No Child Left Behind: The Answer to Preparing Students for Careers,

or the Demise of Career and Technical Education?

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ABSTRACT

This qualitative case study is designed to document the impact of No Child Left Behind (NCLB) on career and technical education (CTE) in Pennsylvania. The research was conducted utilizing a qualitative case study protocol on two specific CTE Centers in the suburban Philadelphia area. The study centered on the following question. Has compliance to the accountability components of NCLB impacted the delivery of secondary education in CTE centers in the Pennsylvania? The study identified the changes that have occurred to selected CTE centers in the NCLB era. The assessment mandates of federal policy NCLB are narrowly focused in academic curriculum. The data used to answer the questions was accumulated through interviews with facility staff and the examination of archival records at the two specific centers to be researched. This study determined the impacts of NCLB on the facilities. The impacts included; decreased enrollment, increased academic and testing focus, reduction in technical budgets, increase in academic budgets, increase of special education students, staff changes for the increase of academic areas, morale issues, program changes, shifts in staff development, facility changes, negative publicity and public image due to academic reporting in the media.

Questions for future study. What are the costs, financial and opportunity related to the reduction in CTE for increased academics? How many students have been denied the opportunity of attending or completing CTE programs? Why there isn't an alignment of NCLB and IDEA goals? What is the emotional impact to our students who keep getting told they are below basic? The conclusion from this study suggests that the public education system in this country needs to be more centered on actual student outcomes and preparing students with marketable skills and not based on the narrow focus of academic test scores.

DEDICATION

I would like to dedicate this work to two of the most influential people in my life. My father, who is always with me in spirit and the person who would have been most proud of this accomplishment. I lost him in 2007 and may never be the same from that tragic day. He was always there for me through countless games, practices, and was also my friend. The other person is my wife. I met her while I was substitute teaching, and before she became my wife. I was impressed and inspired with her, and her position as a cooperative education coordinator. I started educational programs in 1993 to pursue a degree and a teaching certificate. I did not know then that this desire for educational advancement would last twenty years and end with this achievement.

ACKNOWLEDGMENT

I chose to write a separate acknowledgment because this man is in a category by himself. If not for the encouragement and understanding of Dr. Steven Jay Gross this work wound not have been completed. After losing my father in 2007 I had absolutely no desire to write or research. Dr. Gross understood, listened, and was supportive. He also knew when it was time to get me focused and push me to the finish line. For that I will be forever grateful. Dr. G. thank you for everything you have done for me.

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INTRODUCTION

The Problem

The proper curriculum to prepare students to be competitive in the global economy is the subject of ongoing debate. Students must not only be prepared for college but must also be prepared to enter the workforce. Career and technical education (CTE) exposes students to rigorous academics and career paths and, in many situations, includes a community-based work component. The world of work will require young people to reinvent themselves several times in their careers (Phillips & Skelly, 2006).

Current educational policy under the No Child Left Behind (NCLB) Act of 2001 mandates narrowly focused, high-stakes standardized testing. Has this narrow focus limited educational opportunities, specifically in CTE for the secondary school population? Does the current accountability model under NCLB apply to career and technical education students? This work will examine these questions and explore the current condition of career education. It will also document the impact of NCLB on career education programs in the state of Pennsylvania.

explained the situation in this fashion:

> In a climate dominated by rising academic achievement and increasing the number of students prepared for college, it is easy to lose sight of a second important objective of high school—preparing students for lasting success in the world of work. Well-conceived, vocational education, or career and technical as it is now usually called, not only can directly improve students' labor market prospects but also may help focus deeper understanding of academics. (p. 38)

CTE may be the course of study that will comprehensively prepare young adults for their future. The purpose of this work is to identify how NCLB has affected the delivery and availability of CTE for students, specifically in the suburban Philadelphia region and throughout Pennsylvania.

The current accountability model of NCLB does not include career and technical education and unfortunately will not ensure the delivery of CTE curricula. Students must be provided the opportunity to apply academics and practical experience to build the foundations that will allow them to compete in the global economy. Granger (2008) documented teacher quality and accountability in contemporary school reform and the negative impact of NCLB on students and teachers.

> Research also suggests that a significant portion of the increase in students' test scores is the result of teaching to the test, with its concomitant narrowing of students' experiences via the simplifying and narrowing of curriculum. (p. 208)

The U.S. Department of Education (2008a) reported on new regulations for Title I of the No Child Left Behind Act:

> The final regulations establish a uniform and more accurate measure of calculating high school graduation rate that is comparable across states; strengthen public school choice and supplemental education services requirements; and increase accountability and transparency. (p. 1)

The goals have clearly evolved since the inception of the NCLB in 2001. The new regulations focus on measurement, school choice, and supplemental services solely dedicated to the narrow testing requirements related to NCLB. Jim Stone, director of the National Center on Career and Technical Education Research, in an interview with noted policy writer Anne Lewis, noted that to dovetail with NCLB, the research center must have a sharper focus on student achievement (Lewis, 2008).

Purpose of the Study

Focused, relevant research on CTE is urgently needed (Lambeth, Elliot, & Joerger, 2008). NCLB requires states to establish student achievement goals, to monitor a segment of the student population, and to sanction districts not making Adequate Yearly

Progress (AYP) toward the designated goals. AYP goals are currently mandated in the areas of reading, math, and science. Weiner and Hall (2004) asserted that increased testing would increase the rigor of high school curricula:

> But a rigorous secondary education does not just benefit the majority of college-bound students. In today's economy college-ready and work-ready mean virtually the same thing. Dramatic changes in the workplace have substantially raised the bar in a variety of occupations. (p. 18)

The purpose of this study is to ask whether career education options are being reduced in the selected CTE centers in Pennsylvania. For example, are students blocked from taking CTE classes by testing interventions focused on state assessment eligible content only? *Eligible content* is a popular term in the NCLB accountability age. Eligible content is considered the assessment limit and helps educators identify the range of the content covered on Pennsylvania State Assessment Exams. This is meant to ensure districts are teaching the content that will be on the state assessments. School districts struggling to meet the requirements of AYP have embraced the option of narrowing curricula to focus solely on eligible content. The term *curriculum mapping* is also used to directly connect curricula to eligible content. The combination of the two terms translates to school districts' delivering instruction on the content of state assessments, which may be at the expense of other curricular areas.

Pederson (2007) noted that subject areas not mandated by NCLB declined between 2001 and 2007. Pederson's national survey of state assessment directors showed that non-assessed subject areas that experienced decline included social studies, arts and humanities, listening, technology, and computers. Math and reading were the primary focus of the testing. Other subject areas had reduced resources, and non-tested subjects were basically ignored. The ignored subject areas address practical living and vocational skills, including career education. How will this finding affect the generalization of students as they become adults?

The significance of this study is to contribute to the debate on how to prepare U.S. students for their future. This debate has been raging for more than 100 years. Current education policy mandated at the federal level has not sufficiently included the voice of career and technical education. This study connects current data on CTE with related theories and the technological advances that have reshaped the world during the last two decades. The career-related theories presented in the literature review include some of the most extensive research done in the area of career development. The purpose of this study was to determine whether the current educational policies are actually promoting the primary components of a sound career-related educational opportunity necessary for our children to compete in the current workplace.

Research Questions

Questions posed by Pederson and others led to the concept and the title of this work. Can the current system of assessment-driven curricula properly prepare students for their future? This study will ask whether the implementation of NCLB has affected CTE in a suburban area located near Philadelphia and in the commonwealth of Pennsylvania in general. The main question is as follows: Has compliance with the accountability components of NCLB affected the delivery of CTE secondary education in the two CTE centers involved in this study? I will also pursue answers to the following questions:

1. Have changes in curriculum occurred at the selected CTE centers, since the inception of NCLB in 2002?
   A. Have vocational components of the CTE center been altered to address The Pennsylvania System of School Assessment (PSSA) for Pennsylvania NCLB testing requirements?
   B. Have academic components of the CTE center been altered to address testing areas of the PSSA?

2. Has the availability of CTE programs at the CTE centers researched been influenced in the NCLB era (2002–2010)?
   A. Has the number of students enrolled at the centers increased or decreased?
   B. Has the number of programs increased or decreased?

3. What other effects has NCLB had on the CTE centers?
  A. How has perceived staff morale changed at the CTE centers since the inception of NCLB in 2002?
  B. How have the changes associated with NCLB changed the staff members' perceived workplace readiness of students at the CTE students?

Definitions

The following are definitions of terms used in this dissertation. The glossary from the Academic Standards for Career Education and Work from the Pennsylvania Department of Education (http://www.pacareerstandards.com/) provides additional definitions that may be of interest.

Adequate yearly progress (AYP). AYP is the measure by which schools, districts, and states are held accountable for student performance under Title I of NCLB.

Career and technical centers. Schools that educate secondary students and adults through academic instruction, job preparation, and acquisition of occupational skills leading to credentials or employment or both in specific industries are known as career and technical centers. The centers also provide opportunities for transition to postsecondary education and continuing education.

Career cluster. A grouping of related occupations that share similar skill sets.

Certificate/licensure. A document issued by associations, employers, educational institutions, government, and the like, that confirms the holder has fulfilled requirements and is able to perform to a specified level of proficiency within a career field.

Charter schools. Charter schools receive public money and are attended by choice. Each school is guided by a "charter" that specifies certain results that will be achieved. They are subject to some of the rules, regulations, and statutes that apply to other public schools, but they are more flexible than traditional public schools. To receive Charter School Program funds, a charter school must meet the definition in Section 5210(1) of The Elementary and Secondary Education Act of 2004 (National Charter School Resource Center, 2013).

Cooperative education. A structured method of instruction whereby students alternate or coordinate their high school studies with a job in a field related to their academic or career objectives.

Curriculum map. Curriculum mapping is a tool that allows educational organizations to outline the scope and sequence of their curriculum, align curriculum to the Pennsylvania Academic Standards and Curriculum Framework, and to make the maps available to district personnel online.

Eligible content. In Pennsylvania, eligible content is the most specific description of the content that is assessed on the Keystone Exams. This level is considered the assessment limit and helps educators identify the range of the content covered on Pennsylvania State Assessment Exams.

IDEA. The Individuals with Disabilities Education Act (IDEA) is a law ensuring services to children with disabilities throughout the nation. IDEA governs how states and public agencies provide early intervention, special education, and related services to more than 6.5 million eligible infants, toddlers, children and youth with disabilities (U.S. Department of Education, nd).

Individualized Education Program. Each public school child who receives special education and related services must have an Individualized Education Program (IEP). IEPs are designed for one student and must be a truly individualized document. The IEP creates an opportunity for teachers, parents, school administrators, related services personnel, and students (when appropriate) to work together to improve educational results for children with disabilities (U.S. Department of Education, 2007).

Intermediate units. Intermediate units in Pennsylvania are part of the governance structure of public education and are located in the middle between the state education agency and the local school districts. They provide specialized services to local school districts that can be operated more effectively and efficiently on a regional basis. The

majority of the programs offered by intermediate units are supported by federal, state, or district contributions.

   Internship. A work experience with an employer for a specified period of time to learn about a particular industry or occupation. An internship may or may not include financial compensation. The workplace activities may include special projects, a sample of tasks from different jobs, or tasks from a single occupation.

   NCLB. The No Child Left Behind Act (NCLB) was enacted by Congress in an attempt to close a perceived achievement gap in learning. It offers accountability, flexibility, and choices in learning so that all children are served.

   NOCTI. An assessment developed to continuously improve the field of CTE. National Occupational Competency Testing Institute (NOCTI) delivers solutions for increasing students' technical competence and certifying new and incumbent workers in the private sector. This testing is based on workplace competencies and not academic standards in isolation.

   Nontraditional careers. Fields of work for which workers from one gender comprise less than 25% of those employed in each such occupation or field of work.

   Qualitative case studies. Qualitative case studies can be characterized as particularistic, descriptive, and heuristic (Merriam, 1998).

   Self-efficacy. The concept of self-efficacy is the foundation of psychologist Albert Bandura's social cognitive theory. Essentially, self-efficacy is a belief in the ability to succeed in a particular situation (Cherry, 2013). Bandura described these beliefs as determinants of how people think, behave, and feel (1995).

   Soft skills. "Soft skills are behaviors that must be internalized as a natural aspect of a person's repertoire of social skills and character attributes" (U.S. Department of Labor, 2010).

Teaching to the test. Teaching to the test is an educational practice in which the curriculum is primarily focuses on preparing students to do well on a standardized test (Bond, nd).

Unemployment. Measurement of the number of people who are not working and who are actively seeking work.

Delimitations and Limits of the Study

This study was specifically designed to determine the effect of NCLB on CTE in Pennsylvania only. This study uses qualitative case study research methods. The qualitative methods include a case–study design limited to two CTE centers in the suburban Philadelphia geographic region. The data provided in this study may be unique to Pennsylvania; they may not identify needs of other similar and dissimilar regions. This study stands on its own merits as a complete explanation of this particular phenomenon and may not be applicable to other situations.

Significance of the Study

This study addresses a growing problem in this country. Career development has lost importance in the focus on accountability measures and standardized assessments. In 2002, the unemployment rate for 16–19 year olds was 16.1% (U.S. Department of Labor, 2002). In statistics released by the U.S. Department of Labor Statistics in 2009, the jobless rate for teenagers had risen to 27.6%. CTE programs are a vital and necessary component of the high school curriculum (Chadd & Drage, 2006). CTE should be available to all students. Currently, the special education population with the Individuals with Disabilities Education Act (IDEA) mandated transition planning is the only population required to have a defined set of transition goals. Research indicates that these students are not properly prepared for the transition from high school to the workforce (Sawka, McCurdy, & Manella, 2002).

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CTE clearly prepares students for the workplace, but what exactly is happening to CTE in the NCLB era? This study focused on determining the availability and delivery of CTE in a selected suburban area of Pennsylvania. Data were accumulated at two CTE centers in Bucks County, Pennsylvania.

Guiding Theoretical Framework

The guiding theoretical framework for the foundation of this research includes work from Super, Gottfredson, Bandura, Lent, Hackett, and Brown. Super developed a comprehensive theory that defines career development as a lifelong process (Zunker, 1990). Gottfredson developed the theory of circumscription and compromise in career guidance and counseling. The theory defines four developmental processes that young people experience as they encounter vocational choices (Gottfredson, 2002). Bandura developed the social cognitive theory that was expanded by Lent, Brown, and Hackett (2002) into the social cognitive career theory that identifies self-efficacy, outcome expectations, and goals as influential in academic performance (Smith, 2002).

These theories clearly define student career development and the relationship to academic performance. Career development is a life-long process that starts at a young age and affects vocational outcomes. Will the focus on preparing students for tests and college admissions assist in career development? According to Zimmer-Gembeck and Mortimer (2006),

> U.S. adolescents are primarily oriented to getting into college and do not seriously consider their vocational futures. They ask whether this perspective serves them well as they make choices about their postsecondary future. Under these circumstances, future jobs remain closer to fantasies than realistic future goals that depend on planning and purpose; little attention is directed to defining and exploring educational or other forms of preparation needed to enter chosen fields. (p. 541)

How can we better prepare students for their future? Daggett, of the International Center for Leadership led a national initiative to identify, analyze, and showcase 30 of the nation's most successful high schools. This study was funded by the Bill and Melinda Gates Foundation and was completed in conjunction with the Council of Chief State School Officials. The findings were included in *A Central Role for Career and Technical Education in High School Restructuring* (Daggett, 2005). These findings have been shared at numerous summits and national meetings. Daggett reported that he did not see much representation from the CTE community at these meetings nor were CTE programs seen as part of the current solution. Daggett also noted that CTE is still perceived as the vocational education of the past and does not seem important in the age when we are preparing every student to go to college. This is unfortunate, because two of the characteristics of high performing schools are (1) organization around theme-based small learning communities based on careers or the arts, and (2) exposure to real-world applications of the academic skills. "The connection of the applications and the academics increases student motivation and their performance on test scores increases markedly" (Daggett, 2005, p. 56).

In an interview published by the Association for Career and Technical Education (2005), Daggett shared the following:

> With the exception of the 30 highest performing U.S. high schools there has been a dramatic decline in CTE programs due to NCLB. This did not have to happen, but it did, since many educators tried to implement NCLB using their 1960s mindset for delivery. (p. 56)

Fletcher (2006), in *No Curriculum Left Behind: The Effects of the NCLB Legislation on CTE,* examined the current literature on the subject and noted, "How the CTE community reacts and responds to this federal legislation may reflect the future of CTE programs." In the study, he examined several areas where the legislation will affect CTE. The areas include CTE teacher qualifications, the AYP provision of NCLB, CTE

reform initiatives, and CTE legislation objectives. Fletcher also included an introduction that examined NCLB and the impact of NCLB on curricula. His review of the current literature indicated that there is an increased focus on subject areas that will be assessed and that non assessed areas are deemphasized or even ignored completely. The AYP provisions of NCLB have forced CTE programs to increase academic standards to reflect NCLB requirements. CTE programs have expanded their mission to include preparing students for higher education as well as the workplace. This dual mission is noted in programs related to Comprehensive School Reform (CSR) and High Schools That Work (HSTW; Fletcher, 2006;).

In the spring of 2007, Gentry, Peters, and Mann from Purdue University released *Differences Between General and Talented Students' Perceptions of Career and Technical Education Experiences Compared to Their Traditional High School Experience.* The qualitative data that were compiled for this case study compared the student experience from one exemplary CTE center with the traditional high school the students simultaneously attend. The students were divided into two categories. One contained talented/gifted students; the other was a population of general education students. Interviews with students from both categories yielded the following: Students from both populations commented favorably on their CTE experience and negatively on the traditional high school experience. Through constant-comparative data analysis, four themes emerged: autonomy, effective and caring teachers, students with similar interests, and relevant content in an applied setting (Gentry, Peters, & Mann, 2007, p. 392).

Unfortunately, this style of segmented education in Pennsylvania affords only a small portion of students the opportunity to be exposed to CTE. The previously cited research clearly indicated that all the students in the sample preferred their CTE experience to the educational experience provided at a traditional high school. The current segmented format of education in Pennsylvania does not provide a sufficient portion of students exposed to CTE.

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The concept of regional CTE centers limits student participation and drains resources from the local sending school districts. Local school district funding now supports home schools, CTE centers, intermediate units (another segmentation of the educational system), charter schools, NCLB requirements, IDEA, and special education, in addition to energy costs, renovations to aging infrastructure, salaries, and transportation costs. What is needed, perhaps, is consolidation rather than segmentation.

The accountability measures of NCLB directly affect the outcomes of CTE. These programs were conceived of as education alternatives for the less academically motivated and the career-focused student. To subject these students to the same accountability measures could be perceived as inappropriate. CTE and related programs provide students with marketable skills such as industry certification, work experience, employability, soft skills, and technical knowledge.

The debate on the proper curricula and programs to prepare students to be competitive in the world of work has been raging for more than 100 years. The model of education in the United States has not changed significantly since the inception of bell schedules. The reality is that the pace of change in the world is always increasing. Has NCLB precipitated the educational change necessary to properly prepare U.S. students for the career acquisition process? Progressive programs and curricula have been replaced with testing preparation and proficiency remediation. This study was conducted to accurately determine the true impact that the passage of federally mandated NCLB has been on CTE, specifically in the two Bucks County facilities and generally in the state of Pennsylvania.

CHAPTER 2

LITERATURE REVIEW

Introduction

The fundamental purpose of this study was to identify the possible unintended consequences of NCLB on CTE in general and specifically how CTE centers in a region of Pennsylvania may have been affected by the implementation of NCLB. To create a foundation for this study, I researched related topics to establish the need for answers to the research questions.

The following section provides an explanation of CTE in Pennsylvania and an examination of CTE components CTE, including changes in the area student achievement since the inception of NCLB. The debate on the correct curriculum to prepare students for the future is more than 100 years old. This literature review provides a brief, general history of CTE in the United States with a concentration on Pennsylvania. It includes background on NCLB, student achievement, testing, PSSA, business education, cooperative education, partnerships, and special education transition planning to demonstrate how critical CTE is to the preparation of a workforce in the 21st century.

History of CTE

The debate on the correct curriculum to prepare U.S. youth is not new. It began at the end of the 19th century and continues over 100 years later. Kliebard is a valuable reference for a career-based curriculum. His books *The Struggle for the American Curriculum* (2004) and *Schooled to Work* (1999) depict an overview of the history of CTE in United States.

Before career-based education in schools, the majority of U.S. workers were educated through apprenticeships. The manual training movement began at the Philadelphia Centennial Exposition in 1876. John O. Runkle, president of the

Massachusetts Institute of Technology, saw an exhibit on the Russian system as a kind of divine revelation. The system used a series of graded exercises independent of the actual production process. The Russian system was a viable school-based alternative to the apprenticeship system. In 1877, Runkle arranged for an exhibit of the Russian system at the meeting of the National Education Association. He also urged the Massachusetts Board of Education to incorporate manual training into the public high schools (Kliebard, 2004, p. 111).

In 1878, Calvin Woodward joined the campaign for manual training. Woodward was a professor at the O'Fallon Polytechnic Institute at Washington University in St. Louis. He was working on his own series of graded shop exercises to assist students in properly using tools in his shop. He also presented a full-fledged pedagogical rationale for manual training. Throughout the 1880s, Woodward continued to promote manual training as a part of general education. He presented statistics showing that manual training promoted a strong motivation for study. A large number of manual training students continued their education to embark on careers in teaching, law, medicine, architecture, and engineering (Kliebard, 2004, pp. 111–112).

The movement was not universally accepted and had a very strong opponent in William Torrey Harris. Harris was an educational conservative. He became U.S. Commissioner of Education and was chair of the Committee on Pedagogics. That committee had manual training as its central concern. The committee recommended postponing manual training until the student reached the age of 12. Harris preferred postponing manual training until the age of 15, reasoning that manual training would detract from the intellectual and spiritual functions of schooling. The pedagogical debate continued as Woodward persisted in promoting manual training. By 1893, Woodward had gained significant support for manual training (Kliebard, 2004, p. 113).

During this period, manual training was available for some Black and American Indian children. In 1868, Samuel Chapman Armstrong founded the Hampton Institute in

Virginia to instill the virtues of industry and hard work in newly freed slaves. The Hampton model was refined by Booker T. Washington who introduced it into his newly created Tuskegee Institute in Alabama. The principles of the institution were to create an independent class of Black artisans. Washington continually promoted the advantages of industrial education that enhances, rather than opposes, literacy education (Kliebard, 2004, pp. 113–114).

Manual training increased in popularity between 1894 and 1913, with enrollment growing from 3,300 students to almost 51,000 students. The movement was evolving into vocational education with national labor and industry organizations. A 1906 report issued by the Commission on Industrial and Technical Education, also known as the Douglass Commission, after Massachusetts Governor William L. Douglas, demonstrated clearly that schools were out of tune with the times. The remedy prescribed was a move in the direction of industrial trade training (Kliebard, 1999, pp. 21–22).

This period also saw the creation of a scientifically managed curriculum, a direct descendant of Frederick Taylor's scientific management. The scientific concept was directly introduced into the curriculum by the work of John Franklin Bobbitt. This was the first work dedicated to curriculum that incorporated scientific method into education. Students became raw material—the teacher was the overseer of the production, and the children were adults in the making. Bobbitt was one of many promoting this form of curriculum design (Kliebard, 1999, pp. 50–51).

Morgan (1997) in his book *Images of Organization* described five principles that Taylor advocated:

1. Shift all responsibility of the worker to management. The workers have the task to implement.
2. Use scientific methods to determine the most efficient way of doing work.
3. Select the best person to perform the job.
4. Train workers for efficiency.
5. Monitor worker performance. (p. 23)

There is a striking resemblance here to facts and events in the current educational policy climate. The objectives of NCLB could be clearly aligned with the principles advocated by Frederick Taylor. The similarities of the shift toward the scientific curriculum movement at the beginning of the 20th century can be compared directly to the shift from the School-to-Work initiative of 1994–2001 to the implementation of NCLB in 2002.

The federal School-to-Work Opportunities Act (STWOA,1994) was intended as a systematic response to the apparent skills gap among young people. The act had many components of successful CTE programs: school-based learning, work-based learning, and school-industry-community partnerships. The act faced opposition; critics said that it fell short of the objective when it expired in 2001.

This legislation was followed by NCLB, which diametrically shifted educational focus from the postsecondary transition model of STOWA to a rigid model of grade-level assessment and school accountability. NCLB objectives could be compared to the scientific methods established by Fredrick Taylor. "Under NCLB, states are working to close the achievement gap and make sure all students, including those who are disadvantaged, achieve academic proficiency" (U.S. Department of Education, 2004). This quotation clearly indicates the narrow focus of NCLB. There is no mention of anything other than academic proficiency, and all students are categorized together. There is a single goal for all students: academic proficiency based on grade level accountability, in other words, an assembly-line approach to educating children.

CTE

What is CTE and how does it help students? CTE is an existing educational option for high school students. In Pennsylvania this is served by a series of regional CTE centers that are designed to offer a comprehensive high school education to students with a career or trade related focus, or solely the CTE courses with academics still being

provided at the sending school districts. All CTE students receive a combination of academic and career and technical education courses that combine workplace skills and/or industry related competencies, certifications and academics.   In some cases the academics are provided at the sending school districts. A detailed list of the programs that are available at each CTE center researched in provided later in this study.

There is not one standard model of CTE in Pennsylvania and each CTE center operates independently, similar to the way a school district functions. The CTE centers have an operating board of directors, members are designated by the sending school districts. The actual centers are designed as a full or part time program. In a full-time program students leave the sending school district and are considered a full time student at that facility. They receive academic and vocational training at that facility as their school day. The facility has a separate AYP rating and school reporting designation as part of NCLB legislation. In a part time program students receive academics at the sending district and CTE related courses at the CTE center. The student remains a component of the sending districts AYP and accountability process and the CTE is not evaluated as part of that system.

A recent publication from the National Association of State Directors of Career and Technical Education Consortium included the following statement: "CTE is the intersection between rigorous academic, technical, and employability skills resulting in capable, engaged, career-ready individuals" (Schescke, 2008, p. 1). *Career Technical Education: A Partner for Effective High School Reform* also included the following ways CTE can support student success:

> CTE increases student engagement. The use of the CTE contextual
> teaching model brings relevance to academic content. CTE also prepares
> students to be flexible and adaptive and to have transferable skills, such as
> problem solving, teamwork, and the ability to locate information.
> (Schescke, 2008, p. 2)

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The National Center and Technical Education Research Agenda identified a need for focused, relevant, and rigorous research in CTE (Lambeth et al., 2008). This was a nationwide research project, compiled using the Delphi technique. The qualitative data were analyzed using the Affinity Diagram method of data analysis. This comprehensive educational agenda that combines workplace skills and academic standards may be the key to school reform, but the current policy-mandated playing field has tilted overwhelmingly in the direction of standards, thereby inhibiting the practicality of a true school reform effort that will benefit the student. Further research is needed on the long-term economic and educational benefits of combined programs as well as the value of CTE programs in the current educational system (Fletcher, 2006).

The Office of Disability Employment Policy (ODEP) promotes the following recommendations for all youth to move successfully into the workforce (Rhodes, 2007

- Access to high quality standards-based education regardless of setting

- Information about career options

- Exposure to the world of work

- Opportunities to develop social, civic, and leadership skills

- Strong connections to caring adults

- Access to safe places to interact with their peers

- Support services to allow students to become independent adults (pp. 1–2).

These recommendations were included in *High School/High Tech Program Guide: A Comprehensive Transition Program Promoting Careers in Science, Technology, Engineering and Math for Youth With Disabilities* (Rhodes, 2007). The report also includes the impact of technology. The recommendations go well beyond the

strict accountability components of NCLB. Technology has become an aspect of almost every job in today's economy. The information from ODEP is predicated on the most effective way to prepare all youth for the workforce. NCLB is based on all students working at their grade level requirements by 2014 and ignores most of the recommendations of the ODEP.

This study will also contribute to other work in this same area. The effect of NCLB has been studied in different forums, but there may be a universal theme. There is a unified concern among CTE constituents that schools may use funding normally set aside for CTE programs to improve student performance in other areas directly mentioned in the legislation to meet accountability requirements (Chad & Drage, 2006, p. 79).

The objective of the Chad and Drage study was to describe the perceptions of principals and teachers of CTE on the impact that NCLB has had on high school CTE programs in the state of Illinois. In the findings, respondents reported that CTE helps prepare students for academic requirements. However in open-ended responses principals provided responses that included "as graduation requirements increase, CTE gets phased out, NCLB will eventually eliminate most CTE courses. NCLB hurts not helps." Teachers supplied the following comments: "the entire school is focused on reading and math. NCLB has not let students explore, NCLB is a great idea but impractical in reality." One of the conclusions of the study was that teachers and principals agreed that CTE courses help students achieve goals set forth in NCLB.

CTE in Pennsylvania

The mission of the Department of Career and Technical Education as posted on the Pennsylvania Department of Education web site is as follows:

> To provide leadership in developing high-quality academic, career and technical education programs that prepare students for postsecondary and employment opportunities, through the integration of rigorous academic

and industry-relevant instruction. (Pennsylvania Department of Education, Bureau of Career and Technical Education, 2009)

The Office of the Governor and the Pennsylvania Department of Education retained the research firm Jobs for the Future (JFF) to develop options and recommendations for state-level action to improve secondary CTE (Kazis, 2005). *Career and Technical Education in Pennsylvania Opportunities for Commonwealth Policy* concluded

> From JFF's review of practice and policy in Pennsylvania and other states, it is clear that the Commonwealth can base program improvement upon a great deal of strong practice in secondary school reform and CTE. In a state as large and varied as Pennsylvania, CTE can provide a vital, viable option for a significant proportion of today's youth—but only if it is high quality and meets rigorous academic and technical standards. A number of area career and technology centers tell stories of turnarounds—from falling enrollment and declining local support to burgeoning enrollment, increased post-secondary enrollment, and vocal support from sending schools, employers, parents, and teachers. They have achieved those results because of an undaunted focus on student achievement for all students, the alignment of all parts of their schools to support that belief, and a willingness to make significant changes in staffing, program requirements and expectations, funding, and other basic aspects of operations. They have imagined a different future for CTE programs and students, and they have worked to make that vision a reality. They do not have to be the exceptions: by careful consideration of the commendations made here and setting priorities for implementation and action, the Commonwealth can strengthen the secondary CTE system for the tens of thousands of students whose futures depend upon its quality and value. (Kazis, 2005, p. 35)

This conclusion indicates the possibility that CTE centers are experiencing changes to accommodate accountability measures associated with NCLB. Specific areas mentioned by JFF were researched for this study.

The Pennsylvania Department of Education Bureau of Career and Technical Education prepares an annual report to inform the Standing Committee on Education of the Senate and House of Representatives on matters related to area CTE schools, as

required by Act 117 of 1986 and Section 1803.1 of the Pennsylvania School Code. The 2008 report (Pennsylvania Department of Education Bureau of Career and Technical Education, 2009) contained the following statistics on CTE in Pennsylvania. A total of 57,007 students were enrolled in area CTE school programs during the 2006–2007 year. For the same year, participating school district career and technical programs enrolled 27,157 students. In addition, 6,543 students were enrolled in nonparticipating school district reimbursable CTE-approved programs. This totals 90,707 students enrolled in reimbursable CTE programs. Compared with enrollments in 2005–2006, the number of enrollees decreased by 2.5% at area CTE schools and by 0.1% at participating school districts (Pennsylvania Department of Education, Bureau of Career and Technical Education, 2009, p. 6).

The August 2007 edition of *Bulletin,* the bimonthly magazine of the Pennsylvania School Boards Association, was titled "*Career and Technical Schools: More than one route to Success."* The publication contained numerous features and editorials dedicated to CTE in Pennsylvania.

The opening remarks were written by William S. LaCoff, President of the Pennsylvania School Board Association. LaCoff provided pertinent facts to consider in the structure in CTE in the state. The system of CTE centers is a regional format. Local sending districts are responsible for assigning board members to a joint operating committee that establishes policy for each center. LaCoff remarked that without exposure to the centers, it is difficult to understand their mission. The vocational schools of the past are no comparison to the current centers. Learning technical skills is the focus, but now centers are also required to demonstrate that students are meeting the same academic standards as traditional high school students (LaCoff, 2007).

Students who choose technical training may face a reduction of that opportunity so that schools can address current accountability measures. This issue of decreasing career education opportunities was elaborated by Dr. Lee Burkett, Director of the Bureau

of Career and Technical Education, Pennsylvania Department of Education. Burkett noted that CTE has changed significantly in the past 10 years. To meet the standards set by the State Board of Education Chapter 4 Academic Standards and Assessment, CTE centers have increased their efforts in the area of academic preparation and college readiness (Burkett, 2007). Current statistics show that 17% of Pennsylvania public school 9–12 enrollment students attend CTE centers. That means that 83% of students are not exposed to CTE. However, Burkett cited an article written by Gray (2004) in the *Phi Delta Kappan.* Gray indicated that 33% of high school graduates immediately go to work after graduating. At minimum, 16% of high school graduates in Pennsylvania have not been provided with the skills to be competitive in the workplace.

On January 13, 2012 the *Bucks County Courier Times* published "Legislators Hear Benefits, Challenges of Vo-Tech Education" (Bentman).The article focused on the difficulties that CTE centers are currently facing. The article supported the interview data and contained the most current information. Members of the Pennsylvania House Education Committee heard from students, teachers, and employees from the CTE centers. Funding was listed as the biggest challenge. The current funding formula is very complicated, and most federal funding has been slashed. Sending districts face a disincentive to sending students to the CTE centers. The cost to the sending district can range between $5,000 and $10,000. A substantial amount of that funding is spent on special educational services, because the CTE centers have a significant special education population.

<center>**CTE Policy**</center>

CTE centers have specific sections of the School Code and local Articles of Agreements. Centers act independently from their sending districts, hire their own staff, and have their own collective bargaining agreements that must correspond to their policy manuals. Policy must comply with changing legal requirements.

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CTE policies exist for the Joint Operating Committee and the staff to follow to ensure that legal requirements are addressed (Masshardt, 2007, p. 7). Policy is critical in CTE centers, because board members change often. Therefore, a consistent written collection of policies is necessary to maintain stability.

Comprehensive step-by-step procedural regulation ensures the consistency of staff actions. Joint Operating Committee (JOC) members serve both the center and the partnering district. Therefore, a manual leaves day-to-day operations in the hands of staff. All JOC members, participating school districts, students, parents, and community members should be aware of the JOC's policies (Masshardt, 2007).

Business Education

Business education is a component of CTE and has endured a tenuous ride at the K–12 level of education. At the postsecondary level, the discipline of business is studied by a majority of students. At the K–12 level, the majority of business education programs are in a struggle for existence. Lambrecht (2007, p. 17), a professor of business and marketing education at the University of Minnesota, researched the following questions using a Delphi technique in the first of three stages:

- What trends do business educators face in their school environments?

- What assumptions do business educators make concerning these issues in their school environments, their approach to teaching and learning, and their curricula?

- What actions can and should take place to maintain business education as a focused, viable, content area of substance in our schools?

This use of the Delphi technique allowed for the collection, synthesis, explanation, and re-synthesis of the data in such a way that expert opinion and personal experience were included. This study began with a paper and online survey. The survey

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was administered at regional and national conferences. The data were the basis for 16 stage-two, follow-up questions sent to volunteers from the original survey. The findings from the follow-up questions lead to the development of 20 Likert-scale questions for the third-stage survey.

The statements that had strong agreement support the idea that business education should be seen as a general education area for all students. Business education should be valued for its content and not as support to other academic skills and abilities. Although the support for a business education identity was clearly evident, a reduction of business teacher education programs was also identified. There has been a notable reduction of business education doctoral programs. The loss of funding for CTE programs has led to the non-replacement of business education professors at the college level.

Lambrecht's study has added to the list of factors that are contributing to the reduction of CTE programs at the K–12 level. Business education is struggling for survival in the entire educational system. Rader and Meggison (2007) examined business education at all levels. The authors began with an introduction to the levels of business education as designated in the National Standards of Business Education by the National Business Education Association (NBEA): elementary (grades K–6), middle school/junior high (grades 6–9), secondary (grades 9–12), and 2-year postsecondary/community or technical college. The NBEA does not include undergraduate or graduate education (pp. 26–31).

The authors indicate that the business curriculum at the secondary level has been in a rapid and continuous state of change for the last 25 years. The Vocational Education Act of 1963 provided the first federal funding for business and office education. The curriculum emphasized the preparation for young people to enter the workforce. They included the following perception relating to the trend for business and CTE:

> Today's business educators believe, however that this trend is not
> expected to continue, for a variety of reasons such as high-stakes testing,

more rigorous academic standards, and the public perception that most high school students will go to college. Enrollments in CTE programs are expected to continue to decline in the future, and the business education curriculum will focus more on personal use courses and content. (Rader & Meggison, 2007, p. 26)

Currently, few states mandate business courses; like other elective areas such as art and music, there is competition for students. Rader and Meggison (2007) included recommendations to alter the current trends. Business educators at all levels should work collaboratively to promote business education. To validate relevant current curriculum, teachers at the secondary level should enlist input from business and industry in the form of advisories.

College-prep students should be encouraged to take honors and Advanced Placement level courses in business, if available. Dual-enrollment business courses should be established through articulation agreements with local colleges. According to Rader and Meggison (2007), business educators, a component of CTE available at most secondary levels, must work together to promote programs, maintain and build enrollments, secure funding, and improve the image of business education (Rader & Meggison, 2007).

Partnerships

Recent data in the area of partnerships and community involvement indicate that solid relevant connections to classroom material positively affect the educational system. The positive effects are not measured but do improve test scores and increase student engagement. The center of School Family and Community Partnerships at Johns Hopkins University released a study (Sheldon & Epstein, 2004) comparing attendance in elementary schools in Ohio that developed school wide programs of school, family, and community partnerships with schools that did not develop such programs. Sheldon included research that demonstrated important correlations between higher student

attendance and increased academic success (Lamdin, 1996; Nicholes, 2003) and fewer occurrences of delinquent or destructive behaviors (Hallfors, Vevea, Iritani, Cho, Khatapoush, & Saxe, 2002; Wang, Bloomberg, & Li, 2005). There are also connections between higher daily attendance rates and performance on standardized achievement tests. Sheldon noted the lack of research on interventions to improve student attendance. The author drew this conclusion from this study:

> I provide evidence that strong implementation of a school, family, and community partnership program can benefit students. From one year to the next, elementary schools in which teachers, parents, and administrators organize action teams, planned family and community-involvement activities linked to school goals, and reached out to involve all families reported a significant increase in the percentage of students attending class, compared to schools that were not conducting these activities. (Sheldon & Epstien, 2004, p. 39)

Sheldon's research was restricted to elementary schools. Scales, Foster, Mannes, Horst, Pinto, and Rutherford (2005) released a study supported by a grant from the U.S. Department of Education to National Association of Partners in Education. The research was conducted on minority students in an urban Houston high school. The intention was to determine the relationship between developmental assets and positive academic, behavioral, and socio-emotional outcomes of non-white, affluent, or suburban students. In 2002, researchers from the Harvard University Graduate School of Education visited Houston and conducted 76 interviews with students, teachers, administrators, partnership representatives, parents, and grandparents. The quantitative measures included two surveys taken during the school day. The qualitative measures incorporated in this work included a combination of interviews, observations, archival records, and focus groups (Scales et al., 2005).

This mixed-method study offered the following conclusions:

1.	This specific population experienced more positive developmental outcomes as their level of developmental assets increased.

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2.   There is a positive relation between the exposure to school-business partnerships and the level of developmental assets reported.

3.   The greater the exposure to partnerships the more student assets available.

4.   A positive relationship between exposure to partnerships and measures of developmental success, including better self-reported grades, attendance, academic motivation, career preparation, lower risk behaviors, increased leadership, and maintained physical health.

5.   There are identifiable features of partnership experience that seem to contribute most to observed relations between partnerships and developmental assets. The partnership help goes beyond financial and material support and seems to increase academic success, including going to college (Scales et al., 2005, p. 182–183).

Student Achievement and NCLB

The following quote from former Secretary of Education Margaret Spellings' biography page of the U.S. Department of Education clearly depicts the narrow focus related to NCLB implementation and assessment.

> Secretary Spellings is working to ensure that every young American has the knowledge and skills to succeed in the 21st century. She has partnered with states to implement and enforce the No Child Left Behind Act, which commits our schools to bringing all students up to grade level or better in reading and math by 2014. The law has led to rising test scores and shrinking achievement gaps in states across the country. (U.S. Department of Education, 2009)

That statement clearly defines the narrow focus that is used through NCLB to rate student and school performance. The goal to ensure grade level in two subject areas does not properly address preparing students for their future careers. The narrow focus will also create conflict in how school districts allocate their resources and define their priorities.

In the current policy climate, which is framed by the federal NCLB (2001), many

of these priorities can be traced to top-down mandates emanating from the school

district's central office and, in turn, from the state departments of education and the U.S.

Department of Education. (Anderson-Butcher, Lawson, Bean, Flaspohler, Boone, &

Kwiatkowski, 2008, p. 161)

Relevance of theoretical framework and career development to the proposed

study rationale for career development. The most effective methods to facilitate career

development depend on the answer to the question regarding at what age career

development and career exploration should begin. Research supports the concept that the

career development process should begin in childhood. Porfeli, Hartung, and Vandracek

(2008) examined how vocational development research and interventions have focused

primarily on adolescents and young adults. Vocational intervention in childhood

influences vocational development in the adolescent period and beyond. This intervention

is lacking. This position is supported by the high drop-out rate in the United States and

the fact that the public school system offers few services to help high school students

seek and obtain career-track jobs (Porfeli, Hartung, &Vondacek, 2008, p. 26). Porfeli et

al. call for research and intervention in the area of career development. They stated that

the current system of career development is inadequate and has been limited by NCLB:

> A substantial portion of children in the United States educational system
> leave school prematurely and are ill prepared to seek and obtain a lucrative
> and secure career-track job. Elementary and middle school guidance
> programs presently devote few resources to vocational development and
> many school counseling resources are now expanded to address federal
> and state standardized testing mandates associated with No Child Left
> Behind. (Porfeli et al.2008 p. 31)

Career development objectives, as coded in the American School of School

Counselor Association's National Standards, can be overshadowed by the growing

emphasis on academic standards (Kolodinsky, Schroder, Montopoli, McLean, Mangan, &

Pederson, 2006). The Kolodinsky group measured the amount of occupational self-efficacy of a group of primarily adolescent female students that can be produced by a nontraditional career fair. In this study, the career fair produced a statistically significant, generalized increase in occupational self-efficacy (Kolodinsky et al., 2006, pp. 3–8). *Self-efficacy,* a critical component in Bandura's social cognitive theory, will also be referenced in the theory section (Bandura, 1995).

Career Development Theory.

The focus on standardized testing may overshadow the work that has been done in the area of career development. Super's theory of career development can be considered the most comprehensive of all career development theories (Zunker, 1990). There are two primary concepts of Super's theory. The first involves the ideas that career development is a lifelong process defined in stages and that self-concept is shaped in each phase of life (Zunker, 1990). Super clearly stated that the development stages experienced by all individuals begin with the growth stage at age 14. This stage is characterized by the development of attitudes, interests, and behaviors that relate to self-concept. The second stage is the exploratory stage, which begins at age 15 and lasts until age 24. This stage is divided into three categories, the first of which involves crystallization for ages 14–18 and is defined as a cognitive process and period of formulating a general vocational goal through the awareness of resources, contingencies, interests, values, and planning for preferred occupation. That phase was a theoretic focus of this study, because of the age group that is enrolled at the CTE centers researched. The other phases of the exploratory phase are crystallization of preference (18–21 years old) and specifying a vocational preference (early 20s).

Gottfredson also completed extensive research in career development and developed the theory of circumscription and compromise in career guidance and counseling. The theory focused on how young people gradually come to recognize and

deal with, or fail to deal with, the array of vocational choices that society provides

(Gottfredson, 2002):

> The circumscription and compromise theory suggests that four
> development processes are especially important in the matching process:
> age-related growth in cognitive ability (cognitive growth), increasingly
> self-directed development of self (self-creation), progressive elimination
> of least favored vocational alternatives (circumscription), and recognition
> of and accommodation to external constraints on vocational choice
> (compromise). (2002, p. 1)

Social cognitive career theory. Some of the most extensive work in career

development theory evolved into the social cognitive career theory (Smith, 2002). The

work started with Bandura and the social cognitive career theory (Bandura, 1986) and

was expanded by Lent et al. in 2002 (Smith, 2002). Smith used the three social cognitive

variables of the theory—self-efficacy, outcome expectations, and goals—to research

academic performance in information technology:

> Using social cognitive career theory to understand academic performance,
> educators can enhance students' learning experience. Information
> technology education that incorporates data acquired about past
> performance, computer self-efficacy, outcome expectations, and academic
> goals into the curriculum may help students improve their individual
> academic performance. (Smith, 2002, p. 9)

Models of Career Development.

Comprehensive career guidance, including career and academic counseling,

should be offered no later than middle school and should be supported by a personalized

graduation plan (Scheske, 2008, p. 3). The Missouri comprehensive guidance model is an

example of one of several models of career development that are well suited for preparing

students for their future careers. It was highlighted in an article written by Ellis in 1990,

which detailed the system created by Gysbers and associates at the University of

Missouri. The curriculum is organized around career planning and exploration,

knowledge of self and others, and educational development. The structure is supported by an enhanced guidance system, professional development, community relations, advisory councils, and research and development (Ellis, 1990).

Gysbers and Moore (1975) introduced this model of comprehensive career planning in *Beyond Career Development—Life Career Development.* The concept merges the literal interpretation of the words "life" and "career" to intensify into a comprehensive plan dedicated to career development. Life career development describes the total individual and all the roles we assume in our lives (pp. 647–652).

Helwig (2004) followed a group of students from 2nd through 12th grade. The study identified several changes that support vocational behavior and career development theory (Helwig, 2004, p. 49). This longitudinal study was largely based on Gottfredson's theory of circumscription and compromise, which includes career development beginning in the primary years and extends into the theoretical work of Donald Super that begins in the high school years. This study used a similar theoretical lens to compare the components of the theories and the changes that have occurred at the CTE centers since the inception of NCLB. One of the major limitations of that the study focused on the students; this study focused on changes at the CTE facilities studied.

Conclusion

This literature review was intended to accomplish several objectives. It introduced key highlights in the history of career education as well as CTE and how CTE operates in Pennsylvania; illustrated career development research, theory, and methods; and examined how NCLB has affected related curricular areas. The objective of this research is to determine how NCLB may have affected CTE in Pennsylvania. Although the combined elements of this literature review do shed light on the evolution and nature of CTE historically and in our era of high stakes testing and accountability, there is a need

for systematic study of these forces as they currently exist inside selected CTE centers in Pennsylvania.

CHAPTER 3
METHODOLOGY AND PROCEDURE

Introduction

The purpose of this study is to determine the impact of NCLB on CTE in the facilities selected using qualitative data (Creswell, 2003, p. 101). This case study focused on how NCLB may have impacted CTE in Pennsylvania. Qualitative case study methods were used in two CTE centers located in suburban Philadelphia. Qualitative case study methods allowed the researcher to carefully examine how the passage of The No Child Left Behind legislation may have influenced the delivery of CTE in a specific geographic location. *Qualitative research* refers to collecting and interpreting information about a phenomena without necessarily being concerned about quantity (Thomas, 2003, p. 33). For this part of the research, case study methodology was selected to provide the rich data necessary to determine the true effects of the implementation of NCLB. The goal of the study was to determine how these institutions may have changed or modified their practices to comply with the reauthorization of the federal legislation previously known as the Elementary and Secondary Schools Act, now commonly known as NCLB. Case study protocol was of paramount importance in the qualitative data collection process, because maintaining a protocol increases reliability (Yin, 2003, p. 67). The research method included interviews with school administrators, teachers, cooperative education coordinators, and counselors. Further, archival records of CTE centers since the inception of NCLB were reviewed.

The following research questions guided the study. The central theme of the research questions was this, "Has compliance to the accountability components of NCLB impacted the delivery of secondary education in two CTE centers in the Bucks county region of Pennsylvania? Specifically I pursued answers to the following questions.

1. Have changes in curriculum occurred at the selected CTE centers, since the inception of NCLB in 2002?
   A. Have vocational components of the CTE center been altered to address The PSSA for Pennsylvania NCLB testing requirements?
   B. Have academic components of the CTE center been altered to address Testing areas of the PSSA?
2. Has the availability of CTE programs at the CTE centers that will be researched, been influenced in the NCLB era (2002–2010)?
   A. Has the number of students enrolled at the centers increased or decreased?
   B. Has the number of programs increased or decreased?
3. What other impact has NCLB had on the CTE Centers?
   A. How has perceived staff morale changed at the CTE centers since the inception of NCLB in 2002?
   B. B. How have the changes associated with NCLB changed the staffs' perceived workplace readiness of students at the CTE students?

Assumptions and Rationale for a Qualitative Study

This research conducted in the two Pennsylvanian CTE facilities fit these characteristics. The research focused on the phenomenon of NCLB in the limited context of the two centers and examined the impact of the phenomenon over time. Gaytan (2007) examined research methods for articles published in the *Delta Pi Epsilon Journal and NABTE Review* between the years of 2001–2005. He concluded—

> Qualitative research can produce valuable, detailed-oriented, data through careful description of behaviors, events, situations, and interactions because it emphasizes processes that can be rigorously examined. In addition, qualitative research allows researchers to answer questions related to issues that cannot be addressed by quantitative methods. (Gaytan, 2007, p. 109)

A qualitative case study methodology was developed for this research. In a case study, the primary research question begins with how; there is no control over behavioral events and the subject is a contemporary issue (Yin, 2003). This study was developed to determine how NCLB has affected CTE in two CTE facilities in the suburban Philadelphia area only. The primary research question has no control over behavioral events. The subject is the contemporary issue of NCLB. There were no experiment or

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control groups. All data collection aligned with case study methods and met the criteria presented by Yin (2003) and Merriam (1998).

Role of the Researcher

I have a firm commitment to CTE for several reasons, both professional and personal. Professionally I am a certified business teacher and cooperative education coordinator and have witnessed the benefits of community-based instruction. My current professional goal is to document best practices in career development for the 21st century. The question of how to best prepare students for the 21st century must be answered with sound research that includes the input of experienced practitioners from all aspects of CTE.

The goal of the research is to determine the impact NCLB has had on the implementation, delivery, and outcome of CTE on the selected CTE centers in the Pennsylvania. The findings are presented in Chapter 4 in a direct fashion that does not include any bias of the researcher. The research methods employed are intended to present the findings without any preconceptions.

Ethical Issues

The ethical issues in this study focused on the objectivity of the presented data. The true purpose of this study was to assess the effect of compliance with national policy on CTE in Pennsylvania. Member checks were incorporated to protect from personal bias. Colleagues reviewed data analysis to complete a reality check of the intended research. This strategy affirmed the credibility of the results. The final report should not slant the findings in any direction and be a true representation of the changes and adaptations of CTE programs in the attempt to comply with the requirements of federal education policy.

Data Collection

Data collection for this study focused on answering the main research question. The methods of data collection included interviews from an inclusive representation of all staff members associated the educational components of the CTE facility and a comprehensive review of archival records from each facility.

Rich data. This study produced rich data through numerous interviews and the examination of archival records. The data collection included comparative analysis of interviews with CTE staff involved at centers during the period before NCLB to the current day.

Rich data were supplied by the transcription and analysis of the multiple interviews from each facility and the comparison of those data to the relevant archival records associated with those data. The combination of the two data sources should be sufficient to adequately provide the rich data for a meaningful case study methodology.

Triangulation. Triangulation was accomplished by researching two different sites and using two different methods of data collection, then comparing the data with a Pennsylvania statewide survey of CTE. The interviews illuminated data that identified areas of archival records that needed to be researched to validate interview data to determine the full extent of the effect of NCLB on the CTE centers researched. Chapter 4 of this research includes input from the examination of the archival records and the interviews conducted at the two facilities. These sources should ensure sufficient data to provide valid findings.

Sample selection. The qualitative sample selection for this study was specifically selected based on the delivery method of the type of CTE program offered. Pennsylvania has two basic delivery types of CTE centers. The distinction is the amount of time devoted to the program each day. Full-day programs provide both academic and vocational training, and half-day programs provide vocational training only. The sample

selection examined the impact of NCLB on the predominate types of delivery models based in the same geographic location.

Study Population and School Demographic

The initial step was to identify the sites and participants (Creswell, 2003, p. 185). Site identification began with a review of CTE centers to determine which two should be included. The two facilities were selected on the basis of geographic location; they are representative of the two basic delivery models of CTE in Pennsylvania. The *Pennsylvania Area Career and Technical Education Schools 2008 Final Report* described two types of schools: *full-time comprehensive high schools,* which include the delivery of both CTE and academic instruction (total of 23), and *occupational high schools,* which deliver only CTE (total of 62) with academics delivered in the sending district (Pennsylvania Department of Education, 2009). For this study, the comprehensive program is referred to as CTE 1; the occupational program is referred to as CTE 2.

The research began with a thorough review of archival records of the facilities to identify areas and programs that have experienced changes since 2002. The changes were categorized and compared with the data collected through semi-structured interviews with related staff. The staff interviewed at the facilities included administrators, teachers, and counselors. All the data collected through the review of archival records and interviews were analyzed to prepare the final report for this research study.

CTE 1. The inception of CTE 1 began in 1955 when seven school districts voted to support an area technical school. Construction began in 1957, and the school opened in September 1958 with an enrollment of approximately 600 students. Between 1958 and 1963, there was increased interest on the part of students to enroll in the school's various courses. Overtures were made by two additional school districts. By September 1964, plans were developed for the expansion of facilities. Construction was completed in

September 1965. In 1976, four additional instructional units (portable classrooms) were completed to enable minimal expansion for the increased enrollment of students. A new, state-of-the-art, full-time comprehensive technical high school opened in September 2000 with a capacity of 1,500 students. The school also plays an active role in the community by providing adult education programs during the day and evening.

Technical programs at CTE 1 are assigned to one of five academies - Construction/Manufacturing, Creative Arts, Service, Technology and Transportation. Listed below are the academy names and the technical programs associated with that academy. The information was taken directly from the facility website.

CREATIVE ARTS ACADEMY

- Commercial Art
- Commercial Photography
- Graphic Arts/Printing

CONSTRUCTION/MANUFACTURING ACADEMY

- Cabinetmaking/Woodworking
- Carpentry
- Electrical Occupations Technology
- Facilities Support Systems
- Heating, Ventilation, Air Conditioning & Refrigeration Technology (HVAC/R)
- Machine Technology
- Plumbing & Heating Technology
- Welding & Fabrication Technology

SERVICE ACADEMY

- Allied Health

- Baking & Pastry Arts

- Cosmetology

- Culinary Arts

- Dental Health Careers

- Emergency Services Technology

- Landscape & Floral Design

- Marketing Management

TECHNOLOGY ACADEMY

- APPLIED ENGINEERING TECHNOLOGY (AET)

  Computer Maintenance Technology

  Computer Networking Technology

  Electronic Communications Technology

  Electronics/Green Energy Technologies

  Mechatronics Engineering Technologies

- Civil Engineering Technology

- Multi-Media/Digital Design

TRANSPORTATION ACADEMY

- Automotive Technology

- Collision Repair Technology

- Diesel Technology

- Outdoor Power Equipment (OPE)

CTE 2. The half-time educational program at CTE 2 is organized into eight career clusters and twenty-two career pathways (i.e., major courses of study). Typically, students enroll in one career pathway as their major field of study and then complete a core set of courses common to the career cluster as well as a highly rigorous sequence of technical courses related to the career pathways. Students may complete additional

specialized courses as they advance beyond the standard secondary curriculum. Students receive half-day academic instruction at their sending school district.

The following list contains the programs offered at CTE 2. The list was taken directly from the facility web site.

Administrative Sciences & Business Technology

Automotive Collision Technology

Automotive Technology

Building Trades Occupations

Commercial Art & Design

Computerized Drafting & Engineering Graphics

Construction Carpentry

Cosmetology

Culinary Arts

Dental Occupations

Early Childhood Care & Education

Electrical & Network Cabling

Engineering Related Technology

Health Occupations

Health Sciences

HVAC & Plumbing Technology

Multimedia Technology

Networking & Operating Systems Security

Practical Environmental Landscaping

Web Page & Information Resources Design

Welding Technology

Work-Based Education

Population and Sample Characteristics of Participants

Participants for the study were all adult employees of the facilities or employers of students related to the programs of the facilities. Students were not interviewed or observed. The interviews were conducted outside of class time, and student contact was incidental only. The researcher did encounter students as they went about their daily routine at the school, but there was no direct contact as part of this study. The participants for this study were adults who were directly or indirectly connected to the delivery of curriculum or support work programs offered at the facilities. The personnel from the facilities included teachers, guidance counselors, administrators, support staff, and cooperative education coordinators.

The two CTE sites for case study protocol were selected because they are located near each other and represent the two predominant models of CTE delivery in Pennsylvania.

Archival Records

Archives were reviewed to determine the changes that occurred at each facility since 2002, after the inception of NCLB. Records contained data on enrollment, curriculum, and staffing. Enrollment records were reviewed to determine increasing or decreasing student numbers. The researcher looked for changes in curricula, indicated by curriculum guides, such as the program of studies. A staffing guide was examined to determine changes that occurred in the staffing needs and whether those changes were made to focus on testing requirements.

Interviews

The interviews allowed the researcher to gain insight into the participants'
understanding of the intended research (Maxwell, 2005, p. 92). The interviews were
conducted with staff from the facilities, including employers who were involved with
work-related programs before and after NCLB implementation. The main focus
addressed in the interviews was whether compliance with the accountability components
of NCLB affected the delivery of CTE secondary education in the two CTE centers
involved in this study.

Ten interviews were conducted per facility. The interview questions (Appendix
A) covered three categories: background, program, and perception questions. These
questions were formulated to gain understanding from the school personnel selected for
interview (Maxwell, 2005, p. 92). The qualitative research interviews were semi-
structured with an interview guide that included open-ended questions with follow-up
probes (Merriam, 1998, p. 82). The interviews lasted between 30 and 60 minutes and
were digitally recorded and transcribed for better analysis (Merriam, 1998, p. 87).
Appendix B categorizes the interview questions to directly connect the research
questions.

The school personnel interviewed have direct experience with the changes that
have occurred at the facilities since 2002. The personnel were selected for their ability to
provide relevant perspective on the desired information (Merriam, 1998, p. 83).

Participants were all directly involved with CTE programs, administration,
guidance, workplace components, curriculum, budgets, and admissions at the facilities.
They included teachers, administrators, guidance counselors, and cooperative education
coordinators. There were ten interviews per facility. The interviews will be identified for
their position at the facility and their experience at the facility.

Administrators, guidance counselors, cooperative education coordinators, and technical and academic teachers were interview.   Those individuals provide rich date because they are intimately involved with all educational aspects of the facilities. Guidance counselors are familiar with admissions, program changes, curricular requirements, graduation requirements, and enrollment. Administrators coordinate staffing, budgets, monitor curriculum changes, have contact with sending districts and the community—all useful information in determining what the facilities are doing to comply with the accountability measures of NCLB. Teachers and cooperative education coordinators implement work programs as components of the CTE centers. Information regarding implementation is critical in determining whether NCLB has enhanced or impeded the delivery of CTE in the geographic area of the facilities researched. The breakdown of individuals is as follows.

Table 1. CTE 1 Interviews

Position	Title	Years at Facility	Program or Subject Instructed
Administration	Director	5	
Administration	Asst. Dir.	12	
Guidance	Counselor	10	Guidance
Cooperative Ed.	Coordinator	10	
Technical	Teacher	21	Work Based Learning
Technical	Teacher	25	Agriculture and Landscape Design
Technical	Teacher	20	Applied Health
Technical	Teacher	29	Electronics Engineering Technology
Academic	Teacher	11	Cosmetology
Academic	Teacher	11	Spanish
			Language Arts

Table 2. CTE 2 Interviews

Position	Title	Years at Facility	Program or Subject Instructed
Administration	Asst. Principal	3	
Guidance	Counselor	5	Guidance
Cooperative Ed.	Coordinator	15	Work Based Learning
Cooperative Ed.	Coordinator	10	Work Based Learning
Technical	Teacher	12	Web design, Editing, Computer repair
Technical	Teacher	11	Public Safety
Technical	Teacher	20	Early Childhood Care and Education
Technical	Teacher	9	Cosmetology
Technical	Teacher	11	Automotive Collision Technology
Technical	Teacher	20	Welding Technology

Data Analysis

The method of data analysis for this case study was the constant comparative method. This method allowed the researcher to chart responses from interviews and to compare responses to archival records to determine program modification at the two centers. The first data set to be analyzed was the surveys. Next the interviews were analyzed and the archival records were categorized.

Methods of Verification

This research is intended to answer the research questions to determine if NCLB has had an impact on CTE in Pennsylvania. Qualitative research was selected for this study because of the nature of the intended data. CTE prepares students for careers, and when students leave as teenagers, evaluating success in the short term is not a valid

assessment. This study will document changes to the facilities' research and with the connection to findings in career development research this will provide a fair barometer to gauge what can be expected from the young adults completing the programs.

Searching for Discrepant Evidence and Negative Cases

The research is designed to provide opportunities for respondents to discuss all effects of NCLB on CTE. Every aspect will be investigated—not only the negative impacts. Discrepant evidence and negative cases for this study include components of NCLB that have enhanced CTE.

Comparison: Qualitative Sequence

Data collected through the examination of archival records and interviews with CTE personnel were categorized during the data collection period. The development of categories allowed comparison of the two data sources. The objective was to validate findings through the comparison of the multiple sources.

CHAPTER 4
THE RESULTS OF THE STUDY

Introduction

Qualitative case–study methods permitted me to carefully examine how the passage of NCLB has influenced the delivery of CTE in suburban Philadelphia area. This study determined how these institutions changed or modified their practices to comply with the 2001 reauthorization of the 1965 Elementary and Secondary Schools Act commonly known as NCLB. The research method included interviews of school administrators, teachers, cooperative education coordinators, and counselors. There was also a review of the archival records of CTE centers since the inception of NCLB.

The following research questions were answered to ensure the study completed the intended design. The central theme of the research was whether compliance to the accountability components of NCLB has affected the delivery of secondary education in two CTE centers in the Bucks county region of Pennsylvania. Specifically the following questions were answered.

1. Have changes in curriculum occurred at the selected CTE centers, since the inception of NCLB in 2002?
   A. Have vocational components of the CTE center been altered to address The PSSA for Pennsylvania NCLB testing requirements?
   B. Have academic components of the CTE center been altered to address Testing areas of the PSSA?
2. Has the availability of CTE programs at the CTE centers that will be researched, been influenced in the NCLB era (2002–2010)?
   A. Has the number of students enrolled at the centers increased or decreased?
   B. Has the number of programs increased or decreased?
3. What other impact has NCLB had on the CTE Centers?
   A. A. How has perceived staff morale changed at the CTE centers since the inception of NCLB in 2002?
   B. B. How have the changes associated with NCLB changed the staffs' perceived workplace readiness of students at the CTE students?

Data Collection

Data collection for this study was completed in the spring and summer of 2011.The methods of data collection included interviews with an inclusive representation of all staff members associated with the educational components of each CTE facility and a comprehensive review of archival records supplied by the schools and the Pennsylvania Department of Education.

The initial steps in data collection involved establishing a main contact at each facility. The contact at CTE 1 was the human resources director. The contact person at CTE 2 was an assistant principal. Both individuals were extremely helpful and assisted in all aspects of data collection. All of the participants voluntarily agreed to be interviewed and were eager to share their stories.

Data were supplied by the transcription and analysis of the multiple interviews from each facility and the comparison of that data to the relevant archival records associated with the data. The combination of the two data sources is sufficient to adequately provide the rich data required for a meaningful case–study methodology.

Triangulation

Triangulation was accomplished by researching two different sites using two different methods of data collection and comparing data to determine themes and similarities. The interviews illuminated the areas of archival records researched. The final report of this research included input from the examination of the archival records and the interviews conducted.

Sample Selection

The qualitative sample for this study was specifically selected on the basis of the delivery method of the type of CTE program offered. Pennsylvania has two basic

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delivery types of CTE centers. The distinction is the amount of time devoted to the program each day. Full-day programs provide both academic and vocational training, and half-day programs provide vocational training only.

Study Population and School Demographic

For this study, the comprehensive program is delivered at CTE 1, and the occupational programs are delivered at CTE 2.

CTE 1 is a state-of-the-art, full-time comprehensive technical high school opened in September 2000 with a capacity of 1,500 students. The school also plays an active role in the community by providing adult education programs.

The half-time educational program at CTE 2 is organized into 8 career clusters and 22 career pathways (i.e., major courses of study). Students receive half-day academic instruction at their sending school district.

Interviews

The interviews for this study were conducted during the spring of 2011.The time of the interviews ranged from 30-60 minutes. The interviews were not timed and allowed to continue. Some of the subjects interviewed, viewed this as an opportunity to tell their story, in some cases share their personal feelings and frustrations. The interviews took place at the corresponding facilities. Exactly 10 interviews were conducted per facility. The interview questions used were divided into three categories: background, program, and perception questions. Appendix A contains the interview format. These questions were formulated to gain understanding from the school personnel selected to interview (Maxwell, 2005). The qualitative research interviews were semi-structured with an interview guide that included open-ended questions with follow-up probes (Merriam, 1998). This practice ensured that everything said would be preserved for analysis (Merriam, 1998). Appendix B categorizes the interview questions to directly connect the

research questions. Appendixes D–G contain the answers to the research questions categorized by research question and subject. The general sentiment from the interviewed individuals was cooperation and a willingness to share their first-hand experiences.

The personnel interviewed were directly involved with CTE programs, administration, guidance, workplace components, curriculum, budgets, and admissions at the facilities. The personnel included teachers, administrators, guidance counselors, and cooperative education coordinators. Guidance counselors are knowledgeable of admissions, program changes, curricular requirements, graduation requirements, and enrollment.

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

The method of data analysis for this case study was the constant comparative method. To accomplish this method, the interviews were conducted and then transcribed. The transcribed data were accumulated and the responses were charted by research question in relation to Appendix B, the research question matrix. Appendixes D–G were created to chart the data according to the participant interviewed. Appendix D sorts teacher interview questions. Appendix E sorts cooperative education teacher questions. Appendix F sorts guidance counselor interview questions. Appendix G sorts administrator interview questions. The responses were then analyzed for recurring themes. The themes were then listed in the interview results section of this chapter.

The examination of the archival records was also presented in words and graphs. The records provide data similar to the results of the interviews. The interviews provided more data. The records clearly indicated a decrease in attendance and programs offered since the passage of NCLB. That was also substantiated in the interviews; however, the interviews provided data on areas that would not be contained in the records. A decrease in teacher morale was evident in the responses from the interviews, and the detailed changes in staff duties were also explained in the interviews.

Outcome and Its Relation to Theory and Literature

One alarming aspect of the research was that during the research process for this study, there was no mention of career development theory. The literature presented in chapter 2 that predicted a minimization of curricular areas not part of NCLB testing was found to be accurate and overwhelming. At CTE 1, the school focus is academic achievement, and the school is berated because although the students score at the top of NOCTI testing, the school has only made AYP once.

The significant aspect of this study was that it allowed professional staff from the facilities to share their knowledge and experience of the changes and effect of the NCLB era. The personnel interviewed were open and honest. They understood that the policy decisions that have been made are out of their control, but their motivations and passion for CTE were evident. The staff firmly believed in their mission to deliver CTE and they were very willing to devote the time, energy, and commitment to adapt to the new NCLB playing field. The staff did express a sense of exhaustion in the uphill battle on chasing test scores and an overall negative feeling due to the consequences of NCLB on their facilities.

The data evaluation process began with the transcription of the interviews. As the transcripts process progressed, similar themes developed .The main theme focused on the increased academics for both facilities to address AYP requirements. The influence of AYP was noted consistently throughout each group interviewed. The impacts included budgets, staffing, resources, curriculum, scheduling, and attendance.

The results have been broken down into two sections. The first section is interview results. The interviews have been divided by research questions, and the results have been sectioned by the staff group that was interviewed. The second section of results included the findings in various archival records from the facilities. The archival records were reviewed to determine the various changes that are occurring at the

facilities. Archival records were examined to confirm changes that were mentioned in the interviews.

Research Results

The following research results section will include data from the interviews and from the results of the analysis of archivial data. The results will be presented in the research question sequence and will include all acquired data that supports answering that question or part of that question.

This study determined how the passage of NCLB legislation affected CTE in the two centers studied during the timeframe 2002–2011.The extent of the impact depended on the nature of the CTE program. Academic standards and curriculum mapping occurred at both facilities. The following data were produced from the interviews. The interview question responses were sorted by research question and by the group interviewed.

Research Question 1.
1. Have changes in curriculum occurred at the selected CTE centers, since the inception of NCLB in 2002?
   A. Have vocational components of the CTE center been altered to address The PSSA for Pennsylvania NCLB testing requirements?
   B. Have academic components of the CTE center been altered to address Testing areas of the PSSA?

Every interviewee noted changes to the curriculum since 2002.The predominate theme that developed was that academic components were increased at the expense of vocational components, and the shifts were directly connected to academic testing mandated by NCLB AYP requirements. Most programs were affected, and the full-time CTE program experienced the most changes. The entire program has been altered because of the AYP requirements of NCLB

Teacher Responses for Question 1.

*CTE 1.*Interviews at CTE 1, the full-time comprehensive program included academic teachers and vocational teachers. The academic teachers responded that they have shifted their focus to reading and math areas. Less is being done in the area of writing. There has also been a change in the rotation schedule. Students rotate between the academic and technical aspects of their program every six school days. That changes drastically during PSSA testing periods. The rotation stops, and the students involved in testing are not permitted to participate in the technical components of their curricula. Students spend an entire month with academic teachers preparing for and taking tests. Teachers have also increased academic rigor in reading and math. The following quote explains the extent of the impact during PSSA testing.

> The changes in programs have been focused in the area of academic testing. The program used to rotate on a 6-day basis. I would see my 9th and 10th grade students for 6 days, then we would switch, to see my 11th and 12th grade students. With the PSSA, we have stopped that rotation and I have seen the current group of students for 20 days. We allow time to prepare for the testing and time for the testing itself.

The vocational teachers responded that they have been required to integrate more reading, math, and science to their curricula. "We have experienced a definite shift to academics, especially reading and math. This is directly due to the inception of NCLB. The changes in programs have been focused in the area of academic testing."

The previous quote identifies the most notable changes to programs, specifically an increase in academics. The changes are geared to PSSA requirements, and the students are tested monthly. Vocational teachers have an increased responsibility in academics.

> Students are being force fed a test—either the PSSA or foresight—almost every marking period. The students feel that as a tech teacher we try to reinforce, writing, rewrites, but some students don't care about the test.

The previous quote also shows how the students are being affected. CTE is an educational option for students who are less academically inclined, but these students are either being denied access or having to participate in more academic programs due to NCLB requirements.

*CTE 2.*The teachers interviewed at CTE 2 are from technical areas only because the program is a full-time CTE center. Students receive academics at their home school. All teachers interviewed indicated that they were required to curriculum map academic standards into their programs. The curriculum for each program had to be revised to correlate academic standards to the scope and sequence in course outlines. The programs also have time dedicated to PSSA-related technology programs such as Study Island (a web-based standards mastery product) to help students become proficient. The following quote defines the changes and increased demands associated with the academic demands of NCLB.

> Academic changes, we now have to incorporate academic standards into
> the program. Adding the standards adds time to writing the curriculum,
> also weekly lesson plans take more time. I have to reflect which academic
> standards that are to be covered each week, I have to correlate the
> technology lessons to the standards and correlate to standards in program
> scope planned course outlines,

The academic changes have added layers to the planning and assessment at CTE centers and the inclusion of outside programs and requirements. "Academics have increased because we have to allow students to work on Study Island to become proficient"

Cooperative Education Coordinator Responses Research Question 1.

Cooperative education coordinators=

CTE 1. Program requirements have been altered to include NCLB requirements. PSSA proficiency is now part of eligibility to participate in the coop program. There is

also a schedule change that includes a 6-week preparation period. Students are not permitted to leave school to go to their coop placement for the 6-week period. The following quote from one of the cooperative education coordinators explains the total nature of the changes.

> The changes are directly attributed to NCLB Pennsylvania testing requirements. Program requirements have been adjusted to include PSSA proficiency or above and maintain a C- average to be eligible to participate. There is also a schedule change for PSSA preparation, and that has frustrated employers. Students miss up to 6 straight weeks of work for PSSA test preparation.

The coordinators indicated that this interruption is disruptive to the employing business and makes the participation in student placements unattractive.

CTE 2. The program has experienced a drastic increase of special needs students. This increase may be to comply with transition services requirements of the Individualized Education Program (IEP) process. These students may require a job coach. Job coaching changes the cooperative education coordinator's position because it requires more interventions, more workplace visits, and more interactions with special education personnel.

> In 2002 the economy was strong and with the quality of students, they did not have to do much intervention. Currently with 54% special education, we have to do more to assist the students to be successful. The students need more intervention and support. I am doing more damage control and retraining. We are placing students that we may not have in the past. Job coaches have been added for more community visits and work support: more visits to the workplace from once a month to 2 or 3 times a month, more documentation, more interaction with special education personnel.

Guidance Counselor Responses Research Question 1.

CTE 1. Several factors have led to an increase in the number of special needs students. CTE addresses transition requirements, and sending districts for the full-time program see the CTE center as a way to transfer the responsibility of the federal special

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education mandate to the CTE center. Further, sending districts may discourage higher-performing special education students from attending the CTE center so that their scores remain part of that school's PSSA results. The 8th grade results of the PSSA directly affect academic and vocational programs for students. Academic remediation is the primary focus for many students, and remediation alters program time. The scheduling focus is remediation based on the 8th grade test results and preparation for the requirements of the 11th grade PSSA testing.

CTE 2. Student requirements in the areas of math and reading have increased since 2002. Counselors also have to schedule remediation classes and include time for programs such as Study Island.

> Even though it is a tech curriculum, the students are learning reading, math, and science. Some of the instructors have students read books and write about what they learned. They still have academic components, they are just not sitting in an academic classroom. Student requirements in math and reading increased since 2002 with all kinds of remediation classes, and students use Study Island for requirements

Administrator Responses to Research Question 1.

CTE 1.The administrator interviewed started with the following statement:

> Our entire program has been impacted dramatically. The center has added Read 180 [a reading intervention program]. That additional remediation program requires time and staff training. Next year we will have a 9th grade academy, students identified through the 8th grade PSSA, or Fore Sight testing [a formative progress monitoring product] will have double periods of math and reading.

The following quote exemplifies the extensive nature of the impact and the frustration this administrator is experiencing:

> We are chipping away at everything that is not tested and left with a testing focus and not a well-rounded education. Our school was started on the High Schools That Work philosophy, a technical school with quality academics. Now, we are more of an academic school with technical classes as electives. We have added a reading and math specialist to assist

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with reading PSSA scores. We also are up to 24 special education teachers to support an inclusion model for academics. We have to instruct students in Algebra I, II, and Geometry to prepare for the 11th-grade PSSA. We are constantly looking for ways to improve academics. In the past 3 years, all of our technical teachers had to rewrite their curricula to include academic standards. Tech teachers have also been the emotional support for students due to the academic requirements.

This quote clearly indicates the extent of the impact that can be attributed to NCLB at this school. The High Schools That Work philosophy directly prepares students for the workplace of the 21st century (Southern Regional Education Board, n.d.). NCLB has completely altered that in the school.

*CTE 2.*The center has added software programs such as Study Island and 4Sight testing to retain students. These students are pulled from their tech programs for 30-minute sessions to complete the remediation programs. The state required the school to adopt a standardized curriculum and identify eligible content anchors in our curriculum. The administrator said, "All of our programs had to rewrite curriculum to address these requirements. They also incorporated MAX Teaching [a staff-development tool] for reading and literacy strategies anticipation guides." The following quote explains the extent of curricular changes since 2002.

The state adopted a standardized curriculum in a PLS [Performance Learning System] system that aligns all CTE curriculum so if a student moved, they could pick up where they left off. We had to pay teachers for training and to infuse academic standards into our curriculum; this we can't change, but we can add some material. We are also required to map academic eligible content and anchors into our curriculum. Each task that the students perform has to be curriculum mapped. We had to invest time and resources into these types of curriculum initiatives.

Summary of Research Question 1 Responses.

Responses to research question 1 were similar from both facilities. There have been changes to the curriculum at both facilities. Vocational and academic components have altered to increase the focus on academics. The increase of academics is the primary

focus of curricular changes that have occurred since the inception of NCLB. CTE 1 has been more severely affected because the facility is a comprehensive high school full-time program with AYP implications. CTE 2 also had to increase academic requirements to assist sending districts with AYP requirements. Both facilities had to map their curricula to state standards, add web-based intervention programs, and modify schedules to accommodate PSSA testing timelines and requirements.

Research Question 2.
2. Has the availability of CTE programs at the CTE centers that will be researched, been influenced in the NCLB era (2002–2010)?
A. Has the number of students enrolled at the centers increased or decreased?
B. Has the number of programs increased or decreased?

Teacher Responses Research Question *2*.

The general theme that developed through this question indicated that enrollment is down at both schools, and availability is limited for students. The responses also indicated that certain programs are full and have been full and other programs have been eliminated or underutilized.

CTE 1. The teachers are not directly involved with scheduling, but there are indications that sending districts are keeping academic students at the home schools for AYP results. In some cases, the less academically oriented students are being sent to the tech school. One teacher said,

> I hear sending districts are keeping their more academic students and sending us less academic students. They send us students that are not interested in academics, and we are going to teach them plumbing but we have to teach them reading and [are] evaluated on that. It is not a fair system. We traditionally have the less academic students and to hold teachers and the school accountable for academics only, is not appropriate, and counterproductive.

CTE 2. The students in the part-time program are calculated in the AYP results for the sending school districts. Therefore, teachers are seeing a decrease in the number of students. Test preparation and remediation take precedent over the technical programs. For example, some of the sending districts are not permitting students to attend the tech programs and are pulling them back from the programs for PSSA preparation. For the entire month of March schools keep students out of the tech program for PSSA preparation in anticipation of April testing. The following quote explains how this affects classroom teachers.

> Yes, the number has decreased because students are being pulled back to home schools for PSSA prep. The entire month of March, schools kept students at the home schools, so I can't cover new material.

Cooperative Education Teacher Responses to Research Question 2.

CTE 1. Students who are not proficient may not participate in the cooperative program. They are denied access to cooperative education. Program entry restrictions have restricted access to the program. The newest restrictions are focused on academic achievement and not on work performance or vocational standards. School and program requirements have been adjusted to include PSSA proficiency or above and students must maintain a C- average to be eligible to participate.

CTE 2. Sending districts are not permitting students to attend tech. They are holding back students that they think may be successful on PSSA testing. Districts are also holding students back their sophomore year to address testing requirements. In the past, students attended the CTE center for 3 years. There was more time to prepare students for the workplace.

> Sending districts are holding back students that they think may be successful on the testing and not permitting them to go the technical school. Sending districts are also keeping sophomores back at the home schools for test preparation and only allowing them to start as juniors, and we are a 3-year program here. So the students we are asked to place have

only done 1 year to get ready for placement instead of the 2 years previously. The students need more intervention, and support. I am doing more damage control and retraining. We are placing students that we may not have in the past.

Guidance Counselor Responses Research Question 2.

Responses from both schools had a similar theme. Counselors reported that students are being completely denied access to CTE, or their access to programs is limited due to testing related requirement. Students not doing well on the 8th or 11th grade PSSA are being retained at the home schools for testing remediation. Counselors process students before the test results are completed. In some cases, the students are pulled from the tech programs and placed in the sending high school. The scheduling procedure also denies students that may not have been accepted because of limited access, but then the student that was accepted in their place may be pulled from the program because of test preparation. The student that was not accepted is scheduled for the sending school and was completely denied access due to PSSA requirements for another student. A guidance counselor from CTE 2 said,

> It gets frustrating, because we accept students into a program with 25 spots. There were 30 applications, and we did not accept the other 5 students. Then when we are told at the beginning of the next school year that students can't participate; it is a shame for the students who were told "no." Then we go back to the sending districts to offer the program to the students that were denied. Their schedule has to be changed, and this makes more work and sometimes cannot work. Or if students were not given their first choice because a program was full, then we have openings, [but] that student may not get the opportunity to change programs. It is frustrating, but there is nothing we can do about it.

For some students, tech programs do not fit into the student's schedule because of school improvement plans for the sending district. The following quote explains the extent of the impact of the PSSA on student options. This quote was taken from a counselor at CTE 2:

Sending districts are totally responsible for AYP accountability for the students. The test results dictate what the student can take and limit student options.

When we were processing applications from sending districts, there were some with a note attached like "this student may not be able to attend because they may be required to take a remediation class for the 11th grade PSSA." We also actually accept students and later are told by the sending district that they will not be able to attend because they did not do well on the 8th or 11th grade PSSA. The districts hold back the students so they can prepare for the NCLB testing requirements.

CTE 1 interviews included the following quote, "Spanish is the only elective the students can take other than a computerized math or reading program." This quote indicates that the full-time program has dedicated almost all of the elective time and areas to focus on math and reading test preparation and remediation.

Administrator Responses Research to Question 2.

Responses from both schools had a similar theme. Enrollment is down and districts are holding students back for academics. CTE centers cannot give students all the academics of a traditional high school. AYP affects the CTE so negatively that students are being denied access for that reason as well as testing remediation. School code says that students cannot be denied access to CTE, but sending districts are sending fewer and fewer students. Budget cuts are also contributing to the declining enrollment. The main reason sending districts are holding students back is due to PSSA requirements and AYP commitments. The CTE centers have in-demand career programs but cannot get the students to fill the programs. AYP accountability is too severe, and it has limited student access.

CTE 1.

Yes, I am greatly concerned about the future. One of our sending district had 19 spots, they reduced it to 11. We have been in contact with incoming 10th graders, they won't return our calls, districts are cutting their enrollment in half but part of school code says that students can't be denied CTE. We also have a district that will not pay their contributions.

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CTE 2.

Enrollment fluctuates but has been declining in recent years. A few
reasons, but the main reason is that sending districts are holding students
back due to PSSA requirements and AYP commitments. Some districts
are limiting access for students or not allowing them access until they are
in 11th grade. Yes the sending districts are focused on PSSA scores, not
the availability of CTE for their student.

Archival Records Addressing this Question

The archival research for this project supported the interview data and uncovered
more challenges. The records that were researched included attendance data, budgets,
advisory committee meeting minutes, and guidance and scheduling information. The
examination of archival records supported the interview data.

Attendance. In the area of attendance, CTE centers are also facing declining
enrollment. Research question 2 A asked the following question: Has the number of
students enrolled at the centers increased or decreased?

Tables 1 and 2 detail total enrollment records for the two schools researched. Both
schools have developed a trend of declining enrollment. CTE 1 became a comprehensive
CTE center in 2000 and hit a peak enrollment in 2006–2007. Since then, the enrollment
has declined roughly 10%. CTE 2, the half-time program, has experienced a similar
pattern. The school reached an enrollment high in the 2003–2004 school year, and
enrollment has declined steadily since then by more than 27%.

The enrollment trends for both schools are very similar. The schools had increasing
enrollment for the first years of NCLB but as the AYP requirements increased,
enrollment began to trend downward (Figure 1). This trend was also noted in the
interviews and one administrator stated that attendance is one of their main concerns.

Table 3. CTE 1 Enrollment 2001–2011

Year	Total enrollment	Grade 9	Grade 10	Grade 11	Grade 12
01–02	1316	393	415	263	239
02–03	1318	337	368	377	231
03–04	1389	360	352	340	332
04–05	1419	390	385	321	309
05–06	1473	431	374	363	300
06–07	1480	378	410	340	327
07–08	1440	359	371	381	329
08–09	1418	348	359	345	366
09–10	1359	348	348	333	330
10–11	1350	363	330	333	310

Table 4. CTE 2 Enrollment 2001–2011

Year	Total enrollment	Grade 9	Grade 10	Grade 11	Grade 12
01–02	859	12	263	268	310
02–03	896	13	261	324	292
03–04	959	2	315	313	310
04–05	923	3	294	317	299
05–06	875	10	301	285	279
06–07	898	5	296	303	282
07–08	852	3	268	277	278
08–09	802	4	212	285	271
09–10	750	2	203	251	258
10–11	699	0	166	205	244

Note. The data for these tables were retrieved from archival records taken directly from the Pennsylvania Department of Education (http://www.education.state.pa.us/portal/server.pt/community/enrollment/7407/public_school_enrollment_reports/620541).

Figure 1. Attendance Comparisson
     Figure compare the attendance at CTE 1 and CTE 2
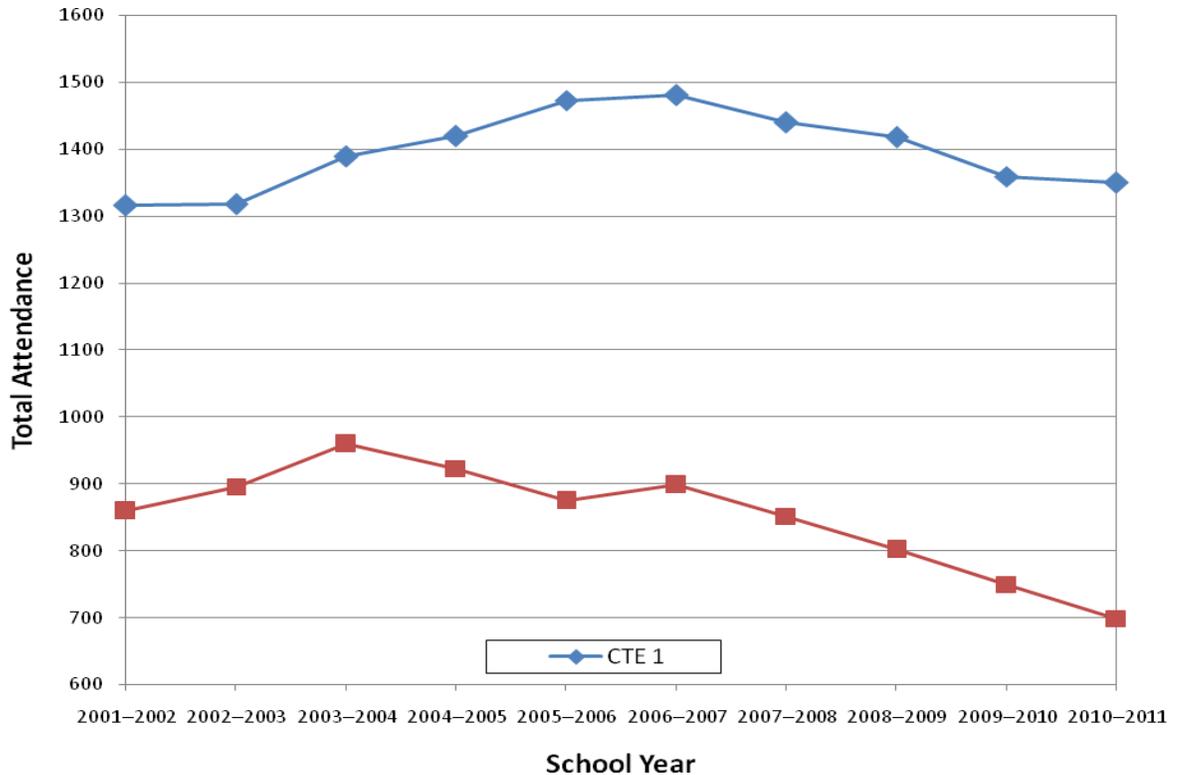
CTE 1. CTE 1 experienced the most program changes. The most likely reason for this is

because it is a full-time program. The struggle to make AYP has severely altered the

program, and the 9th grade is now a comprehensive academy with increased academics.

The following quote was taken directly from the 2011–2012 program of studies for the

facility.

> Incoming freshman in the Academy will be placed on collaborative teams,
>
> which will focus on developing their personal and academic skills. As a

learning community, the goals of the Academy are to promote

interpersonal skills, organization, and time management.

In the CTE 1 2008–2014 strategic plan, the number 2 goal focused on curriculum and instruction. The plan includes developing a 5-year review cycle for academic curriculum.

CTE 2. CTE 2 is the half-time program model, and students are counted in AYP for the sending school districts. However, CTE centers must promote academic success to assist in making AYP. All CTE centers in Pennsylvania are required to map their technical curriculums to standards. CTE 2 has initiated a program called Technical Assistance Program (TAP). As stated in the minutes from the executive council meeting on March 2009, the main goal of the TAP is to promote higher academic achievement by integrating academics into all programs of study. This required teams of staff members to attend professional development workshops for literacy and numeracy. The implementation of the program was funded through the professional development budget and required substitutes and lodging for staff members to attend the training sessions. The trained staff members returned to the district and provided training to the staff who   did not attend the initial training, therefore requiring more dedication of professional development time and resources.

A comprehensive review of the program of studies from 2002–2011 provided the following table showing the number of technical programs added and removed at the facility (Table 3):

Table 5. CTE 2 Program Changes

Added Programs	Eliminated Programs
Dental occupations	Telecommunications technology
Building and facilities occupations	Marketing and management
Practical environmental landscaping	Oracle training and programming
	Electronics communications technology
	Mathematics
	Health and PE
	Precision machining technology

The preceding table indicates the removal of seven programs and the addition of three programs, producing a net loss of four programs. Participants interviewed during the process indicated that enrollment participation is the main factor in the elimination of programs. The enrollment data clearly identified a decline in enrollment in these programs.

The June 8, 2009, executive council meeting minutes supported the data relevant to the elimination of programs and staff. At that meeting, the Oracle programming and electronic communication technology programs were eliminated, along with the supporting staff members. The web page, digital multimedia, and information resources design programs and staff, were reduced to halftime. The same meeting included a report on the PSSA Readiness Initiative. This program was initiated to improve PSSA reading and math scores. The PSSA program tested all incoming 10th grade students using 4Sight, which was purchased with CTE funding. The students identified as basic or below basic were assigned to work on Study Island, another program purchased for academic remediation, for 45–60 minutes weekly, taking time out of their technical programs. The students were then post-tested, and gains were recorded.

To implement the program, instructional assistants had to be trained and reassigned to administer the remediation. The results were shared with the sending school districts by the school caseworker.

This example illustrates how industry-based programs and staff, which provided authentic, work-related skills, are being eliminated and replaced by PSSA preparation and remediation-related programs, and staff are being reallocated to meet AYP requirements.

Summary of Responses for Research Question 2. The responses for research question 2 clearly indicate that there has been a decrease in attendance at both facilities. The archival record section show stables and a graph created from documents provided by the Pennsylvania Department of Education. These tables and graph indicate the exact extent of the problem. The problem is more severe at CTE 1, with a decline of nearly 10%. Both schools are facing declining enrollment.

Research Question 3.
3. What other impact has NCLB had on the CTE Centers?
    A. How has perceived staff morale changed at the CTE centers since the inception of NCLB in 2002?
    B. How have the changes associated with NCLB changed the staffs' perceived workplace readiness of students at the CTE students?

Teacher Responses on Research Question 3.

CTE 1. Several themes developed in the responses to this question. Multiple responses indicated that the special education population is now more than 50%. Many of the students attend CTE because they are not academically oriented, and many have very low reading and math levels. There seems to be a serious conflict with IDEA and NCLB. The CTE programs are losing the appeal for the less academically oriented student, and NCLB testing allows the students to rebel against the school. One teacher said, "Some students put very little effort into the test, and that has a severe impact on the school." The programs provide real-life skills, and the school does as well as any other CTE center in Pennsylvania. The school actually made AYP in the past. As one teacher put it, "the constant bombardment with standards and test scores has precipitated a fight for survival. The quest for test scores has put a severe strain on the entire system."

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The school keeps adding in test-related areas at the expense of the technical programs. The school is now up to 24 special education teachers with resource rooms and rooms dedicated to testing-related software.

> Financially it has been a disaster on the technical programs; now the academic programs are spending on every gadget, software, testing program, or job coach that they can to help academically. They are hiring more staff. This has put a burden on the tech programs financially. We can't order industry equipment because of the financial demands of making AYP.

This situation has negatively affected morale and created internal conflict between the academic and technical teachers. Technical teachers see their budgets, student time, enrollment, and equipment decline in an effort to improve test scores for students at very low academic levels. The following quote expresses the internal struggle that is ongoing in the school between the academic and technical sides.

> I am trying to understand where we are as a school in AYP. I am feeling the frustration; I know other technical teachers are feeling the frustration. We were asked to help out with academics, and we are, but when we hear from the students that this math teacher does not give us any work or we never get homework in that class, or when I have a student come visit during an academic class time, I wonder what they are doing. We [technical teachers] are doing our best; are they [academic teachers] doing their best? This is difficult to say because you are taping but we would really rather focus on our technical area and not be so bogged down with academic hoops to jump through.

The negative publicity about AYP results overshadows the technical achievements. The school is becoming an academic high school, and there is a wedge being driven between the academic and technical programs. There were also positive aspects of the increased focus on academics. Several teachers commented that the improvement in reading skills probably has helped NOCTI scores.

> We used to be totally vocational here; now we are more tilted on the academic side. The academic requirements and the PSSA, it seems like the administrators and decision makers are more focused on the academic

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scores because that is what they are being judged on. So NCLB has slightly impacted the automotive because they are pulling kids out for academics. For my type of program, it has enhanced what we do with the stronger academics.

The following quote contained the most telling consequences of the legislation:

We are constantly getting bombarded with standards and test scores, and our population is traditionally the less academic students. Our special education population is proportionately much higher than surrounding districts, and our students; come in with lower reading and math levels. The teachers are being held accountable for something that is beyond just them. We are fighting for survival based on academic tests, and we are a vocational school that has been serving the community well for years. Now sending districts are not sending us academic students, they tell the students we can't make AYP so why go there? Students say to me that their guidance counselors talk them out of coming here. We also have the opposite happening. Districts send us students that are not proficient to get them out of that school and into here. We are a comprehensive high school and are accountable for that student once they are sent here. We are over 50% special education and students at 4th grade reading levels. That does not happen by accident.

This quote also indicates that there are multiple impacts of NCLB being realized at the CTE facility. Sending school districts are influencing enrollment decisions for students to attend the CTE. School districts may discourage academic students from attending the facilities because they may be proficient on standardized testing. That practice limits availability of the CTE opportunity for those students. Sending districts may also encourage nonacademic students to attend the CTE so that the student is not part of the school's testing pool. This practice may explain why both centers have a very high population of special needs students. The NCLB negative publicity that focuses solely on AYP has affected the image of the schools in the community as well as CTE in general.

CTE 2. The number and quality of students has declined at CTE 2 since the inception of NCLB. Students with a chance of PSSA proficiency are in many cases not permitted to participate in CTE programs so they can focus on academics. This practice is

in contrast to what technical program are demanding and the students are less academic. CTE 2 is now focused on AYP and test scores.

> For years, the school was considered an option for less academic students, but this school is not the same as it was 10 years ago. We still have the trades, but that has changed—fewer trades and more technology. Transformation from manufacturing to information, good or bad, the school has changed. The districts send students that are less academic, and now the programs are more demanding. Sending students with poor reading skills is setting the student up for failure.

The following quote is an appropriate conclusion for teacher quotes. It is a simplistic view of the transformation of CTE by NCLB requirements.

> CTE is no longer a mom and pop type of industry; everyone is worried about AYP and numbers. Good teachers with big hearts are going to do the right thing for students. They are going to step up to challenges; the day you stop worrying should be the day you stop teaching. Teachers are getting weighed down by the NCLB requirements; they are slowing us down with paperwork accountability.

Cooperative Education Coordinator Responses to Research Question 3.

Academics have become the main focus of student performance. The test preparation is damaging the students. Students are scheduled for all types of test remediation and test preparation so that there are no electives or career readiness programs.

Student morale has been negatively affected. Students keep hearing that they are below basic. "Some students say they hate school because they are so beaten down." Students are not permitted to take electives like business and marketing education. Those classes provide the soft skills for the workplace. The cooperative education coordinator job has become more difficult. Cooperative education coordinators have to ramp up what they do to compensate for students being in the technical programs for a shorter period of time. Students are spending more time at their sending schools and in academic remediation, that time for workplace readiness has been shortened. All the remediation is

damaging the student. They get the same thing over and over with no workplace readiness.

Guidance Counselor Responses to Research Question 3.

Schedules are modified to accommodate PSSA remediation for students. Students are required to take additional remediation classes. The programs are changing to adapt to PSSA requirements. Students are not permitted to attend CTE centers, and that sometimes happens in late summer once the PSSA results become available.

CTE 1.

> We have students pulled third marking period for remediation or instead of making the complete half-time program, some have to remain at their sending district an extra period or block. That limits their access to the program. So then we have to modify our schedule to accommodate that student.

CTE 2.

> I haven't heard feedback from them, but they do say that they have to do some stupid class. The students like being here and they feel connected. They enjoy the real hands-on experience, and they can do math or chemistry because it is connected in a real situation. I have heard students upset about being pulled from the program.

Administrator Responses to Research Question 3.

The following quote from one of the administrators interviewed clearly expressed what administrators are going through right now. When asked, "Currently, what are your greatest challenges as administrator at a CTE facility?" an administrator said,

> I think the greatest challenge here as a comprehensive school is balancing academics and technical. We are hit square in the face with the AYP requirements of NCLB, and in addition we also have to be concerned with our technical performance with Perkins funding and other federal mandates. I was not here in 2002, but I can imagine that academics became a focus when the school went comprehensive in 2000. Right now, our biggest challenge is the budget crisis.

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The testing requirements and remediation have forced CTE centers to add academic components as well as the software programs that reinforce reading and writing standards: Read 180, Study Island, and 4Sight. Centers also added reading and math specialists and resource rooms. "During the NCLB era, there has also been a significant increase of special education students, and that has translated into an increase of special education teachers and support personnel." The ripple effect of the impacts has many unintended consequences, as expressed in the following quote.

> Yes, we retrofitted or modified rooms for a Read 180 program, which is a research-based reading program to help low-performing readers to increase comprehension. So we've taken rooms for the program part of Read 180 software and technology, and this takes money and displaced some teachers onto a cart.

The added positions and remediation have a dramatic impact on budgeting and the conflicts associated with the educational process of the CTE centers. There has also been an effect on professional development. CTE centers had to send technical staff to training at Pennsylvania State University to incorporate academic standards. That entailed travel and substitute expenses.

The increased focus on academics has helped the CTE programs, but the accountability is too severe and has limited student access to the programs. Morale and public image have been negatively affected. CTE centers produce successful students in college and skilled workers for the community, but the only thing reported in the media is PSSA results. The following quote provides a personal interpretation of the recent history of CTE 1 and the feelings in its community:

> In 2000, we became a comprehensive high school. That saw a dramatic increase in our student population here. In 2002 with NCLB, there has been a dichotomy because of the variety of testing required of a CTE high school. The number of laws that are in conflict with each other for example: NCLB and special education law, and especially goals of CTE and only using PSSA results for graduation requirements. We added two reading specialists and two resource rooms and we have gone from 20–24

special ed. teachers. My role will also change, and I will be director of curriculum and instruction because we also lost an administrator. I had a parent speak up at a meeting and say she did not care about the PSSA because her son dismantled their bathroom and installed a new one. That test meant nothing to her and with skills like that, her son would not be successful? It is the contradictions of the laws that is most striking to the point where parents want us to bring in [State Senator] Tomlinson and [U.S. Congressman] Fitzpatrick and they want to speak about NCLB.

This administrator also indicated that parent meetings are packed, and the parents are not concerned with the PSSA and AYP requirements. The parents know the valuable career skills that their children are gaining at the CTE center. This administrator was very outspoken and also expressed the reality of the school in federal policy in the following fashion:

Yes and more specifically the challenges are multifaceted; many of our students go to college and into engineering, 62% of our students are college bound, 32% of our students are special education. Many of our applied engineering students have no problem getting into or when they are at college. The integrity of the school, nobody bats an eye when we send a student to MIT or Virginia Tech, and then we read an article by Arnie Duncan about eliminating technical education because they are not getting the results they are looking for. Well, when you try to put a square peg in a round hole that is what you get.

This administrator also included the stringency of NCLB as an obstacle to positive academic gains.

We are the only CTE center in PA to ever make AYP. We did it in the 2006–2007 school year. Then we flat-lined, although in reading we dropped from 63% to 57% proficient or advanced, and in math we have seen growth the past 3 years to current results of 57%, although that was not enough to make AYP. Morale has changed the past 6 years, there is more pressure for all teachers to focus on academics. I know when it talks about us not making AYP on the front page of the paper we feel it administratively and that gets passed down to the teachers.

The administrators from CTE 2 provided the following quotes. They are also being consumed by the delivery of academics although they are a half-time technical program.

> Yes, the cost of professional development. PDE [the Pennsylvania Department of Education] does pick up some of the costs, but we sent faculty to Penn State for professional development for 2–3 day trainings to incorporate academic standards into the curriculum. That involves lodging and travel and subs to cover the classes.

> We had to add another special education coordinator because our special ed population is up to 53%. We are required to address the needs of those students because they are also accountable in the PSSA. Most of our professional development had been for academics, and I think we needed some of that because of the higher technical needs in our curriculum now. The accountability is too severe but we needed something. The extreme has limited student participation.

The administrators expressed great frustration. The mission of a CTE school should be based on tests like the NOCTI and industry certifications that are actually judged exclusively on the academic standards of NCLB.

Summary

The findings in this chapter clearly indicate a severe impact to CTE centers appear to be directly related to the AYP requirements of NCLB. The research methods used followed the methodology section and the findings came from archival records and staff interviews. The enrollment data illustrated through the charts and graphs matches the enrollment concerns expressed by administrators. One administrator described the impact of NCLB implementation change as going from a CTE center with strong academics to an academic school with CTE elective

NCLB has affected the entire fabric of the CTE centers: curriculum, staffing, enrollment, schedules, budgets, morale, and school perception. Although these CTE centers may produce outstanding results on the NOCTI technical test, they are being rated

by PSSA and AYP requirements of NCLB. Several positive comments indicted that CTE needed an increase in academics; however, the severe nature of the AYP requirements is limiting the availability of CTE programs for students.

The findings also showed there has been a decline of teacher morale and an increase in special needs populations in the facilities. Teachers are concentrating on academic achievement when the mission of the school is technical education. There must be a realistic balance. The teachers seem to understand that a student with an elementary reading level is not going to be proficient on a test at an 11th grade level.

The research also showed a true commitment on the part of the individuals interviewed. The staff adapted to the NCLB requirements because they understand the value of what they do.

CHAPTER 5
DISCUSSION

Summary

The research was conducted at two CTE facilities in the suburban Philadelphia area. CTE facilities in Pennsylvania are regional. They support several local school districts. The facilities were selected by the type of CTE delivery system at the facility. There are two different delivery systems for CTE in Pennsylvania: a full-time comprehensive system, and a part-time CTE program only. The comprehensive system provides both academic and vocational curriculums. The other delivery system is a part-time vocational system where the academic curriculum is provided by the sending school district. The CTE facility delivers the vocational component only.

The research followed a qualitative case study protocol. Interviews and the examination of archival records were the data sources. Interviews provided the bulk of the data and were supported and validated by the examination of archival records from both facilities.

The research questions were as follows:
1. Have changes in curriculum occurred at the selected CTE centers, since the inception of NCLB in 2002?
   A. Have vocational components of the CTE center been altered to address The PSSA for Pennsylvania NCLB testing requirements?
   B. Have academic components of the CTE center been altered to address Testing areas of the PSSA?
2. Has the availability of CTE programs at the CTE centers that will be researched, been influenced in the NCLB era (2002–2010)?
   A. Has the number of students enrolled at the centers increased or decreased?
   B. Has the number of programs increased or decreased?
3. What other impact has NCLB had on the CTE Centers?
   A. How has perceived staff morale changed at the CTE centers since the inception of NCLB in 2002?
   B. How have the changes associated with NCLB changed the staffs' perceived workplace readiness of students at the CTE students?

The overall findings indicated that both facilities had been greatly affected by NCLB. Attendance has decreased at both facilities, and academic AYP requirements have perpetuated staffing and curricular changes. The full-time program is evolving from a technical high school with academics to an academic high school with technical electives. These drastic changes have occurred to achieve the academic AYP requirements of NCLB. The half-time program has also changed to provide more academics.

Teachers at the CTE centers have been required to re-write curriculums based on academic standards, modify class schedules to accommodate academic remediation, seen a dramatic increase of special needs students and experienced an overwhelming pressure to achieve academically.

Cooperative education coordinators have a reduced number of eligible students to place in employment due to academic requirements being added to participate in their programs. Students have also been required to include academic remediation into their schedules totally eliminating the possibility of cooperative education placement.

Guidance counselors are addressing academic needs first, in some cases the vocational programs are not possible to schedule due to academic requirements. In some cases three year programs are not possible for students so counselors are working with teachers to fit a three year vocational program into two years. This has created a variety of challenges including some students not being able to accumulate the sufficient number of hours for certifications, the reason for attending a CTE program.

Administrators are facing a host of challenges. They have to balance staffing and resources to address academic requirements while maintaining the credibility of a CTE program. Administrators have to combat the negative press behind not making or supporting AYP requirements while promoting their programs. They have added academic staff, academic remediation technology programs, the rooms and computer labs to deliver the academics while providing current CTE programs.

The challenges facing CTE centers is overwhelming, however the staff interviewed for this study were accepting the challenges and putting their efforts into playing the hand that they have been dealt.

Analysis Through Two Theoretical Lenses.

The purpose of this study was to determine the effect of NCLB on CTE in a designated geographic region in Pennsylvania. This chapter analyses the findings through two theoretical lens devoted to career development. Theories from Super (1980) and Gottfredson (1981), two of the leading researchers in the area of career development, were used to provide the theoretical lens.

Super, world-renowned in the area of career development, stated that self-concept is a product of complex interactions that include physical and mental growth (Lueng, 2008). The foundation of his theory is that most people's self-concept changes as they progress through life and is developed through life situations and experiences.

Super clearly saw the conflict on how to prepare children for the future. He understood the policy climate and the conflict between political priorities and doing what is best for children and humanistic values. According to Super,

> Here lies the real issue, one raised by Hobbes 300 years ago and argued from the other side by Locke and by Rousseau in the early days of our republic. The argument will still go on and is beyond resolution here; but the issue needs to be recognized. The goals of guidance and counseling shall be determined by national policies, and those of us who value individual development must foster it with the means at our disposal despite the political climate. We must work on policy for its improvement within policy for the humanistic values. (Super, 1983, pp. 511–512)

In retrospect, we know that the same time period also brought us *A Nation at Risk* (The National Commission on Excellence in Education, 1983), and that report fueled the current policy climate that has lead us into the NCLB era and the accountability model based exclusively on standardized test scores. That policy is eliminating individual development at the expense of test preparation. Although Super recommended policies

that stressed humanistic values and individual development and encouraged those that

provide career guidance and career counseling, current policy makers are unfortunately

phasing out of those principles for standardized assessments and an exclusive data-driven

system of measurement for the entire educational system in the United States.

Gottfredson described her career development theory in the following fashion:

The Theory of Circumscription and Compromise focuses on how young
people come to recognize and deal with the array vocational choices that
society provides. After summarizing the theory I use it to outline a career
guidance and counseling system that facilitates growth and reducing risk
during the school years. The system can also be used to diagnose and
remediate common vocational problems in adolescence and aid adults who
wish to revisit their career choices. (Gottfredson, 2005, p. 71)

The Theory of Circumscription and Compromise focuses on how people's self-

concept develops with age and fits their concept of self, both socially and

psychologically. Four developmental processes guide this process: cognitive ability,

increasingly self-directed development, progressive elimination of least favorable

alternatives (circumscription), and progression to most favorable alternatives

(compromise) (Gottfredson, 2006).

Winter of the Career Group at the University of London described Gottfredson's

theory as a cognitive map of occupations people develop by picking up occupational

stereotypes from those around us. As young people build their maps, they begin to decide

which occupations are acceptable and which are not (Winter, 1994). The current lack of

career education does not support this process in our students.

The circumscription portion of the theory has four stages. The last stage occurs at

approximately age 14; basically, ninth graders engage in a conscious search for the roles

still remaining in their lives. During the compromise stage, people may be inclined to

sacrifice roles they see as more compatible with their self-concept in favor of those that

may be more accessible. At this stage, people are often limited by the lack of knowledge, lack of information, and social connections to access certain roles (Winter, 1994).

The theoretical combination of Super and Gottfredson establishes a chorological prescription for a comprehensive and effective career development curriculum. The combination of the theories clearly defines career awareness and development as a life-long individual process, beginning in childhood and progressing until retirement. The prescription requires a sustained career counseling component in all phases of education. CTE focuses on workplace competencies based on a blend of academic and practical hands-on learning components. These hands-on components provide students with the external stimulus that cannot be created in a classroom. The reduction of career development components to CTE programs diminishes that availability for students.

Today's predominate high school model in the United States focuses on preparing students for standardized test scores and does not require a career exploration process. The research in this study identified vocational aspects of CTE programs are being reduced, altered, and, in some cases, eliminated to address standardized testing and NCLB AYP requirements.

The facilities studied in this research indicated a single aspect approach on program evaluation forcing the facilities to direct their focus on academics at the expense of CTE components. The research for this study provided insight on how the CTE centers are adapting to the passage of NCLB. The schools are reallocating resources to support academics, eliminating technical programs, struggling to make or to support making AYP, and experiencing enrollment issues and morale issues.

The initial question remains. What is the correct way to prepare our children for their careers and their future stages of life? Research and theory supports a different approach from sole dependence on standardized tests to address career readiness. The current accountability system in Pennsylvania is evolving from the PSSA to Keystone exams. The Keystone exams will add additional testing in other content areas. For

instance, in the 2012–2013 school year, students were tested on literature, algebra I, and biology.

Results in Relation to Theory. The rationale for this examination of CTE was to highlight the effect of NCLB on CTE and to spotlight how little focus is dedicated to career development in our current K–12 school system. Technological advances developed during the last several decades have produced an explosion of new career opportunities for our children. Unfortunately, since the inception of NCLB, our educational system has evolved into a test-driven, politically motivated debate that is not sufficiently addressing career development. The lack of a systemic career guidance system in our current public education curriculum has resulted in a shortage of workplace skills in current high school graduates. Current education policy mandates a narrow, test-driven evaluation of students, staff, and schools as the method of producing college- and career-ready college students.

The literature reviewed in this study and the theorist referenced do not support that method. Many high school seniors are leaving the K–12 system without marketable skills in the current workplace. The present system that is preparing every student for a liberal arts college education is expensive and is not a significant assurance of employability. The expense and the amount of student loan debt is staggering.

The following sections will provide a systematic analysis of the research results directly compared and contrasted with theories on career development from Super and Gottfredson. The analysis follows in numeric order in relation to each research question, including every sub-question.

Research Question 1. For research question 1, the theoretical lens was applied to the entire question, including sections A and B. The theme of the question is curricular changes based on the classification of vocational or academic components.

1. Have changes in curriculum occurred at the selected CTE centers, since the inception of NCLB in 2002?
   A. Have vocational components of the CTE center been altered to address The PSSA for Pennsylvania NCLB testing requirements?
   B. Have academic components of the CTE center been altered to address Testing areas of the PSSA?

The findings from this research indicated serious and systematic changes in curriculum and programs. Vocational components were reduced and redesigned to include and identify academic standards. These changes occurred in schools designed to deliver direct career skills and industry certifications. Both Super and Gottfredson professed career guidance as an individual process for students in the formative years. The final stage of the circumscription portion in Gottfredson's theory defined the significance of career experiences for high school students. During this stage, students begin to identify a self-image through their experiences. The complexity of planning the critical steps, both educational and career related, to transition from secondary to postsecondary educational experiences is paramount in the future of the individual. The decisions have a variety of implications, some of them with life-long ramifications. These might include limiting opportunities, making incorrect career choices, amassing unnecessary student loans, and reducing future earnings and earning potential. There are also societal ramifications. There are currently well-paying positions in careers such as manufacturing, but unfortunately with the universal educational goals of sending students to a 4-year liberal arts education, students do not create a self-image of that type of career.

This study documents how vocational components have been sacrificed for the expansion of academic curricular components for AYP academic requirements and related academic remediation. Interviews noted how test preparation and testing were a complete disruption to the CTE programs. In some cases, the disruption lasts 6 or more weeks to prepare for standardized tests. Students choose to go to the CTE centers for

career development and workplace skills. Some of the students are not academically inclined and choose the technical path because it is a better fit for their natural skills and talents. The students can not completely focus on the CTE requirements, including the standardized tests designed for the CTE programs the NOCTI, National Occupational Competency Testing Institute.

The findings overwhelmingly identified an increase of academic components at both CTE centers. The full-time program experienced more changes; in some areas, the entire program has been redesigned to address the academic requirements related to making AYP. Full-time programs are directly accountable for AYP, limited-time CTE programs are not. The half-time program supports academic achievement for the sending district, which is held accountable for the individual student.

An administrator from the full-time program described the school as being transformed from a High Schools That Work model to an academic high school with vocational electives. These types of systemic changes defeat the mission of CTE and severely limit career exploration. The half-time program has also included academic standards and remediation into every technical program. Students need this time to explore as many career options as possible in a systematic fashion. That should be the focus of a CTE center.

Super's self-concept is a product of complex interactions that include physical and mental growth leading to individual development. The current changes remove some of the interactions necessary for the individual growth at a critical time in an individual's development. In the full-time CTE, ninth grade previously focused on an exploratory concept. The students rotated through all of the vocational areas to maximize their exposure to career areas available. That concept has been altered to create a ninth-grade academy to focus on academic test scores.

One aspect of the current political climate is promoting school choice as an option for students. The current NCLB policies actually limit the options that were part of the

reasoning of the legislation. Students select CTE for many reasons, including their choice

for individual development and exposure to career options. Unfortunately, that choice is

being severely limited.

Research Question 2.

2. Has the availability of CTE programs at the CTE centers that will be
    researched, been influenced in the NCLB era (2002–2010)?
    A. Has the number of students enrolled at the centers increased or decreased?
    B. Has the number of programs increased or decreased?

For this question, this research has shown that availability has been influenced.

Both CTE centers researched showed a dip in attendance and a reduction in programs.

The significance of attendance in relation to theory has numerous implications. Both

Super and Gottfredson highlighted the necessity for sustained career development. In

Pennsylvania, there is a regional system of CTE centers. The centers service only a small

portion of state students. NCLB has reduced the availability for CTE for the already

small portion of students that have the opportunity to attend the centers. The reduction in

availability is converse to the theories referenced in this research. Students, especially in

the high school age group, should be provided a variety of experiences to help them

develop a self-image and to prepared them for the critical decisions students should make

with as much relevant information as possible.

Pennsylvania Department of Education data were used for the attendance chart

that appears in chapter 4 of this study (Figure 1). This chart shows that as the AYP

requirements increased, enrollment trended downward. The research for the literature

review also indicated a general reduction in electives and CTE-type classes in schools.

The small portion of Pennsylvania students who have access to CTE have experienced a

reduction in programs available and a decrease in CTE components to increase academic

components based on standardized test scores. The regional CTE centers studied support

several school districts. Analysis of the findings through the lenses of the theories of

Super and Gottfredson show that the programs that were designed for career development are being altered to facilitate improved AYP results.

The results section of this study also contains a list of programs that have been eliminated in the CTE centers studied. Some of the programs are career areas that are in demand. Pennsylvania has experienced a brain drain of students leaving the state for opportunities elsewhere upon graduation. Highly technical positions are available in manufacturing in the state; however, we have created a K–12 system that has a narrow focus based exclusively on college as the career track and not based on career-related skills and opportunities.

Gottfredson's Theory of Circumscription and Compromise focuses on how young people gradually come to recognize and deal with the array of vocational choices in society. The theory also suggests a matching process between age-related growth and cognitive ability. The two are connected, and the career development process becomes more self-directed as cognitive ability increases. Students face many challenges today: the expanding array of occupational choices, changing skill sets in the workplace, increasing global competition, and the escalating expense of postsecondary educational options. Students face this array of challenges without a sustained career development counseling process in a system that is designed to produce college-ready students based on standardized test scores.

CTE programs in the areas of economic expansion and employment demand, such as technology and manufacturing are being eliminated because of a lack of enrollment and the demands of academic AYP requirements. Some of the programs that have been eliminated from the CTE centers include telecommunications technology, marketing and management, electronics communications technology, and precision machining technology. Some of those careers are in demand and provide a stable career entry option at a comfortable income with opportunities for advancement.

The accountability system being promoted by policy makers, outside interests, the business community, and the National Governors Association is actually compounding the problem of an unprepared workforce. The costs of a traditional 4-year liberal arts college education are increasing at an alarming rate. In Pennsylvania, the recent budget cuts in secondary and postsecondary education will drive these costs even higher. Students need more exposure to other options that are available.

The education mandated through NCLB with the focus on 11th-grade assessment as the sole objective has eliminated Gottfredson's stages. Students are not counseled for careers, and all students are guided in the direction of college readiness without sufficient exposure to career-related opportunities. This strategy is compounding the issue of students graduating from high school without workplace skills or an objectively defined career path. The decrease of CTE components, especially in the area of technology, is also contributing to the lack of qualified applicants for open positions in the technology-related careers.

Research Question 3.

3. What other impact has NCLB had on the CTE Centers?
    A. How has perceived staff morale changed at the CTE centers since the inception of NCLB in 2002?
    B. How have the changes associated with NCLB changed the staffs' perceived workplace readiness of students at the CTE students?

The list of additional impacts is extensive: budget, staffing, morale, negative publicity, schedule changes, allocation of resources, professional development, student frustration, staff frustration, and a sharp increase in special needs populations.

Budgetary impacts related to the CTE centers researched manifested in several areas. The necessity to support academics has forced CTE centers to adjust spending by taking funds from the technical side and moving the funds to the academic side. That includes additional funds for educational materials and technology for academics at the expense of materials, and technical updates to address industry certifications. This is in

direct conflict with the theories from Super and Gottfredson. Students at this stage of career development need relevant, up-to-date educational exposures that mirror or include current career choices that include industry certifications and technologies. The unfortunate consequence of a strictly academic education is the lack of career knowledge and correct array of career choices.

Recommendations for the Field

This research clearly shows the limitation of career education for students in the facilities studied. In these settings there was a documented reduction in attendance and technical programs offered. There were also budgetary conflicts between technical and academic resources. The facilities were committing more time and resources to achieve academic accountability requirements. These limitations may not be confined to these two facilities. A broader study of CTE's nationally testing this possibility seems like a reasonable direction for future research.

Daggett from the International Center for Leadership in Education said the following about some high-performing high schools, CTE "can indeed be a key to success in getting all students to achieve academically rigorous and relevant curriculum." "Of the 30 schools selected for our initiative [showcase 30 of the nation's most successful high schools], 26 already had career or theme-based academies as their primary instructional delivery system" (Daggett, 2005, p. 56). In a recent opinion article in the *Wall Street Journal,* Brad Smith, executive vice president and general counsel of Microsoft, commented on what academia and industry can do to produce more graduates with the information technology skills needed in the marketplace:

> American companies are now creating more jobs for which they can't find
> enough qualified applicants. Despite the fact that the national
> unemployment rate for computer-related occupations was only 3.4% this
> summer, there are simply too few Americans with the necessary science,
> technology, engineering and math skills to meet companies' demand.

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Against this backdrop, Smith outlined the key ideas in a new proposal for closing the U.S. information technology talent deficit.

> Recently Microsoft laid out a proposal for how to begin addressing the problem. It couples long-term improvements in American education with short-term, skills-focused immigration reform. Congress could create a new, supplemental category with 20,000 annual visas for people with science and technology skills that are in short supply. (Smith, 2012)

Although significant current research supports the CTE system, Pennsylvania AYP requirements are transforming the facilities into academically oriented high schools with career-related electives. This is a direct contrast to the model that was used to establish one of the facilities researched in this study. Pennsylvania is going in a different educational direction. The Pennsylvania Department of Education in one of only a handful of states that did not apply for an NCLB waiver. In actuality, the Pennsylvania Department of Education (PDE) is re-creating a more demanding AYP process by increasing the academic content tested, including graduation requirements for students, and mandating test scores as a significant portion of teacher evaluations. Concurrently, the PDE is also promoting charter and cyber schools, as well as a voucher program for school choice, without any additional funding. These additional education options will be funded through the public education budget, while the governor is drastically reducing that funding at all state education levels. There appears, at a minimum, to be a degree of dysfunction at the policy level or other influences or agendas molding current policy objectives.

There has also been a significant increase in the percentage of special needs students in the CTE facilities. One of the schools has a special education populations of roughly 50%.That also presents significant challenges that require staff and resources. The level of special needs population may be due to the federal and state requirements to meet transition goals in IEPs. One of the themes that developed in the interviews

identified the conflict between IDEA and NCLB. That conflict may be a theme for future study. Resources are being dedicated to grade-level standards when students may be at a significantly lower academic and cognitive level. In some cases, these students could have very low reading levels and limited abilities, but the CTE schools are expected to prepare the students for high school tests.

CTE has historically been an educational and vocational option for students. CTE provides direct vocational skills and certifications that make young adults competitive in the job market. With unemployment being at historically high levels and a major topic in the political arena, our educational system should provide maximum opportunity for students to be successful in the world of employment. The current direction of educational reform and school improvement is not providing opportunities for our students.

The Pathways to Prosperity Project at Harvard University noted

> Our current system places far too much emphasis on a single pathway to success: attending and graduating from a four-year college after completing an academic program of study in high school. Yet as we've seen only 30 percent of young adults successfully complete this preferred pathway, despite decades of efforts to raise the numbers. And too many of them graduate from college without a clear conception of the career they want to pursue, let alone a pathway to getting there (Symonds, Schwartz, & Ferguson, 2011, p. 24).

The report also compared the U.S. secondary education system with systems in northern and central Europe. In those countries, vocational education and training is the mainstream system. Many of those countries have up to 70% of high school students in systems that combine classroom and workplace learning. Students leave with a qualification that has real currency in the labor market.

Career and technical programs in the facilities are being adapted to follow the path of academic programs of study at the expense of career pathways and technical

skills. This is not the ideal way to prepare students for their careers. The lack of technical skills can be a contributing factor to chronic unemployment or underemployment.

A clear recommendation for the future would be to include industry standards as an evaluation tool for schools and graduation requirement for students. This would require students to focus on career skills while they are in the k-12 system and allow CTE centers to use industry tests such as the NOCTI as an evaluation tool for the facilities and provide a higher level of reliability for both facility ratings and graduation requirements for the students.

Future Study

After completing this research, several questions remain. What is the total value of the resources consumed in the quest for AYP? This study documented the financial and personnel strains that have been placed on the facilities studied. What is the opportunity cost of that diversion of resources? How many more students could be provided career and technical skills if the availability, attendance, and value of CTE was at the appropriate level. The results indicated the elimination of programs and technical components from the facilities. The question of why there is not an alignment of goals with IDEA and NCLB would also provide some insight on a more practical and effective educational system. Perhaps a study should be conducted to determine the emotional impact of current policies on our students. We continuously test and label our children as not proficient or below basic. We also deny them what they enjoy or want to study and focus on what they are not interested in or have the intellectual capability of achieving. We beat these children down on a daily basis. Taking students at a sixth- or seventh-grade reading level and evaluating the student on 11th grade material should be considered cruel and unusual punishment.

Through the interview process it was stated by many of the teachers and administrators that their programs are extremely effective in producing high level results in testing in the technical areas. It is unfortunate that their voice is not heard or was

considered in the creation of NCLB. These programs provide students with marketable skills in a realistic fashion. That has been diminished by the focus on academic test scores as the method to prepare students for college and careers.

Conclusion

The debate on how to properly prepare students for careers has been waging for more than 100 years in the United States. The current accountability age fostered by NCLB has narrowed educational focus to the results of standardized tests. The scores also are part of teacher evaluations and used as the mechanism to determine whether schools are effective or failing. This focus has caused a tremendous ripple effect throughout CTE. Schools based on industry certifications are also chasing academic test scores. *Time* magazine, in the May 2012 article, "Learning That Works," described the current status as follows:

> Unfortunately, the education establishment's response to the voc-ed problem only made things worse. Over time, it morphed into the theology that every child should go to college (a four-year liberal-arts college at that) and therefore every child should be required to pursue a college-prep course in high school. The results have been awful. High school dropout rates continue to be a national embarrassment. And most high school graduates are not prepared for the world of work. (Klein, 2012, p. 2)

Despite the growing demand for CTE, cuts in programs have been caused by flat state and federal funding and the focus on core classes to meet NCLB standards (Burnette, 2012). The current U.S. educational policy climate is focused on measuring student achievement and teacher effectiveness based on narrowly focused standardized test scores. Some of the related reforms have not worked in places like New York, where a $75 million initiative did not improve test scores (Green, 2011). Many states, including Pennsylvania, are still pushing test scores as the predominate measure of student performance and teacher effectiveness. Pennsylvania has entrenched standards

throughout K–12 education by the recent introduction of standards for K–2.Standards and standards-based assessments will begin with the youngest students and will continue in earnest throughout the K–12 system. The recent migration from the PSSA to the Keystone exams at the secondary level may well affect graduation eligibility. The current education policy direction at the Pennsylvania Department of Education has inundated K–12 student achievement and teacher evaluations with standardized test scores at whatever expense will occur.

Gene Carter, a career educator and CEO of the ASCD (formerly the Association for Supervision and Curriculum Development) summarized the current status of U.S. educational policy:

> Recent education reform efforts have provided clarity about what students should learn so they can be successful and by shining a bright light on the nation's achievement gaps. But the single-minded focus on those accountability efforts has warped our perspective; we worry extensively about test scores and far too little about the whole child. We often choose one-size-fits-all approaches while ignoring solid research about the infinite ways students learn and children develop. (Carter, 2011)

In countries such as Finland, which have experienced significant gains in academic achievement, the educational approach is based on student engagement, teacher–student collaboration, a comfortable atmosphere, and the expectation of quality in how students express themselves. Finland also offers a curriculum with high-quality vocational training with an emphasis on play and the arts in education (Richards, 2011)

In contrast, the test-related accountability of NCLB has limited student opportunities, reduced availability of CTE, and drained resources. Most of all, it has hurt our students as I believe this study has helped to demonstrate. Students need more career related information and focus.

REFERENCES CITED

Anderson-Butcher, D., Lawson, H., Bean, J., Flaspohler, P., Boone, B., & Kwiatkowski, A. (2008, July 1). Community collaboration to improve schools: Introducing a new model from Ohio. *Children & Schools,30*(3), 161–172. doi: 10.1093/cs/30.3.161 (ERIC Document Reproduction Service No. EJ800226) Retrieved January 27, 2009, from ERIC database.

Bandura, A. (1986). *Social foundation of thought and action: A social cognitive theory, .Prentice Hall,* Englewood Cliffs, NJ: Prentice Hall.

Bandura, A. (1995). Exercise of personal and collective efficacy in changing societies. In A. Bandura (Ed.). *Self-efficacy in changing societies* (pp.1–45). Cambridge University Press: Cambridge, England.

Bentman, C. (2012, January 13). Legislators hear benefits, challenges of vo-tech education. *The Bucks County Courier Times.* Retrieved from http://www.phillyburbs.com/

Bill & Melinda Gates Foundation. (2009). *College Ready.* Retrieved from http://www.gatesfoundation.org/learning/Documents/College-ready-education-plan-brochure.pdf

Bond, L. (nd). Teaching to the test. Carnegie Foundation for the Advancement of Teaching: Washington, D.C. http://www.carnegiefoundation.org/perspectives/teaching-test

Burkett, L. (2007, August). Career and Technical Education in Pennsylvania makes a difference. *PSBA Bulletin, 71*(4), 15, 20.

Burnette, D, II. (2012, January 4). Despite demand, career and technical classes cut in Minn. *Starr Tribune Minneapolis.* http://www.startribune.com/local/east/136631848.html?refer=y

Carter, R. (2011, September 13). We need a different national conversation— commentary. http://www.edweek.org/ew/articles/2011/09/14/03carter.h31.html

Chadd, J., & Drage, K. (2006, July). No child left behind: Implications for career and technical education. *Career & Technical Education Research,31*(2), 79–99. Retrieved January 13, 2009, from http://thekeep.eiu.edu/tech_fac/3Education Research Complete database.

Cherry, K. What is self-efficacy? About.com Guide. http://psychology.about.com/od/theoriesofpersonality/a/self_efficacy.htm

Creswell, J., (2003). *Research design qualitative, quantitative, and mixed methods approaches,* (p. 153). Los Angeles, CA: Sage Publications.

Daggett, W. (2005). *A central role for CTE in high school restructuring* (p. 56–58), .Alexandria, VA: Association for Career and Technical Education. ACTE-techniques www.acteonline.org

Ellis, T. (1990).*The Missouri comprehensive guidance model. Highlights: An ERIC/CAPS Digest,* .ED315699 1990-00-00.Ann Arbor, MI:ERIC Clearinghouse on Counseling and Personnel Services.

Fletcher, E.C., Jr. (2006). NCLB: The effects of the NCLB legislation on career and technical education. *Career and Technical Education Research, 30*(3), 1–20.

Gaytan, J. (2007, Spring 2008).Qualitative research: Emerging opportunity in business education. *Delta Pi Epsilon Journal,49*(2), 109–127. Retrieved January 13, 2009, from Education Research Complete database.

Gentry, M., Peters, S. J., & Mann, R. L. (2007). Differences between general and talented students' perceptions of their career and technical education experiences compared to their traditional high school experiences. *Journal of Advanced Academics, 18*(3), 372–401

Gottfredson, L. (1981). Circumscription and compromise: A developmental theory of occupational aspirations. *Journal of Counseling Psychology,*28, 545–580.

Gottfredson, L. S. (2002). Applying Gottfredson's theory of circumscription, compromise, and self-creation, . D. Brown and Associates (Eds.).*Career Choice and Development* (pp. 71–73). San Francisco, CA: Jossey-Bass.

Gottfredson, L. S. (2005). Using Gottfredson's theory of circumscription and compromise in career guidance and counseling. In S. D. Brown & R. W. Lent (Eds.), *Career development and counseling: Putting theory and research to work* (pp. 71−100). New York, NY: Wiley.

Gottfredson, L. S. (2006). Circumscription and compromise. In J. H. Greenhaus &, G. A. Callanan (Eds.), *Encyclopedia of career development*. Thousand Oaks, CA: Sage Publishing. http://www.udel.edu/educ/gottfredson/reprints/2004CCCentry.htm

Granger, D. (2008, May 1). No child left behind and the spectacle of failing schools: The mythology of contemporary school reform. *Educational Studies: Journal of the American Educational Studies Association,43*(3), 206–228. (ERIC Document Reproduction Service No. EJ799209) Retrieved January 27, 2009, from ERIC database.

Gray, K. (2004). Is High School Career and Technical Education Obsolete? *Phi Delta Kappan, 86*(2), 128–134.

Green, E. (2011, March 7). Study: $75M teacher pay initiative did not improve achievement. Gotham Schools. http://gothamschools.org/2011/03/07/study-75m-teacher-pay-initiative-did-not-improve-achievement/

Gysbers, N. C., & Moore, E.J. (1975). Beyond career development—life career development, .*Personnel and Guidance Journal,53,* 647–652.

Hallfors, D., Vevea, J. L., Iritani, B., Cho, H., Khatapoush, S., & Saxe, L. (2002). Truancy, grade point average, and sexual activity: A meta-analysis of risk indicator for youth sub-stance use. *Journal of Social Health, 72,* 205–211.

Helwig, A. (2004, January 1). A ten-year longitudinal study of the career development of students: Summary findings. *Journal of Counseling and Development, 82*(1), 49–57. (ERIC Document Reproduction Service No. EJ698326) Retrieved September 16, 2009, from ERIC database.

Hoachlander, G. (2006). College readiness for all. *The School Administrator, 63(1),* 38–41.

Individuals With Disabilities Act. (1990). Pub. L. No. 101-476, 104 Stat. 1142. Reauthorized in 1997 (Pub. L. No. 105-17, 111 Stat. 37) and 2002 (Pub. L. No. 108-446, 118 Stat. 2647).

Kazis, R. Jobs for the Future, (2005). *Career and technical education in Pennsylvania. Opportunities for Commonwealth Policy*. Boston, MA: Jobs for the Future. http://www.jff.org/publications/education/career-and-technical-education-pennsylva/186

Klein, J. (2012, May 14). Learning that works. *Time Magazine*, http://www.time.com/time/magazine/article/0,9171,2113794,00.html

Kliebard, H. M. (1999). *Schooled to work: Vocationalism and the American curriculum 1876–1946.* New York, NY: Teachers College Press Columbia University.

Kliebard, H. M. (2004). *The struggle for American curriculum.* New York, NY: Taylor & Francis Books, Inc.

Kolodinsky, P., Schroder, V., Montopoli, G., McLean, S., Mangan, P., & Pederson, W. (2006, December 1). The career fair as a vehicle for enhancing occupational self-efficacy. *Professional School Counseling, 10*(2), 161–167. (ERIC Document Reproduction Service No.EJ767369) Retrieved September 16, 2009, ERIC database.

LaCoff, W. S. (2007, August). Providing another avenue for students. *PSBA Bulletin, 71*(4), 5.

Lambeth, J., Elliot, J., & Joerger, R. (2008, October). The national career and technical education research agenda. *Techniques: Connecting Education & Careers,83*(7), 52–55.Retrieved January 13, 2009, from Education Research Complete database.

Lambrecht, J. L. (Winter 2007). Business education delphi study of future directions for the field. *Delta Pi Epsilon Journal, 49*(1), 15–25.

Lamdin, D. J. (1996). Evidence of student attendance as an independent variable in education production functions. *Journal of Educational Research, 89,* 155–162.

Lent, R.W., Brown, S.D., & Hackett, G. (2002). Social cognitive career theory. In D. Brown, L. Brooks, and Associates (Eds.), *Career choice and development* (4th ed.; pp. 255–311). San Francisco, CA: Jossey-Bass.

Lueng, S. A. (2008). The big 5 career theories. In: J.A. Athanasou, R. Van Esbroeck (Eds.), *International Handbook of Career Guidance* (p. 120). Hong Kong SAR, China: The Chinese University of Hong Kong Springer Science + Business Media B.V.

Lewis, A. (2006, May). Clean up the test mess. *Phi Delta Kappan,87*(9), 643–644. Retrieved January 13, 2009, from Education Research Complete database.

Lewis, A. (2008, May). National Research Center on Career and Technical Education Research. *Tech Directions, 67(9), 5–7.* Retrieved from the Teacher Resource Center database.

Masshardt, H. (2007, August). The mechanics of good policy. *PSBA Bulletin, 71*(4), 7.

Maxwell, J. A. (2005). *Qualitative research design an interactive approach*. Thousand Oaks, CA: Sage Publications.

Merriam, S. B. (1998). *Qualitative research and case study applications in education.* San Francisco, CA: Jossey-Bass.

Morgan, G. (1997). *Images of organizations.* Thousand Oaks, CA: Sage, PublicationsP22–26.

The National Commission on Excellence in Education. (1983). *A Nation at Risk: The Imperative for Educational Reform. A Report to the Nation and the Secretary of Education.* Washington, D.C.: U.S. Department of Education.

National Charter School Resource Center. (2013). Frequently Asked Questions. http://www.charterschoolcenter.org/

Nicholes, J. D. (2003). Prediction indicators for students failing the state of Indiana high school graduation exam. *Preventing School Failure, 47,* 112–120.

No Child Left Behind Act. (2001). Pub. L. No. 107-110, 115 Stat. 1425.

Pederson, V. (2007, July). What Is Measured Is Treasured: The Impact of the No Child Left Behind Act on Non-assessed Subjects. *Clearing House,80*(6), 287–291.Retrieved January 13, 2009, from Education Research Complete database.

Pennsylvania Department of Education. Public School Enrollment Reports. http://www.education.state.pa.us/portal/server.pt/community/enrollment/7407/public_school_enrollment_reports/620541

Pennsylvania Department of Education. (2013). SAS Portal Help Desk. Curriculum Mapping FAQs. http://websites.pdesas.org/helpdesk/2010/6/24/73239/page.aspx

Pennsylvania Department of Education, Bureau of Career and Technical Education. (2009). *Pennsylvania Area Career and Technical Education Schools, 2008 Report.* Pennsylvania Department of Education. Harrisburg, PA: Author.

Pennsylvania Department of Education, Bureau of Career and Technical Education. (nd). Pennsylvania Career Education and Work Standards. Career Education & Work (CEW) Standards Toolkit. www.pacareerstandards.com

Pennsylvania School Boards Association. (2007, August). Career and technical schools: More than one route to success. *PSBA Bulletin,71*(4).

Pennsylvania School Code. (1986). 117 §1803.1.

Phillips, D., & Skelly, K. (2006). College readiness for all. *The School Administrator, 1*(63), 26.American Association of School Administrators, P 26.

Porfeli, E., Hartung, P., & Vondracek, F. (2008, September). Children's vocational development: A research rationale. *Career Development Quarterly,57*(1), 25–37. Retrieved January 13, 2009, from Education Research Complete database.

Rader, M., & Meggison, P. (2007). The business education curriculum. *The Delta Phi Epsilon Journal, XLIX*(1), 26–33.

Rhodes, S. (2007). *High school/high tech program guide a comprehensive transition program promoting careers in science, technology, engineering and math for youth with disabilities.* Washington, DC: National Collaborative on Workforce and Disability for Youth, Institute for Educational Leadership.

Richards, E. (2011). Finland Puts high bar for teachers, kids' well-being: .*Journal sentinalsentinel.*www.jsonline.com/news/education/finland-puts-bar-high-for-teachers-kids-wellbeing-qa2tbrf-13456548.html.

Sawka, K., McCurdy, B., & Mannella, M. (2002, Winter2002).Strengthening emotional support services: An empirically based model for training teachers of students with behavior disorders. *Journal of Emotional & Behavioral Disorders,10*(4), 223.

Scales, P. C., Foster, K. C., Mannes, M., Horst, M. A., Pinto, K. C., & Rutherford, A. (2005). School-business partnerships, developmental assets, and positive outcomes among urban high school students: A mixed-methods study. *Urban Education, 40*(2), 144–189.

Schescke, R. (2008). *Career technical education: A partner for effective high school reform,* .Silver Spring, MD: National Association of State Directors of Career and Technical Education Consortium.

Sheldon, S. B., & Epstein, J. L. (2004). Getting students to school: Using family and community involvement to reduce chronic absenteeism. *School Community Journal, 14*(2), 39–56.

Smith, B. (2012, October 18). How to reduce America's talent deficit. *Wall Street Journal,* Dow Jones & Company, Inc. http://online.wsj.com/article/SB1000087239639044367540457805816364036103 2.html

Smith, S. M. (2002). The role of social cognitive career theory in information technology based academic performance, .*Information Technology, Learning and Performance Journal, 20,* No (2, Fall 2002), 1–10.

Southern Regional Education Board. (n.d.). High Schools That Work: An evidence-based design for improving the nation's schools and raising student achievement. Atlanta, GA: Author.

Super, D. E. (1980). A life-span, life-space approach to career development. *Journal of Vocational Behavior, 16,* 282–298.

Super, D. E. (1983). Synthesis: Or is it distillation? *The Personnel and Guidance Journal, 61*(8) 511–514. *Journal of Career Education, Springer Science Business Media B. V,* 511–512.

Symonds, W. C., Schwartz, R. B., and & Ferguson, R. (2011). *Pathways to Prosperity Project: Meeting the challenge of preparing young Americans for the 21st century.* February 2011, Cambridge, MA: Harvard Graduate School of Education.

Thomas, R. M. (2003). *Blending qualitative and quantitative research methods in theses and dissertations.* Thousand Oaks, CA: Corwin Press Inc.

U.S. Department of Education. (2004). Four Pillars of NCLB. Washington, D.C.: U.S. Department of Education, July 1, 2004. www.ed.gov/nclb/overview/intro/4pillars.html

U.S. Department of Education. (2007). A guide to the individualized education program. http://www2.ed.gov/parents/needs/speced/iepguide/index.html

U.S. Department of Education. (2008a). *A Uniform, Comparable Graduation Rate.* Washington, D.C.: U.S. Department of Education, October 2008. http://www2.ed.gov/policy/elsec/reg/proposal/uniform-grad-rate.pdf

U.S. Department of Education. (2008b). *Accountability, assessment, and transparency.* Washington, D.C.: U.S. Department of Education, October 2009. http://www.ed.gov/policy/elsec/reg/proposal/aat.pdf

U.S. Department of Education. (nd). Office of Special Education Programs' (OSEP's) IDEA website. http://idea.ed.gov/

U.S. Department of Labor. Bureau of Labor Statistics. (March 2009). Employment Situation February 2009. Washington, D.C.: U. S. Department of Labor. Retrieved from http://www.bls.gov/news.release/archives/empsit_03062009.pdf

U.S. Department of Labor. (2002). Training and Employment Guidance Letter No. 28-01. http://wdr.doleta.gov/directives/attach/TEGL28-01.cfm

U.S. Department of Labor. (2010). Teaching Soft Skills Through Workplace Simulations in Classroom Settings Providing National Leadership on Disability Employment. Retrieved from http://www.dol.gov/odep/documents/TeachingSoftSkills.pdf

Wang, X., Blomberg, T. G., & Li, S. D. (2005). Comparison of the educational deficiencies of delinquent and nondelinquent students. *Evaluation Review, 29,* 291–312.

Weiner, R., & Hall, D. (2004). Accountability under No Child Left Behind. *The Clearing House, 78*(1), 17.

Winter, D. (1994).*Circumscription and Compromise* .London, England: The Careers Group, University of London. *Creative Commons Attribution- Non Commercial 2.0England and Wales*

Yin, R. (2003). *Case study research design and methods,* .Thousand Oaks, CA: Sage Publications. P ,5 .

Zimmer-Gembeck& Mortimer.(2006). Adolescent work, vocational development, and education. *Review of Educational Research, 76*(4), 537–566.

Zunker, V. G. (1990). *Career counseling: Applied concepts of life planning* (25–29). Pacific Grove, CA: Brooks/Cole Publishing Co.

APPENDIXES

APPENDIX A

INTERVIEW PROTOCOL

Thank you for providing me this time and agreeing to be interviewed. I have shared some background information about myself and explained the reasons behind this interview. I am in a completing a study on the impact of NCLB on CTE. This interview will be audio-taped with your permission, and I have a release for you to sign. My research will be in the area of career education and development.

This interview will remain confidential. Please provide information that you are comfortable with. I know that some of your responsibilities may be in the area of special education so feel free to speak in general terms about names and locations.

TEACHER INTERVIEW QUESTIONS

I. Background information.

What subject or career area do you teach?

How long have you been at this facility?

How long have you been involved with CTE in Pennsylvania?

Have you had any other involvement with CTE?

II. Program-related information.

Has your subject or program changed since 2002?

What types of changes have occurred?

How would you classify the program changes?

Are the changes academic or vocational related?

Can any of that change be connected with the implementation of NCLB?

Has the number of students in your classes or program increased or decreased over the past 6 years?

Have academic components of your program increased or decreased since 2002?

Have vocational components of your program increased or decreased since 2002?

Do you track your students after graduation?

Are the students being as successful as before NCLB?

III. Perception questions.

In your opinion are the students prepared for the workplace?

Has this perception changes since 2002?

In your opinion, Is any of this attributed to NCLB requirements?

If both are yes, has that perception changed since 2002?

In your opinion has there been a change of teacher morale at the facility since 2002?

Can any of that be attributed to impact of the implementation of NCLB?

COOPERATIVE EDUCATION COORDINATOR QUESTIONS

I. Background questions.

How long have you been in your current position?

How long have you been involved with this facility?

How long have you been involved in CTE?

What type of program do you coordinate?

II. Program related information.

Has your cooperative education program changed since 2002?

What types of changes have taken place since 2002?

Can any of the changes be attributed to NCLB?

Has your program participation increased or decreased since 2002?

Can any of that change be attributed to NCLB compliance?

Has the implementation of NCLB affected your program?

Have the requirements or job description of your position changed since 2002?

Can any of those changes be attributed to compliance of NCLB?

III. Perceptual changes.

In your opinion has the perception of cooperative education changed at the facility since 2002?

Has that changed due to the implementation of NCLB?

In your opinion how would you compare the workplace readiness of your students since NCLB in 2002? Please explain

In your opinion has the morale of the staff changes since 2002?

GUIDANCE COUNSELORS QUESTIONS

I. Background questions.

How long have you been a guidance counselor?

How long have you been involved with CTE?

How long have you been at this facility?

III. Program-related information.

How has your job changed since the inception of NCLB?

Have the school graduation requirements changed since NCLB?

What types of changes have occurred and can any be attributed to NCLB?

Has the legislation limited student participation at this facility?

Do you have any information related to this topic for the districts that send students to this facility?

Have you seen specific changes to your position that can be directly related to the facility complying with NCLB?

Have student schedules changed since 2002?

Can any of those changes be attributed to NCLB compliance?

Have student requirements in Math and Reading increased since 2002?

Can any of those changes be attributed to implementation of NCLB?

III. Perception changes.

How do the students feel about their CTE experience?

Has that changed since 2002?

In your opinion are the students more or less prepared for the workplace?

In your opinion has staff morale changed at the facility since 2002?

ADMINISTRATOR QUESTIONS

I. Background information.

How long have you been in your current position and facility?

How long have you been involved in CTE?

II. Program-related information.

How has the enrollment of the facility changed since 2002?

What are the reasons for the enrollment changes?

Has your facility changed since 2002?

Can any of those changes be attributed to the implementation of NCLB?

Currently, what are your greatest challenges as administrator at a CTE facility?

Have these challenges changes since 2002?

Are there changes to your facility that can be directly attributed to NCLB?

If there is change how, has that change impacted your position?

Has there been a change in staffing since 2002?

Can any of that change be attributed to NCLB compliance?

Does your facility administer any parts of the PSSA?

How have the results been?

Have those results been the catalyst for any changes at the facility?

Would any of those changes been related to staffing, budget allocations, or curriculum/programs?

Can you expand on any of the previously stated changes?

Have any positions at the facility be directly related to NCLB compliance?

Have any compliance issues at your sending districts impacted the availability of CTE for those students?

III. Perception information.

In your opinion, has the climate of the school changed since 2002?

Can any of that change be attributed to NCLB?

Has the mission here been impacted by the implementation of NCLB?

In your opinion, has staff morale changed since 2002?

In your opinion has student workplace readiness changed since 2002?

APPENDIX B

RESEARCH QUESTIONS MATRIX

Research Question	Corresponding Interview Question
1. Have changes in the curriculum have occurred at the selected CTE centers, since 2002?	TI- B2,B3,PR1,PR2,PR3,PR4,PR5,PR7,PR8 CI- B2,B3,PR1,PR2,PR3, GI- B2,B3,PR7,PR8,PR9,PR10 AI- B1,S4,PR7,PR11,PR12,PR13,PR14
2. How has the availability of CTE programs at the CTE centers that will be researched been influenced in the NCLB era (2002–2009)?	TI-B3,B4,PR6 CI-PR4,PR5 GI-PR4,PR5, AI-PR1,PR2,PR17
3. What other impact have NCLB had on the CTE Centers?	TI- B1,B3,PR9,PR10,PR1,P2,P3,P4,P5, P6 CI- PR6,PR7,PR8,P1,P2,P3,P4 GI- B3,PR1,PR3,PR6,P1,P3,P4, AI- B2,PR3,PR5,PR6,R8,PR9,PR10,PR13,PR16,P1 P2,P3,P4,P5

Key:

TI = Teacher Interview
CI= Cooperative Education Coordinator Interview
GI = Guidance Counselor Interview
AI = Administrator Question
1 = Interview Question Number 1
2 = Interview Question Number 2
3 = Interview Question Number 3
B = Background Interview Question
PR = Program-Related Information Interview Question
P = Perception Interview Question

PERMISSION TO AUDIOTAPE

Investigator's Name: Albert Catarro M.S., Ed.
Department: Doctoral Program Student, Temple University
Project Title: The impact of NCLB on CTE

Subject: _____ Date: _____
Log#

      I give Albert Catarro permission to audiotape me. This audiotape will be used for the following purpose:

      Research: This audiotape will be used as part of a research project as part a Doctoral Program at Temple University. I give my consent to be part of the research project and my written consent to be audiotaped. My name will not be used as part of this project

      I AGREE TO BE AUDIOTAPED:

      ON: _____ FROM: _____to_____

      THE TAPES WILL BE USED: FROM: _____to_____

      The data will be stored for three years after the project is completed. To be stored longer additional approval from the Institution Review Board must be sought.

      IF YOU CHANGE YOUR MIND

      I understand that I can withdraw my permission at any time. Upon my request, the audiotapes will no longer be used. This will not affect my relationships with Temple University or Albert Catarro in any way.

      Compensation:

      I understand that I will not be paid for being audiotaped or for the use of the audiotapes.

      FOR FURTHER INFORMATION

      If I would like more information about the audiotapes, or if I have questions at any time, I can contact

Investigator's Name: Albert Catarro, M.S.Ed.
Department: Doctoral Program Student, Temple University
Project Title: The Impact of NCLB on CTE in Pennsylvania

Contact Information: Albert Catarro, M.S.Ed.
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William Tennent High School
Warminster, PA 18974
Phone: Work; (215)-441-6181 ext. 3144   Cell; 215-813-6944

This form will be placed in my records. A copy will be kept by the person named above. A copy will be given to me.

PLEASE PRINT:

Subject's Name: _____

Date: _____

Address: _____

Phone: _____

Subject's Signature: _____
Thank you again for your cooperation.

RESEARCH QUESTION RESULTS

Teacher Interview Questions

Research Question	Corresponding Interview Question Responses
1. Have changes in the curriculum have occurred at the selected CTE centers, since 2002?	TI- B2,B3,PR1,PR2,PR3,PR4,PR5,PR7,PR8 **CTE 1** – Academic Teachers (this section will be divided into academic and technical teachers. Less textbook orientated, use novels and trade books, no textbooks more project based especially for my 12th grade class and I like that better. Everything is different since 2000. Absolutely, we do less writing and more of a shift on reading, As a school we have always done better on writing but for the PSSA we have to improve on reading. I have become more of a reading teacher, than language arts. Definite shift to academics especially reading and math. This is directly due to the inception of NCLB. The changes in programs have been focused in the area of academic testing Academic, the program used to rotate on a 6 day basis, I would see my 9th and 10th grade students for 6 days, then we would switch, to see my 11th and 12th grade students with the PSSA we have stopped that rotation and I have seen the current group of students for 20 days. We allow time to prepare for the testing and time for the testing itself. Program has changed in a lot of ways – we went comprehensive in 2000, before comprehensive it was two worlds, students came here for this program and went back to the home school for their stuff. We did not really care what happened there, then we went comprehensive and things changed and then very

slowly we keep pushing more academics into our curriculum and include academic anchors.
We keep adding more academics to comply with NCLB requirements.

Before NCLB all I focused on was getting students prepared for the field. Now we have so much academic stuff as part of what we do, it's like this; some people do it some don't it may be just putting the academic anchor on the board. I enjoy it. I have the students read and write more. Before I accepted any type of answer now I am more demanding and I know it is better for the students. I was just concerned about the students passing the state boards. Now the focus has changed. I found the kids respond better with the more you demand from them, now it is much more academic. I did not care if things were not spelled correctly now I am more demanding

CTE 1 - Technical Teachers;

Both vocationally – technology things are easier to use, academic – there is more academic pressure, we have a lot of reading in Marketing and Management but I added more even novel reading,

Students are being force fed a test wither the PSSA of foresight, almost every marking period the students feel that as a tech teacher we try to reinforce, writing, rewrites, but some don't care about the test

I have been asked to integrate more reading, math, and Science into my curriculum

More academic responsibility to vocational programs. We added more vocational teachers and reinstated our CNA program in 2004. We had to follow the state mandates for nurse aid

As for academic changes we had incorporate strategies that would assist on the PSSA.

Yes we initiated reading strategies. Reworking tests, reading strategies were incorporated

My program is academic in nature probably more so than some of the tech programs here. It was more enhancing our delivery to provide assistance for the PSSA.

Changes in this program but more emphasis on the academic portion of the course I believe the students from that time of the inception of NCLB are now better with and math and English and science is still lacking but the students are more prepared and better focused.

CTE 2

Academic changes, we now have to incorporate academic standards into the program. Adding the standards adds time to writing the curriculum, also weekly lesson plans take more time. I have to reflect which academic standards that are to be covered each week, I have to correlate the technology lessons to the standards and correlate to standards in program scope planned course outlines,

Academics are about the same, computer repair requires electricity and reading technical materials. I teach Excel in web design and that involves math. The difference is that I have to pull out and identify the academic standards and incorporate in all aspects of the program.

Yes but I have to teach more than just the program certification requirements. There is presumed prerequisite knowledge that I also have to cover. I have to teach lessons that are not part of the certificate program.

Integration of academic standards that is very big right now. We had to correlate reading, math, and science standards into our curriculum to address PSSA results.

We had to draw out of our curriculum what we are doing that connects with academic standards and the PSSA.

	Yes tied directly to the PSSA and trying to justify their existence. In my opinion a good teacher is a good teacher. Trying to describe or put on paper what we do doesn't necessarily change what we are doing it is the validation of the paperwork that we have to submit.
	Academics have increased because we have to allow students to work on Study Island to become proficient
	We sacrifice some of public safety time for to help students on academics and skills they need to succeed
2. How has the availability of CTE programs at the CTE centers that will be researched been influenced in the NCLB era (2002–2009)?	TI-B3,B4,PR6
	I hear sending districts are keeping their more academic students and sending us less academic students. They send us students that are not interested in academics and we are going to teach them plumbing but we have to teach them reading and evaluated on that. It is not a fair system. We traditionally have the less academic students and to hold teachers and the school accountable for academics only is not appropriate and counterproductive.
	My program is always full. The program has increased we are full almost every year
	Program has increased
	Remained the same we have a waiting list and we are full.
	CTE 2
	The number has decreased because students are being pulled back to home schools for PSSA prep.
	Yes the entire month of March schools kept students at the home schools, so I can't cover new material.
	I am fortunate, I have increased, and public safety is expecting a 29% increase of employment opportunities. With our aging population, EMTs. Fire Fighters, law enforcement is growing. And shows like CSI have made it cool and very popular at this time.

3. What other impact have NCLB had on the CTE Centers?	TI- B1,B3,PR9,PR10,PR1,P2,P3,P4,P5, P6

TI- B1,B3,PR9,PR10,PR1,P2,P3,P4,P5, P6

CTE 1 - if student is not going to do well on PSSA they are getting pulled from their program for Reading 180 program or if they are SPED they go to resource room. It impacts their time

Yes positively and negatively, as a killer to morale if we have students who are not working on their skills and there is no improvement that impacts negatively on the teacher and that is a negative. But as a positive it has us all working on a common goal. We know what goals we are trying to reach and that is good.

Some students have very set goals, if college, the accountability factor has helped them but the other half we have some students that have no interest in academics and they use this as an opportunity to rebel. We started giving the science PSSA and I have students that have no interest and they take 5 minutes to complete the test and that impacts negatively, you can't have a system that allows students to consciously sabotage the school and teachers by simply not attempting the test. We can't force them to take a test seriously that has little or no impact on them directly.

It gives teachers standards to teach and goals for us to strive for. It has been bad because we have lost some of the fun stuff in education.

It comes down to this I have no problem with the standards of the limited curriculum, or holding students to a high standard, I do have a problem with thee negative aspects of NCLB, It is too weighted on the teacher and the school there is no balance there is no weight on the kid. The expectations are absurd, we have a common standard for all students to achieve in PSSA and we have individualized education plans for Special Education, the two do not mesh.

Special education is taking more of my time and is a separate issue. We started saving every student is different and has different needs to NCLB where every student has to know the same things. The two initiatives are opposite.

Our special needs population has increased, but Actually my numbers are up. Spanish is the only elective the students can take other than a computerized math or reading program. Students are placed in my class in 9th grade and continue in 10th. Now in 10th and 11th grade students are pulled from their vocational program to take Spanish. The 9th grade schedule change has pushed my number up.

We see the students the same amount of time but the rotation shifts at the end of the year to accommodate testing.

Yes we are constantly getting bombarded with standards and test scores and out population is traditionally the less academic students. Our special education population is proportionately much higher than surrounding districts and our students come in with lower reading and math levels. The teachers are being held accountable for something that is beyond just them. We are fighting for survival based on academic test and we are a vocational school that has been serving the community well for years. Now sending districts are not sending us academic students, they tell the students we can't make AYP so why go there? Students say to me that their guidance counselors talk them out of coming here. We also have the opposite happening. Districts send us students that are not proficient to get them out of that school and into here. We are comprehensive high school and are accountable for that student nice they are sent here. We are over 50% special education and students at 4th grade reading levels. That does not happen by accident.

Special education has expanded rapidly; we have added many special education teachers and services.

I am trying to understand where we are as a school in AYP. I am feeling the frustration, I know other technical teachers are feeling the frustration, we were asked to help out and we are but when we hear from the students that this math teacher does not give us any work or we never get HW in that class or when I have a student come visit, I wonder what they are doing. We are doing our best are they doing their best. This is difficult to say because you are taping but we would

really to focus on our technical area and not be so bogged down with academic hoops to jump through. I think that is where it comes from, the academic teachers are right down the hall from us.

There is more academic pressure right now.
I have had a few different experiences – I just got a new student with Asperger's – I have no doubt that he will do well on the NOCTI – I have more special ed. students – they range from the high end and the low end of the class. The methods of testing – telling students they can't do the special trip of the always are being told how low functioning they are, they get the same things and even if a student goes up one or even 2 grade levels they are still unsuccessful, that is not fair to the student.

Yes the students don't want to work like they used to. They want an A but don't want to do the work. One is instant gratification the other is rebellion, they are being force fed a test wither the PSSA of foresight, almost every marking period the students feel that as a

tech teacher we try to reinforce, writing, rewrites, but some don't care about the test

I will look at the time that I have been here so much pressure for the testing, and we hear that there may be a way to connect to our paycheck while I have students at a third grade level of autistic.

Yes to tie testing to everything that we do.

I think positive because when students enroll in a technical program they may be trying to get away from academics but I blend it into the curriculum and almost trick them into it because I have been teaching so long, I think it would be more difficult for a new teacher.

Yes – technical teachers are pushed to focus on tests and not on our subject or technical area. We are feeling beaten up by AYP and NCLB. We are giving real life knowledge and skills for employment and we are beaten up for a standardized test.

Yes, this was a ploy by the government to choke the public school system, there is so much more that students get than answering a standardized test question. We are teaching to a test there is no reason for students to do well. We provide real life skills in a work environment and being criticized for the tests. We can include real life skills. This is an atrocity

There is too much focus on academics, we were promised by administration that there would not be a wedge between academics and technical teachers but they are driving the wedge deeper. This place is going all academic, we got a grant and all the academic teachers got smart boards, projectors and all types of technology and the technical teachers got nothing. We were not part of the grant, I thought there is some kind of way we could share them, now we are hearing that some of the teachers are not even using them, I would love to have that in my classroom and I would use it too. As a vocational teacher we are somewhat of a showman. We have to entertain students to keep their attention and motivate them. I do projects with kids so they can see what it should look like. The push for academics and AYP is all they care about, I brought it to admin that we are doing so well on the NOCTI and she said that does not matter because employers don't use that. I said to her do you think they care anything about the PSSA?

Students are pulled out of the program that was a major change, on the technical side students are basically there all day. They leave for phys-ed and lunch but if they were not proficient or identified in 8th grade PSSA you are pulled out from the program. The students are removed from this program for PSSA prep. They lose time from the program

PSSA prep, our Juniors are in academics every day for the month of March, we called it March Madness, we could not give homework and students were in academics for the entire time. We just finished 6 weeks without out 10th and 11th graders were out for 6 weeks. We just got done the long rotation we have our 9th and 12th graders, the 10th graders are working on their graduation project the 11th graders all PSSA prep.

It is tough but every tech program here is impacted. The tech programs are working here, a math teacher came up with this because it seemed to be a good idea but it was 2 weeks in the beginning and has been expanded. Now we have the kids back, the 11th graders were so happy to get back, they come here for tech and now the focus is academics.

Absolutely, this is a science area and now they are required to get science, some of my students in the past did not get science at their home school.

PSSAs and NCLB were tough for some teachers to comprehend, but with budget cuts we all see how fast the doors can be closed, we have serious challenges, with PSSAs, and budgets. This year especially with budgets we are trying to save our jobs, our survival is at stake,

Being a comprehensive program we all bring PSSA strategies into our programs. I have been on committees and we do have some resistance.

For my class we are coming back strong, our NOCTI scores are off the charts,

More focus on academics

Absolutely schools are being held accountable they have their own report cards and are being watched and teachers take that personally. Teachers that used to take a day off are not doing that now. They know that scores count on them and we have to help every student where in the past there was not that pressure to focus on all students we have to work harder and people know they are being watched.

We used to be totally vocational, now we are more on the academic side. The requirements and the PSSA it seems like the administrators and decision makers are more focused on the academic scores because that is what they are being judged on. So NCLB has slightly impacted the automotive because they are pulling kids out for academics for my type of program it has enhanced what we do with the stronger academics.

The perception that has changed is that before I had students without writing skills and that has helped with writing or filling out a job application they are better equipped.

Yes, however financially it has been a disaster on the technical programs, now the academic programs are spending on every gadget, software, testing program or job coach that they can to help academically. They are hiring more staff this has put a burden on the tech programs financially we can't order industry equipment because of the financial demands of making AYP.

Changes in morale in a negative way because of the financial restraints. They would not think twice about pulling money from the technical side to put more into the emphasis on PSSA and they are financial focused on academics and are laying-off technical teachers for the first time and this has more to do than just the economy. Much of it has to do with this rush to invest in the academic and forgotten the technical. I believe this has something to do with the job market look at monster.com there are technical jobs out there are not enough qualified people. For example you need technical skills for fields like green technology Colleges are feeling this too BCCC stopped its electronics engineering program because it is cheaper not to run it and focus on academics it seems that our entire educational focus is on academics and technical is being forgotten.

First and foremost the technical school should e better funded through the home school we are the step-child and I believe that is part of the reason why we are sending all our jobs overseas they kids need the proper training to be competitive to manufacture highly technical goods we need a better way to fund technical schools.

CTE 2

They readiness of the students have decreased because the caliber of students has decreased.

Fewer students have skill knowledge. For example I teach Excel for web-design. I can't go right into financial functions. I have to teach 5th grade skills like percentages first. I keep backing up more and more. Students are actually kept back at the home schools to prepare for the PSSA test.

For years the school was considered an option for less academic students, but this school is not the same as it was 10 years ago. We still have the trades but that has changed fewer trades and more technology, transformation from manufacturing to information, good or bad the school has changed. The districts send students that are less academic and the programs are more demanding. Sending students with poor reading skills is setting the student up for failure

The number of students is decreasing and students are less prepared for the program. The teacher has to go further and further back in remedial teaching to prepare the students for the certification tests.

You are a teacher, what makes a good teacher is what you are. A lot of initiatives are things we need to do. I understand that need to report to the state and federal government about AYP. There are so many variables and ways that we can influence young lives that a good teacher does what they have to do.

We have an occupational advisory committee and the feedback from them has been to improve report writing and communication skills so NCLB fits into nicely with some of this. However with all the remediation to get proficient we may be shortchanging the advanced students, this may be a byproduct of including all students, I would like to do a study to see if that has impacted test scores at a national level, IEPS having to meet NCLB the more advanced are not being able to excel.

A good question better at math and reading has to help. NOCTI is 190 question written test so it has to help the other side, some may do more if the NCLB time was not so cumbersome

CTE is no longer a mom and pop type of industry, everyone is worried about AYP and numbers. Good teachers with big hearts are going to do the right thing for students. They are going to step up to challenges, the day you stop worrying should be the day you stop teaching. Teachers are getting weighed down by the NCLB requirements, they are slowing us down. With paperwork accountability.

Yes the better students can write, and communicate makes them more competitive in the workplace

Cooperative Education Teacher Interview Questions

Research Question	Corresponding Interview Question Responses
1. Have changes in the curriculum occurred at the selected CTE centers, since 2002?	CI- B2,B3,PR1,PR2,PR3, CTE 1 – responses - Yes – directly attributed to NCLB Pennsylvania Testing Requirements. **Program requirements** have been adjusted to include PSSA proficiency or above and maintain a C- average to be elidgible to participate. **Schedule change** for PSSA preparation has frustrated employers, students miss up to 6 straight weeks of work for PSSA test preparation. CTE 2 - Yes not the content of the Capstone program the **student demographics** have changed. In 2002 we had fewer special education students, had a highly academic successful students. Definitely – Job coaches have been added for more community visits and work support. More visits to the workplace from once a month to 2 or 3 times a month, more documentation, more interaction with special education personnel. Yes – in 2002 the economy was strong and with the quality of students not much intervention. Currently with 54% special education we have to do more to assist the students be successful. The students need more intervention, and support. I am doing more

damage control and retraining. We are placing students that we may not have in the past.

CTE 2 - Yes the morale has changed for a number of reasons; economic, testing, academic. Teachers had to re-map all their curriculum to document to the sending schools that the teach the same academic standards as the home schools.

CTE 2- The demographic changes with so many special ed students such as emotional support and other high end sped needs like autism and aspergers in such high numbers it is difficult to get those students successful in the programs.

2. How has the availability of CTE programs at the CTE centers that will be researched been influenced in the NCLB era (2002–2010)?	CI-PR4,PR5
	CTE 1 – Yes students not proficient may not participate in the program. They are denied access to Coop.
	CTE 2 - Sending districts are holding back students that they think may be successful on the testing and not permitting them to go the technical school. Sending districts are also keeping sophomores back at the home schools for test preparation and only allowing them to start as juniors and we are a three year program here. So the students we are asked to place have only done 1 year to get ready for placement instead of the 2 years previously.
3. What other impact have NCLB had on the CTE Centers?	CI- PR6,PR7,PR8,P1,P2,P3,P4
	CTE – 1 – Academics have become the main focus of student performance.
	CTE 2 - Definitely – we all have more duties and responsibilities. We have a lean school with minimal support. We all have more things to fit into what we do because of the academic standards.
	CTE 2 - Yes because every student is being remediate for the PSSA testing and not taking electives.
	CTE 2 - Students are not permitted to take electives like Business ed. And Marketing ed. That provide the

sort skills for the workplace. We have to ramp up what we do so the students have the sort skills that are so important in the workplace.

CTE 2 - Yes the morale has changed for a number of reasons; economic, testing, academic. Teachers had to re-map all their curriculum to document to the sending schools that the teach the same academic standards as the home schools.

CTE 2 - All the remediation is damaging the student. They get the same thing over and over with no workplace readiness.

Student morale has also decreased, students say how much they hate their home schools because they are so beaten down. They keep hearing that they are below basic. The morale of the students has been negatively impacted by NCLB.

Guidance Counselor Interview Questions

Research Question	Corresponding Interview Question
1. Have changes in the curriculum have occurred at the selected CTE centers, since 2002?	I think it is harder to do my job because this is a half time program. So a lot of what I would like to so I cannot. I do have a colleague who does the college search and I do more counseling.
	Before I came here they did offer math but that was to meet requirements from a sending school. The only academic offering we have here is phys ed. However we do have study island to help students prepare for math and reading and other PSSA requirements.
	Right even though it is a tech curriculum the students are learning reading math and science. Some of the instructors have students read books and write about what they learned. They still have academic components they are just not sitting in an academic classroom.

Student requirements in Math and Reading increased since 2002 with all kinds of remediation classes, students use study island for requirements

2. How has the availability of CTE programs at the CTE centers that will be researched been influenced in the NCLB era (2002–2009)?	GI-PR4,PR5,

Yes when we were processing applications from sending districts there were some with a note attached like this student may not be able to attend because thy may be required to take a remediation class for the 11th grade PSSA. We also actually accept students and later are told by the sending district that they will not be able to attend because they did not do well on the 8th or 11th grade PSSA. The districts hold back the students so they can prepare for the NCLB testing requirements.

Yes students have been completely denied access to the program for NCLB.

Yes because of PSSA requirements we have students pulled from the program so they can get into remediation classes so they cant participate or they are permitted to attend later than 10th grade in 11th or even 12th grade so they do not get the full 3 years in the program.

Not necessarily because of NCLB but because I only have access to students because of the half time program.

It gets frustrating because we accept students into a program with 25 spots and there were 30 applications and we did not accept the other 5 students and then when we are told at the beginning of the next school year that students cant participate it is a shame for the students who were told no. Then we go back to the sending districts to offer the program to the students that were denied, then their schedule has to be changed and this makes more work and sometimes can not work. Or if students were not given their first choice because a program was full then we have openings that student may not get the opportunity to change programs. It is frustrating but there is nothing we can do about it.

3. What other impact have NCLB had on the CTE Centers?	GI- B3,PR1,PR3,PR6,P1,P3,P4,
	We have students pulled 3rd MP for remediation, or instead of making the full half time program some have to remain at their sending district an extra period or block and that limits their access to the program. So then we have to modify our schedule to accommodate that student.
	If there wasn't such an emphasis on academics the students would not have to pick up extra classes
	I haven't heard feedback from them but they do say that they have to do some stupid class. The students like being here and they feel connected. They enjoy the real hands-on experience and they can do math or chemistry because it is connected in a real situation. I have heard students upset about being pulled from the program.
	I think students are prepared for work or college. There is a misconception that these students are not going to college but that is not true. We prepare students for both. These students are highly successful in college. In cosmetology students learn anatomy, chemistry.
	Some faculty question why they are doing study island?

Administration Interview Questions

Research Question	Corresponding Interview Question Responses
1. Have changes in the curriculum have occurred at the selected CTE centers, since 2002?	AI- B1,S4,PR7,PR11,PR12,PR13,PR14
	CTE 1 D
	Yes – Read 180 is a prime example 4 years ago we were not doing that, that requires staff training, next year we are doing a 9th grade academy – we are going to double up in math and reading for identified students, identified through 8th grade PSSAs or through testing either through foresight or the Iowa skills that we administer to all incoming students. Students identified to be below grade level will be

administered double periods of math and reading. This is a dramatic change, and keep in mind that kids come to technical schools generally because they want to pursue technical goals and are not having success in academics

We have hired a reading specialist to work with low performing students

What I see happening we are going to chip away on everything that is not tested and left with schools that focus on tests and not a well-rounded education. Things like Business education will go by the wayside, foreign languages will be less available.

I think there has been a great impact on Academic courses, we were started under the High Schools That Work philosophy, being a technical high school with quality academics, since NCLB there has been a shift to seeing technical education as more as electives in an academic high school, put emphasis on the PSSA while others especially parents fight over the fact that this is a CTE – and kids get a quality to when they are finished here. They don't care about PSSA scores case in point – we looked at a change in schedule, I had over 400 parents at a board meeting and 300 parents at a parent meeting and they said that we will tweak what we have for NCLB requirements and we don't care about the PSSA as long as students are scoring on industry certification and NOCTI tests. As a CTE center we have so many measures for student success. Case in Point – in the past 5 years 100 % of students in the welding program have scored proficient of advanced in American Welding or the NOCTI, 100 %. The same as CNA 100% have passed the first aid care test for CNA. It is difficult to tell a student that they are not successful based on a PSSA score when they have a 3.5 average, hold a CNA certification and have been offered a scholarship from a quality nursing program at Penn State or Villanova. They are not successful because of PSSA math but have no problem with pharmaceutical math. What is more important? There are so many criteria same way with BCCC is an automotive student has a b average and passed the national certification test the college grants they are

awarded 30 credits before they walk into the door. How do you tell that student who did not score well on the PSSA that they are not successful?

Oh yes we have hired a reading specialist, when we went comprehensive we hired 90 academic teachers, mostly right out of college, now we are up to 24 special ed teachers because we added a heavy inclusion model for academics, We have a reading and math specialist. When we hired the most recent group of special education teachers they knew coming in that they would have one year to get dual certified. I need dual certified people for this situation. To talk about fairness of NCLB we have 3 years of math to prepare for in the 11th grade test. Algebra I and II and Geometry before it is tested. That is true for any high school

Oh yes we are constantly looking for ways to improve. Let me tell you about the technical teachers, in the past 3 years we had to re-write curriculum to include academic standards. All of the curriculums had to build in reading and math standards in every part of their course. I read every single one of them and they did a fabulous job. Tech classed also have more focus on academics, the tech teachers have also been the emotional support for the academic requirements there is more reading and math in all tech classes.
CTE 2

We have added things like study island, and foresight testing so we can retain students.

The students are pulled from their CTE program for 30 minutes, but we have found some benefit on NOCTI scores. The better the students can do reading and math the better they score on the NOCTI.

Sure- the state adopted a standardized curriculum in a PLS system that aligns all CTE curriculum so if a student moved they could pick-up where they left off. We had to pay teachers for training and to infuse our curriculum into this we can't change this but we can add some material.

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We are also required to show eligible content and anchors into our curriculum. Each task that the students do, has to be curriculum mapped. We had to invest time and resources into these types of curriculum initiatives.

We also brought in MAX teaching for reading and literacy strategies anticipation guides – reading guides

2. How has the availability of CTE programs at the CTE centers that will be researched been influenced in the NCLB era (2002–2009)?

AI-PR1,PR2,PR17

CTE 1 D
Yes our enrollment has declined but so has the enrollment at our sending districts. The districts that feed our school. Our enrollment is down 8 %.

Yes I do but I don't have evidence that is directly related to NCLB, In my opinion sending districts are holding students back for academics if the student does not score well in 8th grade PSSAs.

Yes it does and it has as I stated previously, districts may push to keep students in their home schools, half of their education here is technical we can't give the kids all the academics that a traditional HS can.

I am greatly concerned about the future one of our sending district had 19 spots they reduced it to 11. We have been in contact with incoming 10th graders, they won't return our calls, districts are cutting their enrollment in half but part of school code says that students can't be denied CTE.

We also have a district that will not pay their contributions.

Yes because AYP impacts us so negatively.

Much greater stress than ever before, stress over budget cuts stress over sending districts, one of the justifications for districts to not send students, is the fact we are not making AYP.

CTE 2

Enrollment fluctuates but has been declining in recent years. A few reasons but the main reason is that sending districts are holding students back due to PSSA requirements and AYP commitments.

Yes – some districts are limiting access for students or not allowing them access until they are in 11th grade.

Enrollment is one of our greatest challenges– getting students, we have in-demand careers like engineering and manufacturing but we can't attract students into those programs.

Yes the sending districts are focused on PSSA scores not the availability of CTE for their students.

Yes sending districts hold sophomores back, seeing larger junior enrollment but the proposed keystone testing may change that in fact one sending district has indicated they will not hold 10th graders back, but keystones may be held back for budget reasons at the state level.

The accountability is too severe but we needed something. The extreme has limited student participation

AI- B2,PR3,PR5,PR6,R8,PR9,PR10,PR13,PR16,P1 P2,P3,P4,P5

Currently, what are your greatest challenges as administrator at a CTE facility? – I think the greatest challenge here as a comprehensive school is balancing academics and technical. We are hit square in the face with the AYP requirements of NCLB and in addition we also have to be concerned with our technical performance with Perkins funding and other Federal mandates.

I was not here in 2002.but I can imagine that academics became a focus when the school went comprehensive in 2000. Right now our biggest challenge is the budget crisis.

Yes – we retrofitted or modified rooms for a Read 180 program, which is a research based reading program to

3. What other impact have NCLB had on the CTE Centers?

help low performing readers to increase comprehension. So we've taken rooms for the program part of Read 180 software and technology and this takes money and displaced some teachers onto a cart.

We have increased staffing for special education – because of the numbers we have 400 special needs students which is roughly 30% of our population.

Our results are stagnant – 4 years of age we were at our highest- with proficiency of 65% in reading and 55% in Math – since then we took a dip in reading and math went up insignificantly.

Yes and if you interview our technical teachers they may say that academics have taken over our school. That there is more emphasis on academics, than technical.

Teachers are justified in feeling that but we are all governed by the requirements of NCLB. However when we do the technical PSSAs the NOCTI our scores are off the charts. We have some of the highest scores in the state. Our NOCTI scores have gone up to 82% proficient or advanced.

We are the premier tech school in the county and we still have to keep our eye on the ball for NCLB compliance, and are judged on our PSSA results.

Morale has changed the past 6 years there is more pressure for all teachers to focus on academics. I know when it talks about us not making AYP on the front page of the paper we feel it administratively and that gets passed down to the teachers.

The students are more prepared, we have more certifications available there is more of an awareness for internships and coop.

In 2000 we became a comprehensive high school. That saw a dramatic increase in our student population here, In 2002 with NCLB there has been a dichotomy – because of the variety of testing required of a CTE HS.

The number of laws that are in conflict with each other for example – NCLB and Special Education Law, and especially Goals of CTE and only using PSSA results for graduation requirements. I had a parent speak up at a meeting and say she did not care about the PSSA because her son dismantled their bathroom and installed a new one, that test meant nothing and with skills like that her son would not be successful? It is the contradictions of the laws that is most striking. To the point where parents want us to bring in Tomlinson and Fitzpatrick and they want to speak about NCLB.

Yes and more specifically the challenges are multi-faceted, many of our students go to college and into engineering, 62% of our students are college bound, 32 % of our students are special education. Many of our applied engineering students have no problem getting into or when they are at college. The integrity of the school, no body bats an eye when we send a student to MIT or VT and then we read an article by Arnie Duncan about eliminating TE because they are not getting the results they are looking for. Well when you try to but a square peg in a round hole that is what you get but if you maintain the mission of CTE. And the dignity of manufacturing

We are the only CTE center in PA to make AYP, we did it in 06 + 07. Then we flat-lined although in Reading we dropped from 63 % - 57 % proficient or advanced, and in Math we have seen growth the past 3 years to current results of 57 %, although that was not enough to make AYP.

We added 2 reading specialists 2 resource rooms and we have gone from 20 – 24 special ed teachers, my role will also change and I will be director of curriculum and instruction because we also lost an administrator.

Anxiety between academic and tech teachers we tried to orchestrate a change, this caused stress because tech teachers care about the NOCTI not the PSSA, PSSA is about you and the school the NOCTI is about me and my future.

Students are better prepared. I came here to make this a comprehensive school we knew the PSSA was coming, I asked the tech teachers if there was a test for the technical side the response was there is a NOCTI but nobody takes it, I said what do you mean they don't take it? I can fix that, if became a component of Senior Project. I had a school board policy approved, they made a policy and in 2002 we had two students test the waters and the board supported that policy.

Absolutely because we see the building students understand rise and run but in Algebra class they don't get it, we have a school of applied learners. The PSSA does not test the students the way they are taught. The NOCTI and certification tests do.

CTE 2

Yes the cost of professional development. PDE does pick up some of the costs but we send faculty to Penn State for professional development for 2–3 day trainings to incorporate academic standards into their curriculum, that involves lodging and travel and subs to cover the classes.

We had to add another special education coordinator because our special education population is up to 53%. We are required to address the seeds of those students because they are also accountable in the PSSA,

Most of our professional development had been for academics and I think we needed some of that because of the higher technical needs or our curriculum now. The accountability is too severe but we needed something. The extreme has limited student participation.

We use Instructional assistants for 4Sight testing and Study Island.

Key:

TI = Teacher Interview
CI= Cooperative Education Coordinator Interview
GI = Guidance Counselor Interview
AI = Administrator Question
1 = Interview Question Number 1

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2 = Interview Question Number 2
3 = Interview Question Number 3
B = Background Interview Question
PR = Program-Related Information Interview Question
P = Perception Interview Question