5) in the new economy. Managers, employees, students, and professors will constantly interact with the assistance of computers and other devices. The embeddedness of Web 2.0 and beyond (computers, mobile devices, networks, virtual networks, cloud memory, etc.) into our environments continues to redefine the traditional classroom at all levels. In addition, the connected world redefines the borderless business world daily.

As recently as October 7, 2011, an article in the Jackson local newspaper read, “Virtual lessons ‘flip’ classes.” Toppo (2011) reported on how teachers were digitally recording lessons and homework with a tablet or similar device and uploading into iTunes or similar platforms. According to Toppo, during class the next day, the teacher reviewed posted assignments and addressed student questions. He further stated that many times the students are given team assignments and are encouraged to use virtual technology to collaborate with their team members (Toppo, 2011). Thus, how entrepreneurship educators integrate technology in the process will assist the next generation of entrepreneurs to be savvier with the aid of technology skills and other resources needed to manage volumes of information. The skills and tools needed to manage and make decisions will make the next generation of entrepreneurs self-reliant. These students will be self-reliant because they have grown up in an environment of self-

sufficiency and multi-tasking. This generation prefers swiftness rather than patience. They make use of the latest advances in technology in order to make their lives simpler (The Intuit Future of Small Business Report, 2007b).

For entrepreneurship education and technology to embrace the twenty-first century, the two must be merged into academia and the pedagogies of courses and professors. This merger should provide the professors with more confidence in use of academic technology and expand their knowledge base to include new and innovative approaches to the teaching of entrepreneurship (Kuratko, 2005). On the positive side, support for the use of technology in the delivery of entrepreneurship curriculum comes from research on new realities in entrepreneurship at HBCUs where business schools widely use the Internet in the curriculum for assignments. The lack comes in the use of online and distance education technology in the delivery of courses. Additionally, many of the business schools are slow to respond to providing “information over the Internet to students regarding entrepreneurship, new venture creation and small business management” (Andrews et al., 2010, p. 47).

### **Summary of the Review of Related Literature**

Chapter II presented the literature review of related research on students’ perceptions of entrepreneurship, entrepreneurship and motivational factors, and entrepreneurship education and technology. Research (Miller, 2007; Souitaris et al., 2007) reported on the gains that have been made in integrating entrepreneurial tools and skills with music and engineering majors. In addition, students’ perceptions about entrepreneurship have been found to show positive change, and reasons have been given for the importance of education and training in the advancement of the field. Specifically,



African American students' exposure to formal entrepreneurship education enhances chances for entrepreneurial success. Other findings from several studies showed that future entrepreneurs will need role models, knowledge about starting a business, and knowledge of entrepreneurship as a career option for the future (Brijlal, 2011; Miller, 2007; Peterman & Kennedy, 2003; Wilson et al., 2004). Students' reasons for wanting to become entrepreneurs varied from wanting to make more money to wanting to have some control of their futures (Bell & Palmer, 2007; Collins et al., 2004).

Intertwined in the recognition of entrepreneurship perceptions and beliefs are motivational factors such as the daily change in economic stability of large corporations, loss of jobs, and achievement motivation matched with demographics (Bosma & Harding, 2006; Collins et al., 2004; Garsombke et al., 2006). Motivational factors used to determine the influence of entrepreneurship have been socioeconomic, personal, demographic (age, gender, college classification), and, to some degree, locus of control. Theoretical models addressing entrepreneurship and other academic majors need further studying in order to incorporate the process of choice towards an entrepreneurial mindset.

In conclusion, the connected world redefines the borderless business world that we live in today. The millennial student will use technological advances in ways never before envisioned. Therefore, entrepreneurship and technology must embrace and merge in academia in order for clients to be better served at the higher education levels.

## CHAPTER III

### METHODOLOGY

The purpose of this study was to examine students' perceptions of entrepreneurship at a HBCU in central Mississippi. This chapter describes the methodology and procedures used to conduct the study. The following sections are included in this chapter: research design, variables for the study, population and sample, instrumentation, data collection, and data analysis.

#### **Research Design**

The design of this research was cross-sectional and descriptive. The cross-sectional survey method was appropriate for this research since answers were sought regarding students' perceptions of entrepreneurship during the 2010 fall semester. Descriptive research is "useful for investigating a variety of educational issues, and is concerned with assessing attitudes, opinions, preferences, demographics, practices, and procedures" (Gay & Airasian, 2003). Therefore, descriptive statistics were appropriate because of the nature of information that was sought from the participants. Descriptive statistics were used to describe students' perceptions of entrepreneurship, an entrepreneur, entrepreneurial opportunities, entrepreneurship education, and technology and entrepreneurship.

### **Variables for the Study**

The variables that were examined in this study were demographics and students' perceptions of entrepreneurship, an entrepreneur, entrepreneurial opportunities, entrepreneurship education, and entrepreneurship and technology. The variables, students' perceptions of entrepreneurship, an entrepreneur, entrepreneurial opportunities, entrepreneurship education, and entrepreneurship and technology, are ordinal scale. The demographic variables are nominal and include age, gender, work status, academic unit, first in immediate to attend college, and first generation to attend college.

### **Population and Sample**

The target population for the study was the 1,620 students enrolled in classes in the COB and SOE in a HBCU in central Mississippi during the 2010 fall semester. The target population was convenient and represented approximately 900 males and 700 females enrolled in both academic units. The COB had the largest population during this same academic semester. The COB majors were Accounting, Economics, Finance, General Business, Entrepreneurship, and the professional development courses. The professional development courses are required for all majors. The SOE majors were Civil Engineering, Computer Science, and Computer Engineering.

Seven SOE classes with an average enrollment of 35 students were used in the study. Six classes in the COB with an average enrollment of 45 students were used in the sample. Selection of the COB professional development classes (required of all undergraduate majors), a senior management, and two graduate courses allowed for all majors and education levels to be included in the study. The calculation of the numbers representing each unit produced an estimated sample size of 385. The total number of

students who completed the survey was 425 students. Of the 425 student surveys, a total of 351 surveys were analyzed and used in this study.

The SOE students were selected because of their potential to create employment opportunities in engineering, computer science, and other areas necessary for a business such as an engineering firm to operate. The COB students were selected because of their potential to create start-ups in the service industry where engineering students may require their business skills and services. Each participant was given a letter which explained the purpose of the study, the methods and procedures, the risks, benefits, and confidentiality of the study (see Appendix B).

### **Instrumentation**

An instrument consisting of seven parts was used in this study. The *Students' Perceptions of Entrepreneurship Survey* (SPES) is comprised of Parts I through VII with a total of 50 items. The SPES was closed-ended (see Appendix C). SPES Part I covered demographic characteristics, and SPES Part II covered personal and family background information. SPES Parts III through VII were ordinal variables in the format of Likert scale statements with a rating scale of strongly disagree (coded 1); disagree (coded 2); undecided (coded 3); agree (coded 4); and strongly agree, (coded 5). Students who responded as strongly disagreeing and disagreeing with a statement subscale were considered likely to perceive the statement as not being important for expressing their perceptions of entrepreneurship. Students who responded as strongly agreeing and agreeing with a statement subscale were considered likely to perceive the statement as being important for expressing their perceptions of entrepreneurship.

SPES Part I, *Demographic Information*, was designed to collect data related to the students' personal information including the nominal variables age, gender, academic unit, work status, first in immediate family to attend college, and generation first to attend college. These categories have been identified throughout research as characteristics that are relevant to an entrepreneurial population. The demographic coding assigned to statements in this part was age (18-22 = 1, 23-29 = 2, 30-41 = 3, 42-53 = 4, and 54 or older = 5); gender (male = 1 and female = 2); majority of classes (COB = 1, SOE = 2, and other = 3); student work status (Full Time [FT] student not employed = 1, FT student employed FT = 2, FT student employed Part Time [PT] = 3, PT student employed FT = 4, and PT student employed PT = 5), first generation to attend college (yes = 1 and no = 0); and first in immediate family to attend college (yes = 1 and no = 0). For analysis purposes, the two lower age subscales were combined. Statistical analyses were done using the age subscales 18-29, 30-41 and 42-54.

SPES Part II, *Personal and Family Background Information*, was designed to collect data on home ownership, owning and/or operating a business, where the students learned about entrepreneurship, and year of college. Additionally, these categories have been identified throughout research as characteristics that are considered relevant to an entrepreneurial population, an acquisition of entrepreneurial awareness, and community relations. Personal and family background information coding assigned to the seven statements in this part was household income (\$00,000-25,999 = 1, \$26,000-50,999 = 2, and above \$51,000 = 3); parents/guardians purchasing or have purchased a home (yes = 1 and no = 2); student purchasing a home (yes = 1 and no = 2); the individual or parents/guardians own/operate a small business (yes = 1 and no = 2); learned about entrepreneurship (high school = 1, college = 2, and other = 3); learned about business

ownership (family = 1, friends = 2, high school = 3, college = 4, and other = 5); and year of college (first year = 1, sophomore = 2, junior = 3, senior = 4, and graduate = 5).

SPES Part III, *Students' Perceptions of Entrepreneurship*, had nine statements. Students were asked to consider how they perceived entrepreneurship in owning and managing a business, the application of personal qualities such as creativity, generation of an idea, opportunities to create something new, aim for financial independence, learned competency versus an inherited characteristic, improving one's quality of life, raising one's standard of living, and allowing for fair use of resources.

SPES Part IV, *Students' Perceptions of an Entrepreneur*, had nine statements. Students were asked to consider their perceptions of an entrepreneur for starting a new business, enjoying seeing technology or an invention go out as a product/service, having special qualities that set them apart from others, having different attitudes towards taking risks, having freedom to accept or refuse being told what to do, feeling a much stronger desire to succeed, experiencing a restlessness that hinders learning new things, making a difference in the world, and having a positive image within society and the community.

SPES Part V, *Students' Perceptions of Entrepreneurship and Opportunities*, had eight statements. Students were asked to provide their perceptions of the ability of individuals perceiving new events and activities in a positive way; how interacting with people in different situations allows the person to gain information; recognizing and exploiting new business ideas from life experiences; offering the potential to generate a profit; the effect of different life experiences; the differences people have in receiving information; the possibility of more productive ways of doing things; and seeing opportunities in technological, social, political, and demographic changes in the human population.

SPES Part VI, *Students' Perceptions of Entrepreneurship Education*, had five statements. Students were asked to share their perceptions of the primary purpose and design of entrepreneurship education, developing characteristics in students, methods for teaching, and experienced individuals should teach entrepreneurship.

SPES Part VII, *Students' Perceptions of Entrepreneurship and Technology*, had six statements. Students were asked to share their perceptions of opportunities provided by technology education to be creative, digitally involved, internet is very integrated in students educational and social life, and use social media to collaborate with classmates and friends, the impact technology has had on their capabilities to use it innovatively for career and/or business development, and online class experience.

### **Validity and Reliability of the SPES**

Validity refers to the degree to which evidence supports any inferences made based on the data collected using a particular instrument (Fraenkel & Wallen, 2006). Content validity requires that the test items measure the intended content area. All items on the SPES are relevant to the measurement of the intended content area and are determined to test the total content area (students' perceptions of entrepreneurship) they are designed to test.

A panel of twelve experienced entrepreneurs, educators, and researchers evaluated the SPES format (printing, type size, work space, language, and comprehensiveness) and agreed that it is representative of the content and study purpose. An example of the instrument review panel letter can be found in Appendix E. The instrument contained an adequate sampling of the domain content it was designed to represent. Further, the SPES format is presented in an appropriate format to obtain valid

data analysis results (Fraenkel & Wallen, 2006). Based on the panel's recommendations, Part I, Demographic Information, was increased from five to six statements; the word "specify" was added to the "other" category under statement 3; "full-time student/employed full-time" was added as a choice under statement 4; and statement 5 was revised to create two statements. The panel also recommended that under Part II, Personal and Family Information, statement 1 concerning household income should have income endings changed from \$25,000 to \$25,999, and from \$50,000 to \$50,999. In this same section, the panel recommended that in statements 5 and 6 the word 'specify' be added to the 'other' category. The instrument was revised to reflect these recommendations.

Under Part III, Students' Perceptions of Entrepreneurship, and Part IV, Students' Perceptions of an Entrepreneur, several statements were restated to reflect a positive tone. Portions of Part VI, Students' Perceptions of Entrepreneurship Education were removed and placed into a new section (Part VII, Students' Perceptions of Entrepreneurship and Technology) comprising all technology statements.

Survey items were developed from instruments and characteristics found in journal articles (Bell & Palmer, 2007; Bennett, 2006; Garsombke, et al., 2006), and dissertations and textbooks (Baron & Shane, 2005; Hisrich et al., 2008). SPES Parts III through VII were used to measure students' perceptions of entrepreneurship, an entrepreneur, entrepreneurial opportunities, entrepreneurship education, and entrepreneurship and technology. Validity of the SPES instrument was accomplished through reviews by department faculty teaching entrepreneurship and modified according to reviewers' recommendations. Reliability of the SPES instrument included the test-



retest method using groups of students; the test of internal consistency using an item-total correlation with the item tested being removed; and the Cronbach's alpha.

The Statistical Package for the Social Sciences (SPSS) version 18 split-half reliability method was used to assess SPES instrument reliability during the pilot study. The split-half reliability involved breaking a single test into two halves. The split-half reliability method was selected because the time frame selected for the pilot study did not allow sufficient wait time to administer the instrument twice. The split-half reliability method is stated reliability of scores on total test = 2X reliability for ½ test/1 + reliability for ½ test (Gay & Airasian, 2003).

The instrument was administered to one group of students (n = 50) during the 2010 fall semester. The Cronbach's alpha levels were examined for instrument reliability. According to George and Mallery (2006), there is no set interpretation of what is an acceptable alpha value but the rule of thumb is the larger the alpha the better the instrument reliability. The SPES Parts III through VII indicated the Cronbach's alpha scores ranged from .624 to .781. A Cronbach's alpha score  $\geq .700$  but  $\leq .800$  is considered acceptable. SPES Parts V and VI Cronbach's alpha scores were .655 and .624. Values in this range are considered questionable. After considering this information, the researcher decided to retain Parts V and VI based on the information being sought from the study participants.

### **Data Collection**

Data were collected using a instrument entitled *Students' Perceptions of Entrepreneurship Survey*. Approval to conduct the research for both the pilot and the proposed research study was obtained from the Mississippi State University and the

Jackson State University Institutional Review Boards (IRBs). Copies of the respective IRBs can be found in Appendix F. Once approval was received from the participating universities' IRBs, the COB and SOE deans, department chairs, and the faculty assigned to the classes were sent a letter under the researcher's signature requesting permission to include the students as part of the study. Approval from the unit deans and department chairs were received; however, permission requests were not returned by all faculty members. The classes in this study represented a convenience sample based on faculty permission to use assigned classes. The limited number of faculty agreeing to allow their classes to participate in the study provided for control over the implementation of the instrument. An example of the letter can be found in Appendix D.

### **Pilot Study**

The pilot study was conducted during the 2010 fall semester. The pilot study was cross-sectional and was conducted to identify unanticipated problems or issues with the instrument. According to Gay and Airasian (2003), the pilot study is “a dress rehearsal” of the actual study (p. 93). The pilot study gives the researcher an opportunity to evaluate changes and additions recommended or identified to be made to the proposed instrument prior to the actual research study. The two classes (50 students) selected for the pilot study were not part of the actual study.

Using a five-item critique sheet (see Appendix A), the students evaluated the SPES format on the printing, type size, work space, language, clarity, and directions for completing the survey. All participants (COB and SOE) completed the instrument within a 15-minute time frame. The following student comments were integrated in the instrument: add “check all that apply” to items 5 and 6 under Part II, Personal and Family

Background Information; under Part V, Students' Perceptions of an Entrepreneur, add an introduction for the statements in order to avoid confusion; and change statements 7.5 and 7.6 to "Yes" and "No" responses. A final copy of the instrument packet (student participant letter [Appendix B] and instrument [Appendix C]) including all recommended changes was prepared for the actual study.

The participants in this study were selected from classes offered in the COB and SOE. The large number of course sections offered by the academic units required that at least one section for the course levels be selected for the study. There were over 149 course sections listed in the 2010 fall semester schedule booklet for the units, excluding labs, independent study, thesis, and dissertation offerings. Class enrollment in the COB tended to be larger than class enrollment in the SOE. Twenty-five sections were selected and verified to make the final selection.

One class for each of the courses in the SOE was selected for the study. The selection of classes was accomplished by verifying cancelled classes, selecting one class for each course level and according to the participating faculty. All faculty members did not respond to the researcher's request to have their classes participate in the study. Therefore, the classes for the faculty agreeing to allow the classes to participate were verified. The final selection of classes was easy because participating faculty taught at least two sections of the courses needed for the study. In the SOE seven classes with an average enrollment of 35 students comprised the sample size.

Six classes in the COB with an average enrollment of 45 students comprised the sample. Selection of COB professional development courses (required of all majors at the first year, second year, and third year of study), a senior management, and two graduate level courses allowed for all majors and education levels to be included in the study. The

calculation of the numbers representing each unit produced an estimated sample size of 385.

The researcher visited each of the classes and collected the data. The students were introduced to the research study and were given a research packet. The researcher explained to the participants that participation in the study was strictly voluntary and that all information would be kept confidential. The students were instructed to read the participant letter which explained in more detail the purpose of the study. Once students had completed reading the participant letter, they were instructed to proceed to review the survey for instructions on completing the instrument. Any student wishing not to participate in the research study was asked to return the research packet to the researcher and the student was excused from the data collection site until the process was completed.

No student identification information was collected during the process in order to protect the confidentiality of the participants. All consent forms and instruments are locked in separate filing cabinets in the office of the researcher. The data collection was completed according to a schedule. The data were collected within a 15-day time frame.

### **Data Analysis**

The analyses of data were completed using the SPSS version 18 for Windows. A descriptive statistical analysis using frequencies and percentages were used to describe the demographic variables. Research questions were addressed using the independent t-test and the analysis of variance test (ANOVA). Data were converted from non-parametric to parametric; the instrument used was on the ordinal measurement scale (Likert scale) and total scores were computed for each category under investigation,

making the data interval. All data analyses were performed at the probability of a .05 significance level.

The independent t-test was used with those variables with two subscales to test for a difference in proportions in another category. According to Fraenkel and Wallen (2006), independent t-test is one of the two t-test “most commonly used for parametric tests for analyzing categorical data” (p. 238).

The ANOVA was used to test those variables with three or more subscales. In cases where there were significant differences in the ANOVA test, a multiple comparison *post hoc* test (Tukey’s Honestly Significant Difference test [HSD]) was computed to determine where the differences occurred (between which groups). According to Field (2005), “*post hoc* tests by their very nature are two-tailed” (p. 355) and are used when no specific hypotheses have been stated and thereby limiting the researcher’s ability to predict the direction of the hypotheses. The Tukey’s HSD provides good power and offers protection against a Type 1 error.

### **Research Question One**

Is there a statistically significant difference in students’ perceptions of entrepreneurship based on demographic characteristics (i.e., age, sex, academic unit, work status, first generation to attend college, and first in immediate family to attend college)? This question was answered by using descriptive statistical analysis, the independent t- test and the ANOVA test.

### **Research Question Two**

Is there a statistically significant difference in students’ perceptions of an entrepreneur based on demographic characteristics (i.e., age, sex, academic unit, work

status, first generation to attend college, and first in immediate family to attend college)?

This question was answered by using descriptive statistical analysis, the independent t- test and the ANOVA test.

### **Research Question Three**

Is there a statistically significant difference in students' perceptions of entrepreneurial opportunities based on demographic characteristics (i.e., age, sex, academic unit, work status, first generation to attend college, and first in immediate family to attend college)? This question was answered by using descriptive statistical analysis, the independent t- test and the ANOVA test.

### **Research Question Four**

Is there a statistically significant difference in students' perceptions of entrepreneurship education based on demographic characteristics (i.e., age, sex, academic unit, work status, first generation to attend college, and first in immediate family to attend college)? This question was answered by using descriptive statistical analysis, the independent t- test and the ANOVA test.

### **Research Question Five**

Is there a statistically significant difference in students' perceptions of entrepreneurship and technology based on demographic characteristics (i.e., age, sex, academic unit, work status, first generation to attend college, and first in immediate family to attend college)? This question was answered by using descriptive statistical analysis, the independent- test and the ANOVA test.

### **Missing Data**

During the actual study, consideration was given to procedural factors such as data entry, disclosure restrictions, and failure to complete the entire questionnaire. A concerted effort was made to obtain missing data but no pressure was placed on the participants to provide the data. Because of missing data, approximately 13% of the surveys were found to be incomplete and unusable. In many cases, complete parts were omitted or one or more statements were omitted in one or more parts of the instrument; these omissions rendered those surveys invalid.

## CHAPTER IV

### RESULTS

Chapter IV is a presentation of the results from the analyses used to address the research questions in this study. The purpose of this study was to examine students' perceptions of entrepreneurship at a HBCU in central Mississippi. The SPES was used to collect data from the study participants. There were a total of 351 students who participated in the study.

This study focused on students perceptions of entrepreneurship. The study answered the following research questions:

1. Is there a statistically significant difference in students' perceptions of entrepreneurship based on demographic characteristics (i.e., age, sex, academic unit, work status, first generation to attend college, and first in immediate family to attend college)?
2. Is there a statistically significant difference in students' perceptions of an entrepreneur based on demographic characteristics (i.e., age, sex, academic unit, work status, first generation to attend college, and first in immediate family to attend college)?
3. Is there a statistically significant difference in students' perceptions of entrepreneurial opportunities based on demographic characteristics (i.e., age, sex, academic unit, work status, first generation to attend college, and first in immediate family to attend college)?



4. Is there a statistically significant difference in students' perceptions of entrepreneurship education based on demographic characteristics (i.e., age, sex, academic unit, work status, first generation to attend college, and first in immediate family to attend college)?
5. Is there a statistically significant difference in students' perceptions of entrepreneurship and technology based on demographic characteristics (i.e., age, sex, academic unit, work status, first generation to attend college, and first in immediate family to attend college)?

### **Demographic Characteristics**

Descriptive statistics were used to address the demographic characteristics of the participants in this study. The demographic information included age, sex, academic unit, work status, first generation to attend college, and first in immediate family to attend. Results of the analyses are presented in the Tables 4.1 through 4.6 that follow.

#### **Age of Participants**

Of the respondents ( $n = 351$ ), 210 (59.8%) were age 18-22 and 112 (31.9%) were age 23-29. Table 4.1 summarizes the results of the age distribution of the participants.

#### **Gender of Participants**

Table 4.2 shows the distribution for the number of participants by sex. Of the respondents ( $n = 351$ ), 189 (53.8%) were males.

Table 4.1 Frequency and Percentage of Participants by Age

Age	Frequency	Percentage
18-22	210	59.8
23-29	112	31.9
30-41	21	6.0
42-54 or older	8	2.3
Total	351	100.0

Table 4.2 Frequency and Percentage of Participants by Sex

Gender	Frequency	Percentage
Males	189	53.8
Females	162	46.2
Total	351	100.0

### Academic Unit of Participants

Table 4.3 shows the academic unit membership of participants. Of the respondents, 184 (52.4%) of the participants were enrolled in classes in the COB.

Table 4.3 Frequency and Percentage of Participants by Academic Unit

Academic Unit	Frequency	Percentage
College of Business	184	52.4
School of Engineering	104	29.2
Other (Specify)*	63	17.9
Total	351	100.0

Note:\* College of Liberal Arts, College of Life Long Learning, and School of Education

### Work Status of Participants

The distribution for the work status of respondents is presented in Table 4.4. There were 143 (40.7%) full-time students not employed and 122 (34.8%) full-time students/employed part-time.

Table 4.4 Frequency and Percentage of Participants by Work Status

Student Work Status	Frequency	Percentage
Full-Time Student/Not Employed	143	40.7
Full-Time Student/Employed Full-Time	66	18.8
Full-Time Student/Employed Part-Time	122	34.8
Part-Time Student/Employed Full-Time	11	3.1
Part-Time Student/Employed Part-Time	9	2.6
Total	351	100.0

### Generation First to Attend College

Table 4.5 shows the distribution for the number of participants responding to college attendance. Of the respondents (n = 351), 262 (74.6%) responded “No” to first generation to attend college.

Table 4.5 Frequency and Percentage of Generation First to Attend College

First Generation	Frequency	Percentage
No	262	74.6
Yes	89	25.4
Total	351	100.0

### First in Immediate Family to Attend College

Table 4.6 shows the distribution for the number of participants responding to first in immediate family to attend college. Of the 351 respondents, 272 (77.5%) responded “No” to first in immediate family to attend college.

Table 4.6 Frequency and Percentage of First in Immediate Family

First in Immediate Family	Frequency	Percentage
No	272	77.5
Yes	79	22.5
Total	351	100.0

### Personal and Family Background

Descriptive statistics were used to address the personal and family background characteristics of the participants in this study. SPES Part II, statements 1 through 7 asked students to provide information about personal and family background. The results of the analyses are presented in Tables 4.7 through 4.13 that follow.

### Household Income

Table 4.7 shows the distribution for household income reported from the data analysis. Of the respondents ( $n = 351$ ), 134 (38.5%) revealed that their household income was between \$26,000-50,999.

Table 4.7 Frequency and Percentage of Household Income

Household Income	Frequency	Percentage
\$00,000-25,999	118	33.6
\$26,000-50,999	134	38.2
Above \$51,000	99	28.2
Total	351	100.0

### Parents or Guardians Purchased Home

The distribution for parents/guardians who were purchasing or have purchased a home is reported in Table 4.8. Of the 351 respondents, 291 (82.9%) responded “Yes” to their parents or guardians are purchasing or have purchased a home.

Table 4.8 Frequency and Percentage of Parents/Guardians Purchased Home

Home Ownership	Frequency	Percentage
Yes	291	82.9
No	60	17.1
Total	351	100.0

### Subject Purchasing a Home

The distribution of participants purchasing a home is summarized in Table 4.9. Of the 351 respondents, 293 (83.5%) responded “No” to purchasing a home.

Table 4.9 Frequency and Percentage of Subject Purchasing a Home

Home Ownership	Frequency	Percentage
Yes	58	16.5
No	293	83.5
Total	351	100.0

### Parents/Guardians Own/Operate a Small Business

The distribution of parents/guardians who owned or operated a small business is summarized in Table 4.10. Of the 351 respondents, 271 (77.2%) responded “No” to their parents or guardians owning and operating a small business.

Table 4.10 Frequency and Percentage of Parents/Guardians Own/Operate a Small Business

Small Business Ownership	Frequency	Percentage
Yes	80	22.8
No	271	77.2
Total	351	100.0

### **Institution from which Participant Learned about Entrepreneurship**

The distribution of the institution from which the participant learned about entrepreneurship is summarized in Table 4.11. Of the 351 respondents, 223 (63.5%) learned about entrepreneurship in high school.

Table 4.11 Institution from which Subject Learned about Entrepreneurship

Institution	Frequency	Percentage
High School	223	63.5
College	101	28.8
Other	27	7.7
Total	351	100.0

### **Sources from whom Participant Learned about Business Ownership**

The distribution of the sources from whom the participant learned about business ownership is summarized in Table 4.12. Of the 351 respondents, 169 (48.1%) learned about business ownership from family, and 73 (20.8%) learned about entrepreneurship in college.

Table 4.12 Sources from whom Subject Learned about Business Ownership

Sources	Frequency	Percentage
Family	169	48.1
Friends	22	6.3
High School	72	20.5
College	73	20.8
Other	15	4.3
Total	351	100.0

### Educational Level Classification

The distribution of the respondents' educational level is summarized in Table 4.13. Of the 351 respondents, 145 (41.3%) responded that they were in their senior year of study.

Table 4.13 Frequency and Percentage of Educational Level

Educational Level	Frequency	Percentage
First Year	43	12.3
Sophomore	45	12.8
Junior	78	22.2
Senior	145	41.3
Graduate	40	11.4
Total	351	100.0

### Research Question Analysis

The research questions were addressed using an independent t-test for those variables with two scales, and an ANOVA test for those variables with three or more subscales. In cases where there were significant differences in the ANOVA test, a multiple comparison *post hoc* test (Tukey's Honestly Significant Difference test [HSD]) was computed to determine where the differences occurred (between which groups). All data analyses were performed at a.05 significance level. Degrees of freedom (*df*) are also reported. The results of the analyses are presented in the Tables 4.14 through 4.47 that follow.

### Research Question One

Research question one asked: Is there a statistically significant difference in students' perceptions of entrepreneurship based on demographic characteristics (i.e., age, sex, academic unit, work status, first generation to attend college, and first in immediate

family to attend college)? The independent t-test was used to analyze the variables with two subscales, and the ANOVA was used to analyze the variables with three or more subscales.

Tables 4.14 through 4.21 present the results of the analyses that were used to address the research question based on demographic characteristics age, sex, academic unit, work status, generation first to attend college, and first in immediate family to attend college. ANOVA was calculated to determine if there were statistically significant differences in measures of perceptions of entrepreneurship among participants of different age groups. The perceptions examined were (a) means owning and managing a business, (b) the application of personal qualities such as creativity, (c) generation of an idea, opportunities to create something new, (d) offers an understanding of how opportunities to create something new arise, (e) offers an individual the opportunity to aim for financial independence, (f) is a learned competency versus an inherited characteristic, (g) may improve one's quality of life, (h) raises one's standard of living, and (i) allows for resources to be used fairly for desired consumers.

The results of the analysis as shown in Table 4.14, indicated that there was a statistically significant difference among the age groups,  $F(3,347) = 3.19, p = .024$ . Tukey's HSD as shown in Table 4.15 was used to determine where the statistically significant differences were. The result of this analysis indicated that the 23-29 year-old age group ( $M = 38.04, SD = 4.42$ ) scored significantly higher than the 30-41 year-old group ( $M = 35.4, SD = 4.43$ ). Therefore, it appears that perceptions of entrepreneurship are related to age.



Table 4.14 Analysis of Variance for Perceptions of Entrepreneurship by Age

Age	df	F	Sig.
Between Groups	3	3.191	.024*
Within Groups	347		
Total	350		

Note:  $p < .05$

Table 4.15 Tukey's HSD for Perceptions of Entrepreneurship by Age

(I) Age of Subjects	(J) Age of Subjects	Mean Difference (I-J)	Std. Error	Sig.
18-22	23-29	-1.09286	.53897	.180
	30-41	1.80000	1.05424	.321
	42-54 or older	-1.93214	1.65930	.650
23-29	18-22	1.09286	.53897	.180
	30-41	2.89286*	1.09536	.043
	42-54 or older	-.83929	1.68573	.960
30-41	18-22	-1.80000	1.05424	.321
	23-29	-2.89286*	1.09536	.043
	42-54 or older	-3.73214	1.91380	.209
42-54 or older	18-22	1.93214	1.65930	.650
	23-29	.83929	1.68573	.960
	30-41	3.73214	1.91380	.209

Note: \*Indicates a statistically significant difference at the .05 level.

Table 4.16 is a presentation of the results of the independent t-test used to examine differences between students perceptions of entrepreneurship based on sex. An independent t-test was calculated to determine if there were statistically significant differences in perceptions of entrepreneurship between males and females. The results of this analysis did not detect any statistically significant differences,  $t(349) = 1.64$ ,

$p = .102$ . The perceptions of males ( $M = 36.85$ ,  $SD = 4.76$ ) were not significantly different than the perceptions of females ( $M = 37.67$ ,  $SD = 4.49$ ). Therefore, it appears that perceptions of entrepreneurship are not related to sex.

Table 4.16 Perceptions of Entrepreneurship by Sex

Sex	t	df	Sig. (2-tailed)
Equal variances assumed	-1.641	349	.102
Equal variances not assumed	-1.648	345.877	.100

Note:  $p > .05$

Table 4.17 is a presentation of the results of the ANOVA test used to examine differences in students' perceptions of entrepreneurship based on academic unit. ANOVA was calculated to determine if there were statistically significant differences in perceptions of entrepreneurship among students in different academic units. There were no statistically significant differences observed,  $F(2, 348) = 2.51$ ,  $p = .083$ .

Table 4.17 Perceptions of Entrepreneurship by Academic Unit

Entrepreneurship	df	F	Sig.
Between Groups	2	2.509	.083
Within Groups	348		
Total	350		

Note:  $p > .05$

ANOVA was calculated to determine if there were statistically significant differences in measures of perceptions of entrepreneurship among participants' work

status. The results of the analysis as shown in Table 4.18, indicated that there was a statistically significant difference among the work status groups,  $F(4, 346) = 2.51$ ,  $p = .042$ . Tukey's HSD as shown in Table 4.19 was used to determine where the statistically significant differences were. The results of this analysis indicated that the difference between FT students not employed ( $M = 36.63$ ,  $SD = 4.67$ ) and FT students employed FT ( $M = 38.70$ ,  $SD = 4.50$ ). No other differences were found among work status groups. Therefore, it appears that perceptions of entrepreneurship are related to participants' work status.

Table 4.18 Perceptions of Entrepreneurship by Student Work Status

Work Status	<i>df</i>	F	Sig.
Between Groups	4	2.509	.042
Within Groups	346		
Total	350		

Note:  $p < .05$

Table 4.19 Tukey's HSD for Perceptions of Entrepreneurship by Student Work Status

(I)Student Work Status	(J)Student Work Status	Mean Difference (I-J)	Sig.
FT student not employed	FT student/employed FT	-2.06760*	.023
	FT student/employed PT	- .37883	.963
	PT student/employed FT	-1.09790	.941
	PT student/employed PT	-1.70396	.819
FT student/employed FT	FT student not employed	-2.06760*	.023
	FT student/employed PT	1.68877	.118
	PT student/employed FT	.96970	.967
	PT student/employed PT	.36364	.999
FT student/employed PT	FT student not employed	- .37883	.963
	FT student/employed FT	1.68877	.118
	PT student/employed FT	- .71908	.988
	PT student/employed PT	-1.32514	.920
PT student/employed FT	FT student not employed	-1.09790	.941
	FT student/employed FT	.96970	.967
	FT student/employed PT	.71908	.988
	PT student/employed PT	- .60606	.998
PT student/employed PT	FT student not employed	1.70396	.819
	FT student/employed FT	- .36364	.999
	FT student/employed PT	1.32514	.920
	PT student/employed FT	.60606	.998

Note: \* Indicates mean difference significance at .05 level

An independent t-test was calculated to determine if there were statistically significant differences in perceptions of entrepreneurship between participants who were generation first to attend college and participants were not generation first to attend college. The results of this analysis as shown in Table 4.20, did not detect any statistically significant differences,  $t(349) = 1.31$ ,  $p = .19$ . The perceptions of participants not the first generation to attend college ( $M = 37.04$ ,  $SD = 4.56$ ) was not significantly different from perceptions of participants who were first generation to attend college ( $M = 37.79$ ,  $SD = 4.87$ ). Therefore, it appears that perceptions of entrepreneurship are not related to generation first to attend college.

Table 4.20 Perceptions of Entrepreneurship by Generation First to Attend College

Generation First to Attend College	t	df	Sig. (2-tailed)
Equal variances assumed	-1.313	349	.190
Equal variances not assumed	-1.648	345.877	.206

Note:  $p > .05$

An independent t-test was calculated to determine if there were statistically significant differences in perceptions of entrepreneurship between participants who were first in immediate family to attend college and participants who were not first in immediate family to attend college. The results of this analysis as shown in Table 4.21, did not detect any statistically significant differences,  $t(349) = 1.12$ ,  $p = .260$ . The perceptions of participants not the first in immediate family to attend college ( $M = 37.08$ ,  $SD = 4.54$ ) was not significantly different from perceptions of participants who were first in immediate family to attend college ( $M = 37.75$ ,  $SD = 5.00$ ). Therefore, it appears that perceptions of entrepreneurship are not related to first in immediate to attend college.

Table 4.21 Perceptions of Entrepreneurship by First in Immediate Family to Attend College

First in Immediate Family	t	df	Sig. (2-tailed)
Equal variances assumed	-1.127	349	.260
Equal variances not assumed	-1.069	117.817	.287

Note:  $p > .05$

### Research Question Two

Research question two asked: Is there a statistically significant difference in students' perceptions of an entrepreneur based on demographic characteristics (i.e., age,

sex, academic unit, work status, first generation to attend college, and first in immediate family to attend college)? The independent t-test was used to analyze the variables with two subscales, and the ANOVA was used to analyze the variables with three or more subscales to respond to this question by examining each of the components of students' perceptions of an entrepreneur from the students' responses on the survey. The perceptions examined were (a) starts a new business, (b) enjoys seeing technology or an invention go out as a product/service, (c) has special qualities that set them apart from the rest of the population, (d) is different from others because of different attitudes towards taking risk, (e) has the freedom to accept or refuse being told what to do, (f) feels a much stronger desire to succeed, (g) frequently experiences a restlessness that hinders learning new things, (h) frequently makes a difference in the world, and (i) has a positive image within society and the community.

Tables 4.22 through 4.28 present the results of the analyses that were used to address the research question based on the demographic characteristics. ANOVA was calculated to determine if there were statistically significant differences in measures of perceptions of an entrepreneur among participants of different age groups. The results of the analysis as shown in Table 4.22, indicated there were no statistically significant differences among age groups  $F(3, 347) = 2.40, p = .067$ . Therefore, it appears that perceptions of an entrepreneur are not related to age.

Table 4.22 Perceptions of an Entrepreneur by Age

Age	<i>df</i>	F	Sig.
Between Groups	3	2.402	.067
Within Groups	347		
Total	350		

Note:  $p > .05$

Table 4.23 is a presentation of the analysis for students' perceptions of an entrepreneur based on sex. An independent t-test was calculated to determine if there were statistically significant differences in perceptions of an entrepreneur between males and females. The results of this analysis did not detect any statistically significant differences,  $t(349) = 1.70$ ,  $p = .090$ . The perceptions of males ( $M = 34.58$ ,  $SD = 5.48$ ) was not significantly different than the perceptions of females ( $M = 35.54$ ,  $SD = 5.09$ ). Therefore, it appears that perceptions of an entrepreneur are not related to sex.

Table 4.23 Perceptions of an Entrepreneur by Sex

Sex	t	<i>df</i>	Sig. (2-tailed)
Equal variances assumed	-1.702	349	.090
Equal variances not assumed	-1.711	346.772	.088

Note:  $p > .05$

Tables 4.24 and 4.25 are presentations of the analysis of students' perceptions of an entrepreneur based on academic unit. ANOVA was calculated to determine if there were statistically significant differences in measures of perceptions of an entrepreneur among participants of different academic units. The results of the analysis as shown in Table 4.24, indicated that there were statistically significant differences among the unit

groups,  $F(2, 348) = 6.99$ ,  $p = .001$ . As shown in Table 4.25, Tukey's HSD reported that statistically significant differences (2.35),  $p = .001$  was among the academic units for the COB and SOE. Therefore, it appears that perceptions of an entrepreneur and academic unit are related.

Table 4.24 Perceptions of an Entrepreneur by Academic Unit

Academic Unit	<i>df</i>	F	Sig.
Between Groups	2	6.986	.001
Within Groups	348		
Total	350		

Note:  $p < .05$

Table 4.25 Tukey's HSD for Perceptions of an Entrepreneur by Academic Unit

Class Location (I)	Class Location (J)	Mean Difference (I-J)	Std. Error	Sig.
College of Business	School of Eng.	2.34866*	.64170	.001
	Other (Specify)	.29555	.76354	.921
School of Eng.	College of Business	-2.34886*	.64170	.001
	Other (Specify)	-2.05311*	.83509	.038
Other (Specify)	College of Business	-.20555	.76354	.921
	School of Eng.	2.05311*	.83509	.038

Note: \*Indicates the mean difference significance at the .05 level

Table 4.26 is a presentation of students' perceptions of an entrepreneur based on student work status. ANOVA was calculated to determine if there were statistically significant differences in measures of perceptions of an entrepreneur among participants' work status. The results of the analysis indicated that there was no statistically significant difference among the work status groups,  $F(4, 346) = 2.331$ ,  $p = .067$ . Therefore, it appears that perceptions of an entrepreneur are not related to work status.



Table 4.26 Perceptions of an Entrepreneur by Work Status

Work Status	<i>df</i>	F	Sig.
Between Groups	4	2.331	.056
Within Groups	346		
Total	350		

Note:  $p > .05$

Tables 4.27 and 4.28 are presentations of students' perceptions of an entrepreneur based on generation first to attend college and first in immediate family to attend college students. An independent t-test was calculated to determine if there were statistically significant differences in perceptions of an entrepreneur between participants who were generation first to attend college and participants who were not the first generation to attend college. The results of this analysis as shown in Table 4.27, did not detect any statistically significant differences,  $t(349) = 1.618$ ,  $p = .107$ . The perceptions of participants who were not the first generation ( $M = 34.76$ ,  $SD = 5.23$ ) was not significantly different than the perceptions of participants who were the first generation to attend college ( $M = 35.81$ ,  $SD = 5.52$ ). Therefore, it appears that perceptions of an entrepreneur are not related to generation first to attend college.

Table 4.27 Perceptions of an Entrepreneur by Generation First to Attend College

Entrepreneur	t	<i>df</i>	Sig. (2-tailed)
Equal variances assumed	-1.618	349	.107
Equal variances not assumed	-1.575	145.366	.117

Note:  $p > .05$

An independent t-test was calculated to determine if there were statistically significant differences in perceptions of an entrepreneur between participants who were not first in their immediate family to attend college and participants who were first in immediate family. The results of the analysis as shown in Table 4.28, did not detect any statistically significant differences,  $t(349) = .533$ ,  $p = .594$ . The perceptions of participants who were not the first in immediate family ( $M = 34.94$ ,  $SD = 5.20$ ) was not significantly difference than the perceptions of participants who were the first in immediate family ( $M = 35.30$ ,  $SD = 5.74$ ) to attend college. Therefore, it appears that perception of an entrepreneur is not related to first in immediate family to attend college.

Table 4.28 Perceptions of an Entrepreneur by First in Immediate Family to Attend College

Entrepreneur	t	df	Sig. (2-tailed)
Equal variances assumed	-.533	349	.594
Equal variances not assumed	-.504	117.620	.615

Note:  $p > .05$

### Research Question Three

Research question three asked: Is there a statistically significant difference in students' perceptions of entrepreneurial opportunities based on demographic characteristics (i.e., age, sex, academic unit, work status, first generation to attend college, and first in immediate family to attend college)? The independent t-test was used to analysis the variables with two subscales, and the ANOVA was used to analyze the variables with three or more subscales to respond to this question by examining each of the components of students' perceptions of entrepreneurial opportunities from the

students' responses on the survey. The perceptions examined were (a) the ability of individuals perceiving new events and activities in a positive way, (b) interactions with people in different situations rarely allows me to gain information, (c) entrepreneurial opportunity is a situation in which I can exploit a business idea, (d) entrepreneurial opportunity rarely offers me the potential to generate a profit, (e) entrepreneurial opportunities exist because people differ in their experiences, (f) entrepreneurial opportunities exist because people differ in their reception of information, (g) technological changes as sources of entrepreneurial opportunity because they make it possible for me to do things in more productive ways, and (h) entrepreneurial opportunities in the social, political, and demographic changes in the human population.

Tables 4.29 through 4.34 present the results of the analyses that were used to address the research question based on demographic characteristics. ANOVA was calculated to determine if there were statistically significant differences in measures of perceptions of an entrepreneurial opportunity among participants of different age groups. The results of the analysis as shown in Table 4.29, indicated there were no statistically significant differences among age groups  $F(3, 347) = 2.357, p = .072$ . Therefore, it appears that perceptions of entrepreneurial opportunities are not related to age.

Table 4.29 Perceptions of Entrepreneurial Opportunities by Age

Age	<i>df</i>	F	Sig.
Between Groups	3	2.357	.072
Within Groups	347		
Total	350		

Note:  $p > .05$

Table 4.30 is a presentation of the analysis for students' perceptions of entrepreneurial opportunities based on sex. An independent t-test was calculated to determine if there were statistically significant differences in perceptions of entrepreneurial opportunities between males and females. The results of this analysis as shown in Table 4.30, did not detect any statistically significant differences,  $t(349) = 1.66$ ,  $p = .868$ . The perceptions of males ( $M = 30.48$ ,  $SD = 4.26$ ) was not significantly different than the perceptions of females ( $M = 30.56$ ,  $SD = 4.04$ ). Therefore, it appears that perceptions of entrepreneurial opportunities are not related to sex.

Table 4.30 Perceptions of Entrepreneurial Opportunities by Sex

Sex	t	df	Sig. (2-tailed)
Equal variances assumed	-.166	349	.868
Equal variances not assumed	-1.711	345.302	.867

Note:  $p > .05$

Table 4.31 is a presentation of the analysis for students' perceptions of entrepreneurial opportunities based on academic unit. ANOVA was calculated to determine if there were statistically significant differences in measures of perceptions of entrepreneurial opportunities of different academic units. The results of the analysis indicated that there was no statistically significant differences among the unit groups,  $F(3, 347) = 2.36$ ,  $p = .072$ . Therefore, it appears that perceptions of entrepreneurial opportunities are not related to academic unit.

Table 4.31 Perceptions of Entrepreneurial Opportunities by Academic Unit

Academic Unit	<i>df</i>	F	Sig.
Between Groups	2	.809	.446
Within Groups	348		
Total	350		

Note:  $p > .05$

Table 4.32 is a presentation of the analysis for students' perceptions of entrepreneurial opportunities based on student's work status. ANOVA was calculated to determine if there were statistically significant differences in measures of perceptions of entrepreneurial opportunities among student work status. The results of the analysis indicated that there was no statistically significant difference among the work status groups,  $F(4, 346) = 1.20, p = .310$ . Therefore, it appears that perceptions of entrepreneurial opportunities are not related to work status.

Table 4.32 Perceptions of Entrepreneurial Opportunities by Work Status

Work Status	<i>df</i>	F	Sig.
Between Groups	4	1.200	.310
Within Groups	346		
Total	350		

Note:  $p > .05$

Tables 4.33 and 4.34 are presentations of the analyses for students' perceptions of entrepreneurial opportunities based on generation first to attend college and first in immediate family to attend college students. An independent t-test was calculated to determine if there were statistically significant differences in perceptions of

entrepreneurial opportunities between participants who were not generation first to attend college and participants who were generation first to attend college. The results of the analysis as shown in Table 4.33, detected statistically significant differences,  $t(349) = 2.44, p = .015$ . The perceptions of participants who were not the first generation ( $M = 30.20, SD = 4.09$ ) was significantly different from the perceptions of participants who were the generation first to attend college ( $M = 31.44, SD = 4.23$ ). Therefore, it appears that perceptions of entrepreneurial opportunities are related to generation first to attend college.

Table 4.33 Perceptions of Entrepreneurial Opportunities by Generation First to Attend College

Generation First	T	df	Sig. (2-tailed)
Equal variances assumed	-2.443	349	.015
Equal variances not assumed	-2.400	147.507	.018

Note:  $p < .05$

An independent t-test was calculated to determine if there were statistically significant differences in perceptions of entrepreneurial opportunities between participants who were not first in immediate family to attend college and participants who were first in immediate family. The results of the analysis as shown in Table 4.34, did not detect any statistically significant differences,  $t(349) = 1.15, p = .252$ . The perceptions of participants who were not the first in immediate family ( $M = 30.38, SD = 4.11$ ) was not significantly different than the perceptions of participants who were the first in immediate family ( $M = 30.98, SD = 4.29$ ) to attend college. Therefore, it

appears that perceptions of entrepreneurial opportunities are not related to first in immediate family to attend college.

Table 4.34 Perceptions of Entrepreneurial Opportunities by First in Immediate Family to Attend College

First In Immediate Family	T	df	Sig. (2-tailed)
Equal variances assumed	-1.147	349	.252
Equal variances not assumed	-1.121	122.662	.265

Note:  $p > .05$

#### Research Questions Four

Research question four asked: Is there a statistically significant difference in students' perceptions of entrepreneurship education based on demographic characteristics (i.e., age, sex, academic unit, work status, first generation to attend college, and first in immediate family to attend college)? The independent t-test was used to analyze the variables with two subscales, and the ANOVA was used to analyze the variables with three or more subscales to respond to this question by examining each of the components of students' perceptions of entrepreneurship education from the students' responses on the survey. The perceptions were (a) the primary purpose of entrepreneurship education should be to prepare students for entrepreneurial opportunities, (b) the basis of designing instruction in entrepreneurship should be competencies, (c) entrepreneurship characteristics can be developed in students through entrepreneurship education, (d) the most effective methods for teaching entrepreneurship are those which provide developmental activities rather than paper and pencil activities, and (e) entrepreneurship should be taught by individuals who have experience in the entrepreneurial process.

Tables 4.35 through 4.41 present the results of the analyses that were used to address the research question. ANOVA was calculated to determine if there were statistically significant differences in measures of perceptions of entrepreneurship education among participants of different age groups. The results of the analysis as shown in Table 4.35, indicated that there were no statistically significant differences observed,  $F(3, 347) = 1.642, p = .179$ . Therefore, it appears that students have similar perceptions of entrepreneurship education based on age.

Table 4.35 Perceptions of Entrepreneurship Education by Age

Age	<i>df</i>	F	Sig.
Between Groups	3	1.642	.179
Within Groups	347		
Total	350		

Note:  $p > .05$

Table 4.36 is a presentation of the analysis of students' perceptions of entrepreneurship education based on sex. An independent t-test was calculated to determine if there were statistically significant differences in perceptions of entrepreneurship education between males and females. The results of this analysis did not detect any statistically significant differences,  $t(349) = 1.228, p = .220$ . The perceptions of males ( $M = 20.89, SD = 2.71$ ) did not significantly differ from the perceptions of females ( $M = 21.24, SD = 2.64$ ). Therefore, it appears that perceptions of entrepreneurship education are not related to sex.



Table 4.36 Perceptions of Entrepreneurship Education by Sex

Sex	t	df	Sig. (2-tailed)
Equal variances assumed	-1.228	349	.220
Equal variances not assumed	-1.231	343.213	.219

Note:  $p > .05$

Table 4.37 is a presentation of the analysis of students' perceptions of entrepreneurship education based on academic unit. ANOVA was calculated to determine if there were statistically significant differences in perceptions of entrepreneurship education among students in different academic units. There were no statistically significant differences observed,  $F(2, 348) = 2.23, p = .110$ . Therefore, it appears that students from different academic units have similar perceptions of entrepreneurship and they have similar perceptions that the primary purpose and design of entrepreneurship education should be about the preparation of students for entrepreneurial opportunities and competencies, development of characteristics in students, methods for teaching, and that experienced individuals should teach entrepreneurship.

Table 4.37 Perceptions of Entrepreneurship Education by Academic Unit

Academic Unit	df	F	Sig.
Between Groups	2	2.217	.110
Within Groups	348		
Total	350		

Note:  $p > .05$

Tables 4.38 and 4.39 are presentations of the analyses of students' perceptions of entrepreneurship education based on student work status. ANOVA was calculated to determine if there were statistically significant differences in measures of perceptions of entrepreneurship education among participants work status groups. The results of the analysis indicated that there was a statistically significant difference among the work status groups,  $F(4, 346) = 3.60, p = .007$ . As shown in Table 4.39, Tukey's HSD was used to determine where the statistically significant differences were. The results of this analysis indicated that FT students not employed and FT students/employed FT groups scored significantly higher than other work status groups. Therefore, it appears that perceptions of entrepreneurship education are related to work status.

Table 4.38 Perceptions of Entrepreneurship Education by Work Status

Work Status	<i>df</i>	F	Sig.
Between Groups	4	3.604	.007
Within Groups	346		
Total	350		

Note:  $p < .05$

Table 4.39 Tukey's HSD for Perceptions of Entrepreneurship Education by Work Status

(I)Student Work Status	(J)Student Work Status	Mean Difference (I-J)	Sig.
FT student not employed	FT student/employed FT	-1.44172*	.003
	FT student/employed PT	- .45936	.620
	PT student/employed FT	- .42657	.986
	PT student/employed PT	-1.13546	.595
FT student/employed FT	FT student not employed	1.44172*	.003
	FT student/employed PT	.98236	.108
	PT student/employed FT	1.01515	.702
	PT student/employed PT	.12626	1.000
FT student/employed PT	FT student not employed	.45936	.620
	FT student/employed FT	- .98236	.108
	PT student/employed FT	.03279	1.000
	PT student/employed PT	-.85610	.881
PT student/employed FT	FT student not employed	.42657	.986
	FT student/employed FT	-1.01515	.762
	FT student/employed PT	- .03279	1.000
	PT student/employed PT	- .88889	.945
PT student/employed PT	FT student not employed	1.31546	.595
	FT student/employed FT	- .12626	1.000
	FT student/employed PT	.85610	.881
	PT student/employed FT	.88889	.945

Note: \*Indicates the mean difference significance at the .05 level

Tables 4.40 and 4.41 are presentations of the analyses of students' perceptions of entrepreneurship education based on generation first to attend college students and first in immediate family to attend college students. An independent t-test was calculated to determine if there were statistically significant differences in perceptions of entrepreneurship education between participants who were not generation first to attend college and participants who were generation first to attend college in their family. The results of this analysis as shown in Table 4.40, did not detect any statistically significant differences,  $t(349) = 1.72$ ,  $p = .086$ . The perceptions of participants who were not the first generation ( $M = 20.91$ ,  $SD = 2.64$ ) was not significantly different than the perceptions of

participants who were the generation first ( $M = 21.47$ ,  $SD = 2.75$ ) to attend college. Therefore, it appears that perceptions of entrepreneurship education are not related to generation first to attend college.

Table 4.40 Perceptions of Entrepreneurship Education by Generation First to Attend College

Generation First	t	df	Sig. (2-tailed)
Equal variances assumed	-1.72	349	.086
Equal variances not assumed	-1.686	146.900	..94

Note:  $p > .05$

An independent t-test was calculated to determine if there were statistically significant differences in perceptions of entrepreneurship education between participants who were not the first in their immediate family to attend college and participants who were the first in their immediate family to attend college. The results of this analysis as shown in Table 4.41, did not detect any statistically significant differences,  $t(349) = .602$ . The perceptions of participants who were not the first in their immediate family ( $M = 21.01$ ,  $SD = 2.62$ ) was not significantly different than the perceptions of participants who were the first in their immediate family ( $M = 21.19$ ,  $SD = 2.87$ ) to attend college. Therefore, it appears that perceptions of entrepreneurship education are not related to first in immediate family to attend college.

Table 4.41 Perceptions of Entrepreneurship Education by First in Immediate Family to Attend College

First in Immediate Family	t	df	Sig. (2-tailed)
Equal variances assumed	-.522	349	.602
Equal variances not assumed	-.487	118.462	.620

Note:  $p > .05$

### Research Question Five

Research question five asked: Is there statistically significant difference in students' perceptions of entrepreneurship and technology based on demographic characteristics (i.e., age, sex, academic unit, work status, first generation to attend college, and first in immediate family to attend college)? The independent t-test was used to analyze the variables with two subscales, and the ANOVA was used to analyze the variables with three or more subscales to respond to this question by examining each of the components of students' perceptions of entrepreneurship and technology from the students' responses on the survey. The perceptions examined were (a) access to technology education provides opportunities for students to be creative, (b) student is digitally involved, (c) the Internet is very integrated into student's educational and social life, (d) use social media to collaborate with classmates and friends, (e) technology skills have helped me pursue an entrepreneurial opportunity, and (f) several of my classes are/have been online.

Tables 4.42 through 4.47 present the results of the analyses that were used to address the research question. ANOVA was calculated to determine if there were statistically significant differences in measures of perceptions of entrepreneurship and technology among participants of different age groups. As shown in Table 4.42, there

were no statistically significant differences  $F(3, 347) = 1.18, p = .318$  observed.

Therefore, it appears that perceptions of entrepreneurship and technology are not related to age.

Table 4.42 Perceptions of Entrepreneurship and Technology by Age

Age	<i>df</i>	F	Sig.
Between Groups	3	1.178	.318
Within Groups	347		
Total	350		

Note:  $p > .05$

Table 4.43 is a presentation of the analysis of students' perceptions of entrepreneurship and technology based on sex of participants. An independent t-test was calculated to determine if there were statistically significant differences in perceptions of entrepreneurship and technology between males and females. The results of this analysis did not detect any statistically significant differences,  $t(349) = 1.931, p = .054$ . The perceptions of males ( $M = 20.78, SD = 2.42$ ) was not significantly different than the perceptions of females ( $M = 21.25, SD = 2.08$ ). Therefore, it appears that perceptions of entrepreneurship and technology are not related to sex.

Table 4.43 Perceptions of Entrepreneurship and Technology by Sex

Sex	t	<i>df</i>	Sig. (2-tailed)
Equal variances assumed	-1.931	349	.054
Equal variances not assumed	-1.954	348.997	.052

Note:  $p > .05$

Table 4.44 is a presentation of the analysis of students' perceptions of entrepreneurship and technology based on academic unit. ANOVA was calculated to determine if there were statistically significant differences in measures of perceptions of entrepreneurship and technology among participants of different academic units. The results of the analysis indicated that there was no statistically significant differences among the unit groups,  $F(2, 348) = .842, p = .432$ . Therefore, it appears that perceptions of entrepreneurship and technology are not related to academic unit.

Table 4.44 Perceptions of Entrepreneurship and Technology by Academic Unit

Academic Unit	<i>df</i>	F	Sig.
Between Groups	2	.842	.432
Within Groups	348		
Total	350		

Note:  $p > .05$

Table 4.45 is a presentation of the analysis of students' perceptions of entrepreneurship and technology based on students' work status. ANOVA was calculated to determine if there were statistically significant differences in measures of perceptions of entrepreneurship among participants' work status. The results of the analysis indicated that there was not a statistically significant difference among the work status groups,  $F(2, 348) = .434, p = .784$ . Therefore, it appears that perceptions of entrepreneurship and technology are not related to students' work status.

Table 4.45 Perceptions of Entrepreneurship and Technology by Work Status

Work Status	<i>df</i>	F	Sig.
Between Groups	4	.434	.784
Within Groups	346		
Total	350		

Note:  $p > .05$

Tables 4.46 and 4.47 are presentations of students' perceptions of entrepreneurship and technology based on students who were the first in their generation to attend college and students who were the first in their immediate family to attend college. An independent t-test was calculated to determine if there were statistically significant differences in perceptions of entrepreneurship and technology between participants who were not generation first to attend college in their family and participants who were generation first to attend college. The results of this analysis as shown in Table 4.46, did not detect any statistically significant differences,  $t(349) = .888$ ,  $p = .375$ . The perceptions of participants who were not the first generation ( $M = 21.06$ ,  $SD = 2.19$ ) was not significantly different than the perceptions of participants who were generation first ( $M = 20.81$ ,  $SD = 2.52$ ) to attend college. Therefore, it appears that perceptions of entrepreneurship and technology are not related to generation first to attend college.



Table 4.46 Perceptions of Entrepreneurship and Technology by Generation First to Attend College

Generation First	t	df	Sig. (2-tailed)
Equal variances assumed	.888	.349	.375
Equal variances not assumed	.829	135.862	.409

Note:  $p > .05$

An independent t-test was calculated to determine if there were statistically significant differences in perceptions of entrepreneurship and technology between participants who were not the first in immediate family to attend college and participants who were first in the immediate family to attend college. The results of the analysis did not detect any statistically significant differences,  $t(349) = .255$ ,  $p = .799$ . The perceptions of participants who were not the first in immediate family ( $M = 21.01$ ,  $SD = 2.19$ ) was not significantly different than the perceptions of participants who were the first in immediate family ( $M = 20.94$ ,  $SD = 2.57$ ) to attend college. Therefore, it appears that perceptions of entrepreneurship and technology are not related to first in immediate family to attend college.

Table 4.47 Perceptions of Entrepreneurship and Technology by First in Immediate Family to Attend College

First in Immediate Family	t	df	Sig. (2-tailed)
Equal variances assumed	.255	.349	.799
Equal variances not assumed	.234	112.994	.816

Note:  $p > .05$

## CHAPTER V

### SUMMARY, DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

#### **Summary**

The purpose of this study was to examine students' perceptions of entrepreneurship at a HBCU in central Mississippi. The benefits of entrepreneurship and business ownership continue to be reported as positive for the country's economic stability and growth. Despite the recognition entrepreneurship is receiving in the business and academic areas and the increased interest of African American students, these students' perceptions of entrepreneurship have remained relatively untested.

Understanding the process of entrepreneurship is important if students are going to be successful in sustaining their businesses from start-ups to sustainable ventures.

How African American students view entrepreneurship and the process should strengthen the millennium African American business success record. This would also add to the overall survival of the communities that African American business owners normally serve. Observation of students taking courses in entrepreneurship at a HBCU revealed that students are not connecting the process of entrepreneurship with business creation. Formally addressing the field itself will provide a foundation for the students and curriculum developer.

This study is important because of the increased number of college students interested in entrepreneurship and the large number of student entrepreneurs on college campuses. With the creation of entrepreneurship programs and centers and the offering of

an undergraduate major in entrepreneurship by more institutions, information reported about the knowledge base of the students will be crucial for the development of an appropriate curriculum.

The design of this research was cross-sectional and descriptive. A descriptive statistical analysis using frequencies and percentages were used to describe the demographic variables (age, sex, academic unit, work, status, first generation to attend college and first in immediate family to attend college). A descriptive analysis using frequencies and percentages were used to describe personal and family background variables (household income, home ownership of parents or guardians, home ownership of participants, parents or guardians' business ownership, participants' knowledge of entrepreneurship and business ownership and educational classification). Data were analyzed by using different statistical methods including the independent t-test, the ANOVA and the *post hoc* Tukey's HSD test.

The participants in this study consisted of 351 students (189 males and 162 females). The 351 students completed a seven-part survey instrument, the SPES. Part I, Demographic Information, was designed to collect demographic data. Part II, Personal and Family Background Information, was designed to collect background information on the participants. SPES Parts III, "Students' Perceptions of Entrepreneurship" was designed to examine how students perceived business ownership, the desire for financial independence and whether entrepreneurship was a learned competency or an inherited characteristic. SPES Part IV, "Students' Perceptions of an Entrepreneur" was designed to examine how students perceived the risk of starting or buying an existing business, whether entrepreneurs' have special qualities that set them apart from others and their images within society and the communities they serve. SPES Part V, Students'

Perceptions of Entrepreneurship and Opportunities, examined how students perceived new events and activities; how interacting with people in different situations allowed them to gain information; how recognizing and exploiting new business ideas from life experiences provided opportunities to generate ideas that would become profitable; the effect of different life experiences; differences in how people receive information; the possibility of more productive ways of doing things; and seeing opportunities in technological, social, political, and demographic changes in the human population.

SPES Part VI, Students' Perceptions of Entrepreneurship Education examined how students perceived the primary purpose and design of entrepreneurship education, developing characteristics in students, methods for teaching, and experienced individuals should teach entrepreneurship. SPES Part VII, Students' Perceptions of Entrepreneurship and Technology were designed to examine how students perceive possible opportunities provided by technology to start a business, impact technology has had on their capabilities to use it innovatively for career and business development, and online class experiences.

### **Discussion**

The results of this study revealed that 210 (59.8%) of the students were between the ages of 18 and 22 and 112 (31.9%) were between the ages of 23 and 29. There were 189 (53.8%) males. In addition, 184 (52.5%) of the students were enrolled in classes in the COB and 143 (40.7%) were full time students who were not employed. Further, 262 (74.6%) of the students responded "No" to being the generation first to attend college and 272 (77.5%) responded "No" to being the first in immediate family to attend college.

Household income for 134 students (38.5%) was between \$26,000-50,000. The majority of the students indicated that their parents or guardians had purchased a home. Of the 351 students, 293 (83.5%) have not purchased a home. The majority of the 351 students (77.2%) reported that their parents or guardians did not own or operate a small business. Of the 351 students, 223 (63.5%) learned about entrepreneurship in high school, and 169 (48.1%) learned about business ownership from family. In addition, the researcher learned that the students' main sources for learning about business ownership were family and college. The majority of students, 141 (41.3%) were in their senior year of college. These scales are consistent with previous studies that the demographics and personal and family background are significant socioeconomic factors in an individual's decision to start a business (Bosma & Harding, 2006; Garsombke et al., 2006).

### **Research Question One**

Research question one addressed whether there was a statistically significant difference in students' perceptions of entrepreneurship based on demographic characteristics (i.e., age, gender, academic unit, student work status, first generation to attend college, and first in immediate family to attend college). Question one examined SPES Part III, Students' Perceptions of Entrepreneurship and was comprised of nine statements. The perception examined were (a) owning and managing a business, (b) the application of personal qualities such as creativity, (c) generation of an idea, opportunities to create something new, (d) aim for financial independence, (e) learned competency versus an inherited characteristic, (f) improving one's quality of life, (g) raising one's standard of living, and (h) allowing for fair use of resources.

The ANOVA test reported a statistically significant difference among the age groups,  $F(3, 347) = 3.19, p = .024$ . Further analysis using the *post hoc* Tukey's HSD, reported that the 23-29 year-old age group ( $M = 38.04, SD = 4.42$ ) scored significantly higher than the 30-41 year-old group ( $M = 35.4, SD = 4.43$ ). It appears that perceptions of entrepreneurship are related to age.

The independent t-test reported no statistically significant differences,  $t(349) = 1.64, p = .102$  of students' perceptions of entrepreneurship based on sex. The perceptions of males ( $M = 36.85, SD = 4.76$ ) was not significantly different than the perceptions of females ( $M = 37.67, SD = 4.49$ ). Therefore, it appears that perceptions of entrepreneurship are not related to sex.

For students' perceptions of entrepreneurship based on academic unit, the ANOVA reported no statistically significant differences  $F(2, 348) = 2.51, p = .083$ . It appears that students from different academic unit have similar perceptions of entrepreneurship. A statistically significant difference among participants work status groups,  $F(4, 346) = 2.51, p = .042$  were reported. According to the Turkey's HSD a difference was reported between FT students not employed ( $M = 36.63, SD = 4.67$ ) and FT students employed FT ( $M = 38.70, SD = 4.50$ ). No other differences were found among work status groups. Therefore, it appears that perceptions of entrepreneurship are related to participants work status.

For perceptions of entrepreneurship based on generation first to attend college, an independent t-test reported no statistically significant differences,  $t(349) = 1.31, p = .19$ . The perceptions of participants not the first generation to attend college

( $M = 37.04$ ,  $SD = 4.56$  was not significantly difference from perceptions of participants who were first generation to attend college ( $M = 37.79$ ,  $SD = 4.87$ ). It appears that perceptions of entrepreneurship are not related to generation first to attend college.

For perceptions of entrepreneurship based on first in immediate family to attend college, an independent sample t-test analysis reported no statistically significant differences,  $t(349) = 1.12$ ,  $p = .260$ . The perceptions of participants who were not the first in their immediate family to attend college ( $M = 37.08$ ,  $SD = 4.54$ ) was not significantly different from participants who were the first in their immediate family to attend college ( $M = 37.37$ ,  $SD = 5.00$ ). Therefore, it appears that perceptions of entrepreneurship are not related to first in immediate family to attend college.

The findings in this study support research on students' interest in entrepreneurship because they enjoy taking risk, they are creative, and they believe that entrepreneurship raises one's standard of living and improves quality of life (Bosma & Harding, 2006; Wilson et al., 2004).

### **Research Question Two**

Research question two addressed whether there was a statistically significant difference in students' perceptions of an entrepreneur based on demographic characteristics. Question two examined SPES Part IV, Students' Perceptions of an Entrepreneur and was comprised of nine statements. The perceptions examined were (a) starting a new business, (b) enjoying seeing technology or an invention go out as a product/service, (c) having special qualities that set them apart from others, (d) having different attitudes towards taking risks, (e) having freedom to accept or refuse being told what to do, (f) feeling a much stronger desire to succeed, (g) experiencing a restlessness

that hinders learning new things, making a difference in the world, and (h) having a positive image within society and the community.

According to the ANOVA analysis for students' perceptions of an entrepreneur based on sex, no statistically significant differences among age groups  $F(3, 347) = 2.40$ ,  $p = .067$  were reported. The results of the independent t-test did not report any statistically significant differences,  $t(349) = 1.70$ ,  $p = .090$  for perceptions of an entrepreneur and sex. The perceptions of males ( $M = 34.58$ ,  $SD = 5.48$ ) was not significantly different than the perceptions of females ( $M = 35.54$ ,  $SD = 5.09$ ). Therefore, it appears that perceptions of an entrepreneur are not related to age or sex.

The ANOVA test for perceptions of an entrepreneur among participants of different academic units indicated statistically significant differences among the unit groups,  $F(2, 348) = 6.99$ ,  $p = .001$ . The Tukey's HSD reported statistically significant differences was found between COB and SOE participants. Therefore, it appears that perceptions of an entrepreneur are related to academic unit.

The ANOVA analysis for perceptions of an entrepreneur based on work status did not report any statistically significant differences  $F(4, 346) = 2.331$ ,  $p = .067$  among work status groups. Therefore, it appears that perceptions of an entrepreneur are not related to participants' work status.

The independent t-test results did not detect any statistically significant differences,  $t(349) = 1.618$ ,  $p = .107$ ) for perceptions of an entrepreneur and first generation to attend college. The perceptions of participants who were not the first generation ( $M = 34.76$ ,  $SD = 5.23$ ) was not significantly different from the perceptions of participants who were the first generation to attend college ( $M = 35.81$ ,  $SD = 5.52$ ). Further, the independent t-test did not detect any statistically significant differences,



$t(349) = .533, p = .594$  for perceptions of an entrepreneur and first in immediate family to attend college. The perceptions of participants who were not the first in immediate family to attend ( $M = 34.94, SD = 5.20$ ) was not significantly different from the perceptions of participants who were the first in immediate family ( $M = 35.30, SD = 5.74$ ) to attend college. Therefore, it appears that perceptions of an entrepreneur are not related to generation first to attend college or first in immediate family to attend college.

### **Research Question Three**

Research question three addressed whether there was a statistically significant difference in students' perceptions of entrepreneurial opportunities based on demographic characteristics. Question three examined SPES Part V, Students' Perceptions of Entrepreneurial Opportunities and was comprised of eight statements. The perceptions examined were (a) the ability of individuals perceiving new events and activities in a positive way, (b) how interacting with people in different situations allows the person to gain information, (c) recognizing and exploiting new business ideas from life experiences, (d) offering the potential to generate a profit, (e) the effect of different life experiences, (f) the differences people have in receiving information, (g) the possibility of more productive ways of doing things, and (h) seeing opportunities in technological, social, political, and demographic changes in the human population.

ANOVA analysis for perceptions of entrepreneurial opportunities among participants of different age groups did not report any statistically significant differences  $F(3, 347, = .236, p = .072$ . Therefore, it appears that perceptions of an entrepreneurial opportunity are not related to age.

The independent t-test did not detect any statistically significant differences,  $t(349) = 1.66, p = .868$  for perceptions of entrepreneurial opportunities between males and females. The perceptions of males ( $M = 30.48, SD = 4.26$ ) was not significantly different than the perceptions of females ( $M = 30.56, SD = 4.04$ ). Therefore, it appears that perceptions of entrepreneurial opportunities are not related to sex. The ANOVA analysis did not report any statistically significant differences in measures of perceptions of entrepreneurial opportunities among the academic unit groups,  $F(3, 347) = 2.36, p = .072$ ). Therefore, it appears that participants from different academic units have similar perceptions of entrepreneurial opportunities and they have similar perceptions of entrepreneurial opportunities as the ability of individuals to perceive new events and activities in a positive way; interaction with people in different situations allows the person to gain information; recognize and exploit new business ideas from life experiences; offer potential to generate a profit, differences in life experiences; differences people have in receiving information; possibility of more productive ways of doing things; and opportunities in technological, social, political, and demographic changes in the human population.

The results of the ANOVA reported no statistically significant differences,  $F(4, 346) = 1.20, p = .310$ ) in measures of perceptions of entrepreneurial opportunities and participant work status. Therefore, it appears that perceptions of entrepreneurial opportunities are not related to work status.

The independent samples t-test reported statistically significant differences,  $t(349) = 2.44, p = .015$  for perceptions of entrepreneurial opportunities between participants who were generation first to attend college. The perceptions of participants who were not the generation first to attend college ( $M = 30.20, SD = 4.09$ ) was

significantly different from the participants who were the generation first to attend college ( $M = 31.44$ ,  $SD = 4.23$ ). For perceptions of entrepreneurial opportunities and first in immediate family to attend college, the data analysis did not detect any statistically significant differences,  $t(349) = 1.15$ ,  $p = .252$ . The perceptions of participants who were not the first in their immediate family ( $M = 30.38$ ,  $SD = 4.11$ ) were not significantly different than the perceptions of participants who were the first in their immediate family ( $M = 30.98$ ,  $SD = 4.29$ ) to attend college. Therefore, it appears that perceptions of entrepreneurial opportunities are related to generation first to attend college. However, it appears that entrepreneurial opportunities are not related to first in immediate family to attend college.

Although significant differences were reported for only one of the intervals, research does support the need for university programs to infuse students with positive self-concepts and opportunities so that they can become entrepreneurs and successful employees in the world with entrepreneurial mindset skills (Plattner et al., 2009). Peterson and Limbu (2010) reported that positioning more courses in the first and second year curriculum levels of study would attract more students for those years, thereby giving students an earlier start into exploring their entrepreneurial opportunities. According to Mahoney (2009), HBCUs must continue to strive to provide excellent and affordable educational opportunities if they are to continue to attract future leaders and entrepreneurs. In order to accomplish their mission they will be challenged to offer entrepreneurial offerings that will develop students' mindset.

#### Research Question Four

Research question four addressed whether there was a statistically significant difference in students' perceptions of entrepreneurship education based demographic characteristics. Question four examined SPES Part VI, Students' Perceptions of Entrepreneurship Education and was comprised of five statements. The perceptions examined were (a) the primary purpose and design of entrepreneurship education should be to prepare students for entrepreneurial opportunities and competencies, (b) developing characteristics in students, (c) methods for teaching, and (d) experienced individuals should teach entrepreneurship.

The ANOVA analysis reported no statistically significant differences in measures of perceptions of entrepreneurship education among the different age groups  $F(3, 347) = 1.642, p = .179$ . The independent t-test reported no statistically significant differences  $t(349) = 1.228, p = .220$  for perceptions of entrepreneurship education and sex of participants. The perceptions of males ( $M = 20.89, SD = 2.71$ ) did not significantly differ from the perceptions of females ( $M = 21.24, SD = 2.64$ ). Therefore, it appears that perceptions of entrepreneurship education are related to age or sex.

The ANOVA test did not report any statistically significant differences for perceptions of entrepreneurship education among student in different  $F(2, 348) = 2.23, p = .110$  academic units. Therefore, it appears that students from different academic units have similar perceptions of entrepreneurship education

ANOVA analysis reported statistically significant differences in measures of perceptions of entrepreneurship education among participants work status groups,  $F(4, 346) = 3.60, p = .007$ . Further analysis from the Tukey's HSD *post hoc* reported that FT students not employed and FT students/employed FT groups scored significantly

higher than other work status groups. Therefore, it appears that perceptions of entrepreneurship education are related to work status.

The independent t-test did not report any statistically significant differences,  $t(349) = 1.72, p = .086$  for perceptions of entrepreneurship education and generation first to attend college. The perceptions of participants who were not the first generation ( $M = 20.91, SD = 2.64$ ) was not significantly different than the perceptions of participants who were the generation first ( $M = 21.47, SD = 2.75$ ) to attend college. Further, independent sample t-test did not detect any statistically significant differences,  $t(349) = .602$  in perceptions of entrepreneurship education and first in immediate family to attend college. The perceptions of participants who were not the first in their immediate family ( $M = 21.01, SD = 2.62$ ) was not significantly different than the perceptions of participants who were the first in their immediate family ( $M = 21.19, SD = 2.87$ ) to attend college. Therefore, it appears that perceptions of entrepreneurship education are not related to generation first to attend college or first in immediate family to attend college.

Research reported by Bennett (2006) found that entrepreneurship is more a learned competency rather than an innate trait and that a person's creativity and innovativeness could be improved through educational programs. In addition, Dabbagh (2006) reported students' participation in entrepreneurship courses designed to merge knowledge and skills with engineering improved students understanding of their chosen profession, leadership skills, communication, and creative thinking. Volkmann's (2004) research concluded that entrepreneurship education is important for the health of any university, any economy, and an individual becomes an entrepreneur by education and by experience. Souitaris et al. (2007) research findings indicated that universities need to be

interested in the effectiveness of their programs and how much their students learn about entrepreneurship, their satisfaction with courses and what inspiration they received from the program curriculum and faculty.

### **Research Question Five**

Research question five addressed whether there was a statistically significant difference in students' perceptions of entrepreneurship and technology and demographic characteristics. Question five examined SPES VII, Students' Perceptions of Entrepreneurship and Technology and was comprised of six statements. The perceptions examined were (a) access to technology education provides opportunities for students to be creative; (b) student is digitally involved; (c) Internet is very integrated in student's educational and social life; (d) use social media to collaborate with classmates and friends; (e) the impact technology has had on their capabilities to use it innovatively for career and/or business development, and online class experience.

ANOVA was calculated to determine if there were statistically significant differences in measure of perceptions of entrepreneurship education among participants of different age groups. There were no statistically significant differences  $F(3, 347) = 1.18, p = .318$  observed. Therefore, it appears that perceptions of entrepreneurship and technology are not related to age.

An independent t-test reported no statistically significant differences,  $t(349) = 1.931, p = .054$  between males and females. The perceptions of males ( $M = 20.78, SD = 2.42$ ) was not significantly different than the perceptions of females ( $M = 21.25, SD = .208$ ). Therefore, it appears that perceptions of entrepreneurship and technology are not related to sex. However, Brijlal (2011) reported that both male and

female students showed strong feelings about entrepreneurship education and that their knowledge levels of entrepreneurship differed. Brijlal also reported that economic and management science students showed significant differences among the other area students who participated in the study.

The ANOVA test analysis did not indicate any statistically significant differences  $F(2, 348) = .842, p = .432$  among academic units. Therefore, it appears that students from different academic units have similar perceptions of entrepreneurship and technology.

There were no statistically significant differences  $F(2, 348) = .434, p = .784$  reported for entrepreneurship and technology and students' work status. Therefore, it appears that perceptions of entrepreneurship and technology are not related to students' work status.

An independent t-test analysis did not detect any statistically significant differences,  $t(349) = .888, p = .375$  for perceptions of entrepreneurship and technology and generation first to attend college. The perceptions of participants who were not the generation first to attend college ( $M = 21.06, SDE = 2.19$ ) was not significantly different than the perceptions of participants who were generation first ( $M = 20.81, SD = 2.52$ ) to attend college. The data analysis for perceptions of entrepreneurship and technology and first in immediate family to attend college did not detect any statistically significant differences,  $t(349) = .255, p = .799$ . The perceptions of participants who were not the first in immediate family ( $M = 21.01, SD = 2.19$ ) was not significantly different than the perceptions of participants who were the first in immediate family.

( $M = 20.94$ ,  $SD = 2.57$ ) to attend college. Therefore, it appears that perceptions of entrepreneurship and technology are not related to generation first to attend college and first in immediate family to attend college.

Findings reported for research question five support research reported by Andrews et al. (2010) that entrepreneurship and technology is projected to increase and must continue to be infused in education from the vantage points of university administrators, faculty, and students. However, the Andrews et al. study addressed entrepreneurship and technology from the standpoint of college/university deans and not students. Toppo's (2011) article on technology reported how it was being infused into secondary education to assist in the delivery of class lectures and assignments. The integration of more technology at the postsecondary level will continue to be crucial from the standpoint of professors and administrators with innovative mindsets. The way entrepreneurship educators integrate technology in and out of the classroom will determine the savviness of students' technology skills. The Intuit Future of Small Business Report (2007b) reported that entrepreneurs and small business owners will use the Internet and technology more and more to start and operate a business.

### **Conclusions**

The number of African American students who are attending HBCUs and are interested in entrepreneurship continues to show growth. Research into how students perceive entrepreneurship should offer deeper insight into the desires of the students and the factors that influence their desires to become business owners. This study examined students' perceptions of entrepreneurship at a HBCU in central Mississippi.



Findings in this study revealed that there were more male students than female students represented, the majority of the students were between the ages of 18-22, and 53% were enrolled in COB classes. Full-time students not employed accounted for 41% of the students. Seventy-five percent of the students in this study were not first generation of their families to attend college and 78% of them were not the first person in their immediate family to attend college.

In this study, approximately 39% of the students' household incomes were \$25,000-50,000 and 85% of the students' parents or guardians were purchasing or had purchased a home. The majority of the students (84%) were not purchasing a home. Sixty-three percent of the students learned about entrepreneurship in high school. The students' knowledge of business ownership was learned from family members and in college. The majority of the students were in their senior year of college. Therefore, one conclusion that can be drawn from the present study is that the majority of the students are following family tradition in pursuing a post-secondary education.

### **Research Question One**

Based on the findings in this study, the researcher concluded that students' perceptions of entrepreneurship and students' age are related. Specifically, the 23-29 year-old age group scored higher than the 30-41 year-old age group. Students' perceptions of entrepreneurship and work status for FT students not employed and FT students employed are related. FT students who were not employed showed a significant difference in their perceptions than FT students employed FT. The researcher further concluded that student perceptions of entrepreneurship and sex of students did not show a relationship. Findings also indicated that students' from different academic units have

similar perceptions of entrepreneurship. However, findings indicated that perceptions of entrepreneurship and generation first to attend college and first in immediate family to attend are not related. Therefore, one conclusion that can be drawn from the present study is that age and student work status play roles in how students' perceive entrepreneurship.

### **Research Question Two**

Based on the results in this study, the researcher also concluded that students' perceptions of an entrepreneur based on academic unit play a role in how students perceive an entrepreneur. However, based on the findings students' sex, age, work status, generation first to attend, and first in immediate family to attend college are not related to students' perceptions of an entrepreneur.

Therefore, one conclusion that can be drawn from the present study is that students' academic unit plays a role in how they perceive an entrepreneur.

### **Research Question Three**

In an examination of students' perceptions of entrepreneurial opportunities, the researcher concluded that perceptions of entrepreneurial opportunities for generation first to attend college play a role in students' perceptions. The perceptions of students who were not generation first to attend college impacts how they perceive entrepreneurial opportunities. The students who were the generation first to attend college in their families reported more significant difference than students who were not the first to attend college.

Students' age, sex, work status and first in immediate to attend college variables did not report significant relationships for perceptions of entrepreneurial opportunities. Therefore, one conclusion that can be drawn from the present study is that students'

generation first to attend college plays a role in how they perceive entrepreneurial opportunities.

#### **Research Question Four**

In examining students' perceptions of entrepreneurship education, the researcher concluded that perceptions of entrepreneurship education based on student work status play a role in how students perceive entrepreneurship education. FT students not employed and FT students/employed FT scored significantly higher than other work status groups. Findings also showed that students age, sex, generation first to attend college, and first in immediate family to attend college did not indicate a role in how students perceive entrepreneurship education. However, students from different academic units appeared to have similar perceptions of entrepreneurship education. They perceived that the primary purpose and design of entrepreneurship education should be to prepare students for entrepreneurial opportunities and competencies, develop characteristics in students, develop effective methods for teaching, and allow experienced individuals to teach entrepreneurship. Therefore, one conclusion that can be drawn from the present study is that students' work status plays a role in their perceptions of entrepreneurship education.

#### **Research Question Five**

The researcher concluded that no statistically significant differences were reported for entrepreneurship and technology based on age, sex, work status, generation first to attend college and first in immediate family to attend college. However, students from different academic units appeared to have similar perceptions of entrepreneurship and technology.

Based on the findings from the present study, a conclusion that can be drawn is that entrepreneurship and technology appears to play a role in how students perceive entrepreneurship and technology or entrepreneurship technology.

### **Recommendations for Further Research**

This research study focused on students' perceptions of entrepreneurship. After reviewing and interpreting the data related to the participants surveyed in this study, the researcher made several recommendations for further research.

1. Findings in this study revealed that there is a relationship between age, work status and students' perceptions of entrepreneurship. Based on this information, a study could be conducted to discover other factors that may be contributable to the relationship between the variables.
2. Since students in the 23-29 age group scored higher than the 30-41 age group in their perceptions of entrepreneurship, research could be conducted on students in these age groups to identify factors supporting these findings. This type of study would lend itself well to quantitative research.
3. The results of the study indicated that students' academic unit plays a role in their perceptions of an entrepreneur. Future research could address factors contributing to this relationship.
4. The perceptions of students revealed differences in entrepreneurial opportunities for viewing new activities positively, recognizing an exploitable situation, and seeing opportunities in the changing social scheme and political arena connected to the changing demographics of the world's populations. Future research should focus on strategies students use to help them recognize

entrepreneurial opportunities. Research focusing on this topic may lend itself well to quantitative investigation.

5. Since students generation first to attend college play a role in how they perceive entrepreneurial opportunities, a study could be conducted focusing on the commonalities of these students.
6. Since no significant differences were reported for students' perceptions of entrepreneurship and technology, future research may address potential factors related to students' perceptions of entrepreneurship and technology and entrepreneurship technology. This type of study would lend itself well to a comparative analysis.
7. Based on the findings in this study, it is recommended that a study be conducted with the faculty at the university focusing on their perceptions of entrepreneurship education and the educational process.
8. Based on the findings in this study, replication is recommended for other academic units at the university and at similar institutions of higher learning (public and private). Replication with other academic units and other institutions would enhance the generalizability of this research.

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APPENDIX A  
SURVEY INSTRUMENT CRITIQUE SHEET

## Student's Perceptions of Entrepreneurship Survey (SPES)

### Survey Instrument Critique Sheet

Please check the most correct response for each item and supply the requested information which follows each item. Your response will assist in producing the final form of the survey which will be used to gather information from a sample of students in the College of Business and School of Engineering students enrolled at Jackson State University. ***Thank you for your assistance.***

1. The directions for completing the survey were:

- clear easy to understand and follow
- too wordy—but could be followed
- confusing—hard to understand and follow
- other \_\_\_\_\_

**NOTE: Please circle on the survey itself any words or phrases in the directions that were confusing.**

2. When reading the survey items:

- all words were understandable
- some words were unfamiliar, but did not affect my ability to answer the questions
- many words were unfamiliar and my ability to answer some of the items was adversely affected
- other \_\_\_\_\_

3. Please list the number of any survey item(s) that you feel was/were unclear or ambiguous. What changes could be made to correct or improve it/them?

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4. Please list the number of any survey items(s) that you feel was/were irrelevant to the study. Should this/these item(s) be omitted from the survey?

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5. Please list any item(s) that you feel should be added to or deleted from the survey by the item.

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APPENDIX B  
LETTERS TO RESEARCH STUDY PARTICIPANTS

## Letter to Pilot Study Participants

Dear Student:

I am a doctoral candidate in the department of Instructional Systems and Workforce Development at Mississippi State University. I am conducting a research study designed to investigate students' perceptions of entrepreneurship at a historically black university in central Mississippi.

The population for this study will be approximately 1,800 students taking classes in the College of Business and School of Engineering. Your participation in this pilot study will ensure that the survey instrument is clear, concise, and reliable. The survey should take only 15 minutes for you to complete. Please note that your participation in the pilot study is strictly voluntary. You may refuse to answer any question on the survey and may withdraw from the study at any time. However, please know that your responses will be summarized with other students who respond to the survey in the pilot study and will be kept confidential.

Please review the survey instrument attached for clarity, preciseness of instructions, and appropriateness of content. Please identify any unclear statements by listing the statement number and making suggestions and/or recommendations for any changes that you deem appropriate on the critique sheet.

This study has been approved by the Institutional Review Board (IRB) at Jackson State University and by the Institutional Review Board (IRB) at Mississippi State University. If you have any questions or concerns, you may contact me at (601) 366-3246 or (601) 979-3311, or Dr. Linda Cornelious, the director of my dissertation, at (662) 325-2281. If you have any questions about the rights of research subjects, please contact the Office of Research Compliance at Jackson State University at (601) 979-2931 or the Office of Regulatory Compliance at Mississippi State University at (662) 325-3994.

I respectfully request that you complete the pilot survey to assist me in this research project. When you have completed the survey, please return the critique sheet and survey to the researcher. I know that your time is valuable, but without your assistance, this research study cannot be completed.

Thank you in advance for your cooperation. Your assistance is greatly appreciated.

Sincerely,

Mercidee Curry  
Doctoral Candidate

## Letter to Research Study Participants

Dear Student:

I am a doctoral candidate in the department of Instructional Systems and Workforce Development at Mississippi State University. I am conducting a research study designed to investigate students' perceptions of entrepreneurship at a historically black university in central Mississippi.

The population for this study will be approximately 1,800 students taking classes in the College of Business and School of Engineering. Your participation in this study will ensure the success of this research project. The survey should take only 15 minutes for you to complete. Please know that your participation in the study is strictly voluntary. You may refuse to answer any question on the survey and may withdraw from the study at any time. However, please know that your responses will be summarized with other students who respond to the survey in the study and will be kept confidential.

This study has been approved by the Institutional Review Board (IRB) at Jackson State University and by the Institutional Review Board (IRB) at Mississippi State University. If you have any questions or concerns, you may contact me at (601) 979-3311 or Dr. Linda Cornelious, the director of my dissertation at (662) 325-2281. If you have any questions about the rights of research subjects, please contact the Office of Research Compliance at Jackson State University at (601) 979-2931 or the Office of Regulatory Compliance at Mississippi State University at (662) 325-3994.

I respectfully request that you complete the survey to assist me in this research project. When you have completed the survey, please return it to the researcher. I know that your time is valuable, but without your assistance, this research study cannot be completed.

Thank you in advance for your cooperation. Your assistance is greatly appreciated.

Sincerely,

Mercidee Curry  
Doctoral Candidate



## APPENDIX C

### STUDENTS' PERCEPTIONS OF ENTREPRENEURSHIP SURVEY (SPES)

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## Students' Perceptions of Entrepreneurship Survey (SPES)

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**Notice:** This survey was developed for the purpose of collecting data about students' perceptions of entrepreneurship. The survey allows participants an opportunity to explore their entrepreneurial understanding.

**Directions:** Please respond accurately to each item on the survey. Please do not put your name on the survey. The results will remain completely anonymous. Your participation is voluntary, and you may refuse to answer any question that makes you feel uncomfortable. You may withdraw from the research at any time during the process. When you complete this survey, please return it to the researcher. Thank you for your participation.

**Please place a check  $\checkmark$  mark in the appropriate space below. Please provide accurate responses to all other questions on the survey.**

### Part I: Demographic Information

1. What is your age?  
 18-22  
 23-29  
 30-41  
 42-53  
 54 or older
2. What is your sex?  
 Male  
 Female
3. The majority of my classes are in the  
 College of Business  
 School of Engineering  
 Other (Specify) \_\_\_\_\_
4. My student work status is  
 Full time student not employed  
 Full time student employed full time  
 Full time student employed part time  
 Part time student employed full time  
 Part time student employed part time
5. My generation is the first to attend college.  Yes  No
6. I am the first person in my immediate family to attend college  Yes  No

## Part II. Personal and Family Background Information

1. Household Income:  
 \$00,000-25,999  
 \$26,000-50,999  
 Above \$51,000
2. My parents/guardians are purchasing or have purchased a home.  Yes  No
3. I am purchasing a home.  Yes  No
4. I or my parents/guardians own and operate a small business.  Yes  No
5. I learned about entrepreneurship in (check all that apply)  
 High School  
 College  
 Other (Specify) \_\_\_\_\_
6. I learned about business ownership from my (check all that apply)  
 Family  
 Friends  
 High School  
 College  
 Other (Specify) \_\_\_\_\_
7. I am in my \_\_\_ year of college  
 First  
 Sophomore  
 Junior  
 Senior  
 Graduate

### Part III. Students' Perceptions of Entrepreneurship

This section of the survey will focus on your perceptions of entrepreneurship.

To what extent do you agree with each of the following statements? Please circle your response (5 = strongly agree; 4 = agree; 3 = neither agree nor disagree; 2 = disagree; 1 = strongly disagree). Please use this rating system to complete the remaining sections of the survey.

I perceive that entrepreneurship	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
3.1. Means owning and managing a business.	5	4	3	2	1
3.2. Is about the application of personal qualities such as creativity, innovativeness, and imagination in business.	5	4	3	2	1
3.3. Involves the generation of an idea for a new product, service, or recognition of an opportunity.	5	4	3	2	1
3.4. Offers an understanding of how opportunities to create something new arise.	5	4	3	2	1
3.5. Affords an individual the opportunity to aim for financial independence.	5	4	3	2	1
3.6. Is a learned competency rather than an inherited characteristic.	5	4	3	2	1
3.7. May improve one's quality of life.	5	4	3	2	1
3.8. Raises one's standard of living.	5	4	3	2	1
3.9. Allows for resources to be used fairly for desired consumers.	5	4	3	2	1

### Part IV. Students' Perceptions of an Entrepreneur

This section of the survey will focus on your perceptions of an entrepreneur.

I perceive an entrepreneur as an individual who	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
4.1. Starts a new business venture or owns a business.	5	4	3	2	1
4.2. Enjoys seeing a technology or an invention go out as a product/service into the world.	5	4	3	2	1
4.3. Has special qualities that set them apart from the rest of the population.	5	4	3	2	1
4.4. Is different from others because of different attitudes towards taking risk.	5	4	3	2	1
4.5. Has the freedom to accept or refuse being told what to do.	5	4	3	2	1
4.6. Feels a much stronger desire to succeed.	5	4	3	2	1
4.7. Frequently experiences a restlessness that keeps them from learning and trying new things.	5	4	3	2	1
4.8. Frequently makes a difference in the world.	5	4	3	2	1
4.9. Has a positive image within society and the community.	5	4	3	2	1

## Part V. Students' Perceptions of Entrepreneurship and Opportunities

This section of the survey will focus on your perceptions of entrepreneurial opportunities.

I perceive	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
5.1. New events and activities in a positive way.	5	4	3	2	1
5.2. My interactions with people in different situations rarely allow me to gain information.	5	4	3	2	1
5.3. An entrepreneurial opportunity is a situation in which I can exploit a business idea.	5	4	3	2	1
5.4. An entrepreneurial opportunity rarely offers me the potential to generate a profit.	5	4	3	2	1
5.5. Entrepreneurial opportunities exist because people differ in their experiences.	5	4	3	2	1
5.6. Entrepreneurial opportunities exist because people differ in their reception of information.	5	4	3	2	1
5.7. I see technological changes as sources of entrepreneurial opportunity because they make it possible for me to do things in more productive ways.	5	4	3	2	1
5.8. I see entrepreneurial opportunities in the social, political, and demographic changes of the population.	5	4	3	2	1

## Part VI: Students' Perceptions of Entrepreneurship Education

This section of the survey consists of questions that will help the researcher identify characteristics of students' perceptions of the value of formal entrepreneurship training.

I believe	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
6.1. The primary purpose of entrepreneurship education should be to prepare students for entrepreneurial opportunities.	5	4	3	2	1
6.2. The basis of designing instruction in entrepreneurship should be competencies.	5	4	3	2	1
6.3. Entrepreneurship characteristics can be developed in students through entrepreneurship education.	5	4	3	2	1
6.4. The most effective methods for teaching entrepreneurship are those which provide developmental activities rather than paper-and-pencil activities.	5	4	3	2	1
6.5. Entrepreneurship should be taught by individuals who have experience in the entrepreneurial process.	5	4	3	2	1

## Part VII: Students Perceptions of Entrepreneurship and Technology

This section of the survey focuses on your perceptions of technology and entrepreneurship.

I believe	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
7.1. Access to technology education provides opportunities for students to be creative.	5	4	3	2	1
7.2. I am a digitally involved person.	5	4	3	2	1
7.3. The Internet is very integrated into my educational and social life.	5	4	3	2	1
7.4. I use several of the social media to collaborate with classmates and friends.	5	4	3	2	1

7.5. My technology skills have helped me pursue an entrepreneurial opportunity. \_\_\_ Yes \_\_\_ No  
Explain: \_\_\_\_\_

7.6. Several of my classes are/have been online. \_\_\_ Yes \_\_\_ No  
Explain: \_\_\_\_\_

This instrument was developed from Bennett (2006) Business lecturers' perceptions, Entrepreneurship: A Process Perspective by Baron and Shane, 2005, a Survey of North Dakota Secondary Entrepreneurship Teachers, and Garsombke, et al. (2006) Millennial African American Entrepreneurs: Developing Appropriate Campus Learning Strategies.

Thank you for your cooperation and your participation in this study.

APPENDIX D  
LETTERS TO DEPARTMENT CHAIRS AND FACULTY

## Letter to Department Chairs

P.O. Box 10001  
Jackson, MS 39286-0001  
Date

Name of Dept. Chair  
Address  
City, State, Zip

Dear Dr. \_\_\_\_\_:

I am a doctoral candidate in the department of Instructional Systems and Workforce Development at Mississippi State University. I am conducting a research study designed to investigate students' perceptions of entrepreneurship at a historically black university in central Mississippi.

I respectfully request your permission to survey students taking classes in your department as part of my dissertation research during the 2010 fall semester in October. I realize that the professional duties and responsibilities of your faculty are very demanding. However, the survey should take only 15 minutes for students to complete. Please note that the participation of students is strictly voluntary. Students may refuse to participate in the study, and may withdraw from the study at any time. The researcher will personally administer the survey to all students according to a data collection schedule. Please know that the responses of students will be summarized with other students who respond to the survey and will be kept confidential.

This study has been approved by the Institutional Review Board (IRB) at Jackson State University and by the Institutional Review Board (IRB) at Mississippi State University. If you have any questions or concerns, you may contact me at (601) 979-3311 or Dr. Linda Cornelious, the director of my dissertation at (662) 325-2281. If you have any questions about the rights of research subjects, please contact the Office of Research Compliance at Jackson State University at (601) 979-2931 or the Office of Regulatory Compliance at Mississippi State University at (662) 325-3994.

I respectfully request that you allow students in your department to participate in this study. Your approval may be acknowledged by signing on the line below. The approval letter can be returned to the researcher by faxing it to (601) 979-2675. I know that the time of faculty and students is valuable, but without your approval and their assistance, this research study cannot be completed.

Thank you in advance for your cooperation. Your assistance is greatly appreciated.

Sincerely,

Mercidee Curry  
Doctoral Candidate

\_\_\_\_\_  
Department Chair

\_\_\_\_\_  
Date



Letter to Faculty

P.O. Box 10001  
Jackson, MS 39286-0001  
Date

Name of Faculty  
Address  
City, State, Zip

Dear Dr. \_\_\_\_\_:

I am a doctoral candidate in the department of Instructional Systems and Workforce Development at Mississippi State University. I am conducting a research study designed to investigate students' perceptions of entrepreneurship at a historically black university in central Mississippi.

Dr. \_\_\_\_, your department chair has given me permission to survey the students taking classes in your department. With your permission and assistance, I would like to survey the students in your class(es) during the month of October 2010. The researcher will personally administer the survey to all students according to a data collection schedule. The survey should take only 15 minutes for students to complete. Students may refuse to participate in study, and may withdraw from the study at any time. Please know that the responses of students will be summarized with other students who respond to the survey and will be kept confidential.

This study has been approved by the Institutional Review Board (IRB) at Jackson State University and by the Institutional Review Board (IRB) at Mississippi State University. If you have any questions or concerns, you may contact me at (601) 979-3311 or Dr. Linda Cornelious, the director of my dissertation at (662) 325-2281. If you have any questions about the rights of research subjects, please contact the Office of Research Compliance at Jackson State University at (601) 979-2931 or the Office of Regulatory Compliance at Mississippi State University at (662) 325-3994.

I respectfully request that you allow your students to participate in this study. Your approval may be acknowledged by signing on the line below. The approval letter can be returned to the researcher by faxing it to (601) 979-2675. I know that your time is valuable, but without your assistance, this research study cannot be completed.

Thank you in advance for your cooperation. Your assistance is greatly appreciated.

Sincerely,

Mercidee Curry  
Doctoral Candidate

xc: Department Chair

\_\_\_\_\_  
Faculty Signature

\_\_\_\_\_  
Date

APPENDIX E  
SURVEY INSTRUMENT REVIEW PANEL

## Letter to Survey Instrument Review Panel Members

P.O. Box 10001  
Jackson, MS 39286-0001

Date

Name of Panel Member  
Address  
City, State, Zip

Dear Dr. \_\_\_\_\_ :

Thank you for agreeing to serve as a panel member to review the survey instrument that will be used in my dissertation research. Currently, I am a doctoral candidate in the department of Instructional Systems and Workforce Development at Mississippi State University. My research topic is, "Students' Perceptions of Entrepreneurship at a Historically Black University in Central Mississippi." The population for this study will be approximately 1,800 students taking classes in the College of Business and School of Engineering.

The *Students' Perceptions of Entrepreneurship Survey* is a 50-item instrument comprised of six parts. SPES Parts I and II are demographic characteristics and personal and family background information. SPES Parts III through VI are Likert Scale statements with a rating scale of strongly disagree (coded 1) to strongly agree (coded 5). The SPES scale is designed to measure if group differences exist in students' perceptions of entrepreneurship, an entrepreneur, entrepreneurial opportunities, and entrepreneurship education.

I respectfully request that you review the survey instrument for clarity, preciseness of instructions, and appropriateness of content. Please identify any unclear statements by listing the statement number. On the critique sheet provided, please make any suggestions and/or recommendations for any changes that you deem appropriate.

This study has been approved by the Institutional Review Board (IRB) at Jackson State University and by the Institutional Review Board (IRB) at Mississippi State University. If you have any questions or concerns, you may contact me at (601) 366-3246 or (601) 979-3311, or contact Dr. Linda Cornelious, the director of my dissertation, at (662) 325-2281.

Please return the survey and critique sheet to me via an email attachment at mc84@msstate.edu or fax to (601) 979-2675 no later than \_\_\_\_\_. I know that your time is valuable, but without your assistance, this research study cannot be completed.

Thank you in advance for your cooperation and assistance.

Sincerely,

Mercidee Curry  
Doctoral Candidate

## Survey Instrument Review Panel

1. Donald R. Andrews, Ph.D.  
Dean and Professor of Economics  
Southern University and A&M College  
P.O. Box 9723  
Baton Rouge, LA 70813-9723  
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2. Dr. James Bell, Director  
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McCoy College of Business and Administration  
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e-mail: jb15@txstate.edu
3. Dr. Donald Causey, Assistant Professor of Entrepreneurship  
Department of Entrepreneurship & Professional Development  
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601-856-0999 (Business Phone)  
e-mail: donald.causey@jsums.edu
4. Dr. Melinda D. Harris  
Hodge Center for Entrepreneurship  
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Norfolk, Virginia  
Phone: 757-823-7920
5. Dr. Frank Hoy  
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College of Business Administration, Room 101  
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El Paso, TX  
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6. Dr. William Cooley  
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Chief Executive Officer  
IMS Engineers  
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8. Dr. Thaddeus McEwen  
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9. Dr. Darlene A. Thurston  
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10. Dr. William McHenry  
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11. Alisa Mosely, Ph.D.  
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12. Dr. Mary M. White, Chair and Sam Walton Fellow  
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13. Dr. William D. Blair  
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Graduate Engineering Program  
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Phone: (601) 979-1802

APPENDIX F  
UNIVERSITIES' IRB APPROVALS



## JACKSON STATE UNIVERSITY

1400 J. R. LYNCH STREET • JSU Box 17057  
JACKSON, MISSISSIPPI 39217-0157

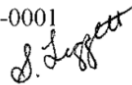
OFFICE OF THE PROVOST  
RESEARCH AND FEDERAL RELATIONS

PHONE: (601) 979-2931  
FAX: (601) 979-3664

DATE: August 12, 2010

### MEMORANDUM

TO: Mercidee Curry  
P. O. Box 10001  
Jackson, MS 39286-0001

FROM: Dr. Sophia Leggett   
IRB, Chair

Re: Protocol entitled: "Students' Perceptions of Entrepreneurship at a Historically Black University in Central Mississippi."

The Jackson State University Institutional Review Board (IRB) has reviewed your application and has come to the conclusion your responses are satisfactory and meet the requirements for protection of human participants as stipulated by the Federal government. Your application received an **Expedited** approval. This approval is good for **one year** from the date of this letter.

Any adverse reactions or problems resulting from this investigation must be reported immediately to the university Institutional Review Board. If you decide to modify or change your procedures in any way, please notify the IRB office in writing. We will review your request in the context of your complete application. If the changes are approved, you will receive written notification for the approval.

Any research that continues beyond one year should be resubmitted for approval before the end of each year so there is no lapse. Contact the IRB office for the extension form and the submission requirements before the end of July 2011.





**MISSISSIPPI STATE**  
UNIVERSITY™

August 16, 2010

Mercidee Curry  
P.O. Box 10001  
Jackson, MS 39286

RE: IRB Study #10-189: Students' Perceptions of Entrepreneurship at a Historically Black University in Central Mississippi

Dear Ms. Curry:

The above referenced project was reviewed and approved via administrative review on 8/16/2010 in accordance with 45 CFR 46.101(b)(2). Continuing review is not necessary for this project. However, any modification to the project must be reviewed and approved by the IRB prior to implementation. Any failure to adhere to the approved protocol could result in suspension or termination of your project. The IRB reserves the right, at anytime during the project period, to observe you and the additional researchers on this project.

**Please note that the MSU IRB is in the process of seeking accreditation for our human subjects protection program. As a result of these efforts, you will likely notice many changes in the IRB's policies and procedures in the coming months. These changes will be posted online at <http://www.orc.msstate.edu/human/aahrpp.php>. The first of these changes is the implementation of an approval stamp for consent forms. The approval stamp will assist in ensuring the IRB approved version of the consent form is used in the actual conduct of research.**

Please refer to your IRB number (#10-189) when contacting our office regarding this application.

Thank you for your cooperation and good luck to you in conducting this research project. If you have questions or concerns, please contact me at [cwilliams@research.msstate.edu](mailto:cwilliams@research.msstate.edu) or call 662-325-5220.

Sincerely,

Christine Williams  
IRB Compliance Administrator

cc: Linda Cornelious (Advisor)

Compliance Division  
Administrative Offices  
Animal Care and Use (IACUC)  
Human Research Protection  
Program (IRB)  
1207 Hwy 182 West, Suite C  
Starkville, MS 39759  
(662) 325-3496 - fax

Safety Division  
Biosafety (IBC)  
Radiation Safety  
Hazardous Waste  
Chemical & Lab Safety  
Fire & Life Safety  
70 Morgan Avenue  
Mississippi State, MS 39762  
(662) 325-8776 - fax

<http://www.orc.msstate.edu>  
[compliance@research.msstate.edu](mailto:compliance@research.msstate.edu)  
(662) 325-3294

Office of Regulatory Compliance & Safety • Post Office Box 6223 • Mississippi State, MS 39762