**An Analysis of Perceptions of Career Technical Education
in Alabama's Schools**

by

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A dissertation submitted to the Graduate Faculty of
Auburn University
in partial fulfillment of the
requirements for the Degree of
Doctor of Philosophy

Auburn, Alabama
May 9, 2011

Keywords: education, career technical education,
workforce development

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Abstract

Career technical education in the State of Alabama has undergone significant change over the last decade (Key, 2008). There are more technology driven programs in the high wage, high skill, and high demand occupational areas and this is reducing the stigma associated with career technical education (National Association of State Directors of Career Technical Education, 2001).

The demand for skilled labor is increasing rapidly within the State of Alabama; this study will help to validate the need for career technical education. The review of literature revealed that leaders in economic development realize that career technical education is a viable component of workforce development for the State. This study also provided an overview of perceptions to see if there has been a statistically significant change over the past seven years.

This study provided a snapshot of self perceptions of career technical educators as well as the latest citizens' poll completed for the State Department of Education in 2008. This study also reviewed longitudinal data from three citizens' opinion polls completed for the State Department of Education by Southern Opinion Research, Inc. located in South Carolina. These surveys were completed in 2003, 2005, and 2008 to assess if perceptions about career technical education had changed from one administration of the survey instrument to the next.

This study provided results from non-parametric statistical analysis performed to answer the research questions. The responses to the survey items were categorical; therefore, the researcher used chi square analyses to determine if there were any statistically significant

differences in responses. There were three research questions asked and eight survey items analyzed in an attempt to answer each of the research questions.

From the data cited, a conclusion can be drawn that the perception of Alabama citizen's regarding career technical education was overall positive. The first survey item analyzed revealed that in each year of the study over 95 percent of the respondents felt it was either important or very important to offer career technical education in Alabama's schools. In general, the educators and citizens perceptions of career technical education were positive. The difference occurred in the degree in which the respondents felt career technical education was either important or beneficial to different student groups. Educators were more passionate in their responses.

Acknowledgements

I would like to thank my wife and children for supporting me, especially the last couple of years, and for being there when I needed them. I appreciate the efforts of my mother-in-law for helping with the proofreading of the document.

To Dr. James Witte, Dr. Maria Witte, Dr. Leane Skinner, Dr. Chih-hsuan Wang, and Dr. Brian Parr, I want to say thank you. I appreciate all the time and effort you have expended on my behalf.

I appreciate Ms. Sherry Key and Ms. Ann Gilmore for being willing to share data and allow access to membership rosters. Their contributions were invaluable to this study.

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Chapter 1

Introduction

Career technical education in the State of Alabama has undergone significant change over the last decade (Key, 2008). There are more technology driven programs in the high wage, high skill, and high demand occupational areas and this is reducing the stigma associated with career technical education (National Association of State Directors of Career Technical Education, 2001).

According to the recent State of the Workforce Report IV: Alabama (2009), "Educational and training requirements of high-demand, fast-growing, and high-earning occupations demonstrate the importance of education in developing the future workforce" (p. viii). This report also predicts that in the future more jobs will require postsecondary education and training at a minimum. Within the context of this discussion postsecondary education and training is occupational training associated with career technical education. Postsecondary education typically leads to a career whether it is a white collar profession or a blue collar occupation.

One of the requirements within the reauthorization of the Carl D. Perkins Career and Technical Education Improvement Act of 2006 was to implement career and technical programs of study. The requirements within this section of the act outlined five items that will add rigor, relevance and relationship to the current offerings within career technical education at both the high school and postsecondary levels (Public Law 109-270). This requirement will also solidify that career technical education and training is relevant to all occupational areas with the implementation of career clusters. The 16 national career clusters encompass every occupational

area recognized by the United States Department of Labor. Career technical education is an integral part of the overall educational process for our youth and the negative perceptions about this particular field of education are beginning to disappear (National Association of State Directors of Career Technical Education, 2001).

<div style="text-align: center;">Statement of the Problem</div>

There is a presumed negative perception or stigma associated with the field of career technical education (Brown, 2003). This can be largely attributed to the period of time in which today's students' parents were in high school. During the 1960's through the 1980's Federal legislation shifted its focus from purely occupational training to occupational training and academic achievement with an emphasis on special needs students (Hayward & Benson, 1993).

Congress passed the Carl D. Perkins Vocational Education and Applied Technology Act in 1984. The Act is the original legislation under which all career technical education programs currently operate. There were two main objectives of the Perkins Act in 1984: (1) the improvement of vocational programs and (2) better services and increased access to vocational education for students with special needs (Hayward & Benson, 1993).

In a report prepared for Office of Educational Research and Improvement (OERI), U.S. Department of Education the following was noted (Lynch, 2000):

> The original Perkins Act set aside 57 percent of the federal grants to states for disadvantaged groups of one form or another and 43 percent for something called "program improvement." In the late 1980s and early 1990s, vocational education experienced unprecedented enrollment percentage increases from special populations… (p. 9)

During the past 30 years, one of the primary objectives of vocational education was the education of special needs populations which attributed to a decrease in enrollment for general academic students. This has also led to the current presumed negative perception and stigma associated with career technical education (Brand, 2008).

While there is still a focus on meeting the needs of special populations and being accountable for federal dollars there is a greater focus on meeting the needs of industry and supplying an educated work force. In order to accomplish this task more emphasis is being placed on rigorous academic preparation through career technical education programs that provide the relevance associated between education and occupational cluster areas (Daggett, 2010; Merlot, 2010).

Career technical education is operating under new Federal legislation with the reauthorization of the Carl D. Perkins Career Technical Education Improvement Act of 2006 that increases accountability for academics, industry credentialing, and post secondary training (P.L. 109-270). Individuals outside of the field of career technical education still hold the perception of stereotypes associated with career technical education due to past experiences associated with this field of education (Brown, 2003). There is a lack of research confirming or refuting this current perception. This study examined perceptions of career technical education between Alabama citizen's and professionals working in the field of career technical education in Alabama's schools.

<div align="center">Theoretical Framework</div>

The current state of the economy in Alabama has prompted school superintendents statewide to evaluate all programs, avenues of funding, and effectiveness of elective programs. The presumed negative perception of career technical education has led to reduced enrollment

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across the state. With decreased enrollment and questions about the effectiveness of secondary level career technical education programs many school systems have elected to close or disband career technical education programs. This study will offer insight into the perceptions of career technical education among Alabama citizens and professionals in the field of career technical education.

<div align="center">Purpose of the Study</div>

This study examined perceptions of career technical education within the State of Alabama. Over the last ten years there have been initiatives from the State Department of Education Career Technical Education section to change the negative perception often associated with career technical education. This initiative has provided local education agencies across the state with a communication and marketing campaign that was developed based upon research findings (Alabama State Department of Education, 2006).

There was a study completed on the comparison between Alabama citizens' and Alabama teachers in the field of career technical education within the state in 2005. That study produced findings that showed there was a difference in the perceptions of professionals within the field and randomly sampled Alabama citizens (Coleman, 2005). This study will seek to provide a snapshot of self perceptions of career technical educators similar to the 2005 study as well as the latest citizens' poll completed in 2008. This study will also review longitudinal data from three citizens' opinion polls completed for the State Department of Education by Southern Opinion Research, Inc. located in South Carolina. These surveys were completed in 2003, 2005, 2008 to assess if perceptions about career technical education had changed from one administration of the survey instrument to the next.

Since these studies were completed there have been major changes in the federal law that funds career technical education. To compound the issue an economic recession has occurred that has caused many individuals to rethink their position on career technical education and training. Many individuals and parents of high school age students have been affected by plant closing or job relocations. Because of this shift many of those displaced workers are seeking training and certification in the field of career technical education because of the high-wage, high-demand status of many occupations.

The demand for skilled labor is increasing rapidly within the State of Alabama. This study will help to validate the need for career technical education within the State to help provide for workforce development. The study will also overview perceptions of career technical education to see if there has been a statistically significant change over the past seven years. This study may also provide information that will enhance communications and marketing plans for career technical education to the State Department of Education and inevitably every local education agency in the State.

Research Questions

The following research questions were used in this study:

1. What are the perceptions of career technical education in the State of Alabama?

2. What are the self perceptions of career technical educators in the State of Alabama?

3. What is the relationship, if any, between the perceptions of career technical education and the self perceptions of career technical educators?

Hypothesis

There is a statistically significant difference between Alabama citizens and career technical educators regarding their perception of career technical education.

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Significance of the Study

Educators within the field of career technical education are faced with increased accountability from all levels including federal, state and local. The current economic state of the education trust fund in Alabama has required superintendents and local boards of education to scrutinize every line item in their budgets. Elective courses such as those associated with career technical education often become the target of cuts. This can be attributed to a lack of thorough understanding of the role career technical education plays in workforce and economic development across the state. The study will identify current trends in public perception of career technical education. The data once compiled and analyzed can be utilized by the State Department of Education Career Technical Education section to enhance their current communications and marketing plan. The data could also be utilized by local administrators to develop communication and marketing plans that will help promote and possibly retain career technical education programs across the State.

Limitations

This study has several limitations:

1. Data were only collected in the State of Alabama, therefore may not be applicable to other states.

2. The latest Citizen's Opinion Poll was conducted in 2008.

3. Data from professionals within the field of career technical education are limited to Alabama Association of Career Technical Education members.

Assumptions

The researcher makes the following assumptions:

1. The citizens' polls represent a random sample of the population.

2. The responses to the survey instruments were truthful and honest.

3. The citizens' responses are from current Alabama citizens.

4. Survey respondents are professionals working the field of career technical education within the State of Alabama.

5. The data were entered correctly.

Definitions

The following terms appear throughout this research document. This section defines commonly used terms that may be specific to the field of career technical education.

Advisory Council are skilled and knowledgeable individuals organized at the state or system level to provide advice on occupational and employment trends, societal needs, and relevance of career technical education offerings in meeting these needs (Alabama Administrative Code, 2006).

Business Industry Certification is a process that provides validation that career technical education programs comply with and maintain quality standards as agreed upon by business and industry, education professionals, and the Department of Education (Alabama Administrative Code, 2006).

Career Cluster is a grouping of occupations and broad industries based on commonalities. The sixteen career clusters provide a framework designed to prepare students to transition successfully from high school to employment or further education (Alabama Administrative Code, 2006).

Career Technical Education consists of organized educational activities that—''(A) offer a sequence of courses that—(i) provides individuals with coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to

prepare for further education and careers in current or emerging professions; (ii) provides technical skill proficiency, an industry-recognized credential, a certificate, or an associate degree; and (iii) may include prerequisite courses (other than a remedial course) that meet the requirements of this subparagraph; and (B) include competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of an industry, including entrepreneurship, of an individual" (Carl D. Perkins Career and Technical Education Act of 2006, p. S250-4).

Career Technical Student Organization is an organization that functions as an integral part of the career technical education instructional program with state and national affiliation that provides support for skill attainment and leadership development (Alabama Administrative Code, 2006).

Communications and Marketing Plan is a plan that was developed by the State Department of Education for statewide and local use that includes a monthly document and an active website. The plan was originally put into place for the purpose of measuring and influencing perceptions about career technical education.

Economic Development is a term associated with increases in economic growth as well as qualitative increases in quality of life of individuals within a given area (Malecki, 1997).

Postsecondary Education is a term used to define formal education that occurs after high school (Alabama Administrative Code, 2006).

Special Populations means ''(A) individuals with disabilities; (B) individuals from economically disadvantaged families, including foster children; (C) individuals preparing for non-traditional fields; (D) single parents, including single pregnant women; (E) displaced

homemakers; and (F) individuals with limited English proficiency" (Carl D. Perkins Career and Technical Education Act of 2006, p.S.250-7).

Vocational Education is a term used in the past to describe educational activities associated with career preparation and vocational skill attainment.

Workforce Development is the coordination of school, company, and governmental policies and programs such that as a collective they enable individuals the opportunity to realize a sustainable livelihood and organizations to achieve exemplary goals, consistent with the history, culture, and goals of the societal context (Jacobs, 2002).

Organization of the Study

Chapter 1 introduces the study, presenting the problem, purpose, research questions, assumptions, limitations and definitions of terms. Chapter 2 is a review of related literature concerning career technical education, a brief history of the subject, accountability for federal legislative funds, economic and workforce development. Chapter 3 reports the methods utilized in this study, including the population and sample, instrumentation, data collection and the data analysis. The findings of the study are presented in Chapter 4. Chapter 5 includes a summary of the study, conclusions, implications and recommendations for further practice and research.

Chapter 2

Literature Review

Career technical education in the State of Alabama has undergone significant change over the last decade (Key, 2008). There are more technology driven programs in the now high wage, high skill, and high demand occupational areas and this is reducing the stigma associated with career technical education (National Association of State Directors of Career Technical Education, 2001). This review of relative literature will provide a foundation for the perceptions associated with career technical education.

Historical Perspective

In the United States education is constitutionally the province of each individual state (Hayward & Benson, 1993). Three major competing policy forces shaped present day career technical education programs. They are the unique needs of the local community, the policies and purposes of each state and the overarching goals of the federal government (Hayward & Benson, 1993).

Unlike in other countries where the trades, craftsmanship, and apprenticeships have had a unifying presence in the development of career technical education, in the United States the development has often been the result of competing interests of federal, state and local policies (Hayward & Benson, 1993). The overall purpose of education is to ensure that the United States has a skilled workforce and engaged citizenry to keep our nation, economy, communities, and families healthy and productive. However, this broader mission is often lost in debates on

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education and school reform that focus primarily on getting students to pass a certain test or gain entrance into Ivy League colleges (Brand, 2008).

In the first decade of the 20th century schools were largely held to the elements of a liberal education (Miller, 1985; Snedden, 1910; Wonacott, 2003). This liberal education was designed to serve those students going to college and was not concerned with instilling work related characteristics (Wonacott, 2003). Snedden characterized this liberal education as one concerned with consuming and not with making efficient producers (1910). Under this liberal education framework fewer than 10 percent of 17 year olds received a high school diploma (Miller, 1985). Because the opportunities for work were attractive many of America's youth did not see the value in further schooling. Typically, youth left the public schools by the age of fourteen, and less than half of these completed sixth grade (Miller, 1985).

During this time, advocates for vocational education in public schools believed it would make schools more democratic. The establishment of vocational education as an alternative for those who were leaving school by the age of 14 would vastly extend general education as well as provide a reason for continued school attendance, and democratize education (Miller, 1985).

Miller (1985) also felt there were several added benefits to vocational education such as making education more meaningful and increasing the wage earning capacity of both girls and boys. Children who did not respond to book instruction, they might be reached through the hands-on nature of vocational education. Vocational education also makes education purposeful and useful for the students' role in life.

David Snedden drew a clear distinction between vocational education and liberal education in 1910. Snedden believed that liberal education was the broadening of the individual's mind and emotional horizons; whereas, vocational education was aimed toward

training of efficient producers or those with the capacity to earn a living and contribute to productive work (Wonacott, 2003).

The first federal support for vocational education came with the passage of the Smith-Hughes Act of 1917 (Gordon, Yocke, Maldonado, & Saddler, 2007; Hayward & Benson, 1993; Lynch, 2000). This legislation was driven by the economy of the time. It was enacted to prepare youth for jobs resulting from the industrial revolution and to provide them with an alternative to the general curriculum of schools (Lynch, 2000).

The Smith-Hughes Act of 1917 established vocational education as a separate and distinct system of education (Gordon, Yocke, Maldonado & Saddler, 2007). The Act emphasized separatism from the classical curriculum and called for a new one that would better meet the needs of the children of the working class (Lynch, 2000).

The Smith-Hughes Act of 1917 established vocational education with a separate board of education as well as separate funds, separate teacher preparation and certification, separate students, and separate and segregated curriculum (Hayward & Benson, 1993; Lynch 2000). The federal board mandated the 50-25-25 rule: 50 percent of students' time in shop work, 25 percent in closely related subjects, and 25 percent in academic courses (Hayward & Benson, 1993). The intent was to separate vocational students from those in the classical curriculum and prepare them for the factories, farms, and homes of the era (Lynch, 2000).

The passage of the Smith Hughes Act mandated segregation of academic and vocational students and curriculum. This led to programs being established within vocational programs which led to further segregation by subject matter (Hayward & Benson, 1993). These programs were distinguished not only from the academic, but also were implemented in ways to distinguish one program from another vocational program. The impact of this separation has

been felt through subsequent decades by the creation of separate teacher training programs, separate teacher organizations, and separate student organizations. Even within vocational education, the impetus of the original Act has led to splintered programs (Hayward & Benson, 1993; Lynch 2000).

As implemented by the Smith Hughes Act of 1917, vocational education emphasized job specific skills to the exclusion of the traditional curriculum (Gordon, Yocke, Maldonado, & Saddler, 2007). The focus of federal legislation has shifted over the years to offer more programs and training for boys and girls to support national defense efforts in the 1920's, to reduce unemployment problems in the 1930's, to assist the war effort in the 1940's, to include junior colleges in the 1950's, and to promote peacetime economic development in the 1950's and 1960's (Lynch, 2000).

The legislative session of 1963 brought about major changes in vocational education. The passage of the Vocational Education Act of 1963 (PL88-210) introduced set asides and vocational education legislation was no longer self enforced. The federal government sought to expand influence over the state programs (Hayward & Benson, 1993). This passage signified a substantial shift in federal policy and direction for career technical education. This move from an exclusive focus on job preparation for a trained workforce to a shared purpose of meeting the economic demands also included a social component (Rojewski, 2002).

The Vocational Act of 1963 provided for each state to set aside 25 percent of its federal dollars for either (a) training for persons who had completed or left high school or (b) construction of area vocational school facilities, or both. A second was set aside for experimental programs to meet the needs of youth in economically depressed communities, or with academic,

socioeconomic, or other handicaps that prevent them from succeeding in regular vocational education programs (Hayward & Benson, 1993).

Later amendments to the Vocational Act of 1963 in 1968 and 1972 continued set asides to expand Congress' leverage for vocational educators to serve students with disabilities, disadvantaged students, bilingual students, postsecondary students, and students preparing for occupations not traditional for their gender (Lynch, 2000). During this period of time the leadership of vocational education was called upon to not only find their place in the world of academia in the high schools, but to also be held accountable for successful education of the most difficult to educate youth (Hayward & Benson, 1993).

Named after the former chair of the House subcommittee on vocational education, Congress passed the Carl D. Perkins Vocational Education Act in 1984 (PL98-524). The Perkins Act contained two main goals: (1) the improvement of vocational programs and (2) better services and increased access to vocational education for students with special needs (Lynch, 2000). The first goal of improvement was directed toward raising the productivity of the work force. The second goal was to increase access for individuals who are disadvantaged, handicapped, entering nontraditional occupations for their sex, adults in need of training or retraining, single parents or homemakers, individuals with limited English proficiency and individuals who were incarcerated. Both goals were ambiguous as vocational programs played a very small role in the productivity of the work force and special needs populations were ill equipped to meet the academic rigors of entering vocational programs (Hayward & Benson, 1993).

The Carl D. Perkins Act of 1984 called for set asides of 57 percent for disadvantaged persons. The remaining 43 percent was for program improvement (Hayward & Benson, 1993;

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Lynch 2000; Wonacott, 2003). Vocational education experienced unprecedented enrollment percentage increases from special populations as an increasing number of general education students opted out of vocational education to take more academic courses and as funding favored inclusion of special populations in vocational educational programs (Lynch, 2000).

Enrollment in high school vocational education was at its peak in the 1960's and 1970's. In the 1980's, enrollments of general education students in vocational education began a downward spiral that just recently may have begun reversing itself. There was a general overall decline in the high school enrollments during the 1980's and 1990's; however, the proportionate decline in vocational education was much steeper (Lynch, 2000).

In 1990, the legislature passed the Carl D. Perkins Vocational and Applied Technology Act of 1990 (PL101-392). This legislation represented the most significant policy shift in the history of federal involvement in vocational-technical education funding (Hayward & Benson, 1993). For the first time in federal vocational education legislation, emphasis was placed on academics and funds could be directed to all segments of the population (Lynch, 2000). The emphasis placed on serving special needs students was tempered somewhat by the high level of publicity and effort devoted to increasing academic standards in career and technical education programs (Rojewski, 2002). This legislation was grounded in school reform and the mandate was to use federal funds to improve students' performance and achievement (Wonacott, 2003). Perkins II called for programs to develop more fully the academic and occupational skills of all segments of the population (Lynch, 2000; Wonacott, 2003).

Technical Preparation (tech prep) was also specifically funded in Perkins II. Congress' intent in funding tech prep was to provide planning and demonstration grants to a consortia of local education agencies and post secondary educational institutions to develop and operate

coordinated programs. These programs were to require academic skills, technical skills, and articulation agreements designed to lead to an associate degree or certificate in a specific career field (Lynch, 2000).

Congress set the stage for a three pronged approach to better prepare a highly skilled work force with the passage of the Carl D. Perkins Vocational and Applied Technology Act of 1990. Congress also eliminated set asides for special populations. This eliminated the separation of federal funds into two separate tracks of serving special populations and program improvement (Hayward & Benson, 1993).

According to Hayward and Benson (1993), Perkins II emphasized:

1. The integration of academic and vocational education,

2. Articulation between segments of education engaged, in work force preparation – epitomized by Congressional support of Tech Prep, and

3. Closer linkages between school and work (p. 17).

The Carl D. Perkins Vocational and Technical Act was signed into law in 1998 (PL105-332). The focus was still on developing academic, vocational, and technical skills of students through high standards and linking secondary and postsecondary programs (Lynch, 2000; Wonacott, 2003). Set asides for specifically funding special populations had been eliminated; however, the states were charged to provide services to help special needs populations succeed in high-quality vocational education programs (Lynch, 2000).

The Carl D. Perkins Vocational and Technical Act required that states provide data on four core indicators of performance. The core performance indicators included student attainment of identified academic and vocational proficiencies; attainment of a high school diploma or postsecondary credential; placement in postsecondary education, the military, or

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employment; and student participation in and completion of nontraditional training and employment programs (Gordon, Yocke, Maldonado, & Saddler, 2007).

In 2006, Congress passed the Carl D. Perkins Career and Technical Improvement Act of 2006 (PL109-270). The passage of this legislation showed that Congress overwhelmingly supports career and technical education (ACTE & Brustein, 2006). In 2003, the Bush administration had released its initial blueprint for the reauthorization of the 1998 Carl D. Perkins Vocational and Technical Education Act. This initial request made significant changes to the program with a drastic cut in funding. The complete overhaul would have included the possible transfer of Perkins funds to No Child Left Behind Act activities, competitive funding, and a shift away from the focus on career and technical skill achievement (ACTE & Brustein, 2006). From 2003 to 2006 debate between the Houses of Congress and Administration occurred regarding the reauthorization of the 1998 legislation. In August of 2006, President Bush signed the approved compromise bill into law.

The Carl D. Perkins Career and Technical Improvement Act of 2006 was authorized through the year 2012; therefore, it is the current federal legislation under which career technical education operates. The bulk of the law is similar to the 1998 legislation; however, there are some significant changes in content and focus (ACTE & Brustein, 2006). One of the significant changes in the law is the use of the term career technical education instead of vocational education. Within the legislation several themes are present throughout including accountability for results and program improvement at all levels, increased coordination within the CTE system, stronger academic and technical integration, connections between secondary and postsecondary education, and links to business and industry (ACTE & Brustein, 2006).

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Several changes were made to the specific performance indicators that state and local programs have to report on under the 2006 Act. Academic attainment will now have to be measured by the academic assessment a state has approved under the No Child Left Behind Act (ACTE & Brustein, 2006). In Alabama, the academic attainment measurement is passage of the Alabama High School Graduation Exam in the areas of reading and mathematics for career technical education concentrators. Graduation rates will also have to be reported as defined in the No Child Left Behind Act, and technical proficiency should include student achievement on technical assessments that are aligned with industry-recognized standards when possible (ACTE & Brustein, 2006).

Core performance indicators for placement rates of career technical education concentrators and nontraditional participation and placement are also present in the 2006 legislation (ACTE & Brustein, 2006). There is an emphasis to focus on high demand occupations, in addition to those that are high skill and high wage. References are also made to entrepreneurship, small business, and the involvement of workforce investment boards within career technical education programs. These linkages emphasize the role that employment availability and local economies should play in career technical education programs (ACTE & Brustein, 2006).

In regard to federal legislation and funding of career technical education Richard Lynch (2000) summed it up as follows:

It seems increasingly clear that we have almost come full circle with federal direction of vocational education. The post-turn-of-the-century legislation was enacted to prepare students with the type of education it was thought they would need to run farms and factories of the 20th century. Today, Perkins III challenges us to prepare more students

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with the contemporary education they will need to work successfully in the ever-changing, technologically sophisticated, and internationally competitive workplaces (p.10).

Career Technical Education's Role in Workforce Development

The economic engine of today's society is driven by a well-prepared, qualified workforce (National Association Secondary Career Technical Directors, 2001). Making the connection between school-based learning and the real life context of work has been the essential motivation for career technical education (Raizen, 1989). The term workforce development has been used to describe a relatively wide range of activities, policies, and programs. Jacobs (2002) defined workforce development as the coordination of school, company, and governmental policies and programs. As a collective they provide individuals the opportunity to realize a sustainable livelihood and organizations the ability to achieve exemplary goals consistent with the history, culture, and goals of the society. Professionals administering career technical education programs, welfare to work, and other public assistance programs and regional economic development initiatives are examples of organizations which now use the term workforce development to describe their services (Jacobs, 2002).

Education in America today faces many challenges. Many of the low- to mid-skilled jobs are disappearing or leaving the country. Workers now need a flexible foundation of knowledge and skills. These skill sets should allow the individual to process information, to use highly productive technology, to create innovative solutions, and to adapt to changing job responsibilities and cutting edge developments in his occupation (Miller, 2008).

Today in the United States, fewer than 20 percent of the jobs in the workplace are classified as unskilled. This is in contrast to the workforce of 1960 where 60 percent of the jobs

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were classified as unskilled. The other 40 percent was divided between 20 percent professional

occupations and 20 percent skilled jobs (Michigan State Legislature, 1992; Stuart, 1999).

Table 1 *Education and Job Classification*

Job Classification	1960	2000
Unskilled	60%	20%
Skilled	20%	60%
Professional	20%	20%

The high-skill, high-tech jobs in the current economy virtually mandate that schools

make significant changes in what and how teachers teach and whom they teach. There is a

growing gap between the technical and social requirements of the workplace and the skills and

education of individuals seeking employment. Business and industry groups have asked schools

to provide a better education with more rigor and relevance to students and then to instill the

need for lifelong learning in both youth and adults (Lynch, 2000). America's workers will need

to be better educated to fill new jobs and to be more flexible to respond to the changing

knowledge and skill requirements of existing jobs (Stuart, 1999).

Raizen (1989) cited that several reform reports of the 1980's focused on the

unpreparedness of high school graduates for the future world of work. Most of these reports

either implied or made outright recommendations for more rigor within the high school

curriculum. Because educational leaders of the time translated that to mean more academic

courses were needed, most states mandated increased academic course credits. Most of those

course credits were mandated in the areas of mathematics and science which, in most cases,

devastated the vocational programs of the time (Raizen, 1989).

There has been the issue of distinction between knowing what (knowledge) and knowing how (doing) in education. These distinctions lead to creating two separate tracks between that of academia and career technical education (Raizen, 1989). American businesses know that the demand for skilled workers increases every day. While new jobs are becoming more technology dependent, existing jobs are also changing at a rapid pace (Stuart, 1999). These changes not only require employees to have the knowledge, but require them to be able to process and use that knowledge in the workplace. Employers are seeking employees with a portfolio of basic, technical, organizational, and company-specific skills (Stuart, 1999).

Career technical education contributes to the preparation of the workforce by providing a curriculum tied to specific workplace requirements. One of the factors that makes career technical education programs unique is that it they draw their curricula, standards, and organizing principles from the workplace. Career technical education is a critical and integral component of the workforce development system because it provides the essential foundation for a thriving economy (National Association Secondary Career Technical Directors, 2001).

Jacobs (2002) determined that workforce development focuses on four societal issues:

1. How schools and agencies prepare individuals to enter or re-enter the workforce;

2. How organizations provide learning opportunities to improve workforce performance;

3. How organizations respond to changes that affect workforce effectiveness; and,

4. How individuals undergo life transitions related to workforce participation. (p. 13)

These four issues suggest that workforce development should not be limited to any one agency or organization. Workforce development should seek to bridge different entities to achieve common societal and economic goals. Collaboration then becomes a necessity for

workforce development programs to be effective (Jacobs, 2002). Working partnerships must be created and maintained among business, labor and education.

Career technical education becomes a critical and integral component of the workforce development system by contributing solid academics, good work ethics, and specific technical skills as well as the ability to communicate, work with others, solve problems, and use information (National Association Secondary Career Technical Directors, 2001). Part of what makes career technical education unique is the blend of education with the workplace. Career technical education is an essential partner with businesses, economic development entities and post-secondary institutions. Employers often relocate to areas with strong career technical education programs that strengthen the economy in a region (National Association Secondary Career Technical Directors, 2002).

Career technical educators are concerned about global labor markets, academic standards, student engagement, and transition from high school to the world of work and/or the transition to postsecondary training (Miller, 2008). Therefore, labor market information is critical for career technical educators to prepare young people and adults for success in the world of work. Career technical educators must be responsive to labor market information in order to help students and their parents make educated training and career choices (Sommers, 2000).

Labor market information includes the full range of conditions and trends for a particular region or occupational category. This information may include industry and occupational employment and wages, labor market projections, business lists, current job vacancies, and information on education and training resources (Sommers, 2000).

Labor market information can also be used by career technical educators to help administrators as well as teachers and policymakers make decisions about program offerings,

curriculum, and resource allocations as well as improving the relationship between education and employers (Sommers, 2000).

According to Miller (2008), policy makers have realized that education at the high school and two year college level is not just a social service. It is a key driver in economic growth. Through the use of labor market information and career cluster initiatives career technical educators are prepared to help individuals achieve higher levels of education and training in a given occupational area.

The career clusters initiative was launched in June, 2001 by the U.S. Department of Education Office of Vocational and Adult Education. The Office of Vocational and Adult Education had identified 16 career clusters representing career opportunities for the economy of the 21st century. These clusters frame a student's opportunities as they pursue postsecondary education and a wide range of career opportunities. Helping students achieve their dream by facilitating the education component of workforce development was the driving force behind this initiative (Losh, 2002).

The career clusters initiative, through a broad based advisory committee, was charged to establish curriculum frameworks and supportive materials for each cluster area. The national advisory committee consisted of members from each of the 16 cluster areas. The national and state advisory committees were responsible for identifying the frameworks, pathways and foundation knowledge and skills, and other supportive materials (Losh, 2002). These committees included representatives from states, schools, education and training, business and industry, associations, and others directly impacted by the materials.

The Office of Vocational and Adult Education had originally intended to use the 16 career clusters to organize new curriculum that would put in place higher order workplace skills,

integrated career development, occupational training that emphasized both breadth and depth, as well as integrated academics. In 2002, the career clusters initiative was taken over by the National Association of Secondary Directors of Career Technical Education (Ruffing, 2006).

The vision for career technical education has become more career focused with the intent to combine rigorous academics, employability skills, and occupational knowledge and skills sets within career clusters. Sixteen national career clusters have become the focus of program curricula rather than specific technical areas. These broad curricula areas organize both academic and occupational knowledge and skills sets into coherent pathways that address various related occupational areas (Ruffing, 2006).

Table 2 *National Career Clusters*

Career Cluster	Description
Agriculture, Food and Natural Resources	Production, processing, marketing, distribution, financing, and development of agricultural commodities and resources including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources
Architecture and Construction	Designing, planning, managing, building and maintaining the built environment
Arts, A/V Technology and Communications	Designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services
Business Management and Administrations	Planning, organizing, directing and evaluating business functions essential to efficient and productive business operations

Education and Training	Planning, managing and providing education and training services, and related learning support services
Finance	Planning services for financial and investment planning, banking, insurance, and business financial management
Government and Public Administration	Executing governmental functions to include governance; national security; foreign service; planning; revenue and taxation; regulation; and management and administration at the local, state, and federal levels
Health Science	Planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development
Hospitality and Tourism	Management, marketing and operations of restaurants and other foodservices, lodging, attractions, recreation events and travel related services
Human Services	Career pathways relate to family and human needs
Information Technology	Design, development, support and management of hardware, software, multimedia, and systems integration services
Law, Public Safety, Corrections and Security	Planning, managing, and providing legal, public safety, protective services and homeland security, including professional and technical support services
Manufacturing	Planning, managing and performing the processing of materials into

	intermediate or final products and related professional and technical support activities such as production planning and control, maintenance and manufacturing/process engineering
Marketing, Sales and Service	Planning, managing, and performing marketing activities to reach organizational objectives
Science Technology, Engineering and Mathematics	Planning, managing, and providing scientific research and professional and technical services (e.g., physical science, social science, engineering) including laboratory and testing services, and research and development services
Transportation, Distribution and Logistics	Planning, management and movement of people, materials, and goods by road, pipeline, air, rail, and water and related professional and technical support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance

Collaboration is necessary for an effective workforce development system to meet economic and societal goals of a particular region. Alabama responded to this need in the late 1990's with the development of Workforce 21: A Strategic Plan for Developing Alabama's Workforce. The leadership of the Alabama Department of Postsecondary Education and the Alabama Department of Education partnered together to provide direction to this project. Workforce 21 was created as a response to the lack of skilled workers necessary to fill high skill, high wage jobs of the 21st Century. Workforce 21 provided a clear direction for effective and accountable career focused education within the state's secondary and post-secondary

institutions (Alabama State Department of Education & Alabama Department of Postsecondary Education, 1999).

During the 1990's, Alabama witnessed unprecedented economic growth with Mercedes Benz and Boeing building state of the art production facilities in the state. Alabama was also faced with an impending shortage of skilled workers with more than 30 percent of adults not having a high school diploma. Alabama's workers were missing the most basic credential to be workforce ready. The predicted job growth for the next 20 years was in technical skill areas that require education beyond high school or extensive employer investment to provide in house training (Alabama State Department of Education & Alabama Department of Postsecondary Education, 1999).

The primary impediment to economic growth identified by the Alabama Industry and Manufacturers Association was the lack of a skilled workforce. The charge of Workforce 21 was to provide clear direction for an effective, accountable system of workforce development and career focused education in the state's public schools and two-year college system.

Stakeholders working with the Workforce 21 project identified five goals or imperatives along with strategies for the overall strategic plan. These imperatives became the basis for how Alabama would conduct its career technical education programs at both the high school and post-secondary levels. These imperatives were: ensure that students attain the skills and knowledge they will need in the workplace and for continued learning; expand options for students to achieve career and education goals; anticipate and respond quickly to changes in the workplace and in society; continuously improve the quality of programs and services; and demonstrate accountability (Alabama State Department of Education & Alabama Department of Postsecondary Education, 1999).

During the focus group meetings pertaining to developing the imperative and strategies for the Workforce 21 strategic plan (1999) Robert Lane, President of the Alabama Association of School Boards made the following observation:

Career technical education clearly should be positioned as a program for bright, energetic students with strong technical skills, the ability to solve problems creatively and the ability to learn new skills as needed. It must raise the level of both the academic and technical expertise demanded for our students. Giving students real life applications for skills they might otherwise see as irrelevant to their future will give them a tangible reason for mastering the skills we know they need. (p. 7)

The overall consensus among the state government administration, state education leaders and task force members of the Workforce 21 project was Workforce 21 is the foundation for a career technical education system that provides individuals with skills and knowledge for successful career entry and/or advancement; provides rigorous and relevant instructional programs for all students; responds quickly to the needs of students and of employers; strengthens teaching and learning; and is accountable to the public it serves.

In October of 2007, Governor Riley signed executive order 37 which created the Office of Workforce Development. Governor Bob Riley recognized that Alabama's workforce development efforts were fragmented and that the state was not getting maximum benefit from its workforce development resources. He also realized that there was little coordination among the many agencies providing workforce development services.

This order created a statewide workforce planning council and the development of regional planning councils that drive workforce development issues in specific regions of the state. Through these regional councils recommendations are made to the state wide planning

council to fund certain projects for the region that pertain to education and training of Alabama's citizens. Executive Order 37 called for the Alabama two year college system to be the primary education and training provider within the state. Many of the local career technical education secondary programs have had projects funded through partnerships with their local community colleges to support dual enrollment of high school students.

Career technical education is a critical and integral component of the workforce development system, providing the essential foundation for a thriving economy (National Association Secondary Career Technical Directors, 2001). The key to building and maintaining a strong and dynamic economy is a skilled and flexible workforce (Brand, 2003).

Ms. Sherry Key, Director of Alabama Career and Technical Education, in her opening comments of the 2008 annual report of Career Technical Education in the State of Alabama notes that "Alabama's CTE programs are helping middle and high school students to stay in school, identify their unique talents, select the career path that ignites their interest and passion, and graduate" (p. i). Career technical education has a significant impact on the education system in Alabama with 233,051 high school students participating in programs that are focused on various career clusters. Also, 93.55 percent of high school graduates take at least one career technical education course during their high school career (Alabama State Department of Education, 2008).

<div align="center">Career Technical Education Curriculum</div>

Career technical education is an essential component of the total educational system in the United States and is critical to the country's ability to compete in a global economy (National Association Secondary Career Technical Directors, 2001). Career technical education has its roots in high school reform around the turn of the 20th century when a separate education track

was formed. This separate track provided for agricultural and industry training for young people who were dropping out of school because they did not see the academic curriculum as relevant to their lives (Raizen, 1989).

Career technical education once again finds itself immersed in high school reform of the 21st century. When high school reform is debated on the national stage questions about the power and effectiveness of career technical education often arise (Kazis, 2005). In a 2005 report for Jobs for the Future, Richard Kazis stated "…CTE at the high school level has no choice but to modernize and to change" (p.6). In this report three themes for reform emerge. These are academic rigor, technical program relevance, and partnerships beyond the school walls. The themes often take the form of the new 3 R's in education: Rigor, Relevance and Relationships (Brand, 2003).

According to Brand (2003), "Every student leaving high school should possess interdisciplinary knowledge – consisting of academic, technical, occupational, employability, civic, and social skills – that enable him or her to pursue and advance in postsecondary education or a career and participate meaningfully in the workplace, society, and as a family member." (p. 6) Career technical education is unique in that it draws its curricula, standards, and organizing principles from the workplace. Career technical education can be provided in a wide variety of settings and levels that provide students the technical skills and knowledge necessary to succeed in the world of work. These skills include career awareness, occupational skills, basic workplace skills, life skills and the enhancement of academic skills and general education (Kister, 2001). One of the goals of career technical education is the alignment of educational and career ambitions of it students to insure they are ready to pursue their career goals after high school (Ryken, 2006).

Career and technical education emphasis on occupational pathways can be used to capture a student's interest and to improve the student's academic skills through curriculum integration. When academic skills are increased, students enrolling in postsecondary education after high school are less likely to be required to take developmental courses that may prevent them from studying the occupational skills they seek and enjoy (Harris & Wakelyn, 2007; Lewis & Overman, 2008).

The Smith-Hughes Act of 1917 outlined the traditional organization of occupational instruction at the secondary level. This Act limited funding to agriculture, trade and industry and home economics. For most of the 20th century secondary vocational education was delivered within this structure and limited primarily to teaching skills needed for entry into these occupations. Over the last two decades, changes in the skills needed in the labor market have demanded increased academics and continued education after high school. This has led to the increased alignment of academic and technical standards for secondary and postsecondary education (Lewis, 2008).

The Carl D. Perkins Career and Technical Education Improvement Act of 2006 addresses rigor, relevance and relationships within the seven numerated item outlined in its purpose (PL109-270).

The purpose of this Act is to develop more fully the academics and career technical skills of secondary education students and postsecondary education students who elect to enroll in career and technical education programs, by-

1. Building on the efforts of States and localities to develop challenging academic and technical standards and to assist students in meeting such standards, including

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preparation for high skill, high wage, or high demand occupations in current or emerging professions;

2. Promoting the development of services and activities that integrate rigorous and challenging academic and career and technical instruction, and that link secondary education and postsecondary education for participating career and technical education students;

3. Increasing State and local flexibility in providing services and activities designed to develop, implement and improve career and technical education, including tech prep education;

4. Conducting and disseminating national research and disseminating information on best practices that improve career and technical education programs, services, and activities;

5. Providing technical assistance that-

   a. Promotes leadership, initial preparation, and professional development at the State and local levels; and

   b. Improves the quality of career and technical education teachers, faculty, administrators, and counselors;

6. Supporting partnerships among secondary schools, postsecondary institutions, baccalaureate degree granting institutions, area career and technical education schools, local workforce investment boards, business and industry, and intermediaries; and

7. Providing individuals with opportunities throughout their lifetimes to develop, in conjunction with other education and training programs, the knowledge and skills needed to keep the United States competitive (p. 2).

Alabama career technical education bases its curriculum on the 16 national career clusters with subsequent career pathways identified. A futures framework is also present in the planning and delivery of career technical education in the State of Alabama. The premise of the futures framework is for students to be prepared for life after high school. In order for this to be realized a graduate needs to graduate with a portfolio of credentials that document preparation for work and lifelong learning. Four primary skills sets in the areas of academics, occupational, technological, and work readiness are required in today's workplace. Career technical education provides a foundation for all these skill sets to be obtained through the issuance of business and industry recognized credentials (Alabama State Department of Education, 2008).
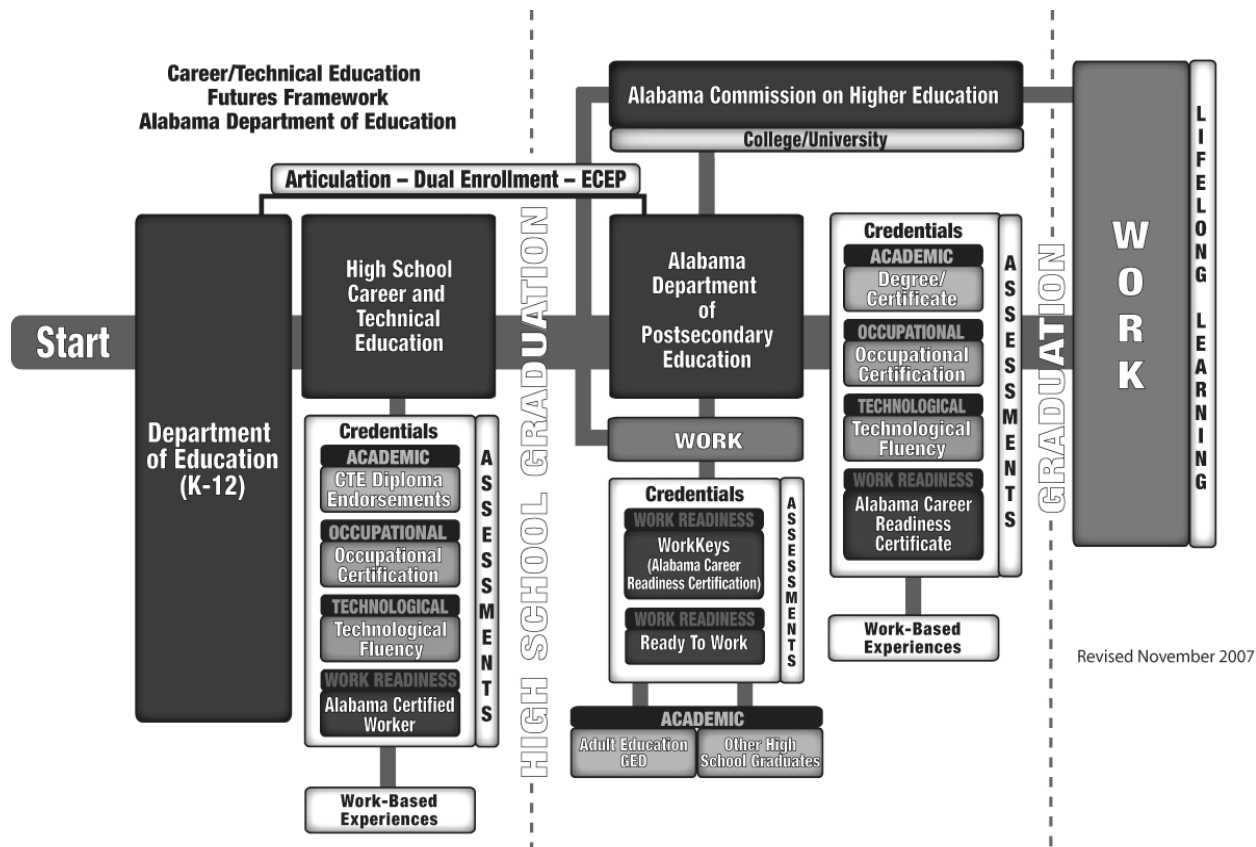
Figure 1. Career Technical Education Futures Framework

Source: Alabama State Department of Education., (2008). Career and Technical Education: 2008

Annual Report.

Nancy Beggs, Former Director of Alabama Career Technical Education, stated in the

2004-2005 Career Technical Education Annual Report that "the CTE Futures Framework

represents a systems approach to workforce development through an education continuum" (p.

3). The intent of secondary career technical education is about life after high school and the

education continuum represented in the Futures Framework. To be prepared for life after high

school, students must graduate with credentials that document what they know and what they can

do. The main goal of the Futures Framework is to depict the sequence of preparation for

participation in Alabama's economy. Students have multiple entry and exit points along the way to becoming productive citizens (Alabama State Department of Education, 2005).

Current federal legislation, the Carl D. Perkins Career and Technical Education Improvement Act of 2006 (P.L. 109-270), requires both secondary and postsecondary career technical education eligible entities to offer at least one program of study, which must include coherent and rigorous content aligned with challenging academic standards and relevant career technical content (Lewis, 2008). A central purpose of a career technical education program of study is to prepare students for postsecondary education and the world of work by providing them with career technical education and academic skills needed to make the transition from school to work (Kosine & Lewis, 2008). The program of study must link secondary and postsecondary to provide a seamless transition for students. The program must be a non-duplicative progression of courses that leads to an industry recognized credential or certificate at the post-secondary level or an associate or baccalaureate degree (P.L. 109-270).

Career clusters and career pathways emerged from the effort to align academic and technical skill sets demanded by industry for success in the occupational area. Career clusters organize related occupations by the types of products and services they provide. Career pathways provide guidance toward the academic and technical skills that must be acquired to prepare for occupations at varying levels within the clusters (Lewis, 2008). Career technical education programs are designed with the intent of helping students align educational and occupational goals and include Tech prep, work-based learning and school to career initiatives. Organizing instruction with an occupational focus through the use of career pathways has helped to integrate course offerings around a central theme (Ryken, 2008). This arrangement may lack depth in a specific job skill; however, students are now encouraged to understand the broader industry and

also to explore more career options within the occupational area. This often leads to postsecondary education and training (Harris & Wakelyn, 2007; Hudson & Laird, 2009).

Alabama's current curriculum for career and technical education was adopted for use by the State Board of Education in 2008. The curriculum is designed to empower students with work-readiness skills needed for success in the new global economy. The curriculum focuses on providing students with the knowledge and skills that will allow them to reinforce academic content through high-caliber experiential learning opportunities (Alabama State Department of Education, 2008). Career technical education engages and motivates students because it gives them the opportunity to learn in applied settings (Harris & Wakelyn, 2007).

Alabama's curriculum is designed to address rigor, relevance and relationships as a student progresses through their particular occupational area. Rigor is derived from academic and industry specific workplace knowledge and skills. Relevance is measured by the degree to which students are prepared for high wage, high skill, and high demand careers. Many of the program areas have established industry recognized credentials and certifications that validate the rigor and relevance of the career technical education program to its stakeholders. Relationships are addressed through partnerships with postsecondary institutions which allow for a seamless transition for students pursuing opportunities to continue their education through the use of articulation agreements and dual enrollment programs. Also, through local partnerships with local business and industry, students are exposed to the workplace during high school through the use of work based learning experiences such as cooperative education (Alabama State Department of Education, 2008; Jones, 2008).

The content within Alabama's career technical education courses of study is based on the sixteen career clusters identified by the United States Department of Education. This provides

the framework for curriculum and instruction based around similar occupations. Courses were developed around fifty different career pathways within the sixteen cluster areas for use in Alabama's career technical education programs (Alabama State Department of Education, 2008). Career pathways provide for a coherent, articulated sequence of rigorous academic and career courses that lead to postsecondary education or industry recognized credentials (Alabama State Department of Education, 2006; Lewis, 2008).

Career technical education programs provide a support system for career guidance by allowing students to progress along a career pathway (Ryken, 2006). These pathways provide Alabama students with the opportunity to combine academics with other learning experiences to meet the demands of life after high school (Alabama State Department of Education, 2008). The concept of using educational and career pathways as structural guidance is central to career technical education (Ryken, 2006). Therefore, the theme established for Alabama's career technical education courses of study was Career Empowerment Through Knowledge and Skills (ALSDE, 2008).

Career technical education makes a unique contribution to education by bringing industry input into the overall secondary curriculum through rigorous content standards (Castellano, Harrison, & Schneider, 2008). Alabama's Career Technical Education curriculum is also based upon content standards written in compliance with No Child Left Behind requirements (Alabama State Department of Education, 2008). Content standards for career technical education, sometimes known as skill standards, involve the work and collaboration of industry and education. Content standards are important elements of school accountability because they set expectations for student performance (Castellano, Harrison & Schneider, 2008). Skill preparation is essential in preparing students for the world of work; however, career exploration is needed to

help students make effective career decisions (Kosine & Lewis, 2008). When developing the minimum content standards for the Alabama Courses of Study the committee and task force pulled information from numerous sources including industry interviews, professional journals, and internet documents as well as similar documents from other states (Alabama State Department of Education, 2008).
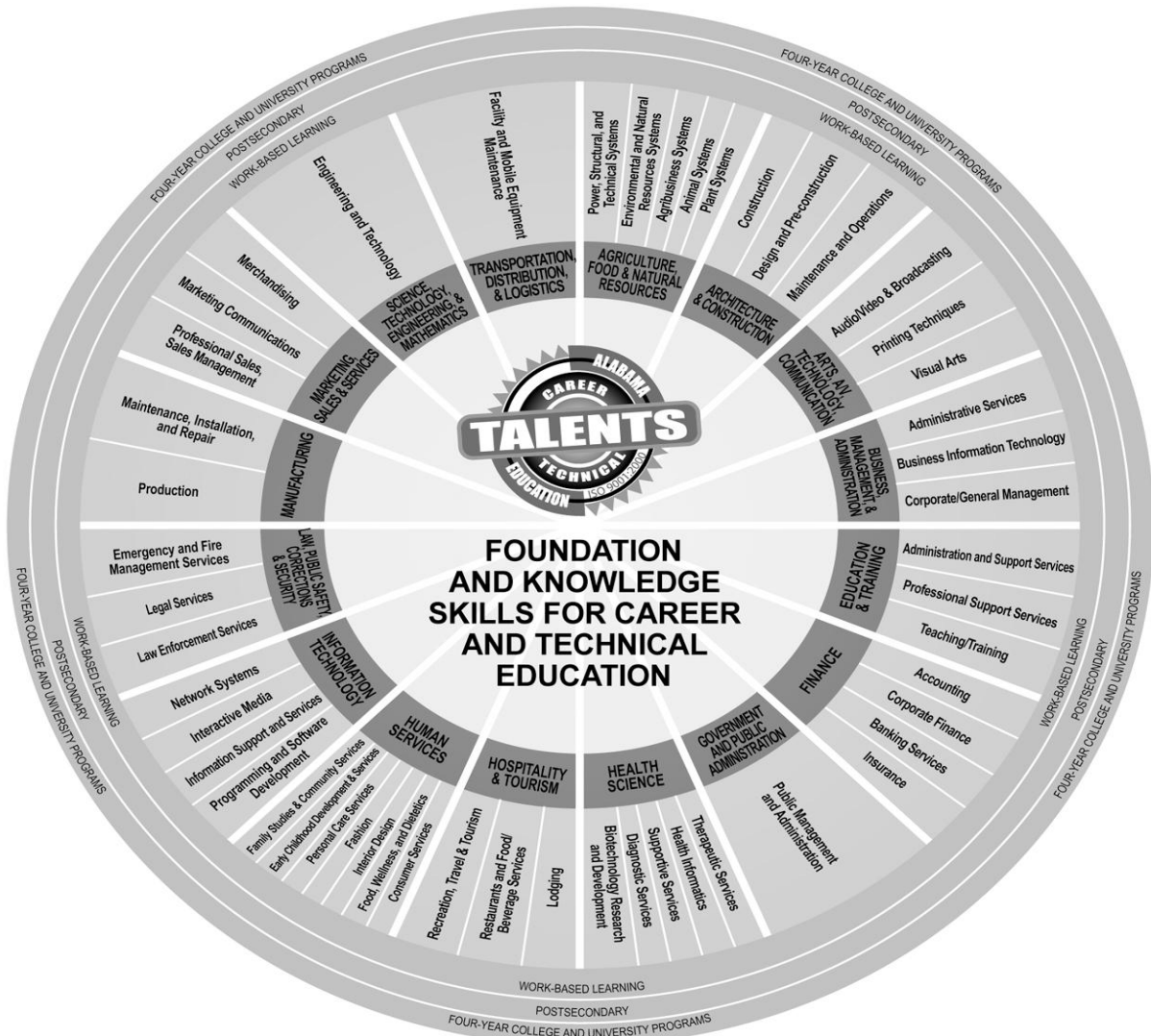
Figure 2. Alabama Courses of Study Conceptual Framework

Source: Alabama State Department of Education., (2008). Alabama Course of Study: Career and Technical Education.

After Alabama implemented the current career technical education curriculum for school years 2009-2014 specific programs of instruction were published for teachers to use in development of lesson plans. These programs of instruction were developed for every course adopted by the Alabama State Board of Education in 2008. The programs of instruction were intended to help teachers further refine their lessons to meet the rigors of the occupational area as well as to foster the partnership with post secondary education through the use of articulation agreements. These programs of instruction outline specific skill sets that must be delivered to students in order to insure high school career technical education provides a seamless transition into Alabama's post secondary career technical education programs.

The integration of academic content into a state's career technical education curriculum is known as crosswalking (Castellano, Harrison & Schneider, 2008). Alabama courses of study crosswalk committees were formed after the adoption of the current career technical education curriculum to evaluate academic content. The purpose of a crosswalk is to demonstrate the academic foundations within the career technical education programs (Castellano, Harrison & Schieder, 2008). These crosswalk committees consisted of career technical education teachers and academic teachers in the areas of math and science. These teachers worked together to determine the number of academic contact hours within the career technical education courses. If academic contact hours met or exceeded 140 hours in either math or science the crosswalk committees recommended substitute academic credit. The result would be that students would earn an academic math or science credit for the specific career technical education course in lieu of an elective credit for the same course. If academic contact hours met or exceeded 140 hours in either math or science across more than one sequenced course within a pathway the committee recommended embedded academic credit. Embedded credit would result in one academic credit

and one or more elective career technical education credits dependent on the number of courses determined by the crosswalk committee.

Career technical education student organizations play an important role in the overall delivery of an effective career technical education program (Alfeld, Hansen, Aragon & Stone, 2006). The Alabama Administrative Code identifies career technical student organizations as an integral, co-curricular component of the career technical education program. The student organizations enhance classroom instruction by developing leadership and workplace readiness skills as well as providing opportunities for personal and professional growth (Alabama State Department of Education, 2006).

The Carl D. Perkins Career Technical Education Improvement Act of 2006 (P.L. 190-270) defines a career technical student organization as "an organization for individuals enrolled in a career and technical education program that engages in career and technical education activities as an integral part of the instructional program" (p. 4). Section 135 of Public Law 190-270 (2006) allows for federal funds to be used by eligible state and local recipients to support and assist career technical student organizations.

Career technical student organizations are co-curricular; therefore, they can offer students the opportunity to apply knowledge and skills from their classrooms directly to real world situations during school hours. Alfeld, Hansen, Aragon and Stone (2006) identify four types of experiences career technical student organizations provide for students who participate in them: (1) leadership, (2) professional development, (3) competitions, and (4) community service (p. 123). Career technical student organizations like FFA and SkillsUSA help provide extended learning time and help students develop skills such as leadership, communication and teamwork.

These programs can also help students find the linkages between academic and technical studies (Brand, 2003).

Ryken (2006) stated that "students make the goals of CTE attainable in a number of ways: by negotiating in a variety of contexts (e.g. high school, college and work); by making choices to spend their time engaged in activities that emphasize educational and career development; by linking school and work; and finally, by viewing adults and peers as learning resources and accessing allies who can provide academic and social support to reach educational and career goals" (p. 67). Students involved in career technical education programs are likely to have a greater sense of self-efficacy, increased sense of career awareness, higher level of college readiness and clearer career related goals (Kosine & Lewis, 2008).

Career technical education students are co-creators of their own learning rather than just passive recipients of information. Students have the opportunity to propel their own learning by asking questions, pursuing postsecondary education and by focusing on their own career goals (Ryken, 2006). According to a statistics brief from the National Center for Education Statistics, career technical education serves several purposes for high school students. It helps them explore career options, gain skills that are useful in the labor market, gain entry level skills and prepare for postsecondary education (Hudson & Laird, 2009)

The Carl D. Perkins Career and Technical Education Improvement Act of 2006 (P.L. 109-270) states that the required programs of study "may include the opportunity for secondary education students to participate in dual or concurrent enrollment programs or provide other ways for students to acquire postsecondary education credits" (Sec 122 [c] [1] [A][iii]). Dual enrollment is a means of increasing the efficiency of education by reducing the time and cost of

obtaining postsecondary degrees and increasing the rigor of high school. This also results in a reduction in the need for postsecondary remediation (Lewis & Overman, 2008).

Many states have policies that support programs that encourage high school students to earn college credit while still in high school. These programs can range from Tech prep, advanced placement, and dual enrollment to articulated high school credit (Harnish & Lynch, 2005). These credit based programs are promoted as a means of increasing students' access to postsecondary education, motivating students to attend college and improving student performance and outcomes at the postsecondary institutions (Harnish & Lynch, 2005).

Demands placed upon education by a changing labor market require educational professionals to provide a smooth transition from high school to postsecondary education (Miller, 2008). Kosine and Lewis (2008) identify persistence as an important factor in the career development of students engaged in career technical education. This persistence involves the engagement in postsecondary education and training and/or work pursuits throughout a student's high school educational experience. Creating that continuum of education that links levels of education and preparation of students for college level work and employment are critical to competing in a global market (Harnish & Lynch, 2005).

Alabama's Governors Office of Workforce Development has embraced dual enrollment and provided necessary funding for students' tuition as well as incorporated the initiative into its 2010-2012 strategic plan (Governors Office of Workforce Development, 2010). Dr. Matthew Hughes, Director of Workforce Development, stated in his opening comments of the 2010-2012 Strategic plan for Workforce Development that the office has "provided more than 1,500 high school students with an early start on postsecondary education and career development through dual enrollment" (p.ii) in 2008 and 2009 (Governors Office of Workforce Development, 2010).

Alabama's Blueprint for a Comprehensive Workforce Development system 2010-2012 strategic plan published by the Alabama's Governors Office of Workforce Development lists dual enrollment as the first action step to increase the number of skilled workers in Alabama's labor pool. The plan calls for Alabama to maximize funding available to support tuition waivers in career and technical dual enrollment programs (Governors Office of Workforce Development, 2010).

Compared to non-career technical education completers, students who have completed a sequenced program of study reported that they felt better prepared to transition to college and have a better perspective on career goals and plans (Kosine & Lewis, 2008). In a study conducted by Kim & Bragg (2008), "dual credit hours earned and articulated hours earned had significant relationships with college readiness. Articulated hours earned had a positive relationship with being college ready in reading and writing and academic dual enrollment had a positive relationship with college readiness in math" (p. 142).

Another key relationship component of career technical education is partnerships and involvement with business and industry. Educational partnerships can be mutually beneficial and supportive to all stakeholders who champion local efforts to improve academic achievement and career development (Alabama State Department of Education, 2008). The Alabama Administrative Code requires in section 290-6-1-.06 (1)(a) that each local education agency have a system level career technical education advisory council and every career technical education program have an advisory committee (Alabama State Department of Education, 2006). Career technical education professionals in Alabama must establish and maintain partnerships with community leaders, representatives from businesses, industries, organizations, economic

development, and other workforce development agencies in addition to their advisory council and committee members (Alabama State Department of Education, 2006).

Alabama Department of Education outlines several benefits of business and industry partnerships in Bulletin 101-2004, Handbook for Career/Technical Education Advisory Committees:

- Community gains a better understanding of career/technical education programs through the involvement of committee members with the educational program

- Relevant program reflects the community needs

- Committee members assist teachers in updating knowledge and skills by sharing ideas and information

- Employability of students in the community is embraced

- Sites are established for training, job placement, and community and workplace mentors

- Community develops a greater sense of responsibility toward education

- Experiences are provided that allow students to obtain knowledge and develop skills that meet industry requirements

- Representatives from business and industry come in contact with individuals who are potential employees and who use their products and services (p. 1)

The partnership between career technical education and business and industry provides the conduit to improve cooperation, coordination, and communication among schools to benefit both students and employers (Alabama State Department of Education, 2008). Education and employers cannot work as separate entities and maintain a system that is able to compete in our global society. Employers must take an active role in education reform and invest in the

educational system by helping to develop new models which include school to work transitions, such as cooperative education, as well as providing educators with the necessary information to make informed curriculum decisions (Michigan State Legislature, 1992).

Career technical education professionals have to carefully examine growth industries for their respective area with the help of industry professionals and be willing to retool programs to reflect the emerging job opportunities (Harris & Wakelyn, 2007). Partnerships are needed to provide information about careers and the workplace to students, parents and program advisors. Employers play a key role by providing experiences for cooperative education, ensuring curriculum meets current industry standards, serving as mentors to students and teachers and donating equipment to the programs (Brand, 2003).

Perception of Career Technical Education

According to Richard Lynch (2000), high school vocational education programs are at a critical point. In one direction, programs exist that have adapted to the changing demands of industry and academic accountability from education leaders. These programs are technologically up to date, integrate rigorous academics with knowledge and skills needed for careers, involve students and parents in career planning, prepare students for employment as well as postsecondary education, and are well respected by the community.

In another direction are programs that have failed to update and rely on larger percentages of special populations for their total enrollment. The students in these programs may not fully understand the career options within the occupational area or how ill prepared they are to enter the workforce or postsecondary education. These programs are often far removed from the business and industry for which they are allegedly preparing students. Unfortunately, it is

these programs that are often thought of by the general public when asked about career technical education (Lynch, 2000).

Some of the reform reports of the 1980's focused on the unpreparedness of the high school graduates for the future workforce. Education leaders of the time translated this into a lack of academics and added more courses to the high school curriculum, especially in the area of math and science (Michigan State Legislature, 1992; Raizen, 1989). This movement indirectly affected vocational education because the time to take additional courses was limited and the general mindset was now focused on academic coursework (Raizen, 1989). Some of the problems occurred when communication between industry and vocational education was either stagnate or non-existent. Industry failed to inform schools about their requirements and vocational schools failed to seek input about future workforce demands and the kinds of professionals needed (Chambliss & Chiariello, 1988).

The debate between academic schooling and vocational education continued through the 20th century. The distinction between knowing what, or acquiring knowledge, and knowing how, or being able to do, were the concepts often at the center of the controversy during these debates (Raizen, 1989). Individuals should learn why and how something works. They should also know the principles involved with the task as well as procedures and tools needed (Chambliss & Chiariello, 1988). This resulted in separate tracks for high school students based upon preparation for doing and preparation for knowing. Unfortunately, the choice has not always been left up to the student or extended to each student equally. The vocational track was often thought of as a place for the less intellectually prepared and for students within special populations. This resulted in a negative stigma for vocational education. (Raizen, 1989).

During most of the 20th century, some students were tracked into manual labor trades while others followed an academic curriculum due to their intelligence quotient (IQ). Despite recent efforts to reform vocational education, it continued to be perceived as a set of less demanding classes taken by students who were not interested in, or able to go to college (Harris & Wakelyn, 2007).

Differences between academic and career technical education teacher preparation may contribute to the separation between the two tracks (Park & Rojewski, 2006). The two teacher groups bring to the educational environment their own educational and life experiences. Often academic teachers have been continuously immersed in the academic realm through high school, to college or university and then back to high school. Career technical teachers are varied in their experiences. These teachers often come to the high school arena from a business or industry background with limited formal post secondary education depending on the occupational area. Their college or university education comes after they are employed by the school system. These two groups of teachers function differently when learning new materials, creating new concepts and implementing new practices (Park & Rojewski, 2006).

Some academic and career technical teachers feel territorial about their subjects and are threatened when new views of their subject matter are presented and promoted. High school academic and vocational teachers often have little contact and little in common with their peers. Vocational teachers are often held in lower esteem by peers and administrators and may suffer from lack of prestige and support from administrators, other teachers, students and parents. Therefore, the two teacher groups often add to the perceptions and negative stigma of career technical education because of their own attitudes toward the subjects they teach (Park & Rojewski, 2006; Sawyers, 1976).

The source of a state's competitive edge has become rooted in its workforce's ability to apply knowledge globally. A strong vocational education system has once again become critical to a state's economic success. However, in some cases, the image of vocational education is still considered second class. To help change this perception educational leaders have changed the name from vocational education to career technical education (Harris & Wakelyn, 2007). However, Fletcher (2006) mentions that the name career technical education may need to be changed to college and career preparatory education to better reflect the new agenda.

This name change signals a change in the curriculum associated with vocational education. The new curriculum is deeply rooted in helping students apply a rigorous academic platform with career technical electives that help students apply their knowledge. The new mindset of career technical education is grounded in the belief that the skills and abilities students need to succeed in college and careers are virtually identical (Harris & Wakelyn, 2007).

Historically, the shortage of skilled workers in the post World War II era prompted Americans to rethink education. People were scared of a second depression and to seek security began flooding colleges to earn degrees. This gradually led to a decline in people entering blue collar jobs and a negative attitude toward vocational education. Children were discouraged from pursuing a vocational education and were led to view it as an easy way out or a second hand, dead end educational track (Chambliss & Chiariello, 1988).

Despite the past reputation of career technical education as a less demanding track, career technical education engages and motivates students through academically rigorous curriculum pathways. These rigorous pathways offer real world learning opportunities, leading to lower dropout rates, increased academic success and greater earning potential for high school graduates (Harris & Wakelyn, 2007). According to Fletcher (2006), career technical education has entered

an era of de-tracking which eliminates the tendency for students to be funneled into an academic or career technical education course track.

Secondary and postsecondary career technical education programs across the United States provide much more than just job training within an exciting and innovative environment. These programs are more academic, more challenging, more rewarding and more relevant than ever before. This area of education, which must remain on the cutting edge of new technology and on the frontline of students' needs, should command more respect than it is currently given (Reese, 2001). Many educational leaders and policy makers view career technical education as status quo; this can be attributed to the lack of data sharing between career technical educators and academia as well as a sense of complacency among many professionals within the field of career technical education (Bray, 2008). Consequently, career technical educators often talk about the negative perceptions of career technical education and rank the image problem high on the list of items that seriously plague their field of education (Lynch, 2000).

When parents view an occupational program as an educational program and not as a vocational program, they more easily accept it as an option for their children. Parents who view career technical education as good programs, just not for their children, begin to change their opinion when statistics exist to document the academic success of students who have taken career technical courses. When this happens the negative stigma begins to fade (Reese, 2001).

Getting children interested in learning is a goal that parents, educators, and communities can all agree upon. If parents begin to see career technical education as a tool that can help achieve that goal, they will no longer view it negatively and will begin to see it as an essential component of a well rounded education for anyone's child (Reese, 2001).

In a study performed by the Oneida-Herkimer-Madison Board of Cooperative Educational Services in Hartford, New York (2007), it was found that 44 percent of students surveyed said friends influenced their decision to attend a career technical education program. It is imperative that marketing strategies be developed that will inform students about career technical education and its opportunities, especially if they are influencing their peers. The goal of marketing strategies has to be to make sure that students are educated enough about career technical education to provide the right influence on their friends (Gaunt & Palmer, 2005; Palmer, 2007).

Fifty eight percent of the respondents that participated in career technical education said that a parent or guardian influenced them to take career technical education, while sixteen percent of the students not participating in career technical education said that a parent or guardian influenced their decision. It is then important for career technical education marketing strategies to reach out to parents and guardians to make sure they are informed about career technical programs and their potential benefits (Palmer, 2007). The influence of parents and guardians is significant and must be addressed if enrollment in career technical education is to flourish (Gaunt & Palmer, 2005).

Gentry, Peters and Mann (2007) found that students commented favorably on their career technical education experience and negatively on their traditional high school experience when compared simultaneously. The five major themes from their comments included: autonomy, effectiveness, caring teachers, students with similar interests, and relevant content in applied settings. Career technical education students felt their experience involved a learning environment that offered curricular connections to the profession, hands-on learning, and relevant content in an applied setting (Gentry, Peters, & Mann, 2007).

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In studies conducted to determine employer perceptions of vocational education the researchers found that vocational programs have solid employer support. The respondents from smaller companies acknowledged that when they hire high school graduates for entry level positions they would prefer individuals that have completed a vocational education program (Hollenbeck, 2007; Sawyers, 1976; Talarzyk, 1975). However, corporate or larger companies were less enthusiastic about vocational education. Many of them believed they could provide better on the job training and were willing to incur that cost (Hollenbeck, 2007; Sawyers, 1976). A second major finding from Hollenbeck's 2007 study was the systematic differences between vocationally trained and non-vocationally trained workers. The vocationally trained workers tended to:

- Be younger at the age of hire

- Have greater educational attainment

- Have less prior relevant work experience

- Be more likely to be promoted

- Receive more training on the job

- Experience greater wage growth during the early part of the employment relationship (ix)

If career technical education professionals rely on observable results for the development of a more favorable perception it will take a lengthy period of time and will fail to maximize other very effective techniques for influencing public opinion. Relevant curricula, effective teaching, and sound administration are recognized by the public and make essential contributions to creating a favorable image. It is also argued that even the most effective and productive

educational programs require continuous dynamic publicity, explanation, interpretation and emphasis to maintain a positive image (Sawyers, 1976).

Dobson and Edwards (1971), noted that respondents in the State of Florida who could recall seeing mass media advertising pertaining to vocational education could not recall what was stressed in the advertising. When choosing advertising medium current career technical education professionals may need to engage in this type of passive media; however, they also should promote active first hand interactions to solidify their message (Palmer, 2007).

In a 1988 report by Chambliss and Chiariello, the researchers noted that improving career technical education strategies plays a key role in improving economic and industrial problems in the United States for several reasons. These reasons included items such as vocational education's direct impact on the economy and labor force and the fact that jobs requiring vocational training top the list of occupations with increasing or impending labor shortages.

When career technical education programs are viewed as an educational tool to build economic growth and inspire learning, they have the power to paint a realistic self portrait in a positive light (Reese, 2001). Career and technical education was once considered an option only for low-achieving, non-college bound students. These programs now serve students looking for high technology jobs and good salaries, which in turn contributes to a state's economic development (Fletcher, 2006).

Career technical education in the State of Alabama has undergone significant change over the last decade (Key, 2008). Alabama's State Department of Education officially changed the name of its vocational education section to career/technical education in 1997. One of the first major shifts toward improving the image of career technical education in the state was to begin an intensive business industry certification process. According to the 2003-2004 Career

Technical Education Annual Report, the Business/Industry Certification process was initiated in 1998 with the intention to align all career technical programs with industry standards (Alabama State Department of Education, 2004).

The business industry certification process when instituted was something never before achieved by a state career technical education program (Alabama State Department of Education, 2003). Nancy Beggs, former Alabama Career Technical Education Director, stated in her opening comments of the 2003-2004 annual report, "We want to be the best, the premier career technical education program in the nation, nothing less" (p. 8). By the end of the 2002-2003 school year, 100 percent of Alabama's career technical education programs had achieved business industry certification. This process which was deeply rooted in program improvement achieved International Organization for Standardization (ISO) certification in 2003. Nancy Beggs (2004), noted,

> The business industry certification of career technical education programs has helped Alabama to solidify its position as a desirable destination for industrial giants. Career technical education provides the foundation to grow a well trained, work ready workforce. This is an essential step for a state to remain a major player in national and international industry. (p. 8)

One of the next major steps to help improve the image of career technical education in Alabama was to develop a statewide communication plan. The Alabama State Department of Education started this project in the spring of 2002 with a series of focus group meetings across the state. The key outcomes from these group meetings were:

- Career technical education students are perceived to function lower academically
- Leaving school to go to centers is negative

- Programs are not consistent

- Alabama's residents do not know enough about these programs or the opportunities they offer (Alabama State Department of Education, 2006).

After the findings from the focus groups were compiled there emerged a growing theme around which the communication plan would be structured: perception is reality (Alabama State Department of Education, 2006). Even after Alabama career technical education programs had gone through the process of business industry certification the general public still held a negative perception of career technical education (Alabama State Department of Education, 2003).

The 2003 Alabama Career Technical Education Communication plan outlined a sequence of events that needed to be implemented to help improve the image of Alabama's programs, one of which was a survey that would be conducted across the state by an outside entity. The purpose of this survey would be to explore opinions and perceptions of career technical education across the state. The Alabama State Department of Education sought the help of Southern Opinion Research, Inc. to conduct this random citizen survey. The survey examined opinions of public education, beliefs about college, knowledge of career technical programs in their area, and opinions of career technical education (Alabama State Department of Education, 2006).

In 2003, a logo for career technical education was developed to provide a consistent trademark for career technical education as it was marketed statewide. This logo revolved around the notion that career technical education helps students identify and expand their own talents and apply them toward future career goals.

Figure 3. Alabama TALENTS logo

Source: Alabama State Department of Education., (2003). CTE Communication Plan.

In 2005, Alabama made national news when the Career Technical Education section of the State Department of Education issued official resolutions to movie and television actress Courtney Cox Arquette, Heisman Trophy winner and all star athlete Bo Jackson, and Grammy award winning entertainer Lionel Richie, for their participation in the Celebrities of Distinction poster campaign. This campaign identified Alabamians who had participated in career technical education programs in high school that have had notable success in their professions, communities, and personal lives (Alabama Department of Education, 2006).

Alabama continues to enhance and promote career technical education through the ongoing business industry certification process, continual revision of courses of study to keep pace with business and industry needs and ongoing communication efforts to promote the positive image of career technical education (Alabama State Department of Education, 2006).

Summary

The review of literature provided an overview of topics related to the research questions to be answered in this paper. These topics included a historical perspective of career technical education including federal legislation, career technical education's role in workforce development, career technical education curriculum, and perceptions of career technical

education. Career technical education has its roots in high school reform and continues to be an important factor when education reform is discussed today.

The current mission of providing a rigorous, progressive educational experience will give students a strong foundation to become competitive in a global marketplace. Alabama's career technical education programs are helping students stay in school, identify their talents, select career paths that ignite their interest and passion, and provide industry with a workforce in which they are confident (Key, 2008).

Chapter 3

Methods

Career technical education in the State of Alabama has undergone significant change over the last decade (Key, 2008). There are more technology driven programs in the now high wage, high skill, and high demand occupational areas and this is reducing the stigma associated with career technical education (National Association of State Directors of Career Technical Education, 2001).

This study examined perceptions of career technical education within the State of Alabama. Over the last ten years there have been initiatives from the State Department of Education Career Technical Education section to change the negative perception often associated with career technical education. This initiative has provided local education agencies across the state with a communication and marketing campaign that was developed based upon research findings (Alabama State Department of Education, 2006).

There was a study completed on the comparison between Alabama citizens' perceptions about career technical education and those of Alabama teachers in the field of career technical education within the state in 2005. That study produced findings that showed there was a difference in the perceptions of professionals within the field and randomly sampled Alabama citizens (Coleman, 2005). This study will seek to provide a snapshot of self perceptions of career technical educators similar to the 2005 study as well as the latest citizens' poll completed in 2008. This study will also review longitudinal data from three citizens' opinion polls completed for the State Department of Education by Southern Opinion Research, Inc. located in South

Carolina. These surveys were completed in 2003, 2005, and 2008 to assess whether or not perceptions about career technical education had changed from one administration of the survey instrument to the next.

Career technical education is operating under new Federal legislation with the authorization of the Carl D. Perkins Career Technical Education Improvement Act of 2006 that increases accountability for academics, industry credentialing, and post secondary training (P.L. 109-270). However, there is still a negative perception or stigma associated with career technical education due to past experiences associated with this field of education (Brand, 2008). This study will address perceptions of career technical education by Alabama citizens and professionals working within the field of career technical education in Alabama's schools.

The demand for skilled labor is increasing rapidly within the State of Alabama (Governors Office of Workforce Development, 2010). This study will seek to validate the need for career technical education within the State to help provide for workforce development. This study will also provide an overview of the perceptions of career technical education to see whether there has been a statistically significant change over the past seven years. This study may also provide information that will enhance communication and marketing plans for career technical education for the State Department of Education.

<div align="center">Research Questions</div>

The following research questions were used in this study:

1. What are the perceptions of career technical education in the State of Alabama?

2. What are the self perceptions of career technical educators in the State of Alabama?

3. What is the relationship, if any, between the perceptions of career technical education and the self perceptions of career technical educators?

Research Design

The researcher obtained permission from the State Department of Education Career
Technical Education Director to use existing data from 2003, 2005, and 2008 perception surveys
compiled for the Department (see Appendix A). The researcher then used this existing data
provided by the Alabama Department of Education, Career Technical Education Section as a
basis for this project. The final analysis consists of a quantitative longitudinal study of
perceptions of career technical education of Alabama citizens in 2003, 2005, and 2008. These
studies were performed for the State Department of Education by Southern Opinion Research,
Inc., currently based in South Carolina. In addition, the final analysis in this report includes a
snapshot view of teachers' opinions of career technical education compared to the 2008 citizens'
opinions to determine if there is a statistically significant relationship.

The original survey instrument used for the citizens' survey consisted of 29 items with
demographics collected such as age at last birthday, county of residence, education level, salary
range, and ethnic origin. The researcher obtained permission from the Alabama Department of
Education Career Technical Education Director to use and modify the original survey instrument
to eliminate items that were not relevant to career technical educators (see Appendix A). The
survey instrument used to collect data from the educators contained 18 of the original 29 items
and consisted of the same demographics as those collected in the citizens' survey. The researcher
obtained permission from the Auburn University Institutional Review Board (See Appendix B)
to distribute a written survey instrument via United States Postal Service to career technical
education professionals in Alabama. The surveys were mailed to randomly selected participants
in September of 2010 and returned to the researcher between September and November of 2010.

The researcher narrowed the analysis to eight items which allowed respondents to categorically rate responses.

The researcher used descriptive statistics and percentages to answer the research questions. Descriptive statistics and percentages were run in SPSS 18 for Windows to compute statistical data. A chi square analysis was performed because of the categorical variances within the responses. Statistical significance was noted when the probability value of .05 or smaller was obtained. According to Ross and Shannon (2008), alpha sets the amount of risk the researcher is willing to take in being wrong. A five percent risk is generally accepted; therefore, alpha equals .05 or probability is equal to or smaller than .05.

The researcher used a two way chi square with Pearson phi coefficient for the longitudinal study (2003, 2005, 2008 data) of citizens' perceptions. The researcher performed additional two way chi square analysis on each of the survey items that reached statistical significance. This was completed to determine between which years the significance in distribution occurred. To determine if any relationships existed between citizens' (2008 data) and educators' perceptions, a two way chi square with Pearson phi coefficient was used. The researcher used a one-way chi square with frequencies noted to get a snapshot view of educators' perceptions to address research question number two. The expected values for the one way chi square analysis were established using the 2008 Citizens' result proportions. The demographics collected allowed the researcher to further investigate into subgroups when the literature warranted. The additional items, which in some cases allowed respondents to answer an open ended question, were used to enhance the discussion.

The following survey items were analyzed to answer the research questions.

1. Importance of offering career technical education

2. Benefit of offering career technical education to college bound students

3. Benefit of offering career technical education to students not likely to attend college

4. Benefit of offering career technical education to students with learning disabilities

5. Benefit of offering career technical education to higher performing students

6. Benefit of offering career technical education to students in general

7. High income encourages students to participate in career technical education

8. Importance of career and technical educators working closely with business and industry

Sample

The target population for the citizen surveys conducted in 2003, 2005, and 2008 was random Alabama citizens. The target population for the surveys conducted by the researcher was randomly selected career technical education professionals within the State of Alabama.

Southern Opinion Research, Inc. conducted all three of the citizens' surveys for the Alabama State Department of Education, Career Technical Education section. In each administration of the telephone based survey a total of 500 randomly selected registered Alabama voters were polled. Southern Opinion Research, Inc. used a multi-cluster random digit dialing process to select the telephone participants. Southern Opinion Research, Inc. indicated they elected to survey 500 because the number allowed the data to be easily manipulated into subgroups.

The researcher obtained permission from the executive director of the Alabama Association for Career Technical Education to randomly survey members of the Association (see Appendix C). Based upon the sampling number used in the citizens' survey, the researcher asked for 500 randomly selected members from the membership roster to sample. The researcher

obtained 500 member mailing labels provided by the executive director out of the 1700 total

membership for the Alabama Association for Career Technical Education. The researcher

received a 59.2 percent response rate with 296 completed surveys returned that were compiled

for analysis. The response rate was 59.2 percent of total surveys mailed; however, the number of

completed responses is very close to the expected sample size of the given population of the

Alabama Association for Career Technical Education (Gall, Borg, & Gall, 1996). According to

Krejcie and Morgan (1970), the response rate was within 17 responses of the expected sample

size for the given population.

<div align="center">Instrumentation</div>

The research is based upon responses from written surveys that were administered via

telephone for the citizens' survey and by written responses via U. S. mail for the career technical

educators' survey. The 2003 (see Appendix D), 2005 (see Appendix E), and 2008 (see Appendix

F) survey instruments used by Southern Opinion Research, Inc. contained items requiring opened

ended responses, categorical responses and demographic information. The 29 items were drafted

by the State Department of Education from questions and concerns about career technical

education from four regional focus group sessions held throughout Alabama in 2002. These

sessions were held to gauge public perception and understanding of career technical education by

the State Director of Career Technical Education. The focus groups were comprised of school

staff, business leaders, parents, and students. During these sessions, participants were asked a

series of questions regarding their perceptions of career and technical education. The final

version of the citizen's survey instrument was refined for professional use by the consulting firm

Southern Opinion Research, Inc. In 2008, an additional eight items were added to address overall

perception of education and 21st century skills.

The researcher obtained permission to use, copy and modify the original survey instrument to administer to career technical educators (see Appendix A). The survey instrument used to collect data from the educators contained 18 of the original 29 items and consisted of the same demographics as those collected in the citizens' survey. The 18 items selected for use in the survey titled Educators' Opinions about Career Technical Education in Alabama (see Appendix G) appeared in the same numeric order as in the original survey instruments.

<div align="center">Validity</div>

The original survey items were derived from direct input from four focus groups conducted by the State Department of Education. The focus groups were asked specific questions about the perception and image of career technical education in Alabama. Once the draft survey items were compiled, a panel of experts from the State Department of Education and professionals from the consulting firm Southern Opinion Research, Inc. refined the items for final approval. The survey items were them resubmitted to the moderators from each of the four focus groups for consensus. At that time, the items were added to the 2003 citizens' survey. The survey items dealing with perception and image remained constant in the 2005 and 2008 administration of the survey.

The survey items in the career technical educators' survey came directly from the citizen's survey. The researcher was given permission to modify the original version for dissemination to career technical educators (see Appendix A). The researcher omitted only survey items that did not directly relate to perception. The final Educators' survey (see Appendix G) contained 18 of the original 29 items and consisted of the same demographics as those collected in the citizens' survey.

A similar study was previously conducted in Alabama (Coleman, 2005). The researcher conducted a field study among career technical educators in Mobile County. During the field test, twelve local summer school teachers were asked to review the directions for the survey and the clarity and content of individual items. The researcher addressed suggestions and comments in the final version of the Educators' Opinions of Career Technical survey (Coleman, 2005). The researcher for this project used the existing data from the original 2003, 2005, and 2008 citizens' survey and the same survey items as the 2005 Coleman study for the 2010 educators' survey instrument.

<div align="center">Data Collection</div>

After gaining approval from the Auburn University Institutional Review Board (see Appendix B), the researcher began the survey process. Approval was granted to conduct a pen and paper survey to be mailed to random members of the Alabama Association for Career Technical Education. The survey instrument was titled Educators' Opinions about Career Technical Education in Alabama (see Appendix G). The executive director of the Alabama Association for Career Technical Education provided the researcher with 500 randomly selected mailing address labels. The mailing labels were affixed to envelopes immediately upon possession by the researcher. The survey instrument Educators' Opinion about Career Technical Education in Alabama along with an information letter from the Institutional Review Board and a self addressed, stamped envelope were enclosed and mailed via the U.S. Postal Service. The information letter provided recipients with knowledge of the research project along with assurances that participation was strictly voluntary and responses would contain no personally identifiable information. The respondents were also assured that confidentiality would be maintained. The mail out had the return address of the Alabama Association of Career Technical

Education so that in the event that an address was incorrect the researcher would not receive returned mail. If a recipient agreed to participate and returned the survey in the enclosed self addressed, stamped envelope the researcher immediately shredded the return envelope to destroy the postmark. The returned instruments were compiled and stored in a sealed file cabinet in the possession of the researcher until they were destroyed.

Data Analysis

The survey instrument used to collect data from the educators contained 18 of the original 29 items and consisted of the same demographics as those collected in the citizens' survey. The researcher narrowed the analysis to eight items based on previous research (Coleman, 2005). These eight items allowed respondents to categorically rate responses. The researcher used descriptive statistics and percentages to answer the research questions. The researcher used a two way chi square with Pearson phi coefficient for the longitudinal study (2003, 2005, 2008 data) of citizens' perceptions. The researcher performed additional two way chi square analysis on each of the survey items that reached statistical significance. This was completed to determine between which years the significance in distribution occurred. To determine if any relationships existed between citizens' (2008 data) and educators' perceptions, a two way chi square with Pearson phi coefficient was used. The researcher used a one-way chi square with frequencies noted to get a snapshot view of educators' perceptions to address research question number two. The expected values for the one way chi square analysis were established using the 2008 Citizens' result proportions. The demographics collected allowed the researcher to further investigate into subgroups when the literature warranted. The additional items, which in some cases allowed respondents to answer an open ended question, were used to enhance the discussion.

The following survey items will be analyzed to answer the research questions.

1. Importance of offering career technical education

2. Benefit of offering career technical education to college bound students

3. Benefit of offering career technical education to students not likely to attend college

4. Benefit of offering career technical education to students with learning disabilities

5. Benefit of offering career technical education to higher performing students

6. Benefit of offering career technical education to students in general

7. High income encourages students to participate in career technical education

8. Importance of career and technical educators working closely with business and industry

Summary

This chapter covered the methods, research design, sample, instrumentation, validity, data collection, data analysis, limitations and assumptions. The researcher addressed the methods used to answer the research questions. The research questions in this study are:

1. What are the perceptions of career technical education in the State of Alabama?

2. What are the self perceptions of career technical educators in the State of Alabama?

3. What is the relationship, if any, between the perceptions of career technical education and the self perceptions of career technical educators?

Alabama's career technical education programs are helping students stay in school, identify their talents, select career paths that ignite their interests and passions, and provide industry with a workforce in which that are confident (Key, 2008). This study provided information that will enhance communication and marketing plans for career technical education.

Chapter 4

Findings

Introduction

This chapter contains information about the purpose of the study, research questions, response rate, population, analysis of data, and results. This study examined perceptions of career technical education within the State of Alabama. Over the last ten years there have been initiatives from the State Department of Education, Career Technical Education section to change the negative perception often associated with career technical education. This initiative has provided local education agencies across the state with a communication and marketing campaign that was developed based upon research findings (Alabama State Department of Education, 2006).

Research Questions

The following research questions were used in this study:

1. What are the perceptions of career technical education in the State of Alabama?

2. What are the self perceptions of career technical educators in the State of Alabama?

3. What is the relationship, if any, between the perceptions of career technical education and the self perceptions of career technical educators?

To answer research question number one, the researcher analyzed longitudinal data from three citizens' opinion polls completed for the State Department of Education by Southern Opinion Research, Inc. located in South Carolina. These surveys were completed in 2003, 2005, and 2008. The analysis was performed to determine if perceptions about career technical

education had changed from one administration of the survey instrument to the next. Research question number two was addressed by providing a snapshot of self perceptions of career technical educators in 2010. Data was obtained from the educators through a modified version of the survey instrument used in the three citizen's surveys delivered by mail to educators. The researcher then addressed research question number three by comparing those educators' perceptions to the latest citizens' poll completed in 2008.

The following survey items were analyzed to answer the research questions.

1. Importance of offering career technical education

2. Benefit of offering career technical education to college bound students

3. Benefit of offering career technical education to students not likely to attend college

4. Benefit of offering career technical education to students with learning disabilities

5. Benefit of offering career technical education to higher performing students

6. Benefit of offering career technical education to students in general

7. High income encourages students to participate in career technical education

8. Importance of career and technical educators working closely with business and industry

<div align="center">Data Analysis</div>

The researcher used a two way chi square with Pearson phi coefficient for the longitudinal study (2003, 2005, and 2008 data) of citizens' perceptions. The researcher performed additional two way chi square analysis on each of the survey items that reached statistical significance. This was completed to determine between which years the significance in distribution of responses occurred. To determine if any relationships existed between citizens' (2008 data) and educators' perceptions, a two way chi square with Pearson phi coefficient was

used. The researcher used a one-way chi square with frequencies noted to get a snapshot view of educators' perceptions to address research question number two. The expected values for the one way chi square analysis were established using the 2008 citizen's result proportions.

Tabulated responses are reported in chi square or categorically based on ratings from participants. The longitudinal two way chi square data to address research question number one are reported in tables 3 through 19. The one way chi square snapshot data to address research question number two are presented in tables 20 through 27. The two way chi square analyses to address research question number three are reported in tables 28 through 35.

A two way chi square analysis with phi coefficient was conducted to evaluate whether there was a change in the general public's opinion regarding the importance of offering career technical education in Alabama's schools. Although there is an assumed negative public perception of career technical education, over 95% of respondents felt offering career technical education was either important or very important in Alabama's schools. Chi square results reported in Table 3 indicate that there was not a significant difference in the public's opinion of the importance of offering career technical education, Pearson χ^2 (8, $N = 1500$) = 13.424, $p = .098$, Phi coefficient .095, $p = .098$.

Table 3 *Importance of Offering Career Technical Education*

	Citizen's 2003	Citizen's 2005	Citizen's 2008
Very Important	323	341	368
	64.6%	68.2%	73.6%
Important	153	144	119
	30.6%	28.8%	23.8%
Not Very Important	12	10	5
	2.4%	2.0%	1.0%
Not At All Important	6	3	4
	1.2%	.6%	.8%
DK/NA	6	2	4
	1.2%	.4%	.8%
Total	500	500	500
	100%	100%	100%

A two way chi square analysis was conducted to evaluate the public's opinion of whether there was any benefit in offering career technical education to college bound students. On the basis of the data in Table 4, the researcher found there was a statistically significant difference in public opinion across the three administrations of the survey instrument, Pearson χ^2 (8, $N = 1500$) $= 19.129$, $p = .014$, Phi Coefficient .113, $p = .014$.

Table 4 *Benefit of Offering Career Technical Education to College Bound Students*

	Citizen's 2003	Citizen's 2005	Citizen's 2008
Great Deal	179	168	192
	35.8%	33.6%	38.4%
Some	190	206	181
	38%	41.2%	36.2%
Not Much	72	86	96
	14.4%	17.2%	19.2%
Not At All	41	32	26
	33%	6.4%	5.2%
DK/NA	18	8	5
	3.6%	1.6 %	1.0%
Total	500	500	500
	100%	100%	100%

Follow up pair-wise comparisons were conducted using additional chi square analysis to determine between which administrations of the citizen's survey the significant differences occurred in the distribution of responses. The data depicted in Table 5 represents the statistical difference in respondents opinion of whether there was a benefit to offering career technical education to college bound students, Pearson χ^2 (4, $N = 1000$) = 14.808, $p = .005$, Phi Coefficient .122, $p = .005$. This distribution occurred between the 2003 administration and the 2008 distribution with the greatest percentage difference being noted in the not at all category.

Table 5 *Benefit of Offering Career Technical Education to College Bound Students*

	Citizen's 2003	Citizen's 2008
Great Deal	179 35.8%	192 38.4%
Some	190 38%	181 36.2%
Not Much	72 14.4%	96 19.2%
Not At All	41 33%	26 5.2%
DK/NA	18 3.6%	5 1.0%
Total	500 100%	500 100%

Data reflected in Table 6, Pearson χ^2 (4, $N = 1000$) = 7.191, $p = .126$, Phi Coefficient .382, $p = .000$, and Table 7, Pearson χ^2 (4, $N = 1000$) = 5.077, $p = .279$, Phi Coefficient .071, $p = .279$, denote results from administrations where there was no significant difference in distribution of responses.

Table 6 *Benefit of Offering Career Technical Education to College Bound Students*

	Citizen's 2003	Citizen's 2005
Great Deal	179 35.8%	168 33.6%
Some	190 38%	206 41.2%
Not Much	72 14.4%	86 17.2%
Not At All	41 33%	32 6.4%
DK/NA	18 3.6%	8 1.6 %
Total	500 100%	500 100%

Table 7 *Benefit of Offering Career Technical Education to College Bound Students*

	Citizen's 2005	Citizen's 2008
Great Deal	168 33.6%	192 38.4%
Some	206 41.2%	181 36.2%
Not Much	86 17.2%	96 19.2%
Not At All	32 6.4%	26 5.2%
DK/NA	8 1.6 %	5 1.0%
Total	500 100%	500 100%

A two way chi square analysis was conducted to assess the public's opinion of the benefit of offering career technical education to students not likely to attend college. Although there was a large number of responses in the great deal and some categories there was no statistical significant differences across the three administrations, χ^2 (8, $N = 1500$) = 10.482, p = .233, Phi Coefficient .084, p = .233. A summary of the chi square analysis is presented in Table 8.

Table 8 *Benefit of Offering Career Technical Education to Students Not Likely to attend College*

	Citizen's 2003	Citizen's 2005	Citizen's 2008
Great Deal	334	367	359
	66.8%	73.4%	71.8%
Some	103	90	89
	20.6%	18.0%	17.8%
Not Much	29	24	28
	5.8%	4.8%	5.6%
Not At All	14	11	14
	2.8%	2.2%	2.8%
DK/NA	20	8	10
	4.0%	1.6 %	2.0%
Total	500	500	500
	100%	100%	100%

In each one of the three citizens' survey's respondents were asked their opinion of the benefit of offering career technical education to students with learning disabilities. According to the data in Table 9, there was not a statistically significant difference in the distribution of responses once a two way chi square analysis was performed, χ^2 (8, $N = 1500$), 9.153, p = .330, Phi Coefficient .078, p = .330. However, a conclusion can be drawn that the general public view career technical education as beneficial to students with disabilities because of the large proportions of responses in the great deal and some categories.

Table 9 *Benefit of Offering Career Technical Education to Students with Learning Disabilities*

	Citizen's 2003	Citizen's 2005	Citizen's 2008
Great Deal	269	279	277
	53.8%	55.8%	55.4%
Some	162	161	152
	32.4%	32.2%	30.4%
Not Much	33	36	26
	6.6%	7.2%	5.2%
Not At All	16	13	20
	3.2%	2.6%	4.0%
DK/NA	20	11	25
	4.0%	2.2 %	5.0%
Total	500	500	500
	100%	100%	100%

A two way chi square was conducted to assess the opinion of respondents as to whether they felt offering career technical education was beneficial to higher performing students. In each of the three administrations less than 22% of the respondents felt career technical education had no benefit for higher performing students. There was not a statistically significant difference in the distribution of responses between the three administrations of the survey, Pearson χ^2 (8, *N* =1500) = 7.071, *p* = .529, Phi Coefficient .069, *p* = .529. A summary of the analysis is presented in Table 10.

Table 10 *Benefit of Offering Career Technical Education to Higher Performing Students*

	Citizen's 2003	Citizen's 2005	Citizen's 2008
Great Deal	215	201	195
	43.0%	40.2%	39.0%
Some	183	170	186
	36.6%	34.0%	37.2%
Not Much	56	72	75
	11.2%	14.4%	15.0%
Not At All	32	38	29
	6.4%	7.6%	5.8%
DK/NA	14	19	15
	2.8%	3.8 %	3.0%
Total	500	500	500
	100%	100%	100%

A two way chi square was performed to determine if respondents felt offering career technical education to students in general was important. According to the data presented in Table 11, there was not a statistically significant difference in the distribution of responses across the three administrations of the survey. Pearson χ^2 (8, $N = 1500$) = 11.325, $p = .184$, Phi Coefficient .087, $p = .184$. However, we can conclude that over 92 percent of respondents in each administration felt career technical education was an important component of the high school curriculum for higher performing students.

Table 11 *Benefit of Offering Career Technical Education to Students in General*

	Citizen's 2003	Citizen's 2005	Citizen's 2008
Great Deal	249	226	245
	49.8%	45.2%	49.0%
Some	213	249	230
	42.6%	49.8%	46.0%
Not Much	18	12	15
	3.6%	2.4%	3.0%
Not At All	4	5	1
	.8%	1.0%	.2%
DK/NA	16	8	9
	3.2%	1.6 %	1.8%
Total	500	500	500
	100%	100%	100%

A two way chi square analysis was conducted to evaluate the public's opinion of whether knowledge of salary potential for career technical education completers would make a difference in student participation in high school career technical education programs. On the basis of the data in Table 12, the researcher found there was a statistically significant difference in public opinion across the three administrations of the survey instrument, Pearson χ^2 (6, $N = 1500$) = 24.368, $p = .000$, Phi Coefficient .127, $p = .000$.

Table 12 *High Income Encourages Students to Participate in Career Technical Education*

	Citizen's 2003	Citizen's 2005	Citizen's 2008
More Likely	356	363	344
	71.2%	72.6%	68.8%
Less Likely	70	58	44
	14%	11.6%	8.8%
No Difference	46	52	89
	9.2%	10.4%	17.8%
DK/NA	28	27	23
	5.6%	5.4 %	4.6%
Total	500	500	500
	100%	100%	100%

Follow up pair-wise comparisons were conducted using additional chi square analysis to determine between which administrations of the citizen's survey the significant differences occurred in the distribution of responses. The data depicted in Table 13 represents a statistical difference in respondents' opinion of whether knowledge of salary potential would make a difference in career technical education participation, Pearson χ^2 (3, $N = 1000$) = 20.322, $p =$ .000, Phi Coefficient .143, $p = .000$. This distribution occurred between the 2003 and the 2008 administrations where collectively 70 percent of respondents felt knowledge of salary would positively impact participation in career technical education.

Table 13 *High Income Encourages Students to Participate in Career Technical Education*

	Citizen's 2003	Citizen's 2008
More Likely	356 71.2%	344 68.8%
Less Likely	70 14%	44 8.8%
No Difference	46 9.2%	89 17.8%
DK/NA	28 5.6%	23 4.6%
Total	500 100%	500 100%

The data depicted in Table 14 represents a statistical difference in respondents opinion of whether knowledge of salary potential would make a difference in career technical education participation, Pearson χ^2 (3, $N = 1000$) = 12.461, $p = .006$, Phi Coefficient .112, $p = .006$. This distribution occurred between the 2005 administration and the 2008 administration where collectively 70.7 percent of respondents felt knowledge of salary would positively impact participation in career technical education.

Table 14 *High Income Encourages Students to Participate in Career Technical Education*

	Citizen's 2005	Citizen's 2008
More Likely	363	344
	72.6%	68.8%
Less Likely	58	44
	11.6%	8.8%
No Difference	52	89
	10.4%	17.8%
DK/NA	27	23
	5.4 %	4.6%
Total	500	500
	100%	100%

Data reflected in Table 15, Pearson χ^2 (3, $N = 1000$) = 1.579, $p = .664$, Phi Coefficient .040, $p = .664$, denote results from administrations where there were no significant differences in distribution of responses.

Table 15 *High Income Encourages Students to Participate in Career Technical Education*

	Citizen's 2003	Citizen's 2005
More Likely	356	363
	71.2%	72.6%
Less Likely	70	58
	14%	11.6%
No Difference	46	52
	9.2%	10.4%
DK/NA	28	27
	5.6%	5.4 %
Total	500	500
	100%	100%

A two way chi square analysis was conducted to evaluate the public's opinion of whether career technical educators should involve local business and industry in their programs. A summary of the data is presented in Table 16. The researcher found there was a statistically significant difference in public opinion across the three administrations of the survey instrument, Pearson χ^2 (8, $N = 1500$) = 17.776, $p = .023$, Phi Coefficient .109, $p = .023$. In each of the three administrations over 96 percent of the respondents felt career technical education instructors should work with local business and industry.

Table 16 *Importance of Career Technical Education Instructors Working with Local Business/Industry*

	Citizen's 2003	Citizen's 2005	Citizen's 2008
Very Important	360	389	380
	72%	77.8%	76%
Important	132	104	101
	26.4%	20.8%	20.2%
Not Very Important	6	3	9
	1.2%	.6%	1.8%
Not At All Important	0	1	5
	.0%	.2%	1.0%
DK/NA	2	3	5
	.4%	.6 %	1.0%
Total	500	500	500
	100%	100%	100%

Follow up pair-wise comparisons were conducted using additional chi square analysis to determine between which administrations of the citizen's survey the significant differences occurred in the distribution of responses. The data depicted in Table 17 represents the statistical difference in respondents opinion of the importance of career technical educators working with local business and industry in program development, Pearson χ^2 (4, $N = 1000$) = 11.551, $p =$ .021, Phi Coefficient .107, $p = .021$. This distribution occurred between the 2003 administration and the 2008 administration where the greatest differences in responses occurred within the very important and important category.

Table 17 *Importance of Career Technical Education Instructors Working with Local Business/Industry*

	Citizen's 2003	Citizen's 2008
Very Important	360	380
	72%	76%
Important	132	101
	26.4%	20.2%
Not Very Important	6	9
	1.2%	1.8%
Not At All Important	0	5
	.0%	1.0%
DK/NA	2	5
	.4%	1.0%
Total	500	500
	100%	100%

Data reflected in Table 18, Pearson χ^2 (4, $N = 1000$) = 6.645, $p = .156$, Phi Coefficient .082, $p = .156$, and Table 19, Pearson χ^2 (4, $N = 1000$) = 6.316, $p = .177$, Phi Coefficient .079, $p = .177$, denote results from administrations where there was no significant difference in distribution of responses.

Table 18 *Importance of Career Technical Education Instructors Working with Local Business/Industry*

	Citizen's 2003	Citizen's 2005
Very Important	360 72%	389 77.8%
Important	132 26.4%	104 20.8%
Not Very Important	6 1.2%	3 .6%
Not At All Important	0 .0%	1 .2%
DK/NA	2 .4%	3 .6 %
Total	500 100%	500 100%

Table 19 *Importance of Career Technical Education Instructors Working with Local Business/Industry*

	Citizen's 2005	Citizen's 2008
Very Important	389 77.8%	380 76%
Important	104 20.8%	101 20.2%
Not Very Important	3 .6%	9 1.8%
Not At All Important	1 .2%	5 1.0%
DK/NA	3 .6 %	5 1.0%
Total	500 100%	500 100%

A chi square analysis was performed to assess the opinion of career technical education professionals regarding the importance of offering career technical education in Alabama high schools. Expected values were set using the response distribution proportions from the 2008 Citizen's survey conducted by Southern Opinion Research, Inc. There were 99.3 percent of the responding educators who felt offering career technical education was either important or very important in the high school curriculum. There was also a statistical significance in the distribution of responses regarding the importance of offering career technical education in Alabama high schools. $\chi^2 = (2, N = 296) = 179.507, p = .000$. A summary of the data is presented in Table 20.

Table 20 *Importance of Offering Career Technical Education*

	Educator's 2010
Very Important	286
	96.6%
Important	8
	2.7%
Not Very Important	2
	.7%
Not At All Important	0
	0%
DK/NA	0
	0%
Total	296
	100%

A chi square analysis was performed to assess the opinion of career technical education professionals regarding the benefit of offering career technical education to college bound students in Alabama high schools. Expected values were set using the response distribution proportions from the 2008 Citizen's survey conducted by Southern Opinion Research, Inc. Seventy nine percent of the educators responding felt offering career technical education to college bound students benefited those students a great deal. There was a statistical significance in the distribution of responses regarding the benefit of offering career technical education to college bound students in Alabama high schools. $\chi^2 = (4, N = 296) = 502.543, p = .000$. A summary of the data is presented in Table 21.

Table 21 *Benefit of Offering Career Technical Education to College Bound Students*

	Educator's 2010
Great Deal	234
	79.1%
Some	58
	19.6%
Not Much	1
	.33%
Not At All	1
	.33%
DK/NA	2
	.64%
Total	296
	100%

A chi square analysis was performed to assess the opinion of career technical education professionals regarding the benefit of offering career technical education in Alabama high schools to students not likely to attend college. Expected values were set using the response distribution proportions from the 2008 Citizen's survey conducted by Southern Opinion Research, Inc. Less than one percent of the educators responding felt offering career technical education was not much of a benefit to students who were not likely to attend college. There was a statistical significance in the distribution of responses regarding the benefit of offering career technical education in Alabama high schools to students not likely to attend college. $\chi^2 = (2, N = 296) = 69.587, p = .000$. A summary of the data is presented in Table 22.

Table 22 *Benefit of Offering Career Technical Education to Students Not Likely to Attend College*

	Educator's 2010
Great Deal	277
	93.6%
Some	17
	5.7%
Not Much	2
	.7%
Not At All	0
	0%
DK/NA	0
	0%
Total	296
	100%

A chi square analysis was performed to assess the opinion of career technical education professionals regarding the benefit of offering career technical education to students with learning disabilities in Alabama high schools. Expected values were set using the response distribution proportions from the 2008 Citizen's survey conducted by Southern Opinion Research, Inc. A majority (96.2 %) of the educators responding felt offering career technical education was either of some benefit or was of great benefit to students with learning disabilities. There was a statistical significance in the distribution of responses regarding the benefit of offering career technical education to students with disabilities in Alabama high schools. $\chi^2 = (4, N = 296) = 42.186$, $p = .000$. A summary of the data is presented in Table 23.

Table 23 *Benefit of Offering Career Technical Education to Students with Learning Disabilities*

	Educator's 2010
Great Deal	215
	72.6%
Some	70
	23.6%
Not Much	7
	2.4%
Not At All	3
	1%
DK/NA	1
	.4%
Total	296
	100%

A chi square analysis was performed to assess the opinion of career technical education professionals regarding the benefit of offering career technical education to higher performing students in Alabama high schools. Expected values were set using the response distribution proportions from the 2008 Citizen's survey conducted by Southern Opinion Research, Inc. Only two percent of respondents felt career technical education was of little benefit to higher performing students. There was a statistical significance in the distribution of responses regarding the importance of offering career technical education to higher performing students in Alabama high schools. $\chi^2 = (3, N = 296) = 203.761, p = .000$. A summary of the data is presented in Table 24.

Table 24 *Benefit of Offering Career Technical Education to Higher Performing Students*

	Educator's 2010
Great Deal	233
	78.7%
Some	56
	18.9%
Not Much	6
	2%
Not At All	0
	0%
DK/NA	1
	.4%
Total	296
	100%

A chi square analysis was performed to assess the opinion of career technical education professionals regarding the benefit of offering career technical education to students in general enrolled in Alabama high schools. Expected values were set using the response distribution proportions from the 2008 Citizen's survey conducted by Southern Opinion Research, Inc. According to the data cited in Table 23, 99.3 percent of the educators responding felt offering career technical education carried either some or a great deal of benefit to students in general within Alabama's schools. There was a statistical significance in the distribution of responses regarding the importance of offering career technical education to students in general enrolled in Alabama high schools. $\chi^2 = (2, N = 296) = 204.436, p = .000$. A summary of the data is presented in Table 25.

Table 25 *Benefit of Offering Career Technical Education to Students in General*

	Educator's 2010
Great Deal	268
	90.5%
Some	26
	8.8%
Not Much	2
	.7%
Not At All	0
	0%
DK/NA	0
	0%
Total	296
	100%

A chi square analysis was performed to assess the opinion of career technical education professionals regarding whether knowledge of salary potential would affect student participation in career technical education programs in Alabama. Expected values were set using the response distribution proportions from the 2008 Citizen's survey conducted by Southern Opinion Research, Inc. Two-thirds (66.9 %) of the educators responding felt students would be more likely to participate if they had prior knowledge of salary earning potential of completers. However, a relatively large number of respondents (30.4 %) felt that a student having prior knowledge of salary earning potential would make no difference in participation within career technical education programs. There was a statistical significance in the distribution of responses regarding the opinion of whether prior knowledge of salary potential for career technical completers affected participation in high school programs. $\chi^2 = (3, N = 296) = 51.168, p = .000$. A summary of the data is presented in Table 26.

Table 26 *High Income Encourages Students to Participate in Career Technical Education*

Educator's 2010		
More Likely	198	
	66.9%	
Less Likely	2	
	.7%	
No Difference	90	
	30.4%	
DK/NA	6	
	2%	
Total	296	
	100%	

A chi square analysis was performed to assess the opinion of career technical education professionals regarding the importance of educators in career technical education working with local business and industry. Expected values were set using the response distribution proportions from the 2008 Citizen's survey conducted by Southern Opinion Research, Inc. Over 98 percent of the educators responding felt working with local business and industry was either important or very important for career technical educators. However, there was not a statistical significance in the distribution of responses dealing with the importance of career technical education instructors working with local business and industry. $\chi^2 = (3, N = 296) = 7.285, p = .063$. A summary of the data is presented in Table 27.

Table 27 *Importance of Career Technical Education Instructors working with local Business/Industry*

	Educator's 2010	
Very Important	241	
	81.4%	
Important	50	
	16.9%	
Not Very Important	4	
	1.4%	
Not At All Important	0	
	.0%	
DK/NA	1	
	.3%	
Total	296	
	100%	

A two way chi square analysis was conducted to determine if there was a relationship between the public's opinion and educator's opinion of the importance of offering career technical education in Alabama's high schools. On the basis of the data in Table 28, the researcher found there was a statistically significant difference in the distribution of responses between the two groups, Pearson χ^2 (4, $N = 796$) = 68.822, $p = .000$, Phi Coefficient .294, $p = .000$. The greatest variation in responses between the two groups was in their opinion of whether career technical education was important or very important.

Table 28 *Importance of Offering Career Technical Education*

	Educator's 2010	Citizen's 2008
Very Important	286	368
	96.6%	73.6%
Important	8	119
	2.7%	23.8%
Not Very Important	2	5
	.7%	1.0%
Not At All Important	0	4
	0%	.8%
DK/NA	0	4
	0%	.8%
Total	296	500
	100%	100%

A two way chi square analysis was conducted to assess any relationship that may exist between the public's opinion and career technical educators' opinion of whether respondents felt there was any benefit in offering career technical education to college bound students. The data cited in Table 29 reveals that there was a statistically significant difference in the distribution of responses between the two groups, Pearson χ^2 (4, $N = 796$) = 141.960, $p = .000$, Phi Coefficient .422, $p = .000$. Less than one percent of educators responded that career technical education was of little or no benefit to college bound students; however, almost 25 percent of citizens responding felt career technical education was of little to no benefit to college bound students.

Table 29 *Benefit of Offering Career Technical Education to College Bound Students*

	Educator's 2010	Citizen's 2008
Great Deal	234	192
	79.1%	38.4%
Some	58	181
	19.6%	36.2%
Not Much	1	96
	.33%	19.2%
Not At All	1	26
	.33%	5.2%
DK/NA	2	5
	.64%	1.0%
Total	296	500
	100%	100%

A two way chi square analysis was conducted to evaluate any relationship that might exist between the public's opinion and educator's opinion of whether there was any benefit in offering career technical education to students not likely to attend college. The data in Table 30 indicate that there was a statistically significant difference in opinions between the two groups, Pearson χ^2 (4, $N = 796$) = 58.006, $p = .000$, Phi Coefficient .270, $p = .000$. Of the educators that responded 93.6 percent felt career technical education offered a great deal of benefit to students not likely to attend college; however, only 71.8 percent of citizens responding had the same opinion.

Table 30 *Benefit of Offering Career Technical Education to Students Not Likely to Attend College*

	Educator's 2010	Citizen's 2008
Great Deal	277	359
	93.6%	71.8%
Some	17	89
	5.7%	17.8%
Not Much	2	28
	.7%	5.6%
Not At All	0	14
	0%	2.8%
DK/NA	0	10
	0%	2.0%
Total	296	500
	100%	100%

A two way chi square analysis was conducted to determine if a relationship exists between the public's opinion and educator's opinion of whether career technical education is beneficial to students with learning disabilities. On the basis of the data in Table 31, the researcher found there was a statistically significant difference in the distribution of responses between the two groups, Pearson χ^2 (4, $N = 796$) = 33.691, $p = .000$, Phi Coefficient .206, $p = .000$. The greatest disparity in responses occurred in the great deal category. From those responding, 72.6 percent of educators felt career technical education programs were of a great deal of benefit to students with learning disabilities whereas only 55.4 percent of citizens had that same opinion.

Table 31 *Benefit of Offering Career Technical Education to Students with Learning Disabilities*

	Educator's 2010	Citizen's 2008
Great Deal	215	277
	72.6%	55.4%
Some	70	152
	23.6%	30.4%
Not Much	7	26
	2.4%	5.2%
Not At All	3	20
	1%	4.0%
DK/NA	1	25
	.4%	5.0%
Total	296	500
	100%	100%

A two way chi square analysis was conducted to determine if a relationship exists between the public's opinion and educator's opinion of whether respondents felt there was any benefit in offering career technical education to higher performing students. The data cited in Table 32 indicates that there was a statistically significant difference in the distribution of responses between the two groups, Pearson χ^2 (4, $N = 796$) = 129.458, $p = .000$, Phi Coefficient .403, $p = .000$. Only 20.8 percent of citizens responding felt career technical education had little to no benefit to higher performing students. However, only 39 percent of citizens felt career technical education had a great deal of benefit to higher performing students. This is in contrast to two percent of educators' opinions of career technical education being of little to no benefit and 78.7 percent of educators thinking career technical education is of a great deal of benefit to higher performing students.

Table 32 *Benefit of Offering Career Technical Education to Higher Performing Students*

	Educator's 2010	Citizen's 2008
Great Deal	233 78.7%	195 39%
Some	56 18.9%	186 37.2%
Not Much	6 2%	75 15%
Not At All	0 0%	29 5.8%
DK/NA	1 .4%	15 3%
Total	296 100%	500 100%

A two way chi square analysis was conducted to determine if a relationship exists

between the public's opinion and educator's opinion of whether respondents felt there was any

benefit in offering career technical education to students in general. According to the data in

Table 33, the researcher determined there was a statistically significant difference in the

distribution of responses of the two groups, Pearson χ^2 (4, $N = 796$) = 140.480, $p = .000$, Phi

Coefficient .420, $p = .000$. The greatest disparity in responses occurred within the great deal and

some categories. Only 49 percent of citizens felt career technical education was of a great deal of

benefit to students in general; however, 90.5 percent of educators felt career technical education

was beneficial to students in general. Forty six percent of citizens felt career technical education

was of some benefit to students in general, while only 8.8 percent of educators responded in that

category.

Table 33 *Benefit of Offering Career Technical Education to Students in General*

	Educator's 2010	Citizen's 2008
Great Deal	268 90.5%	245 49%
Some	26 8.8%	230 46%
Not Much	2 .7%	15 3%
Not At All	0 0%	1 .2%
DK/NA	0 0%	9 1.8%
Total	296 100%	500 100%

A two way chi square analysis was conducted to determine if a relationship exists between the public's opinion and educator's opinion of whether prior knowledge of salary potential for career technical education completers encourages participation. On the basis of the data in Table 34, the researcher found there was a statistically significant difference in the distribution of responses between the two groups, Pearson χ^2 (3, $N = 796$) = 37.852, $p = .000$, Phi Coefficient .218, $p = .000$. The greatest disparity in responses occurred in the no difference category. Just over thirty percent of educators responding felt that prior knowledge of salary potential would have no effect on student participation in career technical education programs; however, only 17.8 percent of citizens had that same opinion.

Table 34 *High Income Encourages Students to Participate in Career Technical Education*

	Educator's 2010	Citizen's 2008
More Likely	198	344
	66.9%	68.8%
Less Likely	2	44
	.7%	8.8%
No Difference	90	89
	30.4%	17.8%
DK/NA	6	23
	2%	4.6%
Total	296	500
	100%	100%

A two way chi square analysis was performed to assess the opinion of career technical education professionals and Alabama citizens regarding the importance of educators in career technical education working with local business and industry. Over 98 percent of the educators responding and 96.2 percent of citizens responding felt working with local business and industry was either important or very important for career technical educators. There was not a statistical significance in the distribution of responses between the two groups regarding the importance of career technical education instructors working with local business and industry. Pearson $\chi^2 = (4, N = 796) = 6.043, p = .196$, Phi Coefficient .087, $p = .196$. A summary of the data is presented in Table 35.

Table 35 *Importance of Career Technical Education Instructors Working with Local Business/Industry*

	Educator's 2010	Citizen's 2008
Very Important	241 81.4%	380 76%
Important	50 16.9%	101 20.2%
Not Very Important	4 1.4%	9 1.8%
Not At All Important	0 .0%	5 1%
DK/NA	1 .3%	5 1%
Total	296 100%	500 100%

Summary

Chapter 4 provided a review of the results from the non-parametric statistical analysis performed to answer the research questions. The responses to the survey items were categorical; therefore, the researcher used chi square analyses to determine if there were any statistically significant differences in responses. There were three research questions asked and eight survey items analyzed in an attempt to answer each of the research questions.

The researcher performed a longitudinal study using existing data from surveys administered in 2003, 2005 and 2008 to answer research question number one: What are the perceptions of career technical education in the State of Alabama?

From the data cited, a conclusion can be drawn that the perception of Alabama citizens regarding career technical education was positive overall. The first survey item analyzed revealed that in each year of the study over 95 percent of the respondents felt it was either important or very important to offer career technical education in Alabama's schools. There were some statistically significant differences in three of the survey items analyzed. The first was the citizens' opinion of whether career technical education benefited college bound students. The statistical difference occurred between the 2003 and the 2008 administration with the greatest percentage of difference being noted in the not at all category. The second statistically significant difference occurred when respondents were asked if knowledge of salary potential for career technical education completers had an impact on program participation. This distribution occurred between the 2003 and 2008 administration and then again in the 2005 and 2008 administration. In each administration just over 70 percent of respondents felt knowledge of salary earning potential would positively affect enrollment in career technical education. However, there were differences in the less likely and no difference categories. The third

statistically significant difference occurred when respondents were asked if career technical educators needed to work closely with local business and industry. This distribution occurred between the 2003 and 2008 administration where the greatest differences in responses occurred within the very important and important category.

The researcher conducted one way chi square analysis on survey responses gathered from career technical education professionals in 2010. The same eight survey items were analyzed to determine the self perceptions of career technical educators in Alabama. This analysis was performed to answer research question number two.

The researcher found that in seven of the eight analyses there was a statistical significance in the distribution of responses from the expected proportions. In each of the seven analyses, career technical education professionals ranked career technical education as very important to offer in high school or very beneficial to all named students groups. The only analysis that did not reach statistical significance was regarding the importance of career technical education professionals working closely with local business and industry. The educators surveyed felt that working with local business and industry was either important or very important; however, this did not differ significantly from the expected proportions.

The researcher performed a two way chi square analysis to answer research question number three: What is the relationship, if any, between the perceptions of career technical education and the self perception of career technical educators?

A two way chi square analysis was performed for each of same eight survey items as previously used. The researcher compared the responses from the 2008 Citizen's survey to the data collected from career technical education professionals in 2010. In seven of the eight analyses there was a statistically significant difference in the distribution of responses. In each of

the seven analyses the data indicated that both citizens and educators felt career technical education was both important and beneficial; however, the percentages recorded for educators were higher than those of citizens. In the eighth analysis, both of the two groups felt it was important for local business and industry to be involved in career technical education programs; therefore, there was not a statistical significant difference in distribution of responses.

In conclusion, the only statistically significant difference in the longitudinal study occurred when respondents were asked about the benefit of career technical education to college bound students, whether income potential has an impact on career technical participation, and the importance of career technical education professionals working with local business and industry. The only analysis that did not produce a statistically significant difference in the snapshot of educators' perceptions as well as the comparison of educators' and citizens' opinions of career technical education was within the survey item dealing with the importance of working with local business and industry. The summary of findings, conclusions, implications, and recommendations for further studies is presented in Chapter 5.

Chapter 5

Conclusions, Implications, Recommendations, and Summary

Introduction

This chapter provides a summary of the study, research findings and the conclusions drawn by the researcher about the perceptions of career technical education in the State of Alabama. There is a presumed negative perception or stigma associated with the field of career technical education (Brown, 2003). This can be largely attributed to the period of time in which today's students' parents were in high school. During the 1960's through the 1980's Federal legislation shifted its focus from purely occupational training to occupational training and academic achievement with an emphasis on special needs students (Hayward & Benson, 1993).

Over the last ten years there have been initiatives from the State Department of Education, Career Technical Education section to change the negative perception often associated with career technical education. Those initiatives have provided local education agencies across the state with a communication and marketing campaign that was developed based upon research findings (Alabama State Department of Education, 2006). This study examined perceptions of career technical education within the State of Alabama.

The demand for skilled labor is increasing rapidly within the State of Alabama; this study will help to validate the need for career technical education. The review of literature revealed that leaders in economic development realize that career technical education is a viable component of workforce development for the State. This study also provided an overview of perceptions to see if there has been a statistically significant change over the past seven years.

The information gained by this study will also be provided to the State Department of Education, Career Technical Education section to enhance communications and marketing plans for career technical education.

Research Questions

The following research questions were used in this study:

1. What are the perceptions of career technical education in the State of Alabama?

2. What are the self perceptions of career technical educators in the State of Alabama?

3. What is the relationship, if any, between the perceptions of career technical education and the self perceptions of career technical educators?

Conclusions

The target population for the citizen surveys conducted in 2003, 2005, and 2008 was random Alabama citizens. In each administration of the telephone based survey a total of 500 randomly selected registered Alabama voters were polled. The target population for the surveys conducted by the researcher was random career technical education professionals within the State of Alabama. The researcher received a 59.2 percent response rate with 296 completed surveys returned that were compiled for analysis.

A series of chi square analyses were performed on the existing citizen survey data to provide a longitudinal perspective of the opinion of career technical education. The researcher performed analysis on eight different survey items to determine if there was a significant difference in the distribution of responses across the three administrations.

From the data cited, a conclusion can be drawn that the perception of Alabama citizen's regarding career technical education was overall positive. The first survey item analyzed revealed that in each year of the study over 95 percent of the respondents felt it was either

important or very important to offer career technical education in Alabama's schools, Pearson χ^2 (8, $N = 1500$) = 13.424, $p = .098$, Phi coefficient .095, $p = .098$.

There was a statistically significant difference in the distribution of responses for three of the survey items analyzed. The first was the citizen's opinion of whether career technical education benefited college bound students, Pearson χ^2 (8, $N = 1500$) = 19.129, $p = .014$, Phi Coefficient .113, $p = .014$. The statistical difference occurred between the 2003 and the 2008 administration with the greatest percentage of difference being noted in the not at all category.

The second statistically significant difference occurred when respondents were asked if knowledge of salary potential for career technical education completers had an impact on program participation, Pearson χ^2 (6, $N = 1500$) = 24.368, $p = .000$, Phi Coefficient .127, $p = .000$. This distribution occurred between the 2003 and 2008 administration and then again in the 2005 and 2008 administration. In each administration just over 70 percent of respondents felt knowledge of salary earning potential would positively affect enrollment in career technical education. However, there were differences in the less likely and no difference categories.

The third statistically significant difference occurred when respondents were asked if career technical educators needed to work closely with local business industry, Pearson χ^2 (8, $N = 1500$) = 17.776, $p = .023$, Phi Coefficient .109, $p = .023$. This distribution occurred between the 2003 and 2008 administration where the greatest differences in responses occurred within the very important and important category.

The researcher conducted a one way chi square analysis on survey responses gathered from career technical education professionals in 2010. The same eight survey items were analyzed to determine the self perceptions of career technical educators in Alabama. This analysis was performed to answer research question number two.

The researcher found that in seven of the eight analyses there was a statistical significance in the distribution of responses from the expected proportions. In each of the seven analyses, career technical education professionals ranked career technical education as very important to offer in high school or very beneficial to all named students groups. The only analysis that did not reach statistical significance dealt with the importance of career technical education professionals working closely with local business and industry, $\chi^2 = (3, N = 296) = 7.285, p = .063$. The educators surveyed felt that working with local business and industry was either important or very important; however, this did not differ significantly from the expected proportions.

The researcher performed a two way chi square analysis to answer research question number three. What is the relationship, if any, between the perceptions of career technical education and the self perception of career technical educators?

A two way chi square analysis was performed for each of same eight survey items as previously used. The researcher compared the responses from the 2008 Citizen's survey to the data collected from career technical education professionals in 2010. In seven of the eight analyses there was a statistically significant difference in the distribution of responses. In each of the seven analyses the data indicated that both citizens and educators felt career technical education was both important and beneficial; however, the percentages recorded for educators were higher than those of citizens. In the eighth analysis, Pearson $\chi^2 = (4, N = 796) = 6.043, p = .196$, Phi Coefficient .087, $p = .196$, both of the two groups felt in was important for local business and industry to be involved in career technical education programs; therefore, there was not a statistical significant difference in distribution of responses.

As we address the perception of career technical education we must also address the purpose of career technical education within the larger scope of the American education system. After a review of literature, we find the overall purpose of education is to ensure that the United States has a skilled workforce and engaged citizenry to keep our nation, economy, communities, and families healthy and productive (Brand, 2008). Miller (1985) noted vocational education makes education purposeful and useful for the students' role in life. There are several added benefits, such as making education more meaningful and increasing the wage earning capacity of both girls and boys.

Research question number one asked about the perception of career technical education in the State. As a result of the compiled longitudinal study we can conclude that the overall perception of career technical education is positive and generally acknowledged as a major component of the overall education system.

It is noteworthy that we mention the dramatic shift in opinion of the benefit of career technical education to college bound students. In the 2003 administration of the survey 33 percent of respondents said career technical education was of no benefit to college bound students. That opinion changed dramatically between the 2003 and 2008 survey. In 2008, only 5.2 percent of the respondents felt career technical education was of no benefit to a college bound students. This shift in opinion may be attributed to the communication and marketing campaign started after the 2003 survey by the Alabama State Department of Education.

The 2003 mindset possibly stems from a period of time when federal legislation contained two main goals for vocational education (1) the improvement of vocational programs and (2) better services and increased access to vocational education for students with special needs (Lynch, 2000). This legislation prompted a public perception that career technical

education was a program for special needs students or lower functioning students. The positive shift in 2008 responses may be directly attributed to the fact that career technical education in the State of Alabama has undergone significant change over the last decade (Key, 2008). There are more technology driven programs in the now high wage, high skill, and high demand occupational areas and this is reducing the stigma associated with career technical education (National Association of State Directors of Career Technical Education, 2001).

Research question number two asked about the perceptions of career technical education from educators within the field. In seven of the eight analyses performed there was a statistically significant difference in distribution of responses from the established expected proportion of responses. Career technical education professionals responded that their programs were very important and were of a great deal of benefit to all student groups mentioned. The career technical educators felt their programs were a vital component of the overall education system.

This passionate attitude may stem from the original federal legislation which established career technical education programs. The passage of the Smith Hughes Act mandated segregation of academic and vocational students and curriculum. The impact of this separation has been felt through subsequent decades by the creation of separate teacher training programs, separate teacher organizations, and separate student organizations. Even within vocational education, the impetus of the original Act has led to splintered programs (Hayward & Benson, 1993; Lynch 2000). In recent years, this has lead to career technical educators having to defend their programs to coworkers and education administrators regarding the impact they have on the students and the economy.

The third research question dealt with the relationship, if any, between the citizen's opinions and the educator's opinion of career technical education. In all eight analyses both

groups' opinion was positive; however, in seven of the analyses the educators ranked their responses higher either in importance or benefit to students. There is an existing positive relationship between the two groups for each of the eight analyses; however, educators seemed to more adamate in their responses. For example, in the analysis regarding the benefit of offering career technical education to students in general 49 percent of citizens felt career technical education was a great deal of benefit compared to 90.5 percent of educators. However, only 3 percent of citizens responded negatively toward the benefit of career technical education.

The following hypothesis was presented in Chapter One: there is a statistically significant difference between Alabama citizens and career technical educators regarding their perception of career technical education. From the findings within this study we can conclude that the hypothesis statement is true; however, the significance is not necessarily negative. In general, the educators and citizens perceptions of career technical education were positive. The difference occurred in the degree in which the respondents felt career technical education was either important or beneficial to different student groups. Educators were more passionate in their responses.

<center>Implications</center>

The communications and marketing plan developed by the Alabama Department of Education, Career Technical Education section has made a positive impact on the public's perception of career technical education. This plan needs to be continued and expanded to include education professionals not directly associated with career technical education.

The current economy has required superintendents and local boards of education to scrutinize every line item in their budgets. Elective courses such as those associated with career technical education often become the target of cuts. This can be attributed to a lack of thorough

<center>110</center>

understanding of the role career technical education plays in workforce and economic development across the state. Unless education decision makers and academic educators understand the role of career technical education in our society, we may continue to see program cuts and further loss of enrollment across the state.

Recommendations

The following recommendations for future research are offered to continue this study of perception of career technical education. Career technical education is being affected nationwide by new federal legislation and the realization that the programs must meet the academic rigor of accountability mandates, be relevant to the learner and workforce as well as continue to develop and build relationships with academic educators, business and industry professionals and the public.

1. This study should be replicated in other states. By using one particular state in a region of the United States it may be difficult to make generalizations nationwide.

2. This study should be replicated using public and educators perceptions captured during the same calendar year. This is a limitation of this study because the communication and marketing plan put in place after the 2003 survey made a difference over a two year period in several of the analysis; therefore, it may have affected public opinion between 2008 and 2010.

3. The study should be replicated comparing career technical education teachers' opinions with the opinion of non-career technical educations teachers and administrators. The researcher believes that teachers make a huge impact on their students' life and career decisions. Core academic teachers may not possess a positive

opinion of career technical education and consequently may not encourage students to participate.

Summary

Throughout the literature review, we find that career technical education has had a diverse history and enjoyed periods of growth and support as well as decline. In each reference, career technical education seemed to revitalize itself and adapt to the changing times either through federal and state mandates or through the tenacity of professionals working in the field.

Today, career technical education is a critical and integral component of the workforce development system, providing the essential foundation for a thriving economy (National Association Secondary Career Technical Directors, 2001). Alabama's CTE programs are helping middle and high school students to stay in school, identify their unique talents, select the career path that ignites their interest and passion, and graduate (Key, 2008). Career technical education has a significant impact on the education system in Alabama with 233,051 high school students participating in programs that are focused on various career clusters (Alabama State Department of Education, 2008).

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Appendices

Appendix A

Survey and Existing Data Approval Letter

Darin Baldwin
331 Beehive Road
Auburn, AL 36830
baldwindl@chambersk12.org

Sherry A. Key
Director of Career and Technical Education
Alabama State Department of Education
P.O. Box 302101
Montgomery, AL 36130-2101

Dear Ms. Key:

I am writing to request approval to survey the educators and participants who will be in attendance during the Alabama Association for Career and Technical Education conference June 16-18 in Birmingham, AL. The survey will be part of my dissertation project entitled "An Analysis of Perceptions of Career Technical Education in Alabama Schools." The goal of the research project is to assess perceptions of public citizens and career technical educators. The review of the literature has suggested negative perceptions of Career Technical Education have much to do with the perceptions of teachers within these courses. Additionally, the data derived from this research could assist the state in marketing and communications efforts in the future. This data will be provided to your office upon its completion.

I would like further approval to contact your appropriate staff member to schedule the best time to survey participants during the conference. I am requesting assistance from your designated staff members to expedite the survey process. Each survey will take approximately six minutes to complete. During the surveying process, time will be devoted to explaining the purpose of this study and assuring participants of the confidentiality of their responses. The survey instrument will not include the name, address, or telephone number of the respondents. Participation in this survey process is completely voluntary and participation may be discontinued at any time without penalty. The survey instruments, charts, and related materials will remain the possession of the researcher and your selected staff members.

If this is permissible, please sign below indicating the name of the appropriate staff member(s) to assist me.

If additional information is needed, please let me know.

Sincerely,

Darin Baldwin

Name of Appropriate staff member: _Ed Crenshaw_____

Approved:_____ Date: _5/7/10_____
    Sherry A. Key, State Director of Career Technical Education

Appendix B

Research Approval by Institutional Review Board

August 16, 2010

MEMORANDUM TO: Mr. Darin Baldwin
                              Department of Educational Foundations, Leadership, and Technology

PROTOCOL TITLE: "An Analysis of Perceptions of Career Technical Education in Alabama's Schools"

IRB FILE NO.:   10-188 EX 1007

APPROVAL DATE: July 15, 2010
EXPIRATION DATE: July 14, 2011

The referenced protocol was approved "Exempt" by the IRB under 45 CFR 46.101 (b) (2):

> "Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless:
>
> (i)   information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and
>
> (ii)   any disclosure of the human subjects' response outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation."
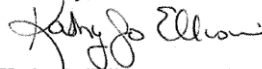
You should retain this letter in your files, along with a copy of the revised protocol and other pertinent information concerning your study. If you anticipate a change in any of the procedures authorized in this protocol, you must request and receive IRB approval prior to implementation of any revision. Please reference the above IRB file number in any correspondence regarding this project.

If you will be unable to file a Final Report on your project before July 14, 2011, you must submit a request for an extension of approval to the IRB no later than June 21, 2011. If your IRB authorization expires and/or you have not received written notice that a request for an extension has been approved prior to July 14, 2011 you must suspend the project immediately and contact the Office of Research Compliance.

<u>A Final Report will be required to close your IRB project file</u>. Note that only copies of the IRB-approved information letter can be used to consent participants.

If you have any questions concerning this Board action, please contact the Office of Research Compliance.

Sincerely,

Kathy Jo Ellison, RN, DSN, CIP
Chair of the Institutional Review Board
for the Use of Human Subjects in Research

cc: Ms. Sherida Downer
      Dr. James Witte

Appendix C

Permission to Access Alabama Association for Career Technical Education Membership Mailing

List

Darin Baldwin
331 Beehive Road
Auburn, AL 36830

Alabama Association for Career Technical Education
Ann Gilmore, Executive Director
660 Adams Avenue, Suite 154
Montgomery, AL 36104

Re: Permission to access membership mailing lists

Dear Ms. Gilmore:

I am pursuing my doctorate degree at Auburn University. As part of my dissertation, I would like to survey professionals in the field of career technical education within the State of Alabama. I will be analyzing the self perceptions of career technical education from those professionals.

Ms. Sherry Key, State CTE Director, has granted me access to existing data from citizen's surveys compiled for the State Department of Education by Southern Opinion Research, Inc. I hope to use that data along with the data gathered from career technical educators to determine if there is a relationship in the perceptions of career technical education between the two groups.
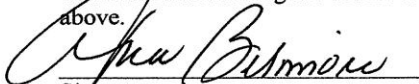
If granted access to your mailing list, I will send out a one-time written survey to solicit anonymous feedback. The survey will be accompanied by an informational letter stating the purpose of the survey as well as directions for completion. If your members choose not to respond there will no penalty and no follow up from me. All they would do is simply discard the mailing.

If you would grant access to your membership mailing list, please sign your approval below. If not, I understand and thank you for your time.

Sincerely,

Darin Baldwin

I, _Ann Gilmore_____, Executive Director of the Alabama Association for Career Technical Education grant access to our membership mailing list for the purpose described above.

_____   _7/20/10_____
Signature   Date

Enc(s):
    Educator Survey Instrument
    Informational Letter

Appendix D

Citizen's Survey 2003

Career/Technical Education Survey

April, 2003

Hello. My name is _____ and I am calling for Southern Opinion Research. We are conducting a survey about important issues facing Alabama.

Is this _____? (READ ENTIRE NUMBER, IF NOT CORRECT NUMBER, TERMINATE INTERVIEW)

It is important that we interview a random sample of people so that the results of our survey will truly represent all citizens of Alabama. We have found that the easiest way to obtain this random sample is to interview the <u>registered voter</u> living in this household who had the last or most recent birthday. Is the <u>registered voter</u> whose birthday occurred most recently at home?

IF RESPONDENT AVAILABLE: start questionnaire

IF RESPONDENT NOT AVAILABLE: arrange callback:

   (a) When would be a good time for us to call in order to   talk with this person? (RECORD ON CALL SHEET)

   (b) Who should we ask to speak with?

      (RECORD ON CALL SHEET. REPEAT NAME BACK TO BE SURE   YOU HAVE IT. IF RESPONDENT OBJECTS, SAY 'WE ONLY   NEED THE PERSON'S FIRST NAME, THE LAST NAME IS   UNNECESSARY,')

IF NECESSARY: Hello. This is _____ calling from Southern Opinion Research.

ALL RESPONDENTS: (As I stated before) We are conducting a survey about important issues facing Alabama. We would greatly appreciate your help in doing this survey. The interview will only take about _____ minutes. All your answers will be held completely confidential.

PROBES   STUDY   __ __ __

What do you mean by that?

IDENTIFICATION   __ __ __

Tell me more about that.

Respondent's sex: 1 MALE

                      2 FEMALE

Q-1 First, what is the most important issue facing Alabama at the present time?

Q-2 Overall how would you rate the quality of public education in Alabama -- it is excellent, good, average, below average, or poor?

        1 EXCELLENT

        2 GOOD

        3 AVERAGE

        4 BELOW AVERAGE

        5 POOR

        9 DK/NA

Q-3 In your opinion, is a traditional four-year college degree necessary for a successful career?

    1 YES

    2 NO

    9 DK/NA

Q-4 Suppose you had a school age child in your household. How important do you think it is it for that child to attend college -- is it very important, important, not very important or not at all important?

    1 VERY IMPORTANT

    2 IMPORTANT

    3 NOT VERY IMPORTANT

    4 NOT AT ALL IMPORTANT

    9 DK/NA

Q-5 Now let me ask you some questions about the Career/Technical education programs offered in Alabama's public schools. What word or words come to your mind when you think of Career/Technical education?

Q-6 Career/Technical Education programs offer students the opportunity to learn a skilled profession, while meeting the same academic standards as other students.. How important do you think it is for the public schools to offer these type programs -- is it very important, important, not very important or not at all important?

    1 VERY IMPORTANT

    2 IMPORTANT

    3 NOT VERY IMPORTANT

    4 NOT AT ALL IMPORTANT

    9 DK/NA

Q-7 What types of students do you think are likely to benefit the most from Career/Technical programs?

Q-8 How much do you think each of the following types of students will benefit from Career/Technical programs -- a great deal, some, not very much or not at all?

(Rotate order of Q-8a to Q-8e)

    1 GREAT DEAL

    2 SOME

    3 NOT MUCH

    4 NOT AT ALL

    9 DK/NA

(a) college bound students   __

(b) students not likely to attend college   __

(c) students with learning disabilities   __

(d) higher performing students   __

(e) students in general   __

Q-9 Now let me ask you two questions to which you may or may not know the answer. First, at the present time, are Career/Technical students in Alabama able to receive advanced high school diplomas?

     1 YES

     2 NO

     9 DK/NA

Q-10 Okay. At the present time do Career/Technical students in Alabama receive the credits or take the classes which allow them to attend college?

     1 YES

     2 NO

     9 DK/NA

Q-11 Now imagine that someone in your family wanted to become an auto mechanic. What would you guess is the potential annual income of someone who is a certified auto mechanic -- is it less than $30,000, between $30 and 40,000, between $40 and 60,000, between $60 and 80,000 or more than $80,000?

     1 LESS THAN $30,000

     2 BETWEEN $30 AND 40,000

     3 BETWEEN $40 AND 60,000

     4 BETWEEN $60 AND 80,000

     5 MORE THAN $80,000

     9 DK/NA

Q-12 [**If More than $80,000 - "You are correct"**] In fact a certified auto mechanic could make more than $100,000 a year. Knowing this, would you be more like or less likely to encourage your family member to become an auto mechanic?

     1 MORE LIKELY

     2 LESS LIKELY

     3 NO DIFFERENCE (**Volunteered**)

     9 DK/NA

Q-13 The salary potential for many of the other skilled professions taught in Career/Technical programs are in the same range as a certified auto mechanic. Knowing this, would you be more like or less likely to encourage a family member to pursue one of these careers?

       1 MORE LIKELY

       2 LESS LIKELY

       3 NO DIFFERENCE (**Volunteered**)

       9 DK/NA

Q-14 Can you give me the names of any of the Career/Technical Education Programs being offered by your local school?

Q-15 In designing their programs, how important is it for Career/Technical instructors in your community's school to work closely with local business -- is it very important, important, not very important or not at all important?

       1 VERY IMPORTANT

       2 IMPORTANT

       3 NOT VERY IMPORTANT

       4 NOT AT ALL IMPORTANT

       9 DK/NA

Q-16 What would be the best source of information for your local school to use in order to communicate with you about their Career/Technical programs -- newspapers, television, radio, the mail, or some other way?

       1 NEWSPAPERS

       2 TELEVISION

       3 RADIO

       4 MAIL

       6 OTHER _____

       9 DK/NA

Q-30 Do you currently have any children or grandchildren attending an elementary, middle or high school?

       1 YES

       2 NO   Skip to Q-40

       9 DK/NA   Skip to Q-40

Q-31 Are any of them attending a public or private elementary school?

       1 YES - PUBLIC

       2 YES - PRIVATE

       3 YES - BOTH PUBLIC AND PRIVATE

       4 NO

       9 DK/NA

Q-32 Are any of them attending a public or private middle school?

    1 YES - PUBLIC

    2 YES - PRIVATE

    3 YES - BOTH PUBLIC AND PRIVATE

    4 NO

    9 DK/NA

Q-33 Are any of them attending a public or private high school?

    1 YES - PUBLIC

    2 YES - PRIVATE

    3 YES - BOTH PUBLIC AND PRIVATE

    4 NO

    9 DK/NA

Q-34 Have any of your children or grandchildren ever participated in a Career/Technical Education program at his or her school?

    1 YES

    2 NO   Skip to Q-40

    9 DK/NA   Skip to Q-40

Q-35 Overall, would you say the Career/Technical Program was excellent, good, average, below average, or poor?

       1 EXCELLENT

       2 GOOD

       3 AVERAGE

       4 BELOW AVERAGE

       5 POOR

       9 DK/NA

Q-80 Now, for statistical reasons, let me ask a few questions about you. When was the last time you visited a public school? **(Do not read responses)**

       1 WITHIN ONE YEAR

       2 BETWEEN ONE AND FIVE YEARS

       3 BETWEEN FIVE AND TEN YEARS

       4 MORE THAN TEN YEARS

       5 NEVER (**volunteered**)

       9 DK/NA

Q-81 In what county do you live? _____

(DO NOT READ RESPONSES)

01 AUTAUGA	25 DEKALB	49 MOBILE
02 BALDWIN	26 ELMORE	50 MONROE
03 BARBOUR	27 ESCAMBIA	51 MONTGOMERY
04 BIBB	28 ETOWAH	52 MORGAN
05 BLOUNT	29 FAYETTE	53 PERRY
06 BULLOCK	30 FRANKLIN	54 PICKENS
07 BUTLER	31 GENEVA	55 PIKE
08 CALHOUN	32 GREENE	56 RANDOLPH
09 CHAMBERS	33 HALE	57 RUSSELL
10 CHEROKEE	34 HENRY	58 ST CLAIR
11 CHILTON	35 HOUSTON	59 SHELBY
12 CHOCTAW	36 JACKSON	60 SUMTER
13 CLARKE	37 JEFFERSON	61 TALLADEGA
14 CLAY	38 LAMAR	62 TALLAPOOSA
15 CLEBURNE	39 LAUDERDALE	63 TUSCALOOSA
16 COFFEE	40 LAWRENCE	64 WALKER
17 COLBERT	41 LEE	65 WASHINGTON
18 CONECUH	42 LIMESTONE	66 WILCOX
19 COOSA	43 LOWNDES	67 WINSTON
20 COVINGTON	44 MACON	98 OTHER ____
21 CRENSHAW	45 MADISON	99 DK/NA
22 CULLMAN	46 MARENGO	
23 DALE	47 MARION	
24 DALLAS	48 MARSHALL	

Q-82 What was your age on your last birthday? _____

Q-89 Which of the following best describes where you now live -- on a farm, in the country but not on a farm, in a city with a population of less than 10,000 people, in a city with between 10 and 50,000 people, in a city with between 50 and 100,000 people or in a city more than 100,000 people?

1 FARM

2 IN THE COUNTRY BUT NOT ON A FARM

3 CITY WITH LESS THAN 10,000

4 CITY WITH BETWEEN 10-50,000

5 CITY WITH BETWEEN 50-100,000

6 CITY WITH 100,000 OR MORE

7 OTHER _____

9 DK/NA

Q-90 What was the last grade or year of school you attended?

(DO NOT READ RESPONSES)

1 0-8 GRADES

2 9-11 GRADES

3 COMPLETED HIGH SCHOOL

4 BUSINESS/TECHNICAL SCHOOL

5 SOME COLLEGE

6 COMPLETED COLLEGE

7 GRADUATE/PROFESSIONAL SCHOOL

9 DK/NA

Q-91 I am going to read several income categories to you. Please stop me when I get to the category including your family's total income last year, before taxes.

01 LESS THAN $10,000

02 $10-20,000

03 $20-30,000

04 $30-40,000

05 $40-50,000

06 $50-60,000

07 $60-70,000

08 $70-80,000

09 MORE THAN $80,000

99 DK/NA

Q-92 Finally, can you tell me if you are white, black, Hispanic or a member of some other group?

1 WHITE

2 BLACK

3 HISPANIC

4 OTHER

9 DK/NA

Respondent's sex: 1 MALE   2 FEMALE

Date of interview: _____

Telephone number: _____

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Appendix E

Citizen's Survey 2005

Career/Technical Education Survey

June, 2005

Hello. My name is _____ and I am calling for Southern Opinion Research. We are conducting a survey about important issues facing Alabama.

Is this _____? (READ ENTIRE NUMBER, IF NOT CORRECT NUMBER, TERMINATE INTERVIEW)

It is important that we interview a random sample of people so that the results of our survey will truly represent all citizens of Alabama. We have found that the easiest way to obtain this random sample is to interview the <u>registered voter </u>living in this household who had the last or most recent birthday. Is the <u>registered voter</u> whose birthday occurred most recently at home?

IF RESPONDENT AVAILABLE: start questionnaire

IF RESPONDENT NOT AVAILABLE: arrange callback:

(a) When would be a good time for us to call in order to talk with this person? (RECORD ON CALL SHEET)

(b) Who should we ask to speak with?

(RECORD ON CALL SHEET. REPEAT NAME BACK TO BE SURE   YOU HAVE IT. IF RESPONDENT OBJECTS, SAY 'WE ONLY   NEED THE PERSON'S FIRST NAME, THE LAST NAME IS   UNNECESSARY,')

IF NECESSARY: Hello. This is _____ calling from Southern Opinion Research.

ALL RESPONDENTS:

(As I stated before) We are conducting a survey about important issues facing Alabama. We would greatly appreciate your help in doing this survey. The interview will only take about 10 minutes. All your answers will be held completely confidential.

PROBES   STUDY   __ __ __

What do you mean by that?

IDENTIFICATION   __ __ __

Tell me more about that.

Respondent's sex: 1 MALE   2 FEMALE

Q-1 First, what is the most important issue facing Alabama at the present time?

Q-2 Overall how would you rate the quality of public education in Alabama -- it is excellent, good, average, below average, or poor?

      1 EXCELLENT

      2 GOOD

      3 AVERAGE

      4 BELOW AVERAGE

      5 POOR

      9 DK/NA

Q-3 In your opinion, is a traditional four-year college degree necessary for a successful career?

    1 YES

    2 NO

    9 DK/NA

Q-4 Suppose you had a school age child in your household. How important do you think it is it for that child to attend college -- is it very important, important, not very important or not at all important?

    1 VERY IMPORTANT

    2 IMPORTANT

    3 NOT VERY IMPORTANT

    4 NOT AT ALL IMPORTANT

    9 DK/NA

Q-5 Now let me ask you some questions about the Career/Technical education programs offered in Alabama's public schools. What word or words come to your mind when you think of Career/Technical education?

Q-6 Career/Technical Education programs offer students the opportunity to learn a skilled profession, while meeting the same academic standards as other students. How important do you think it is for the public schools to offer these type programs -- is it very important, important, not very important or not at all important?

1 VERY IMPORTANT

2 IMPORTANT

3 NOT VERY IMPORTANT

4 NOT AT ALL IMPORTANT

9 DK/NA

Q-7 What types of students do you think are likely to benefit the most from Career/Technical programs?

Q-8 How much do you think each of the following types of students will benefit from Career/Technical programs -- a great deal, some, not very much or not at all?

(Rotate order of Q-8a to Q-8e)

1 GREAT DEAL

2 SOME

3 NOT MUCH

4 NOT AT ALL

9 DK/NA

(a) college bound students   __

(b) students not likely to attend college   __

(c) students with learning disabilities   __

(d) higher performing students   __

(e) students in general   __

Q-9 Now let me ask you two questions to which you may or may not know the answer. First, at the present time, are Career/Technical students in Alabama able to receive advanced high school diplomas?

     1 YES

     2 NO

     9 DK/NA

Q-10 Okay. At the present time do Career/Technical students in Alabama receive the credits or take the classes which allow them to attend college?

     1 YES

     2 NO

     9 DK/NA

Q-11 Now imagine that someone in your family wanted to become an auto mechanic. What would you guess is the potential annual income of someone who is a certified auto mechanic -- is it less than $30,000, between $30 and 40,000, between $40 and 60,000, between $60 and 80,000 or more than $80,000?

    1 LESS THAN $30,000

    2 BETWEEN $30 AND 40,000

    3 BETWEEN $40 AND 60,000

    4 BETWEEN $60 AND 80,000

    5 MORE THAN $80,000

    9 DK/NA

Q-12 [**If More than $80,000 - "You are correct"**] In fact a certified auto mechanic could make more than $100,000 a year. Knowing this, would you be more like or less likely to encourage your family member to become an auto mechanic?

    1 MORE LIKELY

    2 LESS LIKELY

    3 NO DIFFERENCE (**Volunteered**)

    9 DK/NA

Q-13 The salary potential for many of the other skilled professions taught in Career/Technical programs are in the same range as a certified auto mechanic. Knowing this, would you be more like or less likely to encourage a family member to pursue one of these careers?

    1 MORE LIKELY

    2 LESS LIKELY

    3 NO DIFFERENCE (**Volunteered**)

    9 DK/NA

Q-14 Can you give me the names of any of the Career/Technical Education Programs being offered by your local school?

Q-15 In designing their programs, how important is it for Career/Technical instructors in your community's school to work closely with local business -- is it very important, important, not very important or not at all important?

1 VERY IMPORTANT

2 IMPORTANT

3 NOT VERY IMPORTANT

4 NOT AT ALL IMPORTANT

9 DK/NA

Q-16 What would be the best source of information for your local school to use in order to communicate with you about their Career/Technical programs -- newspapers, television, radio, the mail, or some other way?

1 NEWSPAPERS

2 TELEVISION

3 RADIO

4 MAIL

6 OTHER _____

9 DK/NA

Q-30 Do you currently have any children or grandchildren attending an elementary, middle or high school?

    1 YES

    2 NO   Skip to Q-80

    9 DK/NA   Skip to Q-80

Q-31 Are any of them attending a public or private elementary school?

    1 YES - PUBLIC

    2 YES - PRIVATE

    3 YES - BOTH PUBLIC AND PRIVATE

    4 NO

    9 DK/NA

Q-32 Are any of them attending a public or private middle school?

    1 YES - PUBLIC

    2 YES - PRIVATE

    3 YES - BOTH PUBLIC AND PRIVATE

    4 NO

    9 DK/NA

Q-33 Are any of them attending a public or private high school?

    1 YES - PUBLIC

    2 YES - PRIVATE

    3 YES - BOTH PUBLIC AND PRIVATE

    4 NO

    9 DK/NA

Q-34 Have any of your children or grandchildren ever participated in a Career/Technical Education program at his or her school?

    1 YES

    2 NO   Skip to Q-80

    9 DK/NA   Skip to Q-80

Q-35 Overall, would you say the Career/Technical Program was excellent, good, average, below average, or poor?

    1 EXCELLENT

    2 GOOD

    3 AVERAGE

    4 BELOW AVERAGE

    5 POOR

    9 DK/NA

Q-80 Now, for statistical reasons, let me ask a few questions about you. When was the last time you visited a public school? (**Do not read responses**)

     1 WITHIN ONE YEAR

     2 BETWEEN ONE AND FIVE YEARS

     3 BETWEEN FIVE AND TEN YEARS

     4 MORE THAN TEN YEARS

     5 NEVER (**volunteered**)

     9 DK/NA

Q-81 In what county do you live? _____

(DO NOT READ RESPONSES)

01 AUTAUGA	25 DEKALB	49 MOBILE
02 BALDWIN	26 ELMORE	50 MONROE
03 BARBOUR	27 ESCAMBIA	51 MONTGOMERY
04 BIBB	28 ETOWAH	52 MORGAN
05 BLOUNT	29 FAYETTE	53 PERRY
06 BULLOCK	30 FRANKLIN	54 PICKENS
07 BUTLER	31 GENEVA	55 PIKE
08 CALHOUN	32 GREENE	56 RANDOLPH
09 CHAMBERS	33 HALE	57 RUSSELL
10 CHEROKEE	34 HENRY	58 ST CLAIR
11 CHILTON	35 HOUSTON	59 SHELBY
12 CHOCTAW	36 JACKSON	60 SUMTER
13 CLARKE	37 JEFFERSON	61 TALLADEGA
14 CLAY	38 LAMAR	62 TALLAPOOSA
15 CLEBURNE	39 LAUDERDALE	63 TUSCALOOSA
16 COFFEE	40 LAWRENCE	64 WALKER
17 COLBERT	41 LEE	65 WASHINGTON
18 CONECUH	42 LIMESTONE	66 WILCOX
19 COOSA	43 LOWNDES	67 WINSTON
20 COVINGTON	44 MACON	
21 CRENSHAW	45 MADISON	98 OTHER ____
22 CULLMAN	46 MARENGO	99 DK/NA
23 DALE	47 MARION	
24 DALLAS	48 MARSHALL	

Q-82 What was your age on your last birthday? _____

Q-89 Which of the following best describes where you now live -- on a farm, in the country but not on a farm, in a city with a population of less than 10,000 people, in a city with between 10 and 50,000 people, in a city with between 50 and 100,000 people or in a city more than 100,000 people?

     1 FARM

     2 IN THE COUNTRY BUT NOT ON A FARM

     3 CITY WITH LESS THAN 10,000

     4 CITY WITH BETWEEN 10-50,000

     5 CITY WITH BETWEEN 50-100,000

     6 CITY WITH 100,000 OR MORE

     7 OTHER _____

     9 DK/NA

Q-90 What was the last grade or year of school you attended?

(DO NOT READ RESPONSES)

     1 0-8 GRADES

     2 9-11 GRADES

     3 COMPLETED HIGH SCHOOL

     4 BUSINESS/TECHNICAL SCHOOL

     5 SOME COLLEGE

     6 COMPLETED COLLEGE

     7 GRADUATE/PROFESSIONAL SCHOOL

     9 DK/NA

Q-91 I am going to read several income categories to you. Please stop me when I get to the category including your family's total income last year, before taxes.

        01 LESS THAN $10,000

        02 $10-20,000

        03 $20-30,000

        04 $30-40,000

        05 $40-50,000

        06 $50-60,000

        07 $60-70,000

        08 $70-80,000

        09 MORE THAN $80,000

        99 DK/NA

Q-92 Finally, can you tell me if you are white, black, Hispanic or a member of some other group?

        1 WHITE

        2 BLACK

        3 HISPANIC

        4 OTHER

        9 DK/NA

Respondent's sex: 1 MALE   2 FEMALE

Date of interview: _____

Telephone number: _____

Citizen's 2008

Career and Technical Education Survey

May, 2008

Hello. My name is _____ and I am calling for Southern Opinion Research. We are conducting a survey about important issues facing Alabama.

Is this _____? (READ ENTIRE NUMBER, IF NOT CORRECT NUMBER, TERMINATE INTERVIEW)

It is important that we interview a random sample of people so that the results of our survey will truly represent all citizens of Alabama. We have found that the easiest way to obtain this random sample is to interview the <u>registered voter </u>living in this household who had the last or most recent birthday. Is the <u>registered voter</u> whose birthday occurred most recently at home?

IF RESPONDENT AVAILABLE: start questionnaire

IF RESPONDENT NOT AVAILABLE: arrange callback:

(a) When would be a good time for us to call in order to talk with this person? (RECORD ON CALL SHEET)

(b) Who should we ask to speak with?

(RECORD ON CALL SHEET. REPEAT NAME BACK TO BE SURE YOU HAVE IT. IF RESPONDENT OBJECTS, SAY 'WE ONLY NEED THE PERSON'S FIRST NAME, THE LAST NAME IS UNNECESSARY,')

IF NECESSARY: Hello. This is _____ calling from Southern Opinion Research.

ALL RESPONDENTS:

(As I stated before) We are conducting a survey about important issues facing Alabama. We would greatly appreciate your help in doing this survey. The interview will only take about 10 to 12 minutes. All your answers will be held completely confidential.

PROBES   STUDY   __ __ __

What do you mean by that?

IDENTIFICATION   __ __ __

Tell me more about that.

Respondent's sex: 1 MALE   2 FEMALE

Q-1 First, what is the most important issue facing Alabama at the present time?

Q-2 Overall how would you rate the quality of public education in Alabama -- it is excellent, good, average, below average, or poor?

      1 EXCELLENT

      2 GOOD

      3 AVERAGE

      4 BELOW AVERAGE

      5 POOR

      9 DK/NA

Q-3 In your opinion, is a traditional four-year college degree necessary for a successful career?

    1 YES

    2 NO

    9 DK/NA

Q-4 Suppose you had a school age child in your household. How important do you think it is it for that child to attend college -- is it very important, important, not very important or not at all important?

    1 VERY IMPORTANT

    2 IMPORTANT

    3 NOT VERY IMPORTANT

    4 NOT AT ALL IMPORTANT

    9 DK/NA

Q-5 Now, let me ask you some questions about the Career and Technical education programs offered in Alabama's public schools. What word or words come to your mind when you think of Career and Technical education?

Q-6 Career and Technical Education programs offer students the opportunity to learn a skilled profession, while meeting the same academic standards as other students. How important do you think it is for the public schools to offer these type programs -- is it very important, important, not very important or not at all important?

1 VERY IMPORTANT

2 IMPORTANT

3 NOT VERY IMPORTANT

4 NOT AT ALL IMPORTANT

9 DK/NA

Q-7 What types of students do you think are likely to benefit the most from Career and Technical programs?

Q-8 How much do you think each of the following types of students will benefit from Career and Technical programs -- a great deal, some, not very much or not at all?

(Rotate order of Q-8a to Q-8e)

1 GREAT DEAL

2 SOME

3 NOT MUCH

4 NOT AT ALL

9 DK/NA

(a) college bound students   __

(b) students not likely to attend college   __

(c) students with learning disabilities   __

(d) higher performing students   __

(e) students in general   __

Q-9 Now let me ask you two questions to which you may or may not know the answer. First, at the present time, are Career and Technical students in Alabama able to receive advanced high school diplomas?

    1 YES

    2 NO

    9 DK/NA

Q-10 Okay. At the present time do Career and Technical students in Alabama receive the credits or take the classes which allow them to attend college?

    1 YES

    2 NO

    9 DK/NA

Q-11 Now imagine that someone in your family wanted to become an auto mechanic. What would you guess is the potential annual income of someone who is a certified auto mechanic -- is it less than $30,000, between $30 and 40,000, between $40 and 60,000, between $60 and 80,000 or more than $80,000?

     1 LESS THAN $30,000

     2 BETWEEN $30 AND 40,000

     3 BETWEEN $40 AND 60,000

     4 BETWEEN $60 AND 80,000

     5 MORE THAN $80,000

     9 DK/NA

Q-12 [**If More than $80,000 - "You are correct"**] In fact a certified auto mechanic could make more than $100,000 a year. Knowing this, would you be more like or less likely to encourage your family member to become an auto mechanic?

     1 MORE LIKELY

     2 LESS LIKELY

     3 NO DIFFERENCE (**Volunteered**)

     9 DK/NA

Q-13 The salary potential for many of the other skilled professions taught in Career and Technical programs are in the same range as a certified auto mechanic. Knowing this, would you be more like or less likely to encourage a family member to pursue one of these careers?

     1 MORE LIKELY

     2 LESS LIKELY

     3 NO DIFFERENCE (**Volunteered**)

     9 DK/NA

Q-14 Can you give me the names of any of the Career and Technical Education Programs being offered by your local school?

Q-15 In designing their programs, how important is it for Career and Technical instructors in your community's school to work closely with local business -- is it very important, important, not very important or not at all important?

      1 VERY IMPORTANT

      2 IMPORTANT

      3 NOT VERY IMPORTANT

      4 NOT AT ALL IMPORTANT

      9 DK/NA

Q-16 What would be the best source of information for your local school to use in order to communicate with you about their Career and Technical programs -- newspapers, television, radio, the mail, or some other way?

      1 NEWSPAPERS

      2 TELEVISION

      3 RADIO

      4 MAIL

      6 OTHER _____

      9 DK/NA

Q-20 Now, based on what you might have seen, read or heard, which of the following three statements comes closest to what you believe?

(1)   FIRST, OTHER STATES ARE DOING A BETTER JOB THAN ALABAMA IN PREPARING THEIR STUDENTS FOR THE JOBS OF THE 21ST CENTURY

(2) SECOND, ALABAMA IS DOING A BETTER JOB THAN   OTHER STATES IN PREPARING ITS STUDENTS FOR THE JOBS OF THE 21ST CENTURY, OR

(3) THIRD, ALABAMA IS PERFORMING ABOUT AS WELL AS OTHER STATES IN PREPARING STUDENTS   FOR THE JOBS OF THE 21ST CENTURY

(9) DK/NA (**DO NOT READ**)

Q-21 When it comes to preparing students for college, are Alabama's local school systems generally moving in the right direction or the wrong direction?

1 RIGHT DIRECTION

2 WRONG DIRECTION

9 DK/NA

Q-22 When it comes to preparing students for <u>successful</u> careers in the future, are Alabama's local school systems generally moving in the right direction or the wrong direction?

    1 RIGHT DIRECTION

    2 WRONG DIRECTION

    9 DK/NA

Q-23 What does the term "21 Century Learning" mean to you?

Q-24 How important is it to incorporate 21st Century Learning skills like technology and computer skills, critical thinking, and hands-on learning into your local school system's curriculum -- is it very important, important, not very important or not at all important?

    1 VERY IMPORTANT

    2 IMPORTANT

    3 NOT VERY IMPORTANT

    4 NOT AT ALL IMPORTANT

    9 DK/NA

Q-25 Before today, have you heard the term "21st Century Learning?"

    1 YES GO TO Q-26

    2 NO   Skip to Q-27

    9 DK/NA   Skip to Q-27

Q-26 Where or from whom did you first hear the term?

    1 TEACHER/SCHOOL ADMINISTRATOR/OTHER EDUCATOR

    2 NEWSLETTER/SCHOOL MEMO/OTHER PUBLICATION

    3 TELEVISION

    4 OTHER _____

    9 DK/NA

Q-27 Overall, how would your rate the job your local school system is doing in preparing students for Alabama's competitive workforce -- excellent, good, average, below average, or poor?

    1 EXCELLENT

    2 GOOD

    3 AVERAGE

    4 BELOW AVERAGE

    5 POOR

    9 DK/NA

Q-30 Now, do you currently have any children or grandchildren attending an elementary, middle or high school?

    1 YES

    2 NO   Skip to Q-80

    9 DK/NA   Skip to Q-80

Q-31 Are any of them attending a public or private elementary school?

    1 YES - PUBLIC

    2 YES - PRIVATE

    3 YES - BOTH PUBLIC AND PRIVATE

    4 NO

    9 DK/NA

Q-32 Are any of them attending a public or private middle school?

    1 YES - PUBLIC

    2 YES - PRIVATE

    3 YES - BOTH PUBLIC AND PRIVATE

    4 NO

    9 DK/NA

Q-33 Are any of them attending a public or private high school?

    1 YES - PUBLIC

    2 YES - PRIVATE

    3 YES - BOTH PUBLIC AND PRIVATE

    4 NO

    9 DK/NA

Q-34 Have any of your children or grandchildren ever participated in a Career and Technical Education program at his or her school?

      1 YES

      2 NO   Skip to Q-80

      9 DK/NA   Skip to Q-80

Q-80 Now, for statistical reasons, let me ask a few questions about you. When was the last time you visited a public school? (**Do not read responses**)

      1 WITHIN ONE YEAR

      2 BETWEEN ONE AND FIVE YEARS

      3 BETWEEN FIVE AND TEN YEARS

      4 MORE THAN TEN YEARS

      5 NEVER (**volunteered**)

      9 DK/NA

Q-81 In what county do you live? _____

(DO NOT READ RESPONSES)

01 AUTAUGA	25 DEKALB	49 MOBILE
02 BALDWIN	26 ELMORE	50 MONROE
03 BARBOUR	27 ESCAMBIA	51 MONTGOMERY
04 BIBB	28 ETOWAH	52 MORGAN
05 BLOUNT	29 FAYETTE	53 PERRY
06 BULLOCK	30 FRANKLIN	54 PICKENS
07 BUTLER	31 GENEVA	55 PIKE
08 CALHOUN	32 GREENE	56 RANDOLPH
09 CHAMBERS	33 HALE	57 RUSSELL
10 CHEROKEE	34 HENRY	58 ST CLAIR
11 CHILTON	35 HOUSTON	59 SHELBY
12 CHOCTAW	36 JACKSON	60 SUMTER
13 CLARKE	37 JEFFERSON	61 TALLADEGA
14 CLAY	38 LAMAR	62 TALLAPOOSA
15 CLEBURNE	39 LAUDERDALE	63 TUSCALOOSA
16 COFFEE	40 LAWRENCE	64 WALKER
17 COLBERT	41 LEE	65 WASHINGTON
18 CONECUH	42 LIMESTONE	66 WILCOX
19 COOSA	43 LOWNDES	67 WINSTON
20 COVINGTON	44 MACON	
21 CRENSHAW	45 MADISON	98 OTHER ____
22 CULLMAN	46 MARENGO	99 DK/NA
23 DALE	47 MARION	
24 DALLAS	48 MARSHALL	

Q-82 What was your age on your last birthday? _____

Q-89 Which of the following best describes where you now live -- on a farm, in the country but not on a farm, in a city with a population of less than 10,000 people, in a city with between 10 and 50,000 people, in a city with between 50 and 100,000 people or in a city more than 100,000 people?

    1 FARM

    2 IN THE COUNTRY BUT NOT ON A FARM

    3 CITY WITH LESS THAN 10,000

    4 CITY WITH BETWEEN 10-50,000

    5 CITY WITH BETWEEN 50-100,000

    6 CITY WITH 100,000 OR MORE

    7 OTHER _____

    9 DK/NA

Q-90 What was the last grade or year of school you attended?

(DO NOT READ RESPONSES)

    1 0-8 GRADES

    2 9-11 GRADES

    3 COMPLETED HIGH SCHOOL

    4 BUSINESS/TECHNICAL SCHOOL

    5 SOME COLLEGE

    6 COMPLETED COLLEGE

    7 GRADUATE/PROFESSIONAL SCHOOL

    9 DK/NA

Q-91 I am going to read several income categories to you. Please stop me when I get to the category including your family's total income last year, before taxes.

01 LESS THAN $10,000

02 $10-20,000

03 $20-30,000

04 $30-40,000

05 $40-50,000

06 $50-60,000

07 $60-70,000

08 $70-80,000

09 MORE THAN $80,000

99 DK/NA

Q-92 Finally, can you tell me if you are white, black, Hispanic or a member of some other group?

1 WHITE

2 BLACK

3 HISPANIC

4 OTHER

9 DK/NA

Respondent's sex: 1 MALE   2 FEMALE

Date of interview: _____

Telephone number: _____

Appendix G

Educator's Survey

Career/Technical Education Survey

Educator's Survey (Modified version of Citizen's Survey, Southern Opinion Research, Inc.)

Q-1 What word or words come to your mind when you think of Career/Technical education?

Q-2 Career/Technical Education programs offer students the opportunity to learn a skilled profession, while meeting the same academic standards as other students. How important do you think it is for the public schools to offer these type programs -- is it very important, important, not very important or not at all important?

    1 VERY IMPORTANT

    2 IMPORTANT

    3 NOT VERY IMPORTANT

    4 NOT AT ALL IMPORTANT

    9 DK/NA

Q-3 What types of students do you think are likely to benefit the most from Career/Technical programs?

Q-4 How much do you think each of the following types of students will benefit from Career/Technical programs -- a great deal, some, not very much or not at all?

1 GREAT DEAL

2 SOME

3 NOT MUCH

4 NOT AT ALL

9 DK/NA

(a) college bound students   __

(b) students not likely to attend college   __

(c) students with learning disabilities   __

(d) higher performing students   __

(e) students in general   __

Q-5 First, at the present time, are Career/Technical students in Alabama able to receive advanced high school diplomas?

1 YES

2 NO

9 DK/NA

Q-6 At the present time do Career/Technical students in Alabama receive the credits or take the classes which allow them to attend college?

    1 YES

    2 NO

    9 DK/NA

Q-7 Now imagine that someone in your family wanted to become an auto mechanic. What would you guess is the potential annual income of someone who is a certified auto mechanic -- is it less than $30,000, between $30 and 40,000, between $40 and 60,000, between $60 and 80,000 or more than $80,000?

    1 LESS THAN $30,000

    2 BETWEEN $30 AND 40,000

    3 BETWEEN $40 AND 60,000

    4 BETWEEN $60 AND 80,000

    5 MORE THAN $80,000

    9 DK/NA

Q-8 In fact a certified auto mechanic could make more than $100,000 a year. Knowing this, would you be more like or less likely to encourage your family member to become an auto mechanic?

    1 MORE LIKELY

    2 LESS LIKELY

    3 NO DIFFERENCE

    9 DK/NA

Q-9 The salary potential for many of the other skilled professions taught in Career/Technical programs are in the same range as a certified auto mechanic. Knowing this, would you be more like or less likely to encourage a family member to pursue one of these careers?

    1 MORE LIKELY

    2 LESS LIKELY

    3 NO DIFFERENCE

    9 DK/NA

Q-10 Can you give me the names of any of the Career/Technical Education Programs being offered by your local school?

Q-11 In designing their programs, how important is it for Career/Technical instructors in your community's school to work closely with local business -- is it very important, important, not very important or not at all important?

    1 VERY IMPORTANT

    2 IMPORTANT

    3 NOT VERY IMPORTANT

    4 NOT AT ALL IMPORTANT

    9 DK/NA

Q-12 What would be the best source of information for your local school to use in order to communicate with you about their Career/Technical programs -- newspapers, television, radio, the mail, or some other way?

1 NEWSPAPERS

2 TELEVISION

3 RADIO

4 MAIL

6 OTHER _____

9 DK/NA

Q-13 Do you currently have any children or grandchildren attending an elementary, middle or high school?

1 YES

2 NO

9 DK/NA

Q-14 Are any of them attending a public or private elementary school?

1 YES - PUBLIC

2 YES - PRIVATE

3 YES - BOTH PUBLIC AND PRIVATE

4 NO

9 DK/NA

Q-15 Are any of them attending a public or private middle school?

    1 YES - PUBLIC

    2 YES - PRIVATE

    3 YES - BOTH PUBLIC AND PRIVATE

    4 NO

    9 DK/NA

Q-16 Are any of them attending a public or private high school?

    1 YES - PUBLIC

    2 YES - PRIVATE

    3 YES - BOTH PUBLIC AND PRIVATE

    4 NO

    9 DK/NA

Q-17 Have any of your children or grandchildren ever participated in a Career/Technical Education program at his or her school?

    1 YES

    2 NO

    9 DK/NA

Q-18 Overall, would you say the Career/Technical Program was excellent, good, average, below average, or poor?

      1 EXCELLENT

      2 GOOD

      3 AVERAGE

      4 BELOW AVERAGE

      5 POOR

      9 DK/NA

Q-19 In what county do you live? _____

01 AUTAUGA	25 DEKALB	49 MOBILE
02 BALDWIN	26 ELMORE	50 MONROE
03 BARBOUR	27 ESCAMBIA	51 MONTGOMERY
04 BIBB	28 ETOWAH	52 MORGAN
05 BLOUNT	29 FAYETTE	53 PERRY
06 BULLOCK	30 FRANKLIN	54 PICKENS
07 BUTLER	31 GENEVA	55 PIKE
08 CALHOUN	32 GREENE	56 RANDOLPH
09 CHAMBERS	33 HALE	57 RUSSELL
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11 CHILTON	35 HOUSTON	59 SHELBY
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17 COLBERT	41 LEE	65 WASHINGTON
18 CONECUH	42 LIMESTONE	66 WILCOX
19 COOSA	43 LOWNDES	67 WINSTON
20 COVINGTON	44 MACON	
21 CRENSHAW	45 MADISON	98 OTHER ____
22 CULLMAN	46 MARENGO	99 DK/NA
23 DALE	47 MARION	
24 DALLAS	48 MARSHALL	

Q-20 What was your age on your last birthday? _____

Q-21 Which of the following best describes where you now live -- on a farm, in the country but not on a farm, in a city with a population of less than 10,000 people, in a city with between 10 and 50,000 people, in a city with between 50 and 100,000 people or in a city more than 100,000 people?

1 FARM

2 IN THE COUNTRY BUT NOT ON A FARM

3 CITY WITH LESS THAN 10,000

4 CITY WITH BETWEEN 10-50,000

5 CITY WITH BETWEEN 50-100,000

6 CITY WITH 100,000 OR MORE

7 OTHER _____

9 DK/NA

Q-22 What is your highest level of education?

1 Bachelor's Degree
2 Master's Degree
3 Specialist Degree
4 Doctorate Degree
5 DK/NA

Q-23 I am going to read several income categories to you. Please stop me when I get to the category including your family's total income last year, before taxes.

01 LESS THAN $10,000
02 $10-20,000
03 $20-30,000
04 $30-40,000
05 $40-50,000
06 $50-60,000
07 $60-70,000
08 $70-80,000
09 MORE THAN $80,000
99 DK/NA

Q-24 Finally, can you tell me if you are white, black, Hispanic or a member of some other group?

    1 WHITE

    2 BLACK

    3 HISPANIC

    4 OTHER

    9 DK/NA

Respondent's sex: 1 MALE   2 FEMALE