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Entrepreneurship Education and Economic Development: Preparing the Workforce for the Twenty-First Century Economy

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ENTREPRENEURSHIP EDUCATION AND ECONOMIC DEVELOPMENT:
PREPARING THE WORKFORCE FOR THE
TWENTY-FIRST CENTURY ECONOMY

A Thesis
Presented to
the Graduate School of
Clemson University

In Partial Fulfillment
of the Requirements for the Degree
Master of City and Regional Planning

by
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May 2008

Accepted by:
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ABSTRACT

The American economy has undergone a change in recent decades, experiencing a shift away from the traditional industrial economy towards a knowledge-based economy that relies heavily on human capital. The importance of human capital to the economy has stimulated an interest in increasing the educational attainment of the nation's workforce. However, not only should the educational attainment be increased, but the types of education should match the skills needed for the twenty-first century economy. Entrepreneurship and entrepreneurial thinking have been identified as necessary in the ever changing economy. Entrepreneurship education has been encouraged for the purpose of equipping the future workforce with skills required today. Many studies have identified the importance of entrepreneurship education and have conducted extensive surveys of youth and business leaders. However, few studies of the teachers of entrepreneurship education courses have been conducted.

This study uses statistical analysis and survey techniques to determine the characteristics of entrepreneurship programs for high school students, the perspectives of teachers on the challenges and outcomes of entrepreneurship education, and the possibility for establishing partners for an alliance for entrepreneurship education.

The study determines that the role of equipping the future workforce with the skills it needs to succeed in the knowledge-based economy does not rest solely upon the educational system. Officials in economic development agencies, workforce

development agencies, and education must come together to create an alliance for entrepreneurship education and ultimately for the future.

DEDICATION

This thesis is dedicated to my family and friends whose support has carried me here. To my parents who have shown unconditional love. To my sister who has been my best friend. To Chris whose love, support, and passion have forever inspired me.

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INTRODUCTION

As the economy in the United States has shifted away from the industrial economy that relies heavily on physical capital and low costs towards a knowledge-based economy that places an emphasis on human capital, it is vital that regions develop economic development strategies to increase the quality of its human capital. The new economy does not rely solely on an increase of educational attainment, but also on the development of skills that are required by the twenty-first century. These skills include entrepreneurial thinking, leadership development, being able to work with people from diverse backgrounds, and being able to adapt to a rapidly changing environment.

Given the need to equip the current and future workforce with the skills required by the new economy, attention has been turned to entrepreneurship education, particularly at the post-secondary level. The number of colleges and universities that offer an entrepreneurship program has skyrocketed in recent decades. However, it has been determined that entrepreneurship education should be a lifelong learning process, spanning from elementary school through adult education. Increased attention has been paid to entrepreneurship education in high schools, which seem to be particularly beneficial for at-risk students. Numerous surveys of students and businesses have been conducted to determine demand from students for this type of learning as well as the demand from businesses for entrepreneurial skills in their employees. Additionally, a few studies have examined the effectiveness of such programs in teaching the key entrepreneurial skills to high school students. However, not much is known regarding the

types of schools that offer such entrepreneurship courses or the perspectives of the teachers of entrepreneurship courses on the outcomes and the challenges of the programs.

Additionally, building community partnerships that support entrepreneurship have been identified as essential for ensuring the continued success of budding entrepreneurs. However, little research has been conducted regarding the structure of these partnerships and the demand from teachers for such partnerships.

Thus, the objectives for this study are three-fold. The first objective of the study is to determine the characteristics of high schools that offer entrepreneurship education programs. The characteristics examined include the racial composition, poverty level, achievement level, and size of schools that offer entrepreneurship education. The second objective of the study is to gain the perspectives of teachers on the outcomes of the programs, challenges of teaching such courses, and suggestions for improving the effectiveness of entrepreneurship education. The third objective of the study is to determine if there is a demand from teachers for partnerships outside of the classroom and if that demand is being met.

The methodologies used in the study consist of demographic analysis and surveys. The state of South Carolina was chosen as the study area because of the progress it has made in implementing entrepreneurship programs in its public high schools and the availability of training it provides for its teachers. Demographic analysis of the schools was performed using data provided by the South Carolina Department of Education and the National Center for Education Statistics. Additionally, web surveys were conducted of the current entrepreneurship teachers in public high schools across the state. The

demographic analysis and survey results were then analyzed to determine the characteristics of schools offering entrepreneurship education, the perspectives of teachers, and the demand for partnerships with members of the community.

The report will begin with a literature review that explores the shift toward the new economy and the skills that will be required in the twenty-first century. Pinpointing entrepreneurship education as one means of instilling the required skills, the literature review also will give a history of entrepreneurship education and an overview of the current knowledge of the effectiveness of such programs.

The methodology section will then detail the use of demographic analysis and surveys to meet the objectives of the study. After the study area is introduced, the results of the demographic analysis and web surveys are presented. Further analysis is performed on the results of the survey and finally conclusions are drawn based on the findings of the study.

LITERATURE REVIEW

Introduction

The American economy has undergone a change in recent decades that places a greater importance on human capital than ever before. State and regional economic development policy should change in order to meet the needs of the new economy. Investments in human capital will be necessary for economic growth in regions. Regions must place greater emphasis on education and training for twenty-first century skills. This literature review will explore the changing economy, the skills that are required in this new economy, and how the skills gap can be filled through entrepreneurship education. Further, it will identify areas of research that will explore the unanswered questions regarding entrepreneurship education.

The Changing Economy

The United States economy has undergone enormous changes in the past century. The economy has have shifted away from being an industrial economy to a high-tech knowledge-driven economy that relies heavily on human capital (Blakely and Bradshaw, 2002). Economic development strategies have tended to cater towards those economic changes. The strategies of economic development can be broken down into four distinct stages. The first stage occurred during the 1930s in the United States and consisted of aggressive recruitment of branch plants, focused on low costs. The second stage began in

the 1980s and focused on making it easier to do business in an area by offering services such as training subsidies. The third stage occurred later in the 1980s and into the 1990s and involved increasing the competitiveness of firms through investments in technology. The fourth stage began in the 1990s and continues to the present. It is based on entrepreneurship and encourages new startup businesses as well as innovations in existing businesses (Pages, Freedman, and Von Bargen, 2003).

An entrepreneurial economy requires a shift of focus from controlling costs to developing human capital. Economies can no longer compete solely on the basis of low cost, but must compete based on high value (Schweke, 2004). In a knowledge-based economy, human capital is the most important form of capital. Educating and training the current and future workforce to meet the demands of the marketplace is essential for survival. “The ideal country in a flat world is the one with no natural resources, because countries with no natural resources tend to dig inside themselves. They try to tap the energy, entrepreneurship, creativity, and intelligence of their own people – men and women – rather than drill an oil well” (Friedman, 2006). Investing in human capital will result in a higher return in the knowledge economy.

There is a positive link between primary and secondary education and economic growth and development (Schweke, 2004). In an increasingly global economy, it is vital that education systems keep pace with the rest of the industrialized world. Recent studies place the United States sixteenth out of the top twenty industrialized nations in educational attainment. Further, the American South has traditionally lagged behind the rest of the nation in educational attainment. “If the U.S. is increasingly challenged in

competing globally, and the South is not educationally competitive with the U.S. as a whole, then a fair assessment of the state of the Southern workforce is that of crisis” (Southern Growth Policies Board, 2007). Identifying the skills required in the twenty-first century is the first step when considering the proper education and training for the future workforce.

Skills Required for the Twenty-First Century

The knowledge economy requires a new set of skills that is completely different from the set of skills required by the historically manufacturing-dominated economy. Jobs today require an increasing amount of education and training, as well as twenty-first century skills such as creativity, problem-solving, and leadership (Schwarz and Kay, 2006).

In *The World is Flat*, Thomas Friedman quotes Princeton economist Alan Blinder as saying that

simply providing more education is probably a good thing on balance, especially if a more educated labor force is a more flexible labor force that can cope more readily with non-routine tasks and occupational change. But it is far from a panacea...In the future, how we educate our children may prove to be more important than how much we educate them (Friedman, 2006).

Although it is important to attain strong high school graduation rates and to encourage participation in postsecondary education, it is also important that the education system teach students the proper types of skills needed in the twenty-first century. States

that have traditionally lagged behind others in education have an opportunity to tap into the skills that are being required of this new knowledge economy. It is becoming apparent that the economy is requiring more than just knowledge and information; it is also requiring human creativity to develop a competitive advantage (Florida, 2003). It has been asserted that the twenty-first century will be dominated by entrepreneurial thinking (Kourilsky and Walstad, 2000). States should move towards promoting a more entrepreneurial economy (Taylor, Johnson, Hoke, Doron, Pennock, and Clinton, 2007).

As the consensus is being formed that creativity and entrepreneurial skills are being demanded, secondary teachers must teach more than just the basic reading, writing, and arithmetic. Policymakers should recognize the importance of entrepreneurial skills, and encourage schools to “infuse creativity and entrepreneurial opportunity recognition skills more deeply in our educational culture and disciplines” (Kauffman, 2007).

However, it seems that these skills are not taught as often as they should be. Four skills required of the twenty-first century that are currently missing from the traditional educational system are problem-solving, leadership, creativity, and entrepreneurship (Dede). The next section will further explore the entrepreneurship skill gap.

Identifying the Entrepreneurship Skills Gap

Many students express interest in starting their own businesses, but few have the knowledge or skills that they need to do so. A nationwide Gallup poll conducted in 1994 surveyed 602 high school students, 600 members of the general public, and 204 small

business owners to determine their attitudes towards entrepreneurship. The survey revealed a skills gap in entrepreneurship and small business management. While 69 percent of high-school students surveyed would like to start businesses of their own – compared to 50 percent of the general public – they had little knowledge about how to do so. When asked questions about entrepreneurial knowledge, high-school students only answered 44 percent of the questions correctly. Additionally, when asked how they would describe their knowledge and understanding of starting and managing a business, only 13 percent of high-school students responded ‘excellent’ or ‘good.’

The Gallup poll also asked questions specifically about entrepreneurship education. Respondents were asked to rank the importance of teaching entrepreneurial skills in schools on a scale of 1 (not at all important) to 5 (very important). The response was significant: 84 percent of high-school students, 82 percent of the general public, and 81 percent of small business owners responded with a 4 or a 5, indicating that they deemed teaching entrepreneurship in schools important or very important. However, 85 percent of high-school students said that they were taught ‘little’ or ‘nothing’ about how businesses work, and 77 percent of high school students said that they were taught ‘little’ to ‘nothing’ about how the economy works. Only 27 percent of all respondents had taken a course in business or entrepreneurship in high school (Walstad, 1994).

A second survey conducted with the help of the Gallup organization in 1998 and 1999 resulted in similar findings. Approximately 70 percent of high school and college students aspired to start their own business. Interestingly this statistic spanned gender, ethnicity, race, and socioeconomic status. Additionally, 50 percent of youth and 70

percent of young adults surveyed said they had been contemplating starting their own business for two or more years. The second survey echoed the first in that students did not feel that they were being properly educated and prepared for entrepreneurial endeavors. When asked where they expected to receive such preparation, 48 percent of the respondents chose “education in school” as their number one answer (Kourilsky and Walstad, 2000).

The results of the 1994 Gallup poll and 1998 follow-up survey revealed that while there was a general consensus that it is important to teach entrepreneurial skills to students, a large percentage of high-school students in the United States were not receiving this type of education. Entrepreneurs have expressed that one of the biggest constraints on future growth is the lack of talented, highly-skilled, and entrepreneurial workers (Kauffman, 2007). In order to meet the needs of the twenty-first century economy, there must be entrepreneurially-driven improvements in the educational system (Kauffman, 2007).

Defining Entrepreneurship

Entrepreneurship is often equated with business start-ups and therefore an entrepreneur is one who “organizes, manages, and assumes the risks of a business or enterprise” (Webster 2007). Defining entrepreneurship in the narrowest sense as one who starts their own business, entrepreneurship education not only provides the knowledge needed for such an endeavor, but instills the necessary confidence for assuming risks that is required of business owners (Kourilsky and Walstad, 2000).

However, this narrow definition does not properly encompass the complexity behind the entrepreneur. People are not required to start their own businesses to be classified as entrepreneurs. Entrepreneurs can exist within corporations as well. The term 'intrapreneur' has been defined as an "employee that applies entrepreneurial thinking to the various internal functions of existing businesses" (Kourilsky and Walstad, 2000). An entrepreneur is able to see opportunity or an "unexploited niche, and fill it by developing a new product, devising a new service, discovering a new technology, or formulating a new organization" (Kent 1990). A common point of discussion is whether entrepreneurs are born or developed. Much of the literature has determined that entrepreneurs can be nurtured and developed. "The great majority of people are capable of being made more entrepreneurial" (Kent, 1984).

Entrepreneurial skills can be defined in the broadest sense as being able to recognize opportunities, developing services or products to meet the needs discovered, and assuming risk in order to fulfill the identified goals. Entrepreneurial skills include creativity, decision-making, leadership, communication skills, the ability to work in a team, marketing, management, the ability to accept failure, flexibility, risk-taking, confidence, and passion. While these skills are essential for those hoping to start their own businesses, these same set of skills will increasingly be expected of all members of the workforce in the new economy (Kourilsky and Walstad, 2000). To sum up the definitions of entrepreneurship, entrepreneurship is "first and foremost a mindset" (Lundstrom and Stevenson, 2005).

History of Entrepreneurship Education

Entrepreneurship education has become increasingly popular in the past two decades. The University of Southern California created the first true modern entrepreneurship course in 1971 with the first Masters of Business Administration with a concentration in entrepreneurship. Other universities followed suit, with 300 offering entrepreneurship courses by the early 1980s. By the 1990s, over 1,000 universities offered entrepreneurship courses. In 2005, the number had reached 1,600 (Kuratko, 2005). The boom in entrepreneurship education could be a response to marketplace demands (Ries, 2000).

The amount of literature regarding entrepreneurship education and training grew exponentially in the 1980s. However, there appeared to be a large gap in literature regarding entrepreneurship education at the high-school level, as the majority of the published literature concerned entrepreneurship education and training programs at the university or college level (Dainow, 1986). A literature review of entrepreneurship education resources concluded that the same themes pointed out in Dainow's 1986 review remained in 1997. It was concluded that entrepreneurship education is "almost exclusively" focused at the postsecondary level and suggests that there be a push for entrepreneurship at the primary and secondary levels (Gorman, 1997). Although entrepreneurship education has been focused at the university level, it is believed that the most effective time to learn and develop entrepreneurial skills is at the primary and secondary level, particularly in high school (Filion, 1994). It is important to remember that entrepreneurship education is a "lifelong-learning process, starting as early as

elementary school and progressing through all levels of education” (Consortium for Entrepreneurship Education). Entrepreneurship can be thought of like a foreign language: the earlier one learns the language, the easier it is to grasp.

Entrepreneurship education programs vary greatly from school to school. While some might offer a course or courses specifically in entrepreneurship, others might incorporate entrepreneurial skills in various subjects school-wide. Other schools might offer after-school programs, extracurricular clubs, or summer camps. Schools host entrepreneurial contests to encourage further participation (Saboe, 2002).

Characteristics of Effective Entrepreneurship Programs

When implementing entrepreneurship education, it is important to remember that the courses should have certain characteristics. Several organizations including the National Foundation for Teaching Entrepreneurship, the Kauffman Foundation, and the Consortium for Entrepreneurship Education have established curriculums for effective entrepreneurship education programs. As discussed in the following section, it has been found that curriculum matters (Kourilsky, 1997). Basic business courses with a chapter on entrepreneurship are not sufficient for instilling the entrepreneurial spirit in students. The courses must possess certain characteristics that “motivate, interest, and inspire” young people (Rabbior, 1990).

A fundamental goal of any entrepreneurship education program should be to promote awareness of opportunity. Students should learn about career possibilities as an entrepreneur, many of which children may have not explored before (Kent, 1990).

Entrepreneurship courses must be hands-on, creating an environment in which students learn through experience (Rabbior, 1990). Students often write their own business plans, create products or services, and showcase their ideas to their classmates. Other classes have launched student-run businesses in schools. However it is accomplished, entrepreneurship education should involve teaching methods outside of the traditional lecture format.

The courses must encourage students to seek different ways of looking at a problem, rather than insisting that students find the one right answer. Courses should reflect the fundamental aspect of entrepreneurship, which is challenging the status quo. Nurturing creativity is one of the most important aspects of the program. Entrepreneurs must constantly be looking at the world in a different light. Entrepreneurship courses should cultivate creative thinking and problem-solving skills.

Effective entrepreneurship programs should also contain a community involvement component. Entrepreneurs constantly examine their surroundings to determine how they can better their communities. Students of entrepreneurship should be encouraged to do the same. In a 1998 survey, 70 percent of students thought that entrepreneurs had an obligation to give something back to the community (Kourilsky and Walstad 2000). Community service activities also provide for an opportunity to improve relations between the school and the community (Rabbior 1990).

Various teaching styles should be employed in order to reach out to students who learn in different ways. Entrepreneurship courses are often a mixture of students from all socioeconomic backgrounds and skill levels. Entrepreneurship education should be

available to all students from all socioeconomic backgrounds, not just the students who seem to fit a certain model. It is important to reach out to each individual student to encourage their skill development.

The teacher of the entrepreneurship course should be entrepreneurial as well. The teacher should be allowed to amend the curriculum to fit each class's needs. They should be given the freedom to explore different teaching methods and determine the effectiveness of each method (Rabbior, 1990).

Entrepreneurship education programs should have components that instill self-confidence and boost the self-esteem of students. Confidence is an essential component of being a successful entrepreneur. Entrepreneurs must learn how to stand behind their convictions and present their ideas. The entrepreneur must also learn how to accept failure and to stay motivated when presented with obstacles. The education programs must teach students how to deal with these challenges while remaining confident (Rabbior, 1990).

Learning how to be a part of a group or a team is an essential skill for entrepreneurs. Entrepreneurship education programs should include some sort of group activity, project or teambuilding exercise (Rabbior, 1990). Students also should be equipped with the business skills possessed by entrepreneurs such as management and finance (Kent, 1990).

An entrepreneurship program should encourage a can-do attitude. More important than teaching the knowledge behind creating a business, the courses should instill an entrepreneurial spirit in students. Teaching students that entrepreneurs come

from all backgrounds and giving students a positive outlook on their future opportunities is an important aspect of any entrepreneurship course. Additionally, it is important to remember that entrepreneurship is not just about starting a business. Entrepreneurial skills can be used in all occupations as well as in social realms. An intrapreneur is one who is employed by an existing business but is able to apply entrepreneurial thinking to the internal functions of the business (Kourilsky and Walstad, 2000).

Measuring Outcomes of Entrepreneurship Education

Entrepreneurship education has been difficult to measure, for the most part because it is a relatively new phenomenon. Historically, there has been little empirical research on the effects of entrepreneurship education, and the data and methodologies are varied and inconsistent (Peterman and Kennedy, 2003). In the last ten years, empirical research using pre-tests and post-tests has emerged. The majority of the research that exists was conducted on entrepreneurship programs at the university or community-college level (Dainow, 1986; Gorman, 1997). However, there are some studies at the secondary education level, which are described below.

In 2003, Dr. Michael Nakkula of Harvard University released a study of the effects of entrepreneurship education, particularly focused on the National Foundation for Teaching Entrepreneurship's (NFTE) curriculum. Data were collected from two public high schools in Boston over the 2001-2002 school year. Information was gathered from 158 students enrolled in business or entrepreneurship classes and 154 comparison students who were enrolled in health and education classes. Using a pre-test and post-

test, the study measured the change in student attitudes over the academic year. The study found that students enrolled in NFTE programs had a 32 percent increase of interest in college while the comparison group's interest in college decreased by 17 percent. The study also found that students enrolled in NFTE programs experienced a greater increase in occupational aspirations, a variable measuring the "level of education required to achieve the professional goals to which the students aspire." NFTE students increased their interest in careers that require higher levels of education by 44 percent while the comparison group increased by 10 percent (Nakkula, 2003).

An empirical study of Youth Achievement Australia, the Australian extension of Junior Achievement, measured changes in perceptions of entrepreneurship in high-school students as a result of enterprise education. YAA is typically an afterschool program administered to adolescents. The model added the involvement in the YAA program as an additional variable to Shapero's model which "hypothesizes that a person's intent to start a business is influenced by perceived desirability, perceived feasibility, and propensity to act" (Peterman and Kennedy, 2003). The study observed that students enrolled in the YAA program expressed a significantly higher desire to start their own businesses while the control group remained unchanged. Additionally, the YAA students had an increased perception of the feasibility of starting their own businesses after going through the program. Another interesting discovery was that students with prior experience in entrepreneurship were more likely to enroll in entrepreneurship education programs. In fact, the data collected showed that 80 percent of the students enrolled in YAA had previous entrepreneurial experience (Peterman and Kennedy, 2003). It is

important to note that these findings might differ in courses available during the regular school day. After-school groups might be more likely to attract students with prior entrepreneurial experience than classes offered during the school day.

Research conducted on various entrepreneurship education programs has revealed that curriculum matters. Some curriculums are more effective than others in transferring knowledge and understanding of entrepreneurial concepts. A study conducted in 1997 by the Center for Entrepreneurial Leadership and the University of California at Los Angeles compared the effects of the New Youth Entrepreneur curriculum compared to a control group that received exposure to “basic entrepreneurship concepts at an awareness level as part of a general business education course.” The group receiving education based on the New Youth Entrepreneur curriculum significantly outperformed students who received the basic-concepts education (Kourilsky, 1997).

Aside from the empirical analyses, there are numerous success stories from students, teachers, and parents that shed light upon the benefits of entrepreneurship education (Kantor, 2006). Some of the qualified but not quantified measures of entrepreneurship education programs are the increase in self-esteem, confidence levels, personal skills, problem-solving skills, and overall interest in school (Ries, 2000). Educators also have expressed that the programs have alleviated absentee and behavioral problems as well as prevented high-school students from dropping out of school (Ries, 2000; Saboe, 2002).

Entrepreneurship classes allow students to make connections between their schoolwork and the real world. While many high school students feel their other classes

are boring or irrelevant, they find their niche in entrepreneurship (Saboe, 2002). Entrepreneurship education teaches students how to become independent. However, even if the students do not opt to start their own business someday, the skills that they learn through this type of learning can be used in any career (Ries, 2000).

Entrepreneurship education is noted in promoting equity in the otherwise inequitable knowledge-based economy. There has been a widening gap between the haves and have-nots, partly as a result of the higher education levels required in the knowledge economy (Atkinson, 2005). However, entrepreneurship education provides opportunities to students from all different backgrounds and could be particularly valuable to students of disadvantaged backgrounds (Kauffman, 2007). Low-income students have untapped potential that can be realized through entrepreneurship. This form of education also provides disadvantaged children with a sense of hope and economic security and a chance to transform into a “generation of successful businesspeople and contributors to revitalized communities (Saboe, 2002). The National Foundation for Teaching Entrepreneurship recognized this opportunity and has trained over 150,000 low-income students since it was founded in 1987 (National Foundation for Teaching Entrepreneurship, 2007).

Perhaps the most beneficial measure of entrepreneurship education is not that it produces a generation of Bill Gates-like individuals, but that it ignites excitement about learning, opens young eyes to possibility, and fosters creativity in an educational system that is bogged down with standardization. All of these effects will in turn make these students better prepared for the challenges they will face in tomorrow’s economy.

Beyond Education, Creating Policy

To promote entrepreneurial activity most effectively, entrepreneurship education in high schools must be part of a larger network of resources. “The needs of the broader support network for entrepreneurship education, including educators, financial intermediaries and counselors and advisors, appear to have been overlooked completely” (Gorman, 1997). The National Governor’s Association recognizes the importance of implementing entrepreneurial readiness in the K-12 system, as is highlighted in its report “A Governor’s Guide to Strengthening State Entrepreneurship Policy” (National Governor’s Association, 2004). In a 1999 nationwide survey of states conducted by the Kauffman Foundation, only 13 of the 37 responding states provided funding in support of K-12 entrepreneurship programs (Kayne 1999). Support from school administrators, education officials, and local business is essential for effective and comprehensive programs (Lundstrom and Stevenson, 2005).

A participant in a community forum in Columbia, Maryland, hosted by the Southern Growth Policies Board acknowledged the need to work together when he said “Too often we are working in a silo with no awareness of other activities” (Southern Growth Policies Board, 2007). There must be an alliance of educators as well as local officials, economic developers, and businesses that support entrepreneurial activity. “The divide between business trends and the responses of economic development policymakers may be closing. Over the past two to three years, a boomlet of interest in public policy that supports entrepreneurship has developed” (Pages, 2003). It is necessary to share

information with each other in order to promote an environment that fosters entrepreneurial activity.

Objective of the Study

The review of the literature has revealed that entrepreneurship education will be beneficial for future members of the workforce in this constantly changing global economy. However, entrepreneurship education has been praised as being especially beneficial for at-risk students. The first objective of this study is to examine similarities and differences in the characteristics of schools that implement entrepreneurship education. The characteristics that are examined include whether or not entrepreneurship is more prevalent in high-achieving or under-achieving schools, urban or rural schools, or schools with high or low percentages of minority students.

The studies to date that have been conducted on the characteristics and effectiveness of entrepreneurship programs have surveyed youth as well as business leaders. However, these studies have often overlooked another important player in the scenario – the teacher. The second objective of this research is to survey entrepreneurship teachers to determine the changes they have seen in the students, their challenges as entrepreneurship teachers, and suggestions they have for improving the current state of entrepreneurship education.

Further, the study examined whether or not teachers are interested in forming partnerships outside of the classroom with local businesses, post-secondary institutions, Small Business Development Centers, and economic development agencies. The study

identified the extent to which these partnerships exist as well as the extent to which they are desired. The results were then be analyzed to determine what sort of alliance for entrepreneurship education can be created.

The state of South Carolina was chosen as the study area because of several factors. While the state traditionally lags in educational quality, it seems to be taking great strides towards implementing entrepreneurship education. Also, a partner program of the National Foundation for Teaching Entrepreneurship has an office in the state and has been training teachers to become Certified Entrepreneurship Teachers.

ENTREPRENEURSHIP EDUCATION IN SOUTH CAROLINA

History and Background

In 2005, Michael Porter of Harvard University, in conjunction with the South Carolina Council on Competitiveness, outlined an economic development strategy to increase the state's competitiveness. The plan targeted improving the educational system as well as increasing entrepreneurial talent (Porter, 2005).

Although South Carolina has traditionally lagged behind the rest of the nation when it comes to educational measures, the state has kept up in the area of entrepreneurship education. The South Carolina Department of Education has listed an approved curriculum for a course in entrepreneurship. A copy of the standards for Entrepreneurship Activity Course Code 5400 can be found in Appendix A. In order to teach this course, a teacher must have certifications in distributive education, office occupations, shorthand, typing, accounting, accounting and related business, secretarial science, business education, accounting and related economics, or business and marketing technology. Data collected from the South Carolina Department of Education showed that in the 2005-2006 school year Entrepreneurship Activity Course Code 5400 was offered at 102 high schools, special schools, and career and technology centers.

Youth Entrepreneurship South Carolina, also known as YesCarolina, was formed in 2003 with the purpose of training teachers specifically in entrepreneurship education. The Charleston-based nonprofit organization is a program partner of the National Foundation for Teaching Entrepreneurship and has trained 320 educators statewide free

of charge since 2003. The training has been provided for teachers of entrepreneurship and business courses as well as teachers from all different subjects who wish to incorporate entrepreneurial thinking into their curricula. The entrepreneurship curriculum has been targeted towards middle school and high school teachers. In its first two years, the organization trained 41 teachers. The funding for this training was provided through business sponsors and was conducted at the Tate Center for Entrepreneurship at the College of Charleston. In 2005, the South Carolina General Assembly approved funding to YEScarolina for continued teacher training. The grant was expected to last three years. Additionally, the State Department of Education has recognized the graduates of the training sessions as Certified Entrepreneurship Teachers. YEScarolina registered at least 75 teachers for their NFTE Certified Entrepreneurship Teacher Training Classes in Greenville, Columbia, and Charleston in the summer of 2008. YEScarolina is offering an Advanced Teacher Training session for teachers who have already become Certified Entrepreneurship Teachers. YEScarolina maintains a listing of participating teachers and schools. However, some of the teachers who received training returned to their schools only to find administrative barriers in implementing entrepreneurship education in the classroom (YesCarolina, 2007).

In 2007, the Southern Growth Policies Board and the South Carolina Technical College System hosted six community-based forums that included education, economic and workforce development experts as well as policy makers. A survey was conducted at each of these forums to determine the importance of various investments to the state's economic development. When asked if they agreed with the idea of providing

entrepreneurial training in K-12 classrooms, 51 percent strongly agreed and 40 percent somewhat agreed (New Carolina, 2007). Therefore, 91 percent of the educators, economic and workforce development experts, and policy makers at these forums supported implementing entrepreneurship education in South Carolina's K-12 system.

In an additional effort to promote entrepreneurship in South Carolina, a statewide entrepreneurship committee was formed in the Fall of 2007. The committee's main purpose was to support the state's involvement in Entrepreneurship Week which was held during the last week of February 2008. The committee consisted of volunteers from businesses and institutions of higher education. Representatives from the South Carolina Department of Education and the Governor's Office for Small and Minority Business Assistance also served on the committee. During the national entrepreneurship week, Governor Mark Sanford signed a proclamation designating February 28th to March 1st, 2008 as South Carolina Entrepreneurship Week. A copy of this proclamation can be found in Appendix B.

METHODOLOGY

The literature review determined the importance of promoting entrepreneurship education in high schools. This form of education prepares the future workforce with the skills needed in the twenty-first century economy. Initial research has indicated that South Carolina's schools statewide have begun to implement entrepreneurship into their curriculum. However, little is known about the extent of entrepreneurship programs in the state, how well they are working, and what possible improvements could be made.

The South Carolina Department of Education provided a listing of all of the schools in the state at which Entrepreneurship Activity Course Code 5400 was offered in the 2005-2006 school year. This list included public high schools, a few middle schools, and career and technology centers. In all, 102 locations offered Entrepreneurship 5400 in the 2005-2006 school year. The decision was made to narrow the study area to public high schools in South Carolina.

The first objective of this study was to perform analysis on the inventory of entrepreneurship programs, determining characteristics of schools that offer entrepreneurship courses and determining further opportunities for expanding entrepreneurship. Data provided through the South Carolina Department of Education and the National Center for Education Statistics was analyzed to determine the similarities and differences between schools that offered entrepreneurship courses in the 2005-2006 school year and schools that did not. The aspects analyzed are whether or not entrepreneurship is more prevalent in high-achieving or under-achieving schools, urban

or rural schools, schools with high or low percentages of minority students, or schools with high or low percentages of students based on socioeconomic status. The average SAT scores were used as a measure of achievement to differentiate low-achieving and high-achieving schools. The percent of students on free or reduced lunch was used as a measure of poverty in the school. The locale of the school was given by the National Center for Education Statistics and was broken into twelve categories: large, midsize, and small cities and suburbs and fringe, distant, and remote towns and rural areas. The complete descriptions for these locale classifications can be found in Appendix C.

The next objective was to obtain information on the history of the programs, curriculum, challenges faced, perceived outcomes, and possible opportunities. A survey of current entrepreneurship teachers in the state's public high schools addressed those questions and also addressed the involvement of outside partners such as local businesses or post-secondary institutions.

In order to obtain an accurate listing of entrepreneurship teachers, the list provided by the South Carolina Department of Education was cross-examined with a list of schools that have had teachers who have received entrepreneurship training through YESCarolina and the National Foundation for Teaching Entrepreneurship. Website searches were then performed on each school identified by either the South Carolina Department of Education or YESCarolina to determine if entrepreneurship was taught at the particular school in the 2007-2008 school year, to identify the teacher of the course, and to obtain contact information for that teacher. If it was unclear whether or not the

school offered an entrepreneurship course, who the teacher was, or what their contact information was, then more investigation was conducted via telephone.

Finally, a listing of all of the public high schools in the state was obtained from the South Carolina Department of Education. Web searches were conducted to determine if entrepreneurship courses were offered at any of the remainder of the public high schools in South Carolina. In total, 88 public high schools were identified as offering entrepreneurship courses in the 2007-2008 school year.

A web survey was created and recruitment was conducted via email to each of the identified entrepreneurship teachers, with the exception of four whose email addresses were unavailable. The web questionnaire was created using the Survey System Software to ensure that all information remained confidential. The research study and survey were reviewed by the Institutional Review Board at Clemson University and were approved for human subjects research. A copy of the survey instrument can be found in Appendix D.

A total of 84 entrepreneurship teachers were contacted via email and invited to participate in the web survey. An email invitation to participate in the survey was sent out to the 84 entrepreneurship teachers on March 13th, 2008. A reminder email was sent to those teachers who had not yet responded on March 19th. A final reminder email was sent on March 31st. Because of problems with spam filters and mailboxes that were unavailable or had exceeded their capacity, some teachers were sent individual emails or received telephone calls to inform them of the survey. After the three emails and follow-up telephone calls, 36 responses were collected, yielding a 43 percent response rate. The

results of the survey were then analyzed to identify key trends and points of interest. The analysis was used to form conclusions and to provide implications for future steps that might be taken in the development of entrepreneurship education.

A third objective of the study was to identify potential partners in an alliance for entrepreneurship. Forming a network of support for entrepreneurship education facilitates progress for future endeavors. Suggestions were made for creating an alliance that promotes entrepreneurial activity. Aspects examined included hosting regional entrepreneurship competitions for high school students, involving entrepreneurial guest speakers in schools, hosting networking events, forming support groups for entrepreneurship educators, and establishing outcome measurements to evaluate the effectiveness of entrepreneurship programs.

DEMOGRAPHIC STUDY

Characteristics of Schools that Offer Entrepreneurship

The first objective of the study was to determine the characteristics of schools that offer entrepreneurship. The study analyzes schools based on gender, race, socioeconomic status, achievement, and locale.

Analysis of the data revealed little difference among schools that have entrepreneurship programs and those that do not in regard to gender, race, and poverty levels. The gender makeup of schools without an entrepreneurship course is 50 percent male, 49.8 percent female, and 0.2 percent unknown while the gender makeup of schools without an entrepreneurship course is 49.4 percent male, 50.3 percent female, and 0.3 percent unknown.

There is a slight difference in the racial demographics between schools that offer entrepreneurship and those that do not, but the difference is not significant. Schools that do not offer an entrepreneurship course are on average about 53 percent white, 44 percent black, and 2 percent Hispanic. Schools that do offer an entrepreneurship course are on average about 49 percent white, 47 percent black, and 3 percent Hispanic. Therefore, the schools that have a course in entrepreneurship tend to have a slightly higher percentage of minorities than those schools that do not offer entrepreneurship training.

The poverty index used for the demographic comparison is the percentage of students that qualify for free or reduced price lunches. As can be seen in Table 1, the

percentage of students qualified for free or reduced price lunches at schools that offer entrepreneurship is nearly identical to that at schools that do not offer entrepreneurship. In both categories of schools, approximately 48 percent of the student bodies qualified for free or reduced price lunches.

The demographics that differentiated schools with and schools without entrepreneurship programs are the achievement index, school size, and school locale. The average SAT score at schools without an entrepreneurship course was 962, which was 17 points higher than the average SAT score at schools that did offer an entrepreneurship course. The SAT score disparity indicates that on balance entrepreneurship was being offered at lower-achieving schools, which has long been a goal of entrepreneurship education advocates such as the National Foundation for Teaching Entrepreneurship. A summary of the demographics can be found in Table 1.

The second demographic that separated the two categories of schools was the school size. The average enrollment at schools that offered entrepreneurship was 1188, which is 338 more than the average enrollment of 850 at schools that did not offer an entrepreneurship course. It is intuitive that larger schools would be more likely to offer an entrepreneurship course because of the nature of the course. Entrepreneurship is offered as an elective and larger schools typically have enough resources and students to offer multiple electives.

The third characteristic that illustrated differences between schools that offer entrepreneurship and schools that do not is the locale of the school. The National Center for Education Statistics places a school into one of twelve categories. Cities and suburbs

are divided into large, midsize, and small while towns and rural areas are divided into fringe, distant and remote. A chi-squared test was performed to determine if there exists a relationship between the school locale and if the school offers entrepreneurship. With ten degrees of freedom and an alpha of 0.05, there was a chi-squared critical of 18.307. Determining an observed chi-squared of 18.87, there is statistical evidence that there is a relationship between school locale and whether or not entrepreneurship courses are taught. Categorizing the data into just city, suburb, town, and rural, it appears that suburbs and towns are more likely to offer entrepreneurship courses than cities and rural areas, as can be seen in Table 2.

Table 1: Demographics of Schools that Offer Entrepreneurship

	Data for the 2005-2006 School Year	Schools Without an Entrepreneurship Course	Schools With an Entrepreneurship Course
Gender	Percent Male	50.0%	49.4%
	Percent Female	49.8%	50.3%
	Unknown	0.2%	0.3%
Race	Percent White	52.7%	48.6%
	Percent Black	43.7%	47.4%
	Percent Hispanic	2.2%	2.6%
	Other	1.4%	1.4%
Poverty Index	Percent Free Lunch	41.0%	41.0%
	Percent Reduced Lunch	7.4%	7.1%
	Percent Free or Reduced Lunch	48.3%	48.2%
Achievement Index	Average SAT Score	962	945
School Size	Enrollment	850	1188

Table 2: School Locale

	Entrepreneurship Offered in 2005-2006 School Year	Entrepreneurship Not Offered in 2005-2006 School Year
City	45%	55%
Suburb	53%	47%
Town	54%	46%
Rural	41%	59%

SURVEY RESULTS

The survey results reveal some important findings regarding entrepreneurship education. First, the results identify the basic characteristics of the entrepreneurship program as well as the characteristics of the entrepreneurship teachers. Secondly, the results determine if the entrepreneurship courses contain the elements that were identified as necessary in an effective entrepreneurship program. Thirdly, the survey results establish the desire for partnerships outside of the school. Lastly, the open-ended questions allow for the teachers to identify changes in students, challenges and obstacles faced, changes in the curriculum, and suggestions for improving entrepreneurship education.

The results confirm that teachers are generally following the proposed standards for entrepreneurship education and are observing expected results. However, there are challenges and areas for improvement. The survey results also confirm that teachers desire partnerships outside of the classroom, but do not have the time or resources to establish those partnerships.

Characteristics of the Entrepreneurship Program and Teacher

The first question of the survey asked how many years entrepreneurship has been taught at the respondent's school. Identifying the length of the program will help to characterize the different stages at which an entrepreneurship course may go through.

The programs that are just starting out may find it difficult to get the momentum going or to achieve buy-in from school administration and students. The older programs, on the other hand, have most likely learned how to adapt to changes and garner the needed support. The results show that there is a wide range in the age of entrepreneurship offerings at high schools in South Carolina. Just over 36 percent of entrepreneurship courses have been offered for three years or less while about 42 percent of the courses have been offered for six years or more. About 20 percent of the courses have been offered for more than ten years. The results are summarized in Table 3 below.

Table 3: Number of Years Entrepreneurship Has Been Offered

	Number of Respondents	Percentage of Respondents
1 year	5	13.9%
2-3 years	8	22.2%
4-5 years	6	16.7%
6-10 years	8	22.2%
More than 10 years	7	19.4%
Do not know	2	5.6%

The next question asked how many years the teacher has been teaching entrepreneurship at this school or elsewhere. Although a school may have offered entrepreneurship for several years, a new and inexperienced teacher may be forced to start over with little resources. Also, as teachers change, new ideas may be incorporated into the curriculum. The results, which are summarized in Table 4, reveal that in general entrepreneurship teachers are relatively new to the subject. The largest response to the length of time teaching entrepreneurship was 2-3 years, with 36 percent of respondents falling into this category. Overall, almost 70 percent of the respondents have been

teaching entrepreneurship for five years or less. In the next section of the report, analysis is conducted to determine if the current teachers have been the sole teachers of the program or if there has been some turnover.

Table 4: Number of Years the Teacher has Taught Entrepreneurship

	Number of Respondents	Percentage of Respondents
1 year	5	13.9%
2-3 years	13	36.1%
4-5 years	7	19.4%
6-10 years	9	25.0%
More than 10 Years	1	2.8%
Do not know	1	2.8%

The entrepreneurship teachers surveyed were asked whether or not they had received training through the National Foundation for Teaching Entrepreneurship. The results which are summarized in Table 5, reveal that only 40 percent of the respondents had attended the training sessions.

Table 5: Number of Teachers That Have Received Training through YEScarolina

	Number of Respondents	Percentage of Respondents
Yes	14	40.0%
No	20	57.1%
Do not know	1	2.9%
No answer	1	2.9%

Questions were asked regarding the makeup and characteristics of the entrepreneurship course. The first was regarding the number of students enrolled in the courses. The number of students participating in an entrepreneurship course ranged from

8 to 60. The large numbers reveal that there may be several sections of the course at certain schools to meet the demand from the students. The mean number of students enrolled in the course was 29.6 and the median was 24.5.

Next, the survey asked if students participate in any entrepreneurship competitions. Just over 30 percent of the respondents said that their students participate in various competitions. If a teacher responded affirmatively to the question, they were asked the number of students that participate in the competitions each year. The number of students involved in competitions ranged from a sole student to 50 students, with an average of 13.

Curriculum and Outcomes

The teachers surveyed were asked to rate how strongly they agreed or disagreed with fifteen statements about the entrepreneurship course offered at their school. The questions ranged from components of the course to changes in the students they have observed as a result of the course. The results are summarized in Table 6 and Table 7 shown below. The results show that the entrepreneurship courses being offered are following the general standards that have been set for effective entrepreneurship programs. The courses involve hands-on activities, encourage creative thinking, involve team-building exercises, promote awareness of entrepreneurship as a career option, teach leadership skills, teach the challenges and obstacles to becoming an entrepreneur as well as the benefits, and involve students from diverse backgrounds. Two areas in which the courses are not implementing suggested activities are community service activities and

the operation of a school store or other real business. Only 42% of respondents agreed or strongly agreed that the course involved community service activities and only 21% of respondents agreed or strongly agreed that the students run and operate a school store or other real business.

The respondents also agreed with the commonly cited outcomes to entrepreneurship education. An overwhelming 94% of respondents agreed or strongly agreed that the course improves students' self-confidence. Additionally, 63% of respondents noticed an increase in students' interest in school as a result of the course and 60% of respondents agreed or strongly agreed that they have noticed a positive change in students with behavioral problems as a result of the course.

Another positive response to this section of the survey was that 91% of teachers agreed or strongly agreed that they were able to tailor their courses to meet the class's needs. In other words, they were able to be entrepreneurial as a teacher.

A summary of the results discussed above can be found in Tables 6 and 7. Table 6 provides the detailed summary results as percentages of respondents. Table 7 categorizes the results by grouping 'strongly agree' and 'agree' together and 'strongly disagree' and 'disagree' together.

Table 6: Summary of Results to Statement Agreement Question, Showing Percentages

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Don't Know
The courses involve hands-on learning-by-doing activities.	-	6%	-	27%	67%	-
The courses encourage creative thinking.	-	-	-	24%	73%	3%
The courses involve group projects and/or team-building exercises.	-	3%	3%	27%	67%	-
The courses involve community service activities.	6%	27%	24%	21%	21%	-
I am able to tailor my courses to meet the class's needs. In other words, I am able to be entrepreneurial.	-	-	6%	36%	55%	3%
Students are made aware of entrepreneurship as a career option.	3%	-	-	12%	85%	-
The courses focus primarily on small business start-ups.	-	6%	-	27%	67%	-
The students are taught that it is okay to fail.	3%	-	12%	42%	42%	-
The students are taught leadership skills.	-	-	3%	24%	73%	-
The courses improve students' self-confidence.	-	-	6%	30%	64%	-
I have noticed an increase in the students' interest in school as a result of the courses.	-	9%	21%	30%	33%	6%
I have noticed a positive change in students with behavioral problems as a result of the courses	-	9%	30%	36%	24%	-
Students run a school store or other real business through the courses.	24%	36%	18%	9%	12%	-
Students are taught the pitfalls of and obstacles to becoming an entrepreneur as well as the opportunities.	-	-	-	24%	76%	-
Students from all backgrounds are enrolled in the courses.	-	-	3%	27%	70%	-

Table 7: Summary of Results to Statement Agreement Question, Relative Rating

	Strongly Disagree or Disagree	Neutral	Strongly Agree or Agree	Don't Know
The courses involve hands-on learning-by-doing activities.	6%	-	94%	-
The courses encourage creative thinking.	0%	-	97%	3%
The courses involve group projects and/or team-building exercises.	3%	3%	94%	-
The courses involve community service activities.	33%	24%	42%	-
I am able to tailor my courses to meet the class's needs. In other words, I am able to be entrepreneurial.	0%	6%	91%	3%
Students are made aware of entrepreneurship as a career option.	3%	-	97%	-
The courses focus primarily on small business start-ups.	6%	-	94%	-
The students are taught that it is okay to fail.	3%	12%	84%	-
The students are taught leadership skills.	0%	3%	97%	-
The courses improve students' self-confidence.	0%	6%	94%	-
I have noticed an increase in the students' interest in school as a result of the courses.	9%	21%	63%	6%
I have noticed a positive change in students with behavioral problems as a result of the courses.	9%	30%	60%	-
Students run a school store or other real business through the courses.	60%	18%	21%	-
Students are taught the pitfalls of and obstacles to becoming an entrepreneur as well as the opportunities.	0%	-	100%	-
Students from all backgrounds are enrolled in the courses.	0%	3%	97%	-

Partnerships

Partnerships can be very beneficial to an entrepreneurship course. The survey asked entrepreneurship teachers to identify their current partners and the results are provided in Table 8. A little more than half of the respondents stated that they partnered with members of the business community. The respondents were then asked to categorize their partnership with businesses. To a lesser degree, partnerships were established with community and technical colleges or four-year universities. Approximately 17 percent of respondents partnered with a post-secondary institution.

As is shown in Table 9, the most common forms the business partnerships took were in guest speakers and field trips. All of the respondents that had business partners stated that the partnership involved bringing guest speakers into the classroom. Additionally, about 40 percent of the partnerships involved taking field trips to the businesses. About a quarter of the schools received some sort of funding through the partnership. Other ways in which schools partnered with members of the business community included having business people serve as judges for entrepreneurship competitions as well as serving on advisory committees.

Table 8: Current Partners

	Number of Respondents	Percentage of Respondents
Members of the business community	19	52.8%
Community or technical colleges or four-year colleges and universities	6	16.7%
Other	4	11.1%
No partners	16	44.4%

Table 9: Ways in Which Entrepreneurship Classes Partner With Businesses

	Number of Respondents	Percentage of Respondents
Guest speakers	19	100.0%
Field trips	8	42.1%
Funding	5	26.3%
Other	3	15.8%

Of the six respondents that identified a partnership with a post-secondary institution, 4 were with community or technical colleges and 2 were with four-year colleges or universities. The partnerships varied in their purpose from field trips and guest speakers to offering college credit. Other partnerships included mentoring programs for the students and providing judges for business plan competitions. Two schools mentioned that their students can receive college credit through their local community college.

The teachers surveyed also were given the opportunity to identify any other partners they may have in their entrepreneurship program. Several teachers noted that they partner with other teachers within their county to share ideas and resources. Additionally, the students come together for various activities and networking events.

About 44 percent of the respondents currently have no partners in their entrepreneurship course. Partnerships are often time consuming and difficult to establish given the strict structures of a normal school day and classroom. However, what may be surprising are the results of the next question. When asked what entities they would be interested in forming a partnership with for entrepreneurship education, 100 percent of those surveyed acknowledged that they wanted a partnership of some kind, with 0 answers of 'none.' All but one respondent, or 97 percent, stated that they would be

interested in forming a partnership with businesses. The second highest partner of interest was a Small Business Development Center at 75 percent. Institutions of higher education came next with about 67 percent interested in partnering with community or technical colleges and 64 percent interested in partnering with four-year colleges or universities. Half of those surveys indicated that they would want to form a partnership with economic development agencies and just over 40 percent said they would like to partner with business incubators. Table 10 shows the different partnerships that entrepreneurship teachers are interested in forming.

Table 10: Entities in Which Teachers are Interested in Forming a Partnership With

	Number of Respondents	Percentage of Respondents
Businesses	35	97.2%
Community or technical colleges	24	66.7%
Four-year colleges or universities	23	63.9%
Faith-based institutions	7	19.4%
Small Business Development Centers	27	75.0%
Economic development agencies	18	50.0%
Business incubators	15	41.7%
None	0	0.0%

The survey reveals that there is a gap between the interest in partnerships and the actual amount of partnerships that exist. Although there seems to be a very high interest in forming partnerships with various entities, nearly half of the current programs have no partners at all. There is an opportunity for local businesses, institutions of higher

education, Small Business Development Centers, and economic development agencies to provide support to these high school entrepreneurship programs.

Open-Ended Response Questions

At the end of the survey, the teachers were asked four open-ended questions that allowed them to give a variety of answers and to provide more detail than can be supplied through multiple choice responses. The four questions asked regarded changes observed in students as a result of entrepreneurship education, challenges or obstacles faced as an entrepreneurship educator, changes in the curriculum, and suggestions for improving entrepreneurship education. The complete and detailed responses can be found in Appendix E. The responses were divided into categories which are summarized in the tables to follow.

The first open-ended question asked teachers to comment on the changes in their students that they have observed as a result of entrepreneurship education. The most frequent response was that students became more focused, energized, motivated, and interested in school as a result of the entrepreneurship course. Teachers noted that some students felt a connection between school and their personal lives for the first time. There were two categories of responses that were mentioned by six of the respondents. The first was that students experienced a growth in professionalism, leadership skills, and personal responsibility. The second was that students began to believe that starting a business is possible and that it is a real career option. Five of the respondents mentioned that they saw improved self-confidence and self awareness in their students. Teachers

also mentioned that students with behavioral or academic problems improved as a result of the entrepreneurship courses. It was mentioned that students with Attention Deficit Disorder and Attention Deficit Hyperactivity Disorder thrived on the creative, out-of-the-box approach to entrepreneurship education. Additionally, several teachers mentioned that students with behavioral problems in other classes found their niche in entrepreneurship, even asking to stay afterschool to work on their project and to re-enroll in the class. Other changes in students mentioned include that they enjoyed the creative, flexible, and hands-on format of the course, that they developed a respect for business owners, and that they gained an interest in becoming intrapreneurs. A summary of the changes observed in students as a result of an entrepreneurship course can be found in Table 11.

Table 11: Changes Observed in Students as a Result of Entrepreneurship Course

Changes in Students	Number of times mentioned
More focus, interest; energizes and motivates the students	7
Students experienced growth in professionalism, leadership skills, and personal responsibility	6
Students believe starting a business is possible.	6
Improved self-confidence and self awareness	5
Improvement in students with behavioral or academic problems	4
Students enjoy the creativity, flexibility, and hands-on nature of entrepreneurship education.	3
Developed respect for business owners	1
Interest in becoming an intrapreneur	1

The second open-ended question asked the teachers to comment on any challenges or obstacles they have faced in their experience teaching entrepreneurship. Contradictory to the notion that students automatically thrive on the different format and excitement of entrepreneurship education, the number one challenge identified was the lack of student interest in the course. Teachers explain that entrepreneurship is hard work and that not all students are willing to put for the effort required. A common complaint was that entrepreneurship is an elective and in schools that offer few electives, many students are placed in the class because of a lack of alternatives.

The second-most cited challenge faced by teachers was the lack of funds and resources. Several teachers cited problems with school administration, but for various reasons. Some teachers had difficulties getting buy-in from their administrators. The administrators preferred the traditional form of teaching methods and needed to be convinced in order to change over to a new curriculum. Also, administrators prevented the entrepreneurship class from running a school store. Teachers found it difficult to acquire local business contacts, mostly because of lack of time to spend pursuing those contacts. Teachers said that lack of time and resources were impediments to taking their classes on field trips. The teachers who wish to take their students out of the classroom for new experiences could not find the time to make arrangements or the money to fund the trips. A summary of the challenges and obstacles faced by entrepreneurship teachers can be found in Table 12.

Table 12: Challenges and Obstacles Faced by Entrepreneurship Teachers

Challenges and Obstacles	Number of times mentioned
Lack of student interest in course	7
Lack of funds and resources	5
Problems with school administration	4
Lack of local business contacts	3
Scheduling field trips	3
Problems with getting a school store running	2
Students have limited exposure to the world of business	2
Students are trained to go through the motions.	1
Students lack the needed math skills	1

The third open-ended question asked teachers to comment on the changes in the curriculum that have been made since they started teaching the entrepreneurship course. The most cited change in curriculum was the implementation of the National Foundation for Teaching Entrepreneurship curriculum. Teachers mentioned that the state adopted text book is outdated and that the NFTE curriculum provides more hands-on activities. Moving away from the text book and a traditional lecture style of teaching towards more of a hands-on approach also was mentioned by several teachers. The other changes made in the curriculum included enabling kids to be more creative, introducing student organizations, adding a business plan requirement, adding a service learning component, having a more structured curriculum, focusing on idea generation instead of business plan writing, and adding teambuilding activities. The changes made in the curriculum by entrepreneurship teachers are summarized in Table 13. It is interesting to note that one teacher was moving towards requiring a business plan while another teacher was moving away from that approach.

Table 13: Changes Made in the Curriculum by Entrepreneurship Teachers

Changes in Curriculum	Number of times mentioned
Implemented NFTE curriculum and moved away from state adopted text book	4
Use a more hands-on approach, moving away from the text book	3
Enable kids to be more creative	1
Introduced student organizations	1
Students now create their own business plans	1
Attend more conferences and have implemented that material	1
Added a service learning component	1
Curriculum has become more structured	1
Focus on idea generation instead of business plan writing	1
Added teambuilding activities	1

The fourth open-ended question asked teachers to provide any suggestions they have for improving entrepreneurship education in South Carolina. Two suggestions were mentioned by five respondents. The first suggestion was that teachers should move away from the text and implement a curriculum like that provided by the National Foundation for Teaching Entrepreneurship. Such curriculums involve more hands-on, out-of-the-box activities that spur creative thinking and true entrepreneurial learning. The second suggestion that was mentioned by five teachers was that more business partners should be established for entrepreneurship education. Some respondents mentioned that they have little time to devote towards searching for business partners. Another teacher mentioned that they used the South Carolina Council on Economic Education as a source for business partners. Providing more funding and training for teachers was suggested for improving entrepreneurship education. In addition, conducting seminars for school administrators was suggested as a way to get their buy-in. Other suggestions for

improving entrepreneurship education included creating a network of entrepreneurship teachers in which they can share ideas, holding more workshops and business simulations for students, having more competitions for students, and improving the quality of teachers. A summary of the results of the open-ended question regarding suggestions for improving entrepreneurship education can be found in Table 14.

Table 14: Suggestions for Improving Entrepreneurship Education in South Carolina

Suggestions	Number of times mentioned
Move away from text towards a more hands-on, out-of-the-box curriculum like NFTE to spur creative thinking	5
Establish more business partners	5
More funding	3
Training for teachers	2
Get buy-in from school administration	2
Create a network of entrepreneurship teachers	2
More workshops and business simulations for the students	2
More competitions for students	1
Quality of teachers; teachers must be entrepreneurial thinkers	1

ANALYSIS AND IMPLICATIONS

Characteristics of the Entrepreneurship Program and Teacher

The demographic analysis and survey results present some interesting implications for the future development of entrepreneurship education. The demographic analysis determined that entrepreneurship education programs are more prevalent at larger schools. Small schools may not have the resources necessary to develop an entrepreneurship course and to keep it going in those important start-up years. In small schools, there is a smaller pool of teachers. Teachers may be spread thin as it is, teaching the maximum number of classes. Entrepreneurship may not be a top priority in new classes to create. Additionally, small schools might have a more difficult time garnering support from their administration. Perhaps smaller schools should be targeted for promoting entrepreneurship education. Business partners that are willing to provide funding can be identified and school administrators can be educated regarding the benefits of entrepreneurship education.

Small schools may also consider an across-the-curriculum approach to entrepreneurship education. Teacher training through YEScarolina is provided to teachers from all subject areas, not just business education. Therefore, the schools that do not have the resources to create a new course could still implement entrepreneurial skills into their curriculum in the core classes such as math, science, and social studies. The survey was limited to schools that offer a stand-alone entrepreneurship course, so it was unable to detect if this type of learning is already taking place. Further investigation

should be conducted to determine if schools are teaching entrepreneurial skills in the core classes.

The demographic analysis also revealed that schools with lower average SAT scores are more likely to have a course in entrepreneurship than schools with higher average SAT scores. This statistic can be used as a measure of achievement to argue that the goal of reaching at risk students is being reached. However, data at the student level would be much more informative than data at the school level. All schools have a range of students as far as ability goes. It is difficult to determine what types of students enroll in entrepreneurship courses. Further investigation would need to be conducted.

There is a relationship between school locale and whether or not entrepreneurship is taught at the school. Suburbs and towns are more likely to offer entrepreneurship courses than are cities and rural areas, indicating that students living at the two extremes – in very urban areas or very rural areas – are less likely to be exposed to entrepreneurship education than students living in mid-sized locales.

The survey results bring to light that a large proportion of the entrepreneurship teachers are relatively new to the subject, having taught the course for five or less years. Training provided through YEScarolina and networking with other entrepreneurship teachers could be very beneficial to these teachers who are inexperienced in teaching the course. A chi-squared test was performed to determine if there was a link between the length of a program at the school and the number of years the teacher had taught entrepreneurship. The test, using 16 degrees of freedom and an alpha of 0.05, determined that there is statistical evidence of a relationship between the age of the program and the

number of years the teacher had taught entrepreneurship. The chi-squared critical in the test was 26.3 and the chi-squared observed was 45.1. The trend shows that in general, the current teachers were the original teachers of the course at that school. This trend is illustrated in Table 15. Of the 33 respondents to the question, 19 or 58 percent had been the original teacher of the entrepreneurship course at their school. Only three of the respondents had previous experience teaching entrepreneurship before teaching the course at their current school.

Table 15: Relationship between Age of Program and Teacher Experience

Number of Years Entrepreneurship Taught at School	Number of Years Teacher has Taught					Grand Total
	1 year	2-3 years	4-5 years	6-10 years	More than 10 years	
1 year	4	0	0	0	0	4
2-3 years	0	7	1	0	0	8
4-5 years	0	1	3	2	0	6
6-10 years	0	2	2	4	0	8
More than 10 years	1	1	1	3	1	7
Grand Total	5	11	7	9	1	33

The survey results showed an unanticipated trend regarding the training of entrepreneurship teachers. While YEScarolina has trained over 320 middle and high school teachers since 2003, only 40 percent of the entrepreneurship educators that responded to the survey had participated in one of these training sessions. While it is encouraging that teachers in other subjects are being trained to become a Certified Entrepreneurship Teacher and implementing entrepreneurial thinking into their curriculum, it is odd that the teachers of actual entrepreneurship courses are not getting the training. A chi-squared test was performed to determine if there was a relationship

between the number of years experience and whether or not training had been received. However, no such relationship was found.

Perceived Outcomes

The responses to the survey show that the perceived outcomes of entrepreneurship education from the respondents match up with the expected outcomes of entrepreneurship education from the literature review. Teachers have noticed an overall positive change in their students as a result of the class. Increased self-confidence, increased interest in school, and an overall decrease in behavioral problems were noted by respondents. Additionally, the course is preparing the students with skills necessary for success in the twenty-first century economy. Students are developing leadership skills, learning to think creatively, and redefining the term success to understand that sometimes it is okay to fail. It is important to note that there may be bias in these results as some teachers may feel that the outcomes are a self-assessment as their effectiveness as a teacher.

One result of the survey that is contradictory to believed notions in entrepreneurship education literature was that the challenge most cited by entrepreneurship teachers was lack of student interest. The results were analyzed to determine if the teacher's training in entrepreneurship education affected their ability to interest their students in the subject matter. Of the seven respondents that noted a lack of student interest as a challenge, three had received training through NFTE, two had not, and two did not know. Due to the small sample size and the nature of the open-ended question, these results could not be used for any conclusive statements. However, further

investigation should be conducted to ascertain if teacher training affects their ability to interest unmotivated students in entrepreneurship.

Partnerships

The survey revealed that a little less than half of the respondents currently have no outside partners with their entrepreneurship course. However, every single respondent expressed interest in forming a partnership for entrepreneurship education. Additionally, the respondents identified a wide range of potential partners in which they were interested in. The most often cited partner, businesses, is not surprising. The teachers expressed a desire to have guest speakers from the business community and also to establish more long term mentorships with members of the business community. Student internships with local businesses would provide students with hands-on, real-world experience. There was also strong interest in forming partnerships with Small Business Development Centers, community and technical colleges, four-year universities, and economic development agencies.

The gap between the number of teachers that were interested in forming partnerships and the number of teachers that are currently in a partnership suggest that there are barriers that prevent teachers from connecting with their desired partners. The open-ended response questions revealed that teachers often do not have the necessary time to devote to seeking out business partners.

It appears necessary to create an alliance for entrepreneurship education in order to connect entrepreneurship educators and students with partners outside of the

classroom. A statewide alliance consisting of business leaders, nonprofits, and educators could help identify opportunities for partnerships that would benefit both the students and the local businesses.

CONCLUSION

Survey results have demonstrated that the entrepreneurship programs put into place have implemented the suggested standards for entrepreneurship education and have experienced the expected outcomes based on national models. However, the analysis has uncovered some areas in which the implementation of entrepreneurship education programs could be improved.

The demographic analysis revealed that students that attend smaller schools may not have the access to entrepreneurship education that students at larger schools may have. Also, many of the teachers that are teaching entrepreneurship courses have not received the free training provided by the state in its effort to support and promote entrepreneurship education. Buy-in from school administration is often cited as a barrier to implementing a true entrepreneurship curriculum. Lastly, the survey analysis found that teachers strongly desire to form partnerships with businesses, post-secondary institutions, Small Business Development Centers, and economic development agencies but do not have the time or resources to seek out these partners.

Targeted effort should be encouraged to ensure that all students have equal opportunity to entrepreneurship education and that the teachers are receiving the training necessary to teach true entrepreneurship education. Entrepreneurship courses should teach true entrepreneurial skills, moving beyond the traditional business education format. There should be broader entrepreneurship course offerings to ensure that a larger segment of the student body has the opportunity to learn entrepreneurial skills.

Teachers from other subject areas such as math, science, and the social sciences should incorporate entrepreneurial skills into their curriculums as well. Follow-up training should be provided to teachers to ensure that they are able to achieve their goals. The follow-up training could also allow experienced entrepreneurship teachers to come together and share their challenges as well as how they have overcome those obstacles. School officials and administrators should be educated on the benefits of entrepreneurship education, so that more support is fostered for promoting entrepreneurial skills in the workforce.

Finally, a statewide or regional alliance for entrepreneurship education should be established. The alliance should consist of representatives from the Department of Education, the State Chamber of Commerce, and economic development agencies as well as policy makers, educators in K-12 as well as post-secondary institutions, and members of the business community. The alliance would promote entrepreneurship education, emphasizing the importance of entrepreneurial skills to the state's economy. The alliance would also identify state business partners that support entrepreneurship education and would be willing to partner with local schools. Not only will the partnerships provided much needed funding to teachers, but they will expose students to the world of business. Students will be more educated in the business environment and will be more likely to know the next step in implementing the skills they learn in their entrepreneurship course.

In this new economy, it is vital that economic development agencies work hand in hand with workforce development agencies and educational systems. The twenty-first century economy requires not only a higher level of education but a different kind of

education. Entrepreneurship education infuses the skills and knowledge required by the jobs of this age. It is vital for economic development agencies and officials to recognize the importance of instilling such skills in the future workforce if the United States is to remain competitive in the global economy. The study presented here presents the notion of forming a statewide or regional partnership for the support of entrepreneurship education. The alliance will consist of educators, members of the business community, and economic development agencies coming together in support of educating the nation's children and equipping them with the skills necessary for success.

APPENDICES

Appendix A

South Carolina Department of Education Standards

ENTREPRENEURSHIP **ACTIVITY COURSE CODE: 5400**

TEACHERS WITH AT LEAST ONE OF THE FOLLOWING CERTIFICATIONS MAY TEACH THIS COURSE:

- 32 DISTRIBUTIVE EDUCATION
- 40 OFFICE OCCUPATIONS
- 41 SHORTHAND
- 42 TYPING
- 43 ACCOUNTING
- 44 ACCOUNTING AND RELATED BUSINESS
- 45 SECRETARIAL SCIENCE
- 47 BUSINESS EDUCATION
- 48 ACCOUNTING AND RELATED ECONOMICS
- 4B BUSINESS AND MARKETING TECHNOLOGY (New as of JULY 1, 2003)

COURSE DESCRIPTION: This course is designed to provide students with the knowledge and skills leading to the development of a business plan for small business ownership. An important part of the course will be the incorporation of marketing, staffing, and financial considerations.

OBJECTIVE: Given the necessary equipment, supplies, and facilities, the student will be able to successfully complete all of the following core standards for a course that grants one unit of credit. The local Advisory Committee should determine which of the core standards should be taught in a half-unit course.

COMPUTER ACCESS REQUIRED.

CREDIT: 1/2 or 1 unit

A. SAFETY

The student will be able to:

1. Identify methods to reduce on-site accidents.
2. Identify methods to train employees in safety practices and procedures.
3. Demonstrate knowledge of an emergency plan.
4. Describe the threat of viruses to a computer network, methods of avoiding attacks, and options in dealing with a virus attack.
5. Identify potential abuse and unethical uses of computers and networks.

B. STUDENT ORGANIZATIONS

The student will be able to:

1. Explain how related student organizations are integral parts of career and technology courses.
2. Explain the goals and objectives of related student organizations.
3. List opportunities available to students through participation in related student organization conferences and other activities.
4. Explain how participation in career and technology education student organizations can promote lifelong responsibility for community service and professional development.

C. ENTREPRENEURIAL CHARACTERISTICS

The student will be able to:

1. Identify characteristics of entrepreneurs.
2. List the advantages and disadvantages of different types of business ownership.
3. Distinguish between four ways in which a business may be acquired (purchase an existing business, enter the family business, purchase a franchise, or start a new business).
4. Complete a self-analysis to identify potential entrepreneurial interests.
5. Identify and analyze the technical skills needed by entrepreneurs.

D. BUSINESS PLAN

(Evaluation will include assessment of a business plan portfolio that incorporates all of the components in the standards listed below.)

The student will be able to:

1. Name and describe the parts of a business plan.
2. Discuss the purposes of creating a business plan.
3. Select a business opportunity based on research.
4. Identify industry trends, competition, and market segment using various research techniques.
5. Define the industry characteristics, major competitors, and market segment.
6. Determine the marketing mix (product, price, place, and promotion).
7. Select an appropriate location.
8. Design the physical layout.
9. Estimate the cost of equipment, supplies, and inventory.
10. Develop an organizational chart.
11. Write job descriptions for every job.
12. Describe various recruitment techniques.
13. Identify components of an employee manual.
14. Prepare a management plan (incorporate legal requirements, business protection, and operations).
15. Prepare a pro forma budget.

16. Read and interpret financial statements (balance sheet, income statement, cash flow projections, and summary of sales and cash receipts).
17. Complete a pro income statement and balance sheet.
18. Estimate start-up costs and projected living expenses for one year and determine the funding needed to begin the business using the pro forma income statement.

E. LEGAL RESPONSIBILITIES

The student will be able to:

1. Define and interpret federal, state, and local regulations that affect small business ownership.
2. Define employer/employee taxes and sales tax requirements.

F. PUBLIC RELATIONS

The student will be able to:

1. Describe advertising and sales promotion techniques.
2. Identify cost factors in a selection of alternative promotional methods.
3. Identify the objectives of a public relations program.

Revised May 2002

MarkEd Standards: Entrepreneurship

National Business Education Curriculum Standard(s): Career Development, Communication, and Entrepreneurship

Competency Revision Teacher Committee: Eric Wells, Byrnes High School; Chris Haff, Applied Technology Center; and Sandra Oliver, Newberry County Career Center.

Competency Revision Business Advisory Committee: Lauren Burns, Governor's Commission on Women, Columbia; Julie DeWitt, Columbia; Larry Foote and John Watson, Central Carolina Technical College, Sumter; Betsy Greenway, Chronicle Independent; Melissa Irick, Kershaw School District Office, Camden; Melissagale Lechelt, Marriott Residence Inn, Columbia; Fred Oxley, Sheridan's Hallmark, Camden; and Kitty Strickland, University of South Carolina, Columbia.

STATE-ADOPTED TEXTBOOKS

Glencoe/McGraw-Hill

Entrepreneurship and Small Business Management, 2000

South-Western Publishing

Entrepreneurship: Ideas in Action, 2000

RESOURCES

FBLA PowerPoint Presentation, 2002

FBLA Medi@Show Presentation, 2002 (<http://www.dimensional.com/Mediashow.htm>)

DECA PowerPoint Presentation, 2002

DECA Medi@show Presentation, 2002 (<http://www.dimensional.com/Mediashow.htm>)

Safety PowerPoint Presentation (Safety.ppt), 2000 (for the computer classroom)

Safety PowerPoint Presentation (Safety2.ppt), 2002 (for the regular and computer classroom)

Leadership and Personal Development Standards

RELATED STUDENT ORGANIZATION COMPETITIVE EVENTS

DECA

This course will help prepare students for the following DECA Competitive Events. Read the national guidelines in their entirety at the national DECA web site http://www.deca.org/publications/HS_Guide/guidetoc.html because the course may not include everything the students will need to know for the competition.

- **Free Enterprise Event**
- **Entrepreneurship Participating Event**
- **Entrepreneurship Written Event**

FBLA

This course will help prepare students for the *Entrepreneurship* FBLA Competitive Event. Read the national guidelines in their entirety at <http://www.fbla-pbl.org/> because the course may not include everything the students will need to know for the competition.

Appendix B

Governor's Proclamation for Entrepreneurship Week

State of South Carolina

Governor's Proclamation

- WHEREAS, small business is the backbone of our state's economy, and entrepreneurship plays a significant role in our growth and prosperity; and
- WHEREAS, seventy percent of high school students in our country want to start their own business; and
- WHEREAS, financial, economic, and business literacy, along with a proficiency in entrepreneurial skills, help enhance the future workplace productivity and career options for students; and
- WHEREAS, entrepreneurs contribute positively to our economy and serve as innovators and valuable resources for improving communities across our state and nation as places to live, work, and play; and
- WHEREAS, National Entrepreneurship Week helps raise awareness of the innovative ways in which entrepreneurship education can incorporate the core academic, technical, and problem solving skills necessary for our aspiring entrepreneurs and successful workers in the jobs of the future.

NOW, THEREFORE, I, Mark Sanford, Governor of the Great State of South Carolina, do hereby proclaim February 23 - March 1, 2008, as

SOUTH CAROLINA ENTREPRENEURSHIP WEEK

throughout the state and encourage all South Carolinians to celebrate the achievements of entrepreneurs across the Palmetto State and recognize their many contributions to our continued economic prosperity.



A handwritten signature in black ink, appearing to read "Mark Sanford".

MARK SANFORD
GOVERNOR
STATE OF SOUTH CAROLINA

Appendix C

Locale Classifications from the National Center for Education Statistics

11 - City, Large	Territory inside an urbanized area and inside a principal city with population of 250,000 or more.
12 - City, Midsize	Territory inside an urbanized area and inside a principal city with population less than 250,000 and greater than or equal to 100,000.
13 - City, Small	Territory inside an urbanized area and inside a principal city with population less than 100,000.
21 - Suburb, Large	Territory outside a principal city and inside an urbanized area with population of 250,000 or more.
22 - Suburb, Midsize	Territory outside a principal city and inside an urbanized area with population less than 250,000 and greater than or equal to 100,000.
23 - Suburb, Small	Territory outside a principal city and inside an urbanized area with population less than 100,000.
31 - Town, Fringe	Territory inside an urban cluster that is less than or equal to 10 miles from an urbanized area.
32 - Town, Distant	Territory inside an urban cluster that is more than 10 miles and less than or equal to 35 miles from an urbanized area.
33 - Town, Remote	Territory inside an urban cluster that is more than 35 miles from an urbanized area.
41 - Rural, Fringe	Census-defined rural territory that is less than or equal to 5 miles from an urbanized area, as well as rural territory that is less than or equal to 2.5 miles from an urban cluster.
42 - Rural, Distant	Census-defined rural territory that is more than 5 miles but less than or equal to 25 miles from an urbanized area, as well as rural territory that is more than 2.5 miles but less than or equal to 10 miles from an urban cluster.
43 - Rural, Remote	Census-defined rural territory that is more than 25 miles from an urbanized area and is also more than 10 miles from an urban cluster.

Appendix D

Survey Instrument

Entrepreneurship Education in South Carolina's Public High Schools

Questionnaire # _____

Q.1 Thank you for participating in this survey. Your input will help to further the development of entrepreneurship education. The survey should take you approximately 10 minutes to complete. Please read over the following information regarding the survey and click the continue button to give your consent to participate.

Information Concerning Participation in a Research Study, Clemson University

Description of the research and your participation

You are invited to participate in a research study conducted by graduate researcher Carla Bridges and Dr. Anne Dunning. The purpose of this research is to examine entrepreneurship education programs in the state's high schools. Entrepreneurial skills are vital for success in this new and changing economy. Entrepreneurship education plays a major role in equipping the workforce with the skills they need to succeed. This study will examine the current state of entrepreneurship education in South Carolina's high schools and will help us to identify what steps can be taken to further promote entrepreneurship. Your participation will involve completing a survey regarding entrepreneurship offerings at your school.

Risks and discomforts

There are no known risks associated with this research.

Potential benefits

This survey will help characterize the current conditions of the state's entrepreneurship education programs and can make implications towards what steps should be taken in the future to further promote entrepreneurship education. This survey is an opportunity for you to provide your input on these matters.

Protection of confidentiality

Your protection is of utmost importance. Neither your identity nor your school's identity will be revealed in any publications that might result from this study.

Voluntary participation

Your participation in this research study is voluntary. You may choose not to participate and you may withdraw your consent to participate at any time. You will

not be penalized in any way should you decide not to participate or to withdraw from this study.

Contact information

If you have any questions or concerns about this study or if any problems arise please contact Carla Bridges at cmbridg@clemson.edu or Dr. Anne Dunning at Clemson University at 864.656.0511. If you have any questions or concerns about your rights as a research participant, please contact the Clemson University Office of Research Compliance at 864.656.6460.

Q.2 Please provide the name of your school.

Q.3 How many years has entrepreneurship been taught at your school?

- 1 year 1
- 2-3 years 2
- 4-5 years 3
- 6-10 years 4
- More than 10 years 5
- Do not know 6

Q.4 How many years have you been teaching entrepreneurship at this school or elsewhere?

- 1 year 1
- 2-3 years 2
- 4-5 years 3
- 6-10 years 4
- More than 10 years 5
- Do not know 6

Q.5 Have you undergone training through the National Foundation for Teaching Entrepreneurship?

- Yes 1
- No 2
- Do not know 3

Q.6 Which organization's standards or curriculums do you follow? (check all that apply)

- Consortium for Entrepreneurship Education 1
- Junior Achievement 2
- MarkED 3
- Mini-Society 4
- National Foundation for Teaching Entrepreneurship 5
- New Youth Entrepreneur 6
- PACE (Program for Acquiring Competence in Entrepreneurship) 7
- Other 8

Q.7 Where are entrepreneurial skills taught in your school? (check all that apply)

- A course dedicated to entrepreneurship 1
- A course dedicated to virtual enterprise 2
- Other business courses 3
- Career and technology courses (other than business courses) 4
- Economics 5
- Social studies courses 6
- Science courses 7
- Math courses 8
- Afterschool clubs or organizations 9
- Other 10
- Do not know 11

[IF THE ANSWER TO QUESTION 7 IS NOT 9, THEN SKIP TO QUESTION 10]

Q.8 Which afterschool clubs or organizations that promote entrepreneurship are currently active at your school? (check all that apply)

- Future Business Leaders of America 1
- DECA Association of Marketing Students 2
- Junior Achievement 3
- Other 4

[IF THE ANSWER TO QUESTION 8 IS NOT 4, THEN SKIP TO QUESTION 10]

Q.9 What other afterschool organizations at your school promote entrepreneurship?

Q.10 Do students participate in any entrepreneurship competitions?

- Yes 1
- No 2
- Do not know 3

Q.11 Approximately how many students participate in the following each year?

- Entrepreneurship courses _____
- Entrepreneurship afterschool activities, organizations, or clubs ... _____
- Entrepreneurship competitions _____

Q.12 With whom do you partner? (check all that apply)

- Members of the business community 1
- Community or technical colleges or four-year colleges or universities ... 2
- Other 3
- No partners 4

[IF THE ANSWER IS 4, THEN SKIP TO QUESTION 17]
 [IF THE ANSWER IS , THEN SKIP TO QUESTION 17]

[IF THE ANSWER TO QUESTION 12 IS NOT 1, THEN SKIP TO QUESTION 15]

Q.13 How do you partner with members of the business community? (check all that apply)

- Guest speakers 1
- Funding 2
- Field trips 3
- Other 4
- Do not know 5

[IF THE ANSWER TO QUESTION 13 IS NOT 4, THEN SKIP TO QUESTION 15]

Q.14 In what other ways to you partner with members of the business community?

[IF THE ANSWER TO QUESTION 12 IS NOT 2, THEN SKIP TO QUESTION 16]

Q.15 Please describe what the partnership with community college or four-year university involves.

[IF THE ANSWER TO QUESTION 12 IS NOT 3, THEN SKIP TO QUESTION 17]

Q.16 Who is your other partner? Please describe that partnership.

Q.17 What entities would you be interested in forming a partnership with for entrepreneurship education? (check all that apply)

- Businesses 1
- Community or technical colleges 2
- Four-year colleges or universities 3
- Faith-based Institutions 4
- Small Business Development Centers 5
- Economic Development Agencies 6
- Business Incubators 7
- None 8

Q.18 Please indicate the degree to which you agree or disagree with the following statements about the entrepreneurship courses offered at your school?

- The courses involve hands-on learning-by-doing activities. _____
- The courses encourage creative thinking. _____
- The courses involve group projects and/or team-building exercises. _____
- The courses involve community service activities. _____
- I am able to tailor my courses to meet the class's needs. In other words, I am able to be entrepreneurial. _____
- Students are made aware of entrepreneurship as a career option _____
- The courses focus primarily on small business start-ups. _____
- The students are taught that it is okay to fail. _____
- The students are taught leadership skills. _____
- The courses improve students' self-confidence. _____
- I have noticed an increase in the students' interest in school as a result of the courses. _____
- I have noticed a positive change in students with behavioral problems as a result of the courses. _____
- Students run a school store or other real business through the courses. _____
- Students are taught the pitfalls of and obstacles to becoming an entrepreneur as well as the opportunities. _____
- Students from all backgrounds are enrolled in the courses. _____

Q.19 The next four questions are open-ended. They are intended to allow you to provide whatever information you feel would be beneficial for the understanding of and improvement upon entrepreneurship education programs. Please answer them to the best of your ability.

Q.20 Please comment on the changes in your students that you have observed as a result of entrepreneurship education.

Q.21 Please comment on the challenges or obstacles that you have faced in your experience as an entrepreneurship teacher.

Q.22 What changes in the curriculum have been made since you started teaching the entrepreneurship course, if any?

Q.23 What suggestions do you have for improving entrepreneurship education in South Carolina?

Q.24 Thank you for your time. Your input is greatly appreciated. If you have any questions, please contact Carla Bridges at cmbridg@clemson.edu. If you are interested in the results of this survey, please provide your contact information below. Please feel free to provide any further comments in the space below.

Appendix E

Detailed Responses to Open-Ended Survey Questions

Please comment on the changes in your students that you have observed as a result of entrepreneurship education.

- There has been consistent improvement in students with behavioral problems and in students who are defined as ADD/ADHD. They all seem to focus better simply because there is no right or wrong answer and they are free to be creative, take risks, and follow a more flexible schedule.
- Several of my students seemed shy and pretty much unresponsive in class until I tailored the curriculum in a way that allowed the students more freedom and responsibility. They became more creative in how they approached the tasks. I even had some of my low-achieving students asking if they could stay after school to work on their projects.
- Most realize that starting their own business has many challenges and a great deal of responsibility involved in the process. They seem to develop a respect for our current business owners in the community.
- Some are excited about their business plans when completed. Some decide early on that the course was not what was expected and slack off. Some of the more reluctant students enjoyed the hands on activities. About 4 chose the alternative assignment offered rather than write a business plan.
- Huge growth in self-confidence, improvement in grades in other classes, being unique is sometimes an asset not a burden. Students with ADD or ADHD find a great deal of success through their 'out of the box' approach to thinking. Experiencing success in school for the very first time. School finally has a relative connection to their personal lives.
- The students start believe that starting a business is within their grasp.
- Many students who have taken Entrepreneurship have made decisions to go into their own business or to follow a similar career path. It has given them a chance to explore the career of their choice by building their own business in class.
- Some students realize they have other options.
- Some students enjoy the class and improve their knowledge, but don't make any major changes. However, it is the students that have the natural characteristics and unpolished potential that begin to shine and take a new interest in school as a result of entrepreneurship education.
- My Students seem more focused when they are working on their business plans
- They seemed very interested in the course. They are very attentive.
- As a result of this class, students are interested in working for an employee in which they plan to become an entrepreneur.
- Strong growth in leadership skill set. An interest in personal responsibility and success.

- My students are career oriented. They already have ideas about business ventures that they are planning to pursue. Upon the completion of the class students are equip with know on how to make their dreams come true.
- I have had students who want to re-enroll in the class that were having attendance problems at school in general, but do not have them in this course.
- The students have a better understanding of what it takes to take a business on their own.
- The students I have had in my Virtual Enterprise classes and FBLA organization have become more confident in voicing their opinion in a respectful and professional manner; they are more confident to participate in other activities; and they volunteer to be a leader more often as opposed to when I first met them. The VE classes and FBLA give the students a good sense of who they are.
- All 8 in the first class improved their study habits and work ethic. Several have told me that they are now interested in majoring in business. All have a higher level of confidence after winning the entrepreneurship competition at South Carolina State University.
- This course has opened the eyes of a few students to small business ownership. This course has also been a place where students can practice their professionalism in a classroom setting, learning about how to not only run a business but to be a worthy employee.
- My students get a sense of empowerment and self awareness.
- Teaching in one of the poorest district in the state, it really energize the students
- They become more motivated about being an entrepreneur as the course progresses.

Please comment on the challenges or obstacles that you have faced in your experience as an entrepreneurship teacher.

- If students are not interested in the course, then it is difficult to get them motivated once they find out how much work it really is to be an entrepreneur.
- Liabilities and stipulations that are placed on selling in the public schools have hampered our efforts to run a school-based business. Also, many of our administrators and teachers are still holding on to the traditional classroom setting. Entrepreneurship forces you to get out of that box.
- Scheduling field trips that require a substitute for me and excused absences from other classes for my students.
- It is difficult to arrange field trips, ie, the cost, chaperones, and logistics which is why I had people come into the classroom. Entrepreneurship is an elective and because of limited electives to choose from, students are put in the course because there is no other alternative. Students do not know what the course entails and sometimes have a dislike for it. Others are pleasantly surprised.
- Changing the students mindset of just completing the assignment for me the teacher, to buying in on a personal level. Students sometimes go through the

- motion of school work as though they are trained robots. Very few really understand the big connection to their future.
- I would like to see small businesses get involved with helping our students. I would like to have our students get the opportunity to maybe assist these businesses. (Ex. I had a class who created a slogan for a local business.)
 - One obstacle is that many students only take it as a needed elective. Thus, some do not care how they do in the course and do not apply themselves like they should.
 - Lack of money makes it tough to take kids out of the classroom to show them what entrepreneurs are accomplishing.
 - The biggest challenge that I face is a lack of math skills and a lack of motivation. When learning the mathematical concepts, many students who aren't academically motivated, tune out.
 - I teach the course early in the morning and many students work the night before. They are usually tired.
 - I feel we need more resources.
 - Not having enough business contacts in the local area.
 - Buy in from local business and students who are not exposed to the class.
 - I have not faced any challenges.
 - Time and budgetary constraints
 - The biggest challenge is getting the student to understand that even though they may not plan to own a business of their own, no one knows what the future holds for them. Having the understanding and knowledge of entrepreneurship is a great beginning.
 - The VE class is structured for minimal oral instruction and more hands-on and peer teaching. The challenge is to determine early in the semester who works well together, who the leaders of the individual departments are without creating dictators in the classroom. It is also a challenge when students are not successful to help them understand 'failing, is just not getting back up to try again!'
 - I had 26 years in the Marine Corps, but no business education or experience. I attended the REAL entrepreneurship institute in North Carolina. I then had to develop a syllabus, work with Florence Darlington Technical College to get an articulation agreement and then sell the program to my principal and superintendent.
 - I teach at a small school with somewhat limited elected course offerings therefore sometimes the entrepreneurship class will have many students that did not really sign up for the class. This can make it difficult from a class management stand point. I have found that this can sometimes limit what I am able to do.
 - I have faced resistance from administrators in using the NFTE books & program. I have since worked that out and will use those materials as my primary source starting next year. Also, I'm not allowed to have a school store. I believe that would compliment what is being done in class.

- The students have limited exposure to the world of business in general and a limited view of what success is
- Having students in the classes that do not want to be there! Not having all of the necessary equipment.
- Biggest obstacle has been trying to implement 'real world' opportunities from the classroom - I have had my students bake and sell cookies, milk shakes and chicken biscuits - Coordinating and getting approval from Administration has been hard.

What changes in the curriculum have been made since you started teaching the entrepreneurship course, if any?

- I have added activities and lessons on teambuilding, communication, and management.
- I now serve more as facilitator than teacher and use a more hands on approach with resources other than our text. I have learned to allow students to use their creativity in coming up with ways to approach certain tasks.
- Included in our objectives now is the introduction of student organizations (FBLA) which I feel is a good thing.
- When I first started teaching Entrepreneurship I used the state adopted textbook. Since taking the NFTE training summer 2006 I have used their curriculum which I find is better because of the simplicity of the textbook and the hands on activities which the students really like. I would like to see the accounting part of the curriculum have easier activities, ones that are easier to understand
- 9 years ago I developed my own curriculum based on the Kauffman Foundation's high school initiative. During this time I reviewed many textbooks that seem to focus on the procedures of running a business. Not really how to teach the students to think like an Entrepreneur first. To me this is critical. 3 years ago I adopted the NFTE curriculum because this was closer to my method than any thing I had seen.
- We have each student create their own business plan.
- The availability of guest speakers and material changes often.
- I am still fairly new to teaching this course.
- Previous teachers did not use the National Foundation for Teaching Entrepreneurship (NFTE) curriculum. The course was previously much more textbook/lecture orientated.
- None
- I able to attend more conferences and I notice these workshops are implementing more Entrepreneur material and information.
- This is the second year I have taught entrepreneurship; therefore, I can not answer this question.
- Adding a service learning component, not just community service
- There have not been any changes since I started teaching.

- The curriculum has become more structured for the instructors to follow a set path. This has been extremely helpful
- This was the first year I taught the course. Each student was required to write an individual detailed business plan. A panel of judges then selected the best plan which was polished by all class members for the SCSU competition. The pace was hectic and several students were less interested when their plan wasn't chosen. Next year students will breed ideas instead of doing a complete plan.
- None, that I know of.
- The curriculum hasn't changed. In fact, that's part of the problem. The state adopted book is old and outdated. I look forward to using my NFTE books.
- I have been teaching here for the past Three years. This is the second year we have had Entrepreneurship. Getting the course is hte biggest change.

What suggestions do you have for improving entrepreneurship education in South Carolina?

- Teachers need to be more willing to get out of the book and follow a curriculum like NFTEs in terms of providing students with challenging activities that spur creative thinking.
- We need to find a way to get the school administration more involved and to see that the traditional classroom is fast becoming a thing of the past.
- Continue offering NFTE. It is a great curriculum.
- Selection of teachers is critical to the success of Entrepreneurship. Entrepreneurial type thinkers with motivation to work with their students outside the normal classroom. SC should never be about numbers of teachers but quality of teachers. Entrepreneurship teachers need follow-up visits from seasoned teachers with help or demonstration teaching to address a difficult topic. Too many programs never get momentum.
- Give teachers more access to outside business sources. I use S.C. Council on Economic Education.
- I am taking a course this summer about Entrepreneurship. It should be implemented into the Program of Studies and students should see all the benefits of taking this course--even if they do not want to own their own businesses in the future.
- More money and smaller class sizes!
- Implementing the NFTE curriculum state wide and providing the opportunity for teachers to receive the appropriate training.
- I would like to get more involvement with businesses.
- I feel we need more workshops for the students. Maybe a simulation for business on line for the students to actually manage and monitor and make decision with capital and investments.
- State business partners!!! I need help finding people who will work with us because I personally have little time out of school. I coach track, have two

children and one is Autistic. I struggle to find time to approach business partners.

- With our economic is becoming global, students need to understand that in order to complete in a market they must understand that market. Our students need exposure. In order for them to get this exposure, business need to allow or offer internships to our students.
- Actually have for profit business run, not solely virtual businesses.
- Have more in class activities and project presented in the textbook.
- The only room for improvement I see is for the State to assist the cost of having a VE classroom set up properly. The image of the office is a huge factor when teaching Entrepreneurship at the high school level.
- We were only able to find one competition. It would be nice to be able to compete in several given the amount of time it took to develop a viable plan.
- I feel like I re invent the wheel every time I teach the class. I would love more of a partnership with other entrepreneurship teachers that teach in a similar situation as I do to be able to discuss ideas for school run businesses or perhaps some type of turn key school business. I have tried to do some time in the past and have found it to be very labor intensive on my part.
- I was enrolled in the NFTE summer workshop and it was a very positive experience. The instructors provided many hands-on activities and teachers were given many examples to take back into their classrooms.
- I believe Jimmy Bailey and his team at YESCarolina is doing a great job. I think that a seminar for administrators would be helpful. Teachers are having to keep recreating the wheel to inform administrators about what we are trying to accomplish and helpful methods to do that.
- I believe we need more involvement from local business in supporting student projects. I also would like to see more involvement from legislation with funding for more entrepreneurship training and start-up funds in the poorer district. It's that small poor district and become self through small business supporting

Any Further Comments

- State standards should be brought into today's world and tie in with National Standards

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