

6-8-2012

A Survey of Vocational Administrators and Teachers in Career and Technical Education Centers Regarding Their Perception of Vocational Program Improvements

Richard Lynn Hummel Jr.
Indiana University of Pennsylvania

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A SURVEY OF VOCATIONAL ADMINISTRATORS AND TEACHERS IN CAREER
AND TECHNICAL EDUCATION CENTERS REGARDING THEIR PERCEPTION
OF VOCATIONAL PROGRAM IMPROVEMENTS

A Dissertation

Submitted to the School of Graduate Studies and Research

in Partial Fulfillment of the

Requirements for the Degree

Doctor of Education

Richard Lynn Hummel Jr.

Indiana University of Pennsylvania

May, 2012

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Indiana University of Pennsylvania
School of Graduate Studies and Research
Department of Professional Studies

We hereby approve the dissertation of

Richard Lynn Hummel Jr.

Candidate for the degree of Doctor of Education

Dr. Robert E. Millward
Professor of Education, Advisor

Dr. Cathy C. Kaufman
Professor of Education

Dr. Joseph F. Marcoline
Professor of Education

ACCEPTED

Timothy P. Mack, Ph.D.
Dean
School of Graduate Studies and Research

Title: A Survey of Vocational Administrators and Teachers in Career and Technical Education Centers Regarding Their Perception of Vocational Program Improvements

Author: Richard Lynn Hummel Jr.

Dissertation Chair: Dr. Robert E. Millward

Dissertation Committee Members: Dr. Cathy C. Kaufman
Dr. Joseph F. Marcoline

The purpose of this statewide study is to assess the perceived improvements made to programs that are offered at Career and Technical Education Centers from the perspective of vocational administrators and teachers following the Bureau of Career and Technical Education conduction of an Approved Program Evaluation. The Pennsylvania Bureau of Career and Technical Education initiated a multi-year Approved Program Evaluation review visit at each Career and Technical Education Center within the State beginning in 2005.

A sample population of 385 participants was selected to participate in the internet-based survey. One hundred sixteen surveys were returned creating a return rate of 30%.

The preceding research findings offer a basis for and support the following conclusions:

1. The program evaluation seemed to have little impact on organizational change within Career and Technology Centers throughout Pennsylvania.
2. Program Evaluation did allow Career and Technology Centers to demonstrate existing adequate practices or the ability to make minor changes to become compliant and allows for the verification of accountability and results required to receive federal Carl D. Perkins funding as described by Haigh (2007).
3. The perceived change of administrators and teachers from the Program Evaluation was minimal and did not have a significant impact on the operations of each Career and Technology Center.

4. In the future, the Program Evaluation should be revised.
5. Future funding to continue the Program Evaluation should be linked to definitive improvements which can be made to career and technical programs.
6. The Program Evaluation should challenge schools which have identified they are already meeting State standards to push themselves further and achieve goals higher than previously achieved minimum requirements.

ACKNOWLEDGEMENTS

I would like to thank my parents Rick and Becky for their continued support and guidance throughout this entire process. I would also like to thank my sister Ann for all of her advice and expertise which was greatly appreciated as I continued to get closer toward the completion of this dissertation. I could not have been successful without the support of Mr. Kevin O'Donnell, Dr. Pat Carlson, as well as those who graciously served on my expert panel.

I owe special gratitude and recognition to my dissertation committee. As my committee chairperson, Dr. Millward was always there for me with expert advice, positive reinforcement and continuing guidance throughout this journey. Dr. Kaufman and Dr. Marcoline also spent countless hours reviewing my work, providing feedback, and helping me along the way. I cannot express how grateful I am to have each of you involved with my dissertation.

Finally, I would like to thank all of my friends, family, and professional colleagues who have supported me since I started this dissertation. Your support has not gone unnoticed and is greatly appreciated.

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CHAPTER 1

THE PROBLEM

Introduction to the Study

How do administrators perceive the importance of the recent program review for Career and Technical Education Centers? Are the new evaluation procedures worth the effort? What major benefits have occurred as a result of Pennsylvania's new evaluation? These are just some of the questions to be answered in this research study.

The Pennsylvania Bureau of Career and Technical Education initiated a multi-year Approved Program Evaluation review visit at each Career and Technical Education Center (CTC) within the State beginning in 2005. An organization that is one hierarchical level lower than the Pennsylvania Department of Education, the Bureau of Career and Technical Education is the governing body of 83 such Career and Technical Education centers located within the Commonwealth (Pennsylvania DLI, 2006). Throughout the Approved Program Evaluation review of each CTC, a team of reviewers is seeking to observe compliance of each vocational program that the CTC offers with the Public School Code and Vocational Education Standards found within Chapter 4 and Chapter 339 (Lee Burket, personal communication, September 26, 2006).

The review of each CTC follows the same multi-day agenda, verifies instructional program information related to 20 specific areas outlined in the “Approved Program Evaluation Review” (Bureau of Career and Technical Education, 2006), and provides a list of commendations, recommendations, and corrections to the head Administrator of each CTC. According to the Bureau of Career and Technical Education (n.d.) the purpose of the Approved Program Evaluation Review is designed to ensure program quality,

identify technical assistance needs, and identify best practices. Evaluation of career and technical education programs is important. Other career and technical education research on topics such as project based learning continues to reinforce the effectiveness of career and technical programs (Tanner, 2012). The focus of this study on program evaluations reinforces similar career and technical education in an effort to ensure programs prepare students for entering the 21st century workforce.

The approved program evaluation process is being conducted throughout Pennsylvania at the request of former Governor Edward Rendell in response to the publication of the *Career and Technical Education in Pennsylvania: Opportunities for Commonwealth Policy* conducted by the consulting firm Jobs for the Future. This publication outlines specific strategies that public officials in Pennsylvania should take in order to effectively promote reform within Career and Technical education environments (Hoye, Kazis, et al., 2005). The Pennsylvania Bureau for Career and Technical Education created the Approved Program Evaluation process based on the following four key findings from the *Career and Technical Education in Pennsylvania: Opportunities for Commonwealth Policy* publication: (1) Academic Rigor – Integrate CTE reform with overall HS reform, Insist on high standards for all students. (2) Industry Relevance – Strengthen connections to employers and their needs, Adopt industry-recognized skills standards. (3) Postsecondary Connections – Smooth the progression from secondary CTE to postsecondary programs, (4) State Leadership – Invest in system capacity and teacher professionalism, Strengthen program oversight and review processes (BCTE, n.d.).

As a result, the Approved Program Evaluation process was initiated to ensure that each instructional program being taught at every CTC meets the guidelines set forth by

the Pennsylvania Department of Education and the Bureau of Career & Technical Education. School wide components that have been identified by the BCTE that are included as part of the evaluation process include admissions, individual education plans, support services, professional development plan, career guidance, student handbook, and the course selection book (BCTE, n.d.). At the current time, there is inadequate information that explains or evaluates CTC Administrators' perceived vocational program improvements resulting from the Program Evaluation reviews.

Historical Perspectives

Research by M. L. Barlow (1976) found that Massachusetts took the lead as one of the first states in our country's history that integrated practical subjects into the curriculum. This is demonstrated by the state of Massachusetts having passed legislation to create industrial schools in the year 1872. As a result of this initiative, Governor Douglas of Massachusetts spearheaded an evaluation of the educational system in 1905, which found: (1) There was widespread interest in the general subject of industrial education or special training for vocations. (2) There was a practical and specific interest among manufacturers and wage earners because of personal need. Industry wanted workers with more than skill in manual operations; they wanted workers with "industrial intelligence." (3) There was a growing feeling of the inadequacy of the existing public school system to fully meet the needs of modern industrial and social conditions. Schools were found to be too exclusively literary in their spirit, scope, and methods. (4) There was no evidence that the people interested in industrial education had any concrete ideas as to its scope and method. (5) Their investigation had aroused the suspicion and hostility of many of the labor unions of the state. (6) There was little opposition to technical

schools but significant opposition to trade schools. (7) There was a general agreement that the financial support for technical education should be born wholly by the state (Barlow 1976.)

The findings of the commission brought vocational education into the national spotlight under the direction of President Woodrow Wilson in 1914. The commission that he assembled made the following recommendations that became part of the national vocational reform document known as the Smith-Hughes Act. The 64th Congress passed the National Vocational Education (Smith-Hughes) Act (1917) that outlined the following methods to promote vocational education: (1) Grants should be used for training vocational teachers, paying part of teachers' salaries and making studies and investigations helpful to vocational education. (2) Federal aid should be given to publicly supervise and control schools of less than college grade. (3) Instruction should be limited to youths over age 14 and designed for profitable employment in agriculture and the trades. (4) Three types of classes should be developed to provide vocational education: day school, part-time, and evening classes. (5) A federal board should be created to administer the grants and states should develop a state plan for administering vocational education programs (Barlow, 1976). The phenomena of changes to educational opportunities offered through vocational settings can be linked to this continuous series of changes that occur due to political evaluations and assessments. These trends have continued throughout the 20th century and continue to affect the current vocational setting through governmental actions that include the Vocational Act of 1963 and the Carl D. Perkins Vocational and Technical Education Act of 1998.

Problem Statement

The purpose of this statewide study is to assess the perceived improvements made to programs that are offered at Career and Technical Education Centers from the perspective of vocational administrators and teachers following the Bureau of Career and Technical Education conduction of an Approved Program Evaluation.

Limitations of the Study

A limitation of this study is that the findings may not be applicable to a larger population outside of Pennsylvania. Since this study was limited to Pennsylvania, some readers may be reluctant to assume generalizability. Although this researcher attempted to include participants from every Career and Technology Center in Pennsylvania, the findings are limited to volunteers who chose to participate in the study. An assumption was made that the volunteer participants were honest with their responses.

Research Questions

Throughout the duration of this study, the following research questions will guide this investigation:

1. What were the perceptions of vocational administrators and teachers to programs that exist within the Career and Technical Education Center in relation to Pennsylvania's Approved Program Evaluation?
2. What were the most significant changes perceived by vocational administrators and teachers that occurred as a result of the Pennsylvania Approved Program Evaluation?
3. Has Pennsylvania's Approved Program Evaluation Process produced significant changes in Career and Technical Education Centers across Pennsylvania?

Significance of this Study

Historical patterns indicate that political evaluations of and revisions to the way Career and Technical Education is implemented within our country's schools has continued for well over the last one hundred years. Recently, many of our country's most recognizable politicians have undertaken educational reform through federal controls, which includes Career and Technical Education, as major campaign issues (Spring, 2002). The changes that have occurred through these revisions have created a conflict between district administrators and representatives from state educational agencies according to Spring (2002). Spring outlines the following seven tendencies that occur between the local administrators and state or federal agencies: (1) Federal legislation is implemented with minimal controls. (2) Interest groups and federal officials complain that state and local education agencies are not fulfilling the intent of federal legislations. (3) Federal regulations are tightened and made more specific. (4) New professionals appear in local and state education agencies to handle federal programs which makes management difficult. (5) Complaints are voiced about federal red tape and regulation. (6) Federal controls are eased, and cooperation develops among the new professionals in charge of federal programs. (7) Conflict continues between the new professionals at the state and local levels.

A review of the literature demonstrates a need for efficient and effective changes to improve Career and Technical Education. This is based on political interests, professional research conducted by reputable consulting firms, and individual state initiatives such as the Approved Program Evaluation process. (e.g., Burket, 2006; Hoyer, Kazis, & Muller, 2005; Sarkees-Wircenski, & Scott, 2003; Spring, 2002)

The recurring frequency of Career and Technical Education reform within the literature reinforces the importance of seeking the perceptions of the administrators who operate the technical education specific schools which are being described. Perceived affects of instructional programs from an administrative viewpoint after an Approved Program Evaluation will allow further scholarly research. Additional research conducted at the state or national level will result in opportunities for nationwide advancements in Career and Technical Education reform initiatives.

Conceptual Framework

The investigation was conducted utilizing the framework of organizational change as outlined by Evans (1996) to examine perceived changes that occurred to approved programs within Career and Technical Education centers across Pennsylvania. Evans outlines three specific components of conceptualizing organizational change theory which are: the nature of change, key dimensions of the change process, and the dilemmas that occur as a result of change. The nature of change involves gaining an understanding of what pre-existing assumptions affect the educational system in different ways. The key dimensions of the change process observe specific elements of the educational system and analyze how those elements interact with the actual innovations that stimulate change to occur. Dilemmas are the inevitable obstacles that develop through the implementation of innovative ideas. Dilemmas are based on identifiable changes to the organization of an educational facility.

Bridges (2003) expands upon this organizational change theory saying that change from an initial idea to a full-scale implementation takes time. Furthermore, Bridges states that organizations that can not change quickly are not going to exist for a

long period of time. An analysis of Bridge's research indicates that organizations undergo three transitional phases that he identifies as "Ending, Losing, Letting Go", "The Neutral Zone", and "The New Beginning". As career and technical education programs undergo assessments and evaluations from the local, state, and federal level, any change that occurs has a trickle down effect that reaches every level including the administration, faculty, staff, students, parents, and community. For this reason, it is crucial to understand how vocational administrators and teachers feel instructional program areas are changing based on evaluations that include the Approved Program Evaluation process.

This investigation demonstrates how vocational administrators perceive identifiable changes that have occurred in their schools' approved program areas after undergoing the BCTE Approved Program Evaluation process at each respective school that the administrator oversees. Previous research related to vocational education evaluation conducted by Cobb and Preskill (1985) demonstrates how evaluations of vocational education should be optimally conducted. This allows for effective reform and compliance with state and federal mandates. Cobb and Preskill concluded that "State vocational education departments need to encourage the development of district or regional vocational program evaluators" (p. 502). Research conducted by Wentling (1980) highlighted the benefits of career and technical education programs that undergo an on-site evaluation process. This research showed that an on-site evaluation process provides expertise otherwise unavailable to the program, identifies deficient program components, helps to update and insure relevance, provides an outside view of the program, facilitates working relations of instructional and ancillary personnel, informs

community personnel of program character, reinforces beneficial or outstanding aspects of the program, and provides in-service training for team members. This study reflects a majority of these characteristics while providing insight into the effectiveness of the Approved Program Evaluation process in Pennsylvania.

Wentling (1980) describes the importance of including administrative personnel along with outside experts in the evaluation process. This is highlighted through his view of the utilization of external experts contributing to the evaluation process by stating “...their outside ideas can be of immense value to planners and evaluators” (p. 44). This correlates directly with this investigation’s team of individuals that conducted the Approved Program Evaluation at each of the career and technical centers across the state.

World renowned author, Peter Senge, (1999) states that “Expectations as well as observations influence assessments” (p. 281) in describing the assessment methods utilized to evaluate an organization. This revelation becomes a focal reality within this investigation through the expectations provided by the BCTE along with the observations conducted throughout the Approved Program Evaluation process. The theoretical foundation that Senge provides gives support to this investigation that seeks to record and observe noticeable changes to approved program areas in career and technical schools. This investigation sets out to identify patterns of success that have occurred as a result of changes instituted in response to the Approved Program Evaluation. The views of Senge provide insight into the decision making and operational perspective of vocational personnel who this investigation utilizes as its primary source for collecting data.

From a theoretical perspective, it is crucial for research such as this to begin to examine the impact, measure perceived improvements, and make recommendations about

this evaluation process that will benefit many individuals from the local to national level. Exploring the relationships that exist between organizational changes that occur as a result of the Approved Program Evaluation will provide a much needed theoretical foundation that will allow for further research, enhancements, and reforms to occur within approved vocational programs through the scope of this process. If proven to be successful, the vocational evaluation model being researched through this investigation could be adopted by other states. Ultimately this could result in the model of evaluation developed by the BCTE of Pennsylvania becoming a national standard. This investigation establishes a theoretical linkage from the evaluation process to a formal analysis of vocational administrators in an effort to further understand the perceived impacts that occurred.

Research Design

This study used a survey to determine the perceived effects the Approved Program Evaluation has on programs at each Career and Technical Education center. Information from this survey will be specifically targeted to seek information about areas of the evaluation process analyzed during the conduction of an on-site evaluation.

The survey was designed through a collaborative approach that includes input from an expert panel consisting of veteran career and technical education experts as well as a survey committee consisting of this researcher, the Chair of my doctoral committee, a subject matter expert from the Bureau of Career and Technical Education, as well as experts from the Applied Research Lab at Indiana University of Pennsylvania. All decisions made by the survey committee were reviewed and approved by the expert panel in order to maintain validity of the survey instrument throughout this research project.

Definitions

The following definitions of terms were utilized within this investigation.

Career and Technical Education is defined as “the primary system through which youth and adults are prepared to enter competitive employment through programs of general labor market preparations such as technology, family and consumer sciences, general work experience, computers, and others. Program curricula include materials that focus on the development of foundational skills, such as basic skills, thinking skills, and personal qualities as well as common core of the workplace competencies and the specific skill competencies required for each occupational area” (Hoye, Kazis, & Muller, 2005).

Vocational Education shares the same definition as **Career and Technical Education**, although the former term has become outdated within the literature. The United States federal government is currently considering legislation that will formally change its reference to Vocational Education to Career and Technical Education. Many States, including Pennsylvania, have already adopted the term Career and Technical Education as a replacement.

The Pennsylvania **Bureau of Career and Technical Education** is an organization that works as a branch of the Department of Education that has a mission of “Assuring a skilled workforce through high quality career and technical education” (Pennsylvania Department of Education, 2006).

Approved Program Evaluation is the process created by the Pennsylvania Bureau of Career and Technical Education for evaluating approved programs at each Career and Technical center. The purpose of the Approved Program Evaluation is to

ensure program quality, identify technical assistance, and to identify best practices (BCTE, n.d.).

Chapter 339 is the portion of Pennsylvania Code that encompasses Vocational Education.

Vocational Administrator is an individual that oversees the general operations of a school that instructs Career and Technical Education programs. Job titles correlated with the position include Administrative Director, Director of Vocational Education, Director of Career and Technical Education, and Chief School Administrator. The roles of a Vocational Director include fiscal management, program operations, curriculum, and compliance with local, state, and federal guidelines.

Change agent is defined as “a person who knew how to enter an organization, often from outside, and change things” (Bridges, 2003).

Summary

In summary, the existence of studies that examine the perception of change to vocational education programs as a result of an evaluative process is scarce. Additionally, it is critical to understand the importance of seeking information regarding the evaluation process from the vocational administrators and related personnel who are in charge of operating CTE schools across the entire state. There is a great need for this investigation to bring to light the importance of the Approved Program Evaluation, identify any areas of improvement to approved programs that may exist, and examine the evaluation process from an administrative viewpoint. This investigation will serve as the foundation for others that are seeking to expand research into one of many topics that can include the Approved Program Evaluation process, vocational evaluations, or vocational

administration. This investigation was based on the theoretical framework of how an organization changes through the research of Robert Evans (1996). The information that was collected through literature, analysis of the Approved Program Evaluation process documentation, and consultation with subject matter experts within the field of Career and Technical Education allowed for the creation of a survey that can be deployed through a variety of data collection methods.

CHAPTER 2

REVIEW OF LITERATURE

Introduction

A historical trend of political influences that produce changes in the educational system has shaped the current educational environment in which our society operates. Current legislation such as No Child Left Behind resulted in state wide assessments that dictate operations of schools within Pennsylvania. In Pennsylvania, the Bureau of Career and Technical Education developed the Approved Program Evaluation process to assess Pennsylvania Career and Technical Education programs in response to the Governor's desire to ensure that this sector of education is meeting the needs of our students.

The literature review looked at the historical perspective of Career and Technical Education, an overview of how Career and Technical education programs have been evaluated, a review of research related to organizational change, a review of research related to change theory, and research related to political education movements. This review will help to assess the theoretical position of this research which is Career and Technical Education schools have changed due to the Approved Program Evaluation.

Literature Review Methods and Key Words

A review of literature was conducted by utilizing a variety of references including published texts, search engines, databases, resources from the Pennsylvania Bureau of Career and Technical Education, bibliography reviews that yielded additional resources, as well as research that exists within other doctoral dissertations that are relevant to this study. The keywords used included, career and technical education, vocational education,

Pennsylvania Bureau of Career and Technical Education, Approved Program Evaluation, and Vocational Administrator. The limited body of available research related to Career and Technical Education Vocational Administrators with relation to program evaluations has been a limitation within this review.

Historical Perspective – Early Vocational Education

Historically, the art of utilizing a specific skill to accomplish a technical task can be traced back many years. A multitude of famous individuals can be attributed to making a significant impact on the evolution of career and technical education as society recognizes it today. Whether examining Francis Bacon who coined the term “manual arts” as a foundation for learning, or John Locke who pushed for students to be educated toward a practical life, the origin of vocational education can not be credited to a single individual but rather a large pool of individuals from around the globe. Technical education in the United States can be traced to early colonists arriving in America that developed systems of apprenticeships. These apprenticeships provided youth with a master from whom they would learn the knowledge and skills of a technical trade (Sarkees-Wircenski, & Scott, 2003).

Melvin Barlow (1976) documents the evolution of vocational education in America dating back to 1776 into four consecutive fifty year periods during which career and technical education evolved from the eighteenth century to the twentieth century. Barlow (1976) recognizes 1776-1826 as an awakening to the need for education, 1826-1876 as a time of independent actions as a reaction to the industrial revolution, the period of 1876-1926 which gives birth to vocational education as we know it today, and 1926-

1976 as the “Coming of Age” period in which great growth and development of vocational education occurs in the United States (Barlow, 1976, p. 21).

According to Spring (1997) the foundations of career and technical education evolved throughout these time spans due to a series of historical movements and political changes within our country. During the late 1700’s leaders such as Horace Mann and Benjamin Rush argued that discipline and exercise of the various faculties of the mind were necessary for proper development toward the goal of perfectibility of the human being and that controlling the institutional environment was critical to this process (Spring 1997). Charity schools began to be established in the 1800’s. Charity schools built a foundation of public schools that would be designed for children living in the United States. Students attending charity schools could socialize and become prepared for an industrious lifestyle.

The education evolution that occurred during the late 1700’s and into the early 1800’s creates links to this study. Educational changes based on political motives can be seen through the evolution of the common school movement. Spring (1997) describes the common school movement as having three aspects that are unlike other educational ventures of the early 1800’s. These aspects include (1) an emphasis on educating all children in a common schoolhouse, (2) using schools as a means of conveying government policies, (3) and the creation of state agencies to control local schools (Spring 1997). The political ties to education continued to evolve into the 1830’s as states widely adopted supervision and control of the school systems. At the time, educational leaders saw the government involvement in the school system as a setting in which students could be educated for a more perfect society. This process caused disputes

between political parties such as the liberals and conservatives as efforts were made to operate a school system that was beneficial to everyone (Spring 1997). These types of disputes occurred between the conservatives who attempted to preserve the traditional educational system as it existed, versus the liberals who sought out various changes to the educational system structure.

Based on these back and forth negotiations between various political influences, education continued to evolve throughout the 1800's. Political linkages between evaluating school methodologies and changes occurring to the state run educational organizations began to progress. This progression occurred in a similar nature to how the evaluation process being examined throughout this study was formed. For example, Spring (1997) documents the foundation of the National Education Association in 1857 that worked to further advance the cause of public education. During the time span of 1892-1913, the National Education Association formed several powerful committees that pushed toward the single high school system. This system provided education based on the same curriculum for both college and non-college bound students. In essence, the described system provides students with one choice of curriculum within a high school. This type of school does not accommodate students that possess an interest in varied career paths. These reform movements resulted in the adoption of a comprehensive high school model that prepared a new generation of students who would help shape society (Spring 1997).

Observing the same types of changes from a vocational perspective, Kincheloe (1999) provides insight into the American vocational movement that describes how learning industrial trades from a hands-on perspective would provide many benefits to the

learning process that directly followed several major reforms of the National Education Association. Advocates of this movement were convinced that this type of vocational instruction would make school more interesting and enroll students in the school system for longer periods of time (Kincheloe 1999). The six types of behaviors that managers were seeking during this time period according to Kincheloe (1999) were (1) increased output without wage increases, (2) reduced labor turnover, (3) reduced conflict between labor and management, (4) more loyalty among workers, (5) workers who respected authority, and (6) workers who valued the work ethic. Nearly a century later, research and current news articles demonstrate that many of the behaviors identified by Kincheloe have remained desirable.

Historical Perspective – Modern Vocational Education

From a historical perspective, politics has caused changes to the educational system which have helped to shape vocational education as it currently exists. For example, the federal government crafted education related policies from 1917 up through the passage of the Vocational Act of 1963. During the time span of 1917-1963 educational policies catered to improving and expanding the system of vocational education programs across the country. These policies were enacted as the federal government recognized a need for vocational instruction that could serve the corporate needs of business and industry that were in need of a highly skilled workforce (Sarkees-Wircenski, & Scott, 2003).

As political policies continued to evolve, the expansion and development of modern day career and technical education became visible. Congress established a variety of stipulations that would accompany federal dollars as they pertained to supporting a

changing vocational field that required flexibility to meet its needs. Congress mandated that educational organizations demonstrate results in the areas of learner achievement, program completion, placement in postsecondary education and the workforce, and improvements to gender equity in program offerings. Changes and stipulations mandated by Congress forced schools to develop systems that would track learners and implement statewide plans for methods to address the requirements outlined by the federal government. As a result of these modifications, Congress hoped to strengthen academics as well as vocational methods of instruction while also placing a great emphasis on professional development for teachers and additional career guidance services for students (Hoachlander & Klein, 1999).

Dr. Lee Burkett (2007), the Director of the Bureau of Career and Technical Education for the Pennsylvania Department of Education, contends that significant changes have occurred in Career and Technical Education within the state due to the emphasis on academic preparation and college readiness within the curricular materials used by Career and Technical Education schools. These changes are a result of the Department of Education's Chapter 4 Academic Standards and Assessment. In addition changes have occurred as a result of the federal legislation of the Carl D. Perkins Act (Burkett 2007). The primary change that Burkett (2007) identifies is how academics are now being fully integrated into the coursework of Career and Technical Education students which results in the improvement of student achievement.

With relation to the changes occurring within the field of career and technical education the research of Birmingham (1993), indicates that the field of vocational education is changing to reflect changes that are occurring in technological advances and

the economy. Part of Birmingham's research within the field of special education indicates that traditional special education programs lack the ability to adequately prepare students for the transition from school to a work environment. The inability of special education students to enter the world of work has caused further changes to occur within the field of vocational education. As part of these changes, vocational and special education instructors have recommended the integration of curriculum and instruction modifications that are similar to the actions taking place within Pennsylvania as described by Dr. Burkett (Birmingham 1993). Birmingham (1993) expanded this point by expressing that this transition toward the integration of academics and vocational skills was a sensible and authentic way to tie the curricular areas together for an improved educational experience. In the 1950's, research was geared toward understanding the benefits of integrating academic and vocational skills within existing school to work programs (Birmingham 1993).

As vocational education evolved from the 1950's to today, many important individuals have worked with the changing field which is now referred to as career and technical education. This includes Jackie Cullen, the Executive Director of the Pennsylvania Association of Career and Technical Administrators who has observed a major transformation within career and technical education. Cullen (2007) describes how programs have evolved due to factors such as technical and academic qualifications that are changing each of the specific fields of study. The curriculum and equipment needed for each technical program has changed in relation to the needs of industry. In addition to changes that are mandated by industry, there is now federal legislation that mandates all vocational programs include a pathway for students to continue their technical field of

study at a postsecondary level (Cullen 2007). The three factors that Cullen (2007) describes as today's modern view of Career and Technical Education are (1) academic subject matter taught with relevance to the real world, often called contextual learning, (2) employability skills, from job related skills to workplace ethics, and (3) education pathways that help students explore interests and careers in the process of progressing through school.

The modern view of Career and Technical Education is supported by Lynch (2000), who outlined the four forces behind the demand for reform within vocational education as the new economy, public expectations for students, new research on student learning, as well as motivation and effective teaching. The changes outlined by Lynch provided Salaiz (2004) with the desire to further explore school administrators' expectations of traditional vocational-technical education programs. A direct link was found between school administrators who support vocational education and the student success rate of students who are enrolled within vocational education programs (Salaiz 2004).

The above research helps to demonstrate how modern career and technical education has evolved into the format which exists today. In essence, the modern historical perspective of career and technical education is continuing the pattern that was created when early America established a primitive form of vocational education which has evolved over time. The necessity for a skilled workforce of educators within the public school system that is overseen by State and Federal interests continues to be present throughout the research that focuses on the educational foundations of our schools. The continued series of research initiatives which have been spurred by

government involvement has created an evaluation method of career and technical education programs. Similarly, the report *A Nation at Risk* (National Commission on Excellence in Education) from 1983 described economic ruins unless there were major reforms made to both the elementary and secondary educational systems. This report documented evidence that students were not prepared to enter the workforce upon graduation and described how technology was being developed to replace traditional jobs. As a result, the report set a challenge for educational reforms to take place in regions across our country geared to analyze and improve the existing educational structure in an effort to better prepare our nation's student population.

As these reforms continue to be present within our educational system, the challenges of implementation and understanding the impact are a cause of great concern for school administrators across the country. It is the purpose of the next section to establish the importance of how career and technical education programs have been evaluated in the past in relation to the evaluation that is being examined through this study.

Vocational Education to Career and Technical Education

Assessment has caused Career and Technical Education Schools to change. To understand how Vocational Education evolved over the last five decades to becoming known as Career Technical Education is vitally important. Leith (2007) outlines the progression of federal funding from the 1958 National Defense Education Act (NDEA) which increased funding for vocational education. The NDEA Act was followed by President John F. Kennedy's Area Redevelopment Act and the Manpower Development and Training Act. These were the final pieces of federal legislature passed before the

transition was made to create vocational schools that were not directly attached or combined within a traditional high school setting (Leith 2007).

The shift toward independent vocational schools occurred in 1963 with the passage of the Title V National Education Improvement Act (Leith 2007). The analysis of assessment data, as demonstrated by Morris (1997), reveals how legislation affecting vocational education continued to be passed over time by legislative bodies. For example, South Carolina made legislative changes after analyzing the median years of school completed between the decades 1940, 1950, and 1960. South Carolina recognized that it was performing poorly in comparison to other states. As a result, changes to improve the school system to promote more students learning trade specific skills and continuing on to post-secondary education were implemented (Morris 1997).

The last three decades of the twentieth century continued the evolution of vocational schools into separate entities with relation to traditional academic schools. The change of name from vo-tech into career and technical education evolved along with the progression of career and technical schools across the United States. A major political change that assisted with the changes to career and technical education over these decades occurred when Jimmy Carter formed the Department of Education as part of the United States government (Perry, 2002). Having a branch of government specifically dealing with the issue of education spurred the development of career and technical education as we know of it today. Presidents Reagan, Bush Sr., Clinton, and Bush Jr. all supported and cultivated education as a platform that was vital to the success of the nation. Political involvement spurs changes to educational entities regardless of academics or technical related fields.

Evaluation of Career and Technical Education Programs

Career and Technical Education programs operating within vocational based schools within the state of Pennsylvania have not undergone an on-site evaluation by representatives of the Bureau of Career and Technical Education in the last several decades. The development of the Approved Program Evaluation, which is the primary focus of this study, supports the research of Wentling (1980) through his documented procedures to design an evaluation system for an occupational education program. The initial steps are (1) establish a team for planning and coordinating the evaluation; (2) schedule and hold a meeting of the planning team; (3) develop and make a formal purpose and scope statement for the evaluation system; and (4) select appropriate evaluation activities. These steps are similar in nature to the process followed by the Pennsylvania Bureau of Career and Technical Education established as part of the preparation for the Approved Program Evaluation.

The evaluation process should include industry valid-skill standards that are used to guide the career and technical education programs into effective instructional delivery systems that cater to the needs of business and industry. The inclusion of industry standards will help to narrow the identified gap between those currently taught through career and technical education programs and the specific skills that are needed within the workplace (Davis, 2006). The formation of the National Skill Standards Board in 1994 helped to initiate this series of links between career and technical education programs and industry standards.

Individual researchers such as Freeman (2006), Hubbard (2002), and Bower (2006) have evaluated various aspects of school organizations in an effort to better

understand their operations, effectiveness, and the contributions that are made to the overall educational system. Freeman (2006) demonstrates how a vocational school analyzes policy and practices which consist of the entire educational process. This was accomplished through a historical analysis and in depth interviews with personnel involved with a vocational school. From this process Freeman was able to capture a snapshot of the evolution of technical education that has occurred since its inception in the early 1960s. The evolution of the vocational school mirrored many other changes which occurred to vocational schools during the same time period. Examples have included physical name changes, additions to and deletions of programs that are offered to students, and personnel changes that naturally occur over time (Freeman, 2006). The conceptual framework of Freeman's research (2006) is similar in nature to the snapshot of the administrative perceptions sought through this research study. The same general framework is supported by the argument of Carnoy and Levin (1985) through their description that "the relationship between education and work is dialectical – composed of a perpetual tension between two dynamics, the imperatives of capitalism and those of democracy in all its forms" (p. 4).

Continuing with experts that have studied the field of education, it is necessary to further recognize the impact of change on an educational organization. Understanding the impact of a change such as the approved program evaluation is important for school administrators and officials from the Bureau of Career and Technical Education. A similar change initiative was observed by Hubbard (2002) who identified that the same target group of administrators in the state of Oklahoma did not have access to technology resources that are relevant to their facilities. His qualitative study analyzed the statewide

system of vocational schools and identified challenges that exist and proposed solutions to the schools that exist within the state. His proposed solutions were to: provide more professional development activities, improve technology related policies, provide staff with appropriate equipment, technical support, and develop a sound technology plan (Hubbard 2002).

The findings of these researchers provide insight into how schools currently operate. Career and technical education programs are often evaluated solely on the standardized test scores of students that complete the career and technical education program. According to the Pennsylvania Department of Education (2007) one of the primary testing instruments utilized to assess student performance is governed by the National Occupational Competency Testing Institute. The National Occupational Competency Testing Institute (NOCTI) provides job ready tests which are designed to measure an individual's knowledge of basic processes. These processes include the identification and use of terminology and tools and can be used for secondary and post-secondary education as well as business and industry. (Pennsylvania Department of Education, 2007).

Beyond the existence of test results, some research has broken down the evaluation of programs based on specific variable such as gender, race, age, and region where they are located. For example, Bower (2006) examined women who were involved with an apprenticeship program that encompassed a vocational skill. His research found the themes of the importance of physical conditioning; mental preparation; training; and access to hygiene accommodations to be important factors of a vocational apprenticeship program (Bower, 2006). Similarly, his study looked at a wide variety of evaluation

techniques that are part of the evaluation process conducted by the Bureau of Career and Technical Education. Based on the research of others within the field of vocational education, this study enhances the existing body of literature available for others to utilize as decisions are made based on the results of the statewide initiative.

The evaluation of career and technical education programs traditionally mirrors the scope of research associated with traditional academic courses. Test scores, evaluating specific target groups, and alignments to local, state, and federal regulations have all been demonstrated to be common measures that are utilized to analyze both career and technical programs and academic courses. The context of this study encompasses an on-site physical evaluation of career and technical education programs. As a result, a significant contribution to the existing bodies of literature within the field of career and technical education is created.

According to Griffin, et al., (2007) evaluation models can have an effect on whether career and technical education programs are successful. Griffin, et al., (2007) conducted a study of “Year Twelve Vocational Education and Training” programs across the country of Australia where students demonstrated consistency through a standards-referenced model of evaluation. The standards-referenced model was integrated into vocational programs across Australia. The research validated the model of assessment development, demonstrated the model's consistency, and showed how the standards-referenced model could address the issue of consistency across large areas. As a result of the study, the researchers were able to propose a set of principles for a joint assessment of both quality and competence. These principles include: an evaluation process that is situated in a theory of learning and assessment, procedures that have face and construct

validity, and procedures that are fair, equitable, and unbiased. As a result of this study, it was specifically found that these principals were critical in developing a quality-based competency assessment (Griffin, et al., 2007). Research of both Griffin, et al., (2007) and this study examined the perceptions of vocational administrators related to the conduction of an evaluation.

Review of Research Related to Organizational Change

Understanding the theory of organizational change is required in-part to answer the research questions posed within this study. Organizational change theory is included within the central idea that an on-site evaluation created changes to programs offered at a career and technical center. This theory is also relevant to individuals who work at career and technical schools as they perceived changes which occurred as a result of the on-site evaluation.

As there are many variables that impact on organizational change, it is difficult to isolate a single variable which has a major impact as a change agent to a career and technology center. Peter Senge et al. (1999) believe that “At first glance it appears that people seeking change in organizations have very different goals in mind. Some seek the “accelerating” “visionary” or “intelligent” organization; others, the “innovative,” living,” “adaptive,” or “transformational” company. ...They are trying to respond quickly to external changes and think more imaginatively about the future” (p. 4-5). This viewpoint of multiple perspectives of change within an organization relates to this study through the survey of vocational administrators and teachers who perceive changes to their approved programs as a result of the Approved Program Evaluation process. Administrators across the Commonwealth of Pennsylvania are each faced with individual organizations that are

constantly undergoing changes that are unique to their specific environment and situations that surround them. For example, Superintendents can no longer serve as the administrative director of a Career and Technology Center unless they possess their Vocational Director certificate from the Pennsylvania Department of Education. Another example would include the requirement of each Career and Technology Center to plan and adopt a new “Program of Study” during each year. The “Program of Study” requires articulation and granting of credits that can be transferred to a post-secondary institution upon graduation. Changes such as these are in addition to a multitude of mandates related to areas such as special education, data reporting, fiscal management, as well as collective bargaining which continue to change gradually over time through laws, policy revisions, lawsuits, and other similar means. Ongoing issues such as these maintain the importance of understanding how organizational changes affect the daily operations of career and technical schools across Pennsylvania. As a result, it is important to understand that career and technical schools are constantly experiencing or adapting to some type of change as organizations.

As changes occur at career and technical schools, similar to any school environment, there is an equal chance the resulting changes will either be deemed successful or unsuccessful. The survey instrument within this study will seek answers to the research questions regarding the changes that took place as a result of the on-site evaluation. Was the on-site evaluation deemed successful as a change agent or not in the minds of the people responding to the survey? Any change initiative follows a life cycle that has characteristics that are common across various organizations and contain a certain amount of potential that allows changes to either be significant or result in failure

(Senge 1999). The result of changes being successful or unsuccessful is actually compared to the cycle of life which is the primary focus of biologists. As a result, the potential for changes forms an s-shaped curve which can be compared to an organism that grows in nature. The actual biological term given to this s-shaped pattern is “sigmoidal” growth (Senge 1999). To further explain the similarities between the pattern of both a change process and a life cycle, the s-shaped pattern originates from the beginning of a change or life cycle by following a pattern of limited slow growth. The next phase contains a period of exponential growth as the change or life cycle gains momentum. The s-curve shape is formed through a third cycle which demonstrates a slowing of the change or life cycle caused by age, limited resources, or other slowing factors.

Within a career and technology center, a continuous pattern of learning is occurring at all levels including administrators, instructors, students, support staff, and even stakeholders through the quest of continually offering an educational package that prepares all students for their future endeavors. From the perspective of Kofman & Senge (1995) “Learning occurs between a fear and a need. On one hand, we feel the need to change if we are to accomplish our goals. On the other hand, we feel the anxiety of facing the unknown and unfamiliar. To learn significant things, we must suspend some basic notions about our worlds and our selves” (p. 37-38). Administrators who oversee the daily operations of career and technical schools are faced with the demand of change on many forefronts as it applies to the approved programs that operate within their facilities. Goals for these programs are set at the local, state, and federal levels and it is ultimately up to the primary administrator to ensure that each program within in the school has the

ability to change and transform in compliance with all of these demands while still meeting the needs of the students that are enrolled within each program area. At the same time, research by Findley (2012) indicates that “providing authentic growth experiences for faculty may positively influence both satisfaction and retention” (p. 115).

At the State level, a recent change that has affected all career and technical schools in Pennsylvania is the submission of data through the Pennsylvania Information Management System (PIMS). PIMS has been a massive multi-year initiative that has placed a great burden of work on career and technical schools. Schools have had to re-organize and develop complex plans to accommodate the six submission deadlines per year that PIMS requires. An example of how career and technical schools have changed from federal guidelines is evident through the regulations that must be followed to be eligible to receive Carl D. Perkins funding. Carl D. Perkins funding is federal funding that requires recipient schools’ adherence to ever-changing guidelines. An example of this legislation changing includes a newly adopted rule which states Perkins funds cannot be utilized as pass-through funds to other entities. In essence, a school working with another school on an objective set forth in the funding guidelines can no longer receive monies from the recipient organization as they had in the past. As the majority of career and technical schools in Pennsylvania receive Carl D. Perkins funding, this is yet another example of how each school organization must make changes to comply with all of the laws and mandates that exist. Both of the PIMS and Perkins mandates are clear examples of how a learning organization is affected by new laws and changes made to existing legislation. School administrators face the premise of continuously learning as their organization continues to change in accordance with changes occurring both internally

and externally. The basic notion of unfamiliarity and suspending basic notions takes place which Kofman and Senge (1995) describe as changes occur throughout the organization during the course of a school's daily operations.

These examples of changes to new laws and updated legislation pose the question: how can a career and technical school possibly implement these types of changes on a continuous basis? In order to answer this question it is important to understand how the structure of an organization affects the organization's ability to change. To that extent, Sanford (1995) identifies six improvement targets that affect the work design of a structured organization. A career and technical school implementing change can focus on the improvement targets in order to achieve the desired outcome of the proposed change.

To better explain, each of the targets is an item that any organization could utilize to help implement changes successfully. The first three improvement targets are identified as interaction, concentration, and freedom which are based on the outcomes that an organization seeks to obtain through its change process. The final three improvement targets are recognized as expansion, identity, and order. These targets represent characteristics that members of the organization build upon and work to achieve through a set of common goals and objectives (Sanford, 1995). All six target areas can be found within a career and technical education organization by examining the different functions of operations. In addition the various targets can be utilized to understand the change processes that occur throughout all career and technical school. (Sanford 1995). The strategic planning process of a career and technical school would be an example of a change process which would benefit the school if it were based on the six targets of improvement.

The series of targets exists to help individuals understand the capability of others as well as their contributions to society and capitalizes on the open-ended nature of the individual as a learner that can contribute to change within an organization. Through this process, it is possible for individuals to unleash an undiscovered potential within themselves, what they do, and items they can contribute to within the organization. From a career and technical standpoint, employees are encouraged to utilize creativity and innovative ideas within their instructional program areas. Doing so in a controlled environment would allow the career and technical school to flourish, while still allowing individuals to maximize their creativity skills (Sanford 1995). To further reinforce the connection to career and technical education, an Administrative Director could utilize the six described target areas while working with the instructors of the school. This could be accomplished by establishing a focus on the identity target which would allow employees to be creative in developing plans and ideas that would help promote a positive image within the community as it pertains to their school. As a result, the ability for a career and technical school of this nature to achieve growth and changes from conducting the process could be achieved. A recent dissertation conducted in the state of Missouri outlined the primary form of evaluation which takes place in career and technical programs is the “Self-Monitoring Report for Career Education” (Lady & Wilhelm, 2010). This study is designed to observe if any notable changes to technical programs based on the conduction of an on-site evaluation actually took place as opposed to a method such as the completion of a self-monitoring report as utilized in Missouri.

The Pennsylvania Bureau of Career and Technical Education expects vocational schools within the Commonwealth to continuously change and improve as organizations.

The work of Zmuda, Kuklis, and Kline (2004) outlines the following six steps of continuous improvement: (1) identify and clarify the core beliefs that define the school's culture, (2) create a shared vision by explicitly defining what the core beliefs will look like in practice, (3) collect accurate, detailed data and use analysis of the data to define where the school is now and to determine the gaps between the current reality and the shared vision, (4) identify the innovations that will most likely close the gaps between the current reality and the shared vision, (5) develop and implement an action plan that supports teachers through the change process and integrates innovation within each classroom and throughout the school, (6) embrace collective autonomy as the only way to close the gaps between the current reality and the shared vision, and embrace collective accountability in establishing the responsibility for closing the gaps (Zmuda, Kuklis, and Kline, 2004). Career and technical schools which follow this model of continuous improvement benefit from a structured process in which changes take place within the school.

Understanding changes which occurred due to the Approved Program Evaluation is the focus of this study. Consequently, vocational personnel at each school are responsible for understanding how the evaluation process impacts each instructional program that is offered. These individuals are required to implement the recommended changes generated by the evaluation process to each of the evaluated programs. This process provides evidence of linkages between organizational change and the Approved Program Evaluation in a multitude of ways.

Change Theory Research

This study focuses on the perceived changes that occur to vocational programs as a result of program assessment. The theoretical position of this study is that changes occur to career and technical programs as a result of assessment. From the perspective of Kotter and Cohen (2002), “Highly successful organizations know how to overcome antibodies that reject anything new. They know how to grab opportunities and avoid hazards” (p. 2). Personnel who work at career and technical schools were surveyed to determine their perception of how instructional programs offered at their school changed as a result of the assessment. It is important to understand how an individual’s perception of change is affected through an assessment of this nature. The perception of change within a career and technical school creates linkages between this study and organizational change theory. The eight stages that Kotter and Cohen (2002) describe are crucial to the process of achieving large scale change. The stages include: push up urgency, put together a guiding team, create the vision and strategies, effectively communicate the vision and strategies, remove barriers to action, accomplish short term wins, keep pushing for wave after wave of change until the work is done, and create a new culture to make new behavior stick (Kotter & Cohen, 2002). The perspective of Kotter and Cohen (2002) has direct similarities with the deployment of the Approved Program Evaluation Process that was conducted by the Bureau of Career and Technical Education at the urging of then Governor Rendell. The evaluation aims to allow vocational personnel to better understand areas of their current programs which require changes to occur for them to be considered acceptable by the State.

The Pennsylvania Senate Democratic Caucus documented several statistics which are relevant to the continued successful operations of Career and Technical Centers in Pennsylvania. These data included the dropout rate for Career and Technology Centers in 2009-2010 to be 1.81%. Also included were data which indicated the 2009-2010 4-year Cohort Graduation Rate for all students in career and technology centers to be 76.37% (Senate Democratic Caucus, 2011). These student statistics could easily be affected positively or negatively with the presence or absence of an on-site program evaluation.

The role of a vocational administrator will continue to change and develop as the natural evolution of the education process necessitates changes and adaptations to occur within the educational institution. This changing environment requires problem solving and adaptation to emerging ideas such as new technologies as outlined by Kapp and Hummel. As described by Kapp (2007), problem solving involves the application of a previously learned rule, procedure, or concept that will enable an individual to remedy a situation which the person has not encountered before. I (Hummel, 2007) describe emerging technologies within educational environments by stating “Technology gadgets that seemed impossible to imagine ten years ago, including text messaging devices and Internet-based video game consoles, now need to become the building blocks for transferring ideas and learning from boomers to gamers. The continual development of new technological gadgets will drive the educational world into the future as an incredibly powerful source of learning” (p. 229). The areas of problem solving and changes within the educational organization will be an ongoing issue with which vocational administrators will be faced throughout their professional duties and responsibilities.

The role of a vocational administrator ties directly with the issue of establishing links between vocational administrators who possess characteristics of leadership. The definition of leadership as described by Bass (1995) states “Leadership has been conceived as the focus of group processes, as a matter of personality, as a matter of inducing compliance, as the exercise of influence, as particular behaviors, as a form of persuasion, as a power relation, as an instrument to achieve goals, as an effect of interaction, as a differentiated role, as initiation of structure, and as many combinations of these definitions” (p. 38). A link between leadership and change directly relates to the analysis of changes that occurred following an on-site evaluation. The perception of career and technical administrators and those employees familiar with the evaluation process will be evaluated in accordance with the theoretical position of this study.

Understanding mental models further explains how elements of leadership and perception of change interact with those being surveyed as part of this study. The work of Fairhurst and Sarr (1996) depicts examples of how individuals are able to establish mental models that relate one’s perception of what is desirable, with the current system that exists within an organization. These authors believe an individual will analyze a current organization and utilize a mental model within their environment. The mental model will be used in an effort to form relationships, adaptations, and experiences that feel similar to that of the existing system. From this standpoint, the individual then sets goals that are based on the similarities that exist between the perceived mental model and the actual system that is currently in place (Fairhurst & Sarr, 1996). The mental model concept relates to this study through ties between the vocational administrator and the approved instructional programs which were part of the on-site evaluation. The platform

an individual forms and implements as a mental model is based on the role he assumes within the workplace. This role is a basic and structural component in which an individual demonstrates the skills which could easily be adapted for their use within the specific profession. With relation to this study, these same principles would apply to the role of each career and technical school's employees (Fairhurst & Sarr, 1996).

Advancing from the concept of mental models, it is important to understand how individuals assume specific roles within their workplace. In connection with individuals assuming roles within their professional position, the research of Heifetz (2002) strives to connect with individuals that are placed within a leadership role. Heifetz (2002) seeks to provide individuals with information that will allow them to understand the difficulties experienced when implementing changes within an organization. Heifetz (2002) believes the following: "Leadership addresses emotional as well as conceptual work. When you lead people through difficult change, you take them on an emotional roller coaster because you are asking them to relinquish something – a belief, a value, a behavior – that they hold dear" (p. 116-117). As a result of the Approved Program Evaluation, it is possible for employees of vocational schools to have faced challenges with regard to changes. Many such changes could have occurred in preparation for or as a result of the on-site evaluation. This study shares a common idea in which a leader is able to maintain his position by minimizing the extent to which people have targeted his levels of frustrations. (Heifetz 2002).

Political Education Movements

The influence of politics in the area of school organizations has a significant impact on the overall operation and changes which occur to schools located within the

United States. It is possible to understand this stance based on the views of Spring (2002), who contends “What students learn in school could affect their future decisions regarding politics, economics, consumption, and social and moral issues. One example is the way that most governments in the world use their school systems to build loyalty to state policies among their citizens. If the school is effective in building loyalty and patriotism, then citizens will make choices that are congruent with the needs of their particular government” (p. 32). As is the case with this study, the Approved Program Evaluation process was initiated in response to a report created at the request of former Pennsylvania Governor Edward Rendell. The act of a Governor to spur an evaluation reinforces the ideals that politics influence the operations of schools within a state. Thus, a clear connection can be made to this study with the ongoing pattern of political influences that affect school organizations across the United States as well as around the world. With a newly elected Governor taking office in 2011, it is crucial evidence be provided to his administration which will either justify the time and expense associated with the on-site evaluation process or provide data which suggest it can be eliminated. A September 2011 Democratic Caucus Survey on Education Issues yielded an evaluation of the performance of the Governor on education issues. This survey yielded 67% of respondents providing him with a letter grade of an F, while an additional 29% graded him at the level of C or D (Senate Democratic Caucus, 2012). The overwhelming 96% response of negative perception of the Governor on the topic of education further justifies the importance of this study to provide evidence of whether the Approved Program Evaluation should continue, be modified or be discontinued in Pennsylvania.

CHAPTER 3

METHODS

Introduction

In 2005, the Pennsylvania Bureau of Career and Technical Education initiated a multi-year Approved Program Evaluation review visit at each Career and Technical Education Center (CTC). A team of reviewers is determining compliance of vocational program mandates contained in the Public School Code and Vocational Education Standards found within Chapter 4 and Chapter 339 (Lee Burket, personal communication, September 26, 2006). The purpose of the Approved Program Evaluation Review is designed to ensure program quality, identify technical assistance needs, and identify best practices. This study sought input from 385 individuals who are familiar with the Approved Program Evaluation.

Statement of the Problem

The purpose of this study is to assess administrative and teacher perceptions of whether programs that are offered at Career and Technical Education Centers created changes after the conduction of an Approved Program Evaluation. At the current time, there is inadequate information that explains or evaluates changes caused by the Approved Program Evaluation.

Selection of the Expert Panel

The survey instrument was modified and validated by a panel of five individuals from the field of Career and Technical Education. Each member of the expert panel fulfills professional duties that are related to the Approved Program Evaluation process.

The panel was utilized as an informational source of the Approved Program Evaluation. The composition of the panel included one active and one recently retired Administrative Director, each with 6 and 15 years experience, of a Career and Technology Center (CTC), and an Assistant Director of a CTC. The three expert panel members who have experience as an administrative director or assistant director of a career and technical school in Pennsylvania were selected based on their experience along with the required certifications that they possess from the Pennsylvania Department of Education. These individuals at minimum hold an Administrative certificate valid within the state of Pennsylvania that ensures they have received the appropriate training necessary to obtain their professional position. They have also maintained their professional certificate with continued educational experience that was gained in correlation with the regulations of Act 48. Act 48 was enacted on July 1, 2000 and requires educators in Pennsylvania to complete continuing education requirements every five years in order to maintain their professional certification. These expert panel members possess advanced knowledge within the field of career and technical education and have specific in depth knowledge within the area of administration. The panel also included a school evaluator who worked for the Bureau of Career and Technical Education as part of an Approved Program Evaluation. The program evaluator was chosen as an expert panel member based on the individual's integral involvement with the Approved Program Evaluation process as an evaluator. The panel member was selected to be an evaluator of the Approved Program Evaluation process based on the experiences the individual possesses with regard to the field of career and technical education and a professional position that directly correlates to the evaluation being studied. The final member of the panel chosen is an educator who

was intricately involved with preparing an instructional program for the Approved Program Evaluation. The career and technical educator who was selected to be a part of the expert panel possesses a teaching certificate issued by the Pennsylvania Department of Education. This certificate permits the individual to be a qualified instructor to students of the specific career and technical education program area. All of the expert panel members have an extensive professional career within the field of education and specifically the area of career and technical education. A listing of the expert panel can be found within Appendix A of this study.

The confirmation of the expert panel was made through telephone calls which were placed to the prospective expert panel members. The telephone conversation described the individual's role and agreement to participate as an expert panel member. Each panel member was informed of the purpose of the study, information related to instructions on the actual survey that is being designed, and a description of how their contributions would assist with establishing the validity of the survey instrument. As a result, the expert panel consists of a variety of individuals that are experienced within the field of career and technical education and possess in-depth knowledge on areas that include vocational administration, the Approved Program Evaluation process, as well as career and technical education.

Decisions made by the expert panel include assisting with the development of the survey instrument, revising the survey instrument, as well as approving recommended changes to the survey instrument as advised by others involved with this study. The role of the expert panel continued throughout the duration of this study from the initial

development of the original pilot study survey to the deployment of the full scale survey which was sent electronically to all of the selected respondents.

Developing the Instrument

Model surveys that include relevant questions and information useful to the construction of this unique survey were reviewed to ensure the highest standards of academic reliability and validity exist within the survey utilized for this research project. A “Survey of Public School Classroom Teacher Recruitment and Hiring Procedures” conducted by Professor Robert P. Strauss from Carnegie Mellon University for the Pennsylvania State Board of Education exemplifies the utilization of an excellent survey distributed via the United States Postal Service that can provide guidance through the similarities that exist within this research project (Strauss, 2006). Dr. Leigh S. Estrabrook (2006) conducted a survey on behalf of the Commonwealth Libraries of Pennsylvania that sought out specific and valuable personal data similar in nature to those which are required within the context of this research project. The design and nature of the techniques utilized to obtain the type of personal data related within this survey exemplifies an additional example of how the survey was constructed through the combined efforts of the expert panel, survey committee, and existing models.

Content validity was achieved through the expert panel analyzing the survey through the use of a modified Delphi technique. The Pennsylvania Approved Program Evaluation Process Survey (PAPEPS) was mailed to the expert panel along with a letter that explained the research study. Panel members requested that each member of the panel validate the statements within the survey that the respondents will view as the survey is taken. Validation of the statements was completed by having each of the panel

members verify that the content of the survey questions aligned to items which were being analyzed as part of the on-site evaluation. The panel was asked to make additions, deletions, and amendments to any of the statements. The survey instrument sent to potential respondents was developed after reviewing and incorporating the comments and suggestions provided by the expert panel. Two rounds of the Delphi technique were necessary to reach consensus among the expert panel.

Working with the expert panel through a series of survey revisions yielded changes to the survey instrument. Changes to the survey included dividing the survey into three sections, utilizing a different set of response foils for each of the three sections, as well as maintaining the structure of the questions as they are in order to target each specific area being evaluated through the Approved Program Evaluation process.

The input received from the expert panel resulted in changes to 7 items with relation to wording and structure. Once the changes were completed from the first round of reviews from the expert panel members, the revised survey was resubmitted to them for their review, while once again asking for input related to additional changes, modifications, or amendments that appear necessary to further improve the survey instrument.

Once feedback was obtained from the expert panel a second time and all of the recommended changes were integrated into the survey instrument, it was possible to proceed with the conduction of a pilot study. This approval included several changes and modifications to the overall structure and appearance of the survey as recommended through guidance of the survey committee. The expert panel endorsed all recommendations of the survey committee. The research questions utilized within this

study have been matched with the questions found within the survey instrument. After conducting the study it was possible to address the research questions as they relate to one or more of the research questions.

Pilot Study Results

The pilot study was conducted utilizing the Qualtrics website that is offered as an online assessment tool in conjunction with a partnership that has been established with Indiana University of Pennsylvania. As a result, the final version PAPEPS survey as approved by the expert panel was hosted and deployed through the Qualtrics website. The pilot study was conducted by sending out email notifications to a population in order to begin the process of establishing the validity and reliability of the PAPEPS survey instrument. The recipients of the pilot study were instructed via email to access and complete the PAPEPS survey through the Qualtrics website. Participants of the pilot study, expert panel, and survey reviewers were not involved with the actual study. During the pilot study it was possible to monitor the rate of return in order to send out additional reminders to pilot participants through the Qualtrics website. The email reminders were sent out throughout the active status of the survey's deployment. The pilot study was conducted in order to ensure that no gaps exist before the PAPEPS survey was deployed to the full spectrum of recipients.

Based on the return rates of the pilot study that were received it was deemed that (1) the IUP Email (Appendix C) was effective, (2) the Qualtrics platform achieved an overall response rate that would be satisfactory if implemented in a full scale statewide deployment of the PAPEPS survey, and (3) the selection of participants chosen to receive invitations to participate in the survey should be carefully chosen to target those

individuals that would be extremely likely to be involved with the Approved Program Evaluation process at their respective career and technical education school.

The frequency with which individuals responded to the survey correlated strongly with when the email invitations were sent out through the Qualtrics portal. The initial email was sent to potential respondents at 2:00 P.M. on September 15, 2008. Within the first forty eight hours, 6 respondents completed either the entire survey or a portion of the survey. Additional follow up emails were sent at 8:00 A.M. on September 22, 2008 and 10:30 A.M. on September 29, 2008. The second email reminder on September 29th generated 4 additional responses versus one response that appears to have been generated from the first reminder email that was sent out. The timing of the reminder emails appeared to generate a higher response when sent out at 10:30 A.M. versus an earlier time of 8:00 A.M. based on the number of responses that were generated when working with a pilot study population of this size.

Overall, based on the data collected through this pilot study, it was recommended by the director of the Applied Research Lab that a yes or no question be added at the beginning of the statewide survey to provide an overview of the Approved Program Evaluation process and ask the respondents if they have enough knowledge needed to complete the PAPEPS survey in its entirety. This question seeks to better understand and analyze the return rate that was received throughout the implementation of this pilot study. Several additional responses were also be added to the demographics question related to job title based on the responses that were received but not listed on the pilot study question. All of these modifications were reviewed and approved by the expert

panel via the telephone and in person communications as valuable contributions to this research project.

Reliability of the Instrument

Based on the length of the survey, it is appropriate to utilize the Cronbach's Alpha reliability test to determine the reliability of the of the survey instrument. Obtaining a reliability coefficient of .75 or greater will be an acceptable result to establish reliability of the instrument for this study (Alman, 2006).

A Cronbach's Alpha was implemented on each of the survey questions related to the Approved Program Evaluation identified within the survey instrument. The results of the data analysis yielded a Cronbach's Alpha of .863 and a Cronbach's Alpha based on standardized items of .852. As a result of this data analysis, all of the questions related to the Approved Program Evaluation were deemed to be highly correlated. A foil analysis was also completed to determine which questions would need to be revised following the pilot study. The foil analysis examined questions in which respondents all answered the question in the same way. The steps taken allowed for the establishment of reliability for the survey instrument. Reliability can be deemed as being achieved through the results of this pilot study.

Validity of the Instrument

With relation to this study, content validity was established through the judgment utilized by the expert panel as they conducted revisions, modifications, and additions to the survey instrument (Gay & Airasian, 2003). In this case, the research panel consisted of five professionals within the field of Career and Technical Education that possess a broad range of experiences and familiarities with the Approved Program Evaluation that

was conducted by the Pennsylvania Bureau of Career and Technical Education. The research of Gay and Airasian (2003), describes the process of how the survey instrument aligns with the intended content items through judgments that they make based on the actual contents and design of the survey instrument. With this case, each member of the expert panel was intricately involved with providing input and commentary related to the validity of each question found within the survey instrument.

Following the conduction of the pilot study, a review of the PAPEPS survey was recommended by the thesis committee. The review was conducted by a committee of vocational personnel familiar with the on-site evaluation. The committee recommended a series of changes that were adopted into the PAPEPS survey (Appendix B). These changes included making the questions easier to understand, modifying foil responses, as well as adding several questions that would aid in answering the research questions of this study. Recommendations made by this committee were approved by the expert panel to maintain validity.

Sample Size and Selection

Since this study was conducted online utilizing a web-based model, sampling was a problem. Based on the issue that there is not a single registry or internet based directory of all of the vocational administrators actively involved with the Approved Program Evaluation process that is being analyzed, sampling must be modified to suit the needs of the researcher (Andrews, Nonnecke, & Preece, 2003). Customizing the sampling in this way can allow for a higher response rate than other methods, even though the limiting factor continues to be the generation of the actual list of individuals that are part of the sample in an effort to reach as many applicable respondents as possible (Alman, 2006).

The sample for this statewide study was generated from selecting vocational administrators and related personnel from several of the 83 Career and Technology Centers located within the Commonwealth. The contact information was obtained from the Internet and a listing of each Career and Technology Center as found on pages 88-90 of the 2006-2007 Pennsylvania Education Directory. The entire population for the scope of this study is estimated to be approximately 385 members based on the judgment of the expert panel that each Career and Technology Center constructed a team of approximately five vocational administrators in order to prepare for and undergo the Approved Program Evaluation. All vocational administrators who were involved with preparing for and undergoing the Approved Program Evaluation process were encouraged to complete the Pennsylvania Approved Program Evaluation Process Survey (PAPEPS).

Administration of the Instrument on the Internet

The PAPEPS was conducted utilizing a web-based survey model through the research portal website Qualtrics. Kiesler (1986), outlines how web based surveys allow for automatic verification and survey responses to be captured within databases. The work of Fowler (2002), describes how contact information of sample populations from a professional directory such as the Pennsylvania Education Directory provides for an excellent method by which to collect survey data from intended and appropriate respondents (Fowler, 2002). Fowler (2002), also indicates that a survey delivered to a specific population that is (1) highly literate, (2) intrinsically motivated, and (3) interested in research will be more likely to respond to the survey and provide evidence of success for the web-based survey. With today's rapidly changing technological environment, the

utilization of a web based survey can provide the same results as a mail based survey but with the ability to achieve advantages such as economically feasible, quick distribution, and faster response cycles (Alman, 2006; Andrews, et al., 2003; Taylor, 2000).

With regard to this study, a web-based survey was distributed to approximately 385 email addresses that were collected from websites, Internet databases, and Internet mailing lists. These sources found 385 vocational administrators and teachers in Pennsylvania that would be appropriate to respond to this survey. The Qualtrics platform allows for customized distribution methods, such as email reminders and tracking of survey completers, which have an impact upon the response rates that are received from the deployment of the survey (Alman, 2006; Andrews, et al., 2003). In addition, Andrews et al., (2003) found that lower response rates are obtained when systems such as Qualtrics are not utilized in cases when only a single email notice is distributed, there is a significant perception of effort, or vague passwords are utilized. Comparisons of web-based surveys to surveys that are distributed through the postal system have found that the response rate is similar. A response rate of 20% or lower is common with both types of survey distributions (Andrews, et al., 2003). As is the case with this study, vocational administrators in Pennsylvania tend to network and communicate with each other frequently, as they face the same issues within their professional careers and are members of professional organizations that represent their common interests. These factors should make vocational administrators more likely to respond to the survey. It is also anticipated that the administrators will discuss the completion of the survey with their professional colleagues and prompt them to respond to it if they have not already done so.

Qualified respondents to this web-based study were subjected to the normal privacy and confidentiality concerns as with any study that is conducted within an online environment. Individuals that receive the email asking for their consideration to participate in the study were provided with the option of not clicking on the web-based link that would allow them to access the survey within the Qualtrics platform. This option of taking no action, easily allowed for the recipient to opt out of choosing to participate in the study. Options were provided for the recipient of the email to indicate that they wish to no longer receive any emails related to this study, at which point they were removed from the Qualtrics email distribution list. Confidentiality was maintained throughout this process because the respondents have no direct contact with the researcher and all decisions to opt out or to proceed with the study occur within the Qualtrics platform. It is possible to utilize the Qualtrics platform to determine which individuals accepted the email request to participate in the study, based on the email address that received the original email request, and observe the percentage of the study that the respondent completed.

The ability to utilize the Qualtrics platform, allowed for monitoring of the recipients of the survey. Information was compiled based on whether they had finished, partially completed, or not yet responded to the survey. This system allows for additional email reminders to be sent out through the Qualtrics platform in an effort to increase participation in the study from those who had not yet responded to the original email. Throughout the process of conducting this web-based survey, a total of approximately three emails were sent out as reminders to those who had not yet participated in the study,

unless they specifically chose to opt out of the study through the directions provided within one of the first two emails.

The final PAPEPS survey utilized a Likert scale. The pilot administration of this survey indicated that two versions were needed. One version was designed specifically for Career and Technology Center Administrators while the second version was designed for Career and Technology Center educators. Feedback from the pilot studies indicated various wording discrepancies and understandings would be easily resolved if separate versions of the survey were created. It is important to note the specific evaluation items being analyzed through each survey did not differ, only various modification to the way in which the question was asked to the respondent.

The main components of the survey encompassed demographic information and items evaluated during the on-site evaluation process. Respondents addressed demographic information such as their age, years of experience, job classification, and indicated the year in which they underwent the Approved Program Evaluation at their Career and Technology Center. Respondents transitioned to questions related directly to the on-site evaluation conducted by the Bureau of Career and Technical Education. The respondents addressed each of the evaluated items by indicating the level to which they felt changes occurred within their Career and Technology Center linked directly to specific items addressed within the on-site evaluation process.

Reliability of the survey was determined using the Statistical Program for the Social Sciences by coding and analyzing each of the responses (SPSS Base 17.0.1 2009).

Invitations to participate in this study were sent by email to 385 administrators and educators at Career and Technology Centers across Pennsylvania. Of those 385

individuals invited to participate, 116 individuals (30%) completed the PAPEPS survey. Of those 116 respondents 83 completed the PAPEPS Administrator version in its entirety while 33 completed the entire PAPEPS educator version. The return rate was increased by sending follow-up reminders to respondents who had not yet responded. The findings described within this chapter represent the 30% of respondents who completed the PAPEPS survey.

Data Analysis Procedure

The results obtained through the deployment of the survey were analyzed utilizing the SPSS statistical analysis software package. The data were transferred from the Qualtrics platform to the SPSS software in order for the data to be verified, scanned for inconsistencies, ensure no data are missing, or possess invalid information. Chapter IV of this study provides descriptive summaries of the survey responses that were obtained throughout the web-based survey process. The descriptive summary includes descriptive statistics and frequency tables for each survey question. Frequency tables analyze the demographic data that were collected through the deployment of this study. This study not only sought to determine which areas of the Approved Program Evaluation had the greatest degree of perceived change by vocational administrators, but also includes an analysis of variance (ANOVA) to compare differences that exist between the means of various groups of respondents. A Chi-Square test of significance was utilized to establish which elements of perceived change occurred as a result of the Approved Program Evaluation process. Specifically, the Chi Square analyzes those components of the Approved Program Evaluation that were deemed statistically significant between the groups of respondents.

Summary

The intent of this chapter was to describe the research plan of this study. This plan included the process utilized to select the expert panel, information related to the development of the survey instrument, sample size and selection, information related to the deployment and results of the pilot test, as well as the administration of the survey instrument through the utilization of the Qualtrics platform and the analysis of data. In essence, the plan described throughout this chapter described how the research questions have been established through the conduction of this study will be able to be addressed and analyzed in a formal systematic manner that could be replicated by others that are interested in this field of study in the future.

CHAPTER 4

ANALYSIS OF THE DATA

Introduction

The purpose of this statewide study was to assess the perceived improvements made to programs that are offered at Career and Technical Education Centers from the perspective of vocational administrators and teachers following the Bureau of Career and Technical Education conduction of an Approved Program Evaluation. This chapter analyzes the data collected from the survey and provides findings which address the following research questions as stated in Chapter 1:

1. What were the perceptions of Vocational administrators and teachers to programs that exist within the Career and Technical Education Center in relation to Pennsylvania's Approved Program Evaluation?
2. What were the most significant changes perceived by vocational administrators and teachers that occurred as a result of the Pennsylvania Approved Program Evaluation?
3. Has Pennsylvania's Approved Program Evaluation Process produced significant changes in Career and Technical Education Centers across Pennsylvania?

This chapter provides the quantitative findings from the online Pennsylvania Approved Program Evaluation Process Survey (PAPEPS) completed by employees of Career and Technology Centers located throughout Pennsylvania.

Quantitative Findings

A survey instrument was developed by the researcher to address the research questions posed in this study. The survey instrument underwent a series of pilot studies as

outlined in Chapter 3 to establish validity and reliability. The pilot process included consultation from an expert panel of Career & Technology Center directors, a panel of Career and Technology Center educators, thesis committee advisors, an Indiana University of Pennsylvania research specialist, as well as follow-up consultations with individual Career and Technology Center directors.

Table 1 shows administrators have a greater awareness of the Approved Program Evaluation Process compared to career and technical teachers.

Table 1

A Descriptive Comparison of Administrators' and Instructors' Awareness of the Approved Program Evaluation Process

Participants	Yes	No
Administrators	83 (81%)	19 (19%)
Males	46 (55%)	
Females	37 (45%)	
Teachers	33 (45%)	41 (55%)
Males	20 (61%)	
Females	13 (39%)	

Respondents who indicated they were not aware of the Approved Program Evaluation process were thanked for their time and informed they would not be eligible to continue with the remaining survey questions.

Table 2 illustrates the age differences between administrators and educators. Administrators were primarily older in age while educators were spread more evenly between the upper age ranges.

Table 2

Age of Administrator and Instructor Respondents of PAPEPS Survey

Participants	Under 30	30 – 39	40 – 49	50 or higher
Instructor	1 (3%)	5 (15%)	13 (39%)	14 (43%)
Administrator	0 (0%)	20 (8%)	7 (24%)	57 (68%)
Total	1 (1%)	25 (21%)	20 (17%)	71 (61%)

Table 3 shows that the majority of respondents possess a Master's degree or Doctoral degree.

Table 3

Highest Education Level of Respondents to the PAPEPS Survey

Rating	Number of Responses	Percentage of Responses
High school diploma	2	2%
Associate's degree	9	8%
Bachelor's degree	19	16%
Master's degree	69	59%
Doctoral degree	17	15%

Table 4

Professional Position of Respondents to the PAPEPS Survey

Rating	Number of Responses	Percentage of Responses
Instructor	32	28%
Administrator	78	67%
Educational Specialist	6	5%

Administrators responded to the survey from across the entire Commonwealth of Pennsylvania. Instructors responded to the survey from four Career and Technology Centers which were randomly selected from all CTC's. Of all who responded to the survey, six individuals classified themselves as educational specialists.

Within table 5 the respondents experience within their professional position declines as one approaches 20 or more years of experience.

Table 5

Length of Time within Professional Position of Respondents to the PAPEPS Survey

Rating	Number of Responses	Percentage of Responses
Less than 5 years	34	29%
5 – 10 years	37	32%
11 – 15 years	20	17%
16 – 20 years	12	12%
21 years or longer	10	10%

Table 6 represents of the number of BCTE Approved Programs offered by the School. The data indicates CTC's generally offer a multitude of programs rather than a limited amount.

Table 6

Number of Approved Instructional Programs Offered at Local Education Agency

Rating	Number of Responses	Percentage of Responses
Less than 5 programs	3	2%
5 – 10 programs	9	7%
11 – 15 programs	27	24%
16 – 20 programs	28	25%
21 programs or higher	49	42%

The data in Table 7 indicates respondents participated in the Approved Program Evaluation Process over a time period of 6 years. Evaluation year data varies with a peak occurring in 2008.

Table 7

Year of the Approved Program Evaluation

Rating	Number of Responses	Percentage of Responses
2005	11	10%
2006	19	8%
2007	28	27%
2008	40	38%
2009	12	12%
2010	1	1%
Unknown	5	4%

The data indicate respondents participated in the Approved Program Evaluation Process over a time period of 6 years. Evaluation year data vary with a peak occurring in 2008.

A majority of respondents agree or strongly agree that courses were changed or revised due to the Approved Program Evaluation.

Table 8

Components of Career and Technical Programs from Which

Changes to a Course Could Occur as a Result of Program Evaluation

Rating	Agree	Strongly Agree	Neither Agree nor Disagree	Strongly Disagree	Unable to answer
Labor market data utilized to offer course to students	40%	46%	10%	3.5%	.5%
Plan developed to update equipment	35%	57%	4%	4%	0%
Plan developed to update courseware	37%	50%	10%	3%	0%
Changes made to ensure adequate resource materials	35%	46%	14%	3%	2%
Changes made to course Articulation agreements with Post-secondary institutions	36%	46%	17%	1%	0

Academic standards integrated into existing courses	32%	60%	5%	2%	1%
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Research Question 1

Research Question 1 focused on: The perceptions of Vocational administrators and teachers to programs that exist within the Career and Technical Education Center in relation to Pennsylvania's Approved Program Evaluation. 83 administrators and 33 educators completed the survey.

Table 9

Update of Occupational Objectives for the Approved Program Evaluation

Administrators and Educators	Was Completed	Now Completed	Not Completed	Unsure
Update of Occupational Objectives to Programs	95	18	2	1

Table 10 reveals that only 10% of males and 22% of the females perceived an increase in instructional time. The majority of male (85%) and female (70%) administrators did not believe instructional time increased as a result of the Approved Program Evaluation.

Table 10

Did Instructional Time Increase as a Result of the Approved Program Evaluation?

Administrators	Yes	No	Unsure
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Male	5	11%	40	85%	2	4%
Female	9	22%	28	70%	3	8%

p<.05

Although Table 11 reveals a significant difference in scores between male and female teachers in regard to whether Program Evaluation resulted in increased instructional time, the majority of teachers had similar perceptions to the administrators in that they did not feel that the program evaluation increased instruction time. A small minority of males (5) and females (9) thought instructional time did increase.

Table 11

Did Classroom Teachers See an Increase in Instructional Time as a Result of the Approved Program Evaluation?

Educators	Yes		No		Unsure	
Male	3	13%	18	78%	2	9%
Female	2	14%	28	86%	0	0%

p<.05

According to Table 12, there was not a significant difference between male and female administrators with regard to teacher transfers as a result of the Approved Program Evaluation. Neither male nor female administrators felt that teachers in their building were transferred as a result of the program evaluation.

Table 12

Were Teachers Transferred (Administrator Perception) as a Result of the Approved Program Evaluation?

Administrators	Yes		No		Unsure	
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Male	2	4%	44	94%	1	2%
Female	3	8%	36	90%	1	2%

p>.05

Analysis of Table 13 reveals that male (78%) and female (86%) teachers did not perceive teachers were transferred as a result of the program evaluation.

Table 13

Were Administrators Transferred (Teacher Perception) as a Result of the Approved Program Evaluation?

Teachers	Yes		No		Unsure	
Male	3	13%	18	78%	2	9%
Female	2	14%	12	86%	0	0%

p>.05

Data collected within Table 14 reveal there was not a significant difference between male and female administrators regarding their perceptions of student participation in school organizations. About half perceived an increase in participation and half perceived little change in participation rates.

Table 14

Did Administrators Perceive Participation Levels of Student Organizations Increase as a Result of the Program Evaluation?

Administrators	Yes		No		Unsure	
Male	20	43%	26	55%	1	2%
Female	15	38%	23	58%	2	4%

p>.05

Table 15 reveals there was a significant difference between male and female teachers regarding their perception of whether there was an increase in the number of student organizations as a result of the Approved Program Evaluation. It appears that males perceived greater increase compared to females. However, the majority of males and females indicated there were no real increases in student organizations. Over 25% of males and females were unsure of any increase related to participation in student organizations. A greater percentage of female respondents perceived no increase in student organization participation than males.

Table 15

Did Teachers Perceive Participation Levels in Student Organizations Increasing as a Result of the Program Evaluation?

Teachers	Yes		No		Unsure	
Male	5	22%	13	56%	5	22%
Female	2	15%	9	70%	2	15%

p<.05

According to table 16, there was significant difference between the perception of male and female administrators with regard to planning between the CTC and school districts due to the Approved Program Evaluation. A majority of male respondents indicated no additional planning took place between the CTC and member districts while at least half of the female respondents felt that cooperative planning did increase with member school districts. Overall, the Approved Program Evaluation created opportunities of planning between the CTC and member districts for 39 CTC's.

Table 16

Approved Program Evaluation – Did Administrators Perceive an Increase of Planning with Member School Districts?

Administrators	Yes		No		Unsure	
Male	19	41%	26	55%	2	4%
Female	20	50%	17	43%	3	7%

p<.05

Data within table 17 reveal male and female teachers have little contact with the student's home school. According to this table, 3 teachers said they did have contact with the students' school while the overwhelming majority had no contact with the public school. Over 25% of males and females were unsure of the connection with the public school districts the students' are associated with.

Table 17

Approved Program Evaluation –Did Teachers Perceive an Increase of Planning with Member School Districts?

Teachers	Yes		No		Unsure	
Male	1	4%	17	74%	5	22%
Female	2	15%	9	69%	2	15%

According to table 18, there was not a significant difference between male and female administrators related to providing students with end of year evaluations. Both male and female respondents indicated a majority now provide end of year evaluations as

a result of the Approved Program Evaluation. The program evaluation did have an impact on providing year end assessments to 26 male respondents and 20 female respondents.

Table 18

Did the Program Evaluation Cause an End of Year Evaluation (Final Exam) to be Administered as an Assessment within their CTC Class?

Administrators	Yes		No		Unsure	
Male	26	55%	19	40%	2	5%
Female	20	50%	17	43%	3	7%

Findings of table 19 reveal there was a significant difference between male and female teachers providing students with year-end evaluations as a result of the Approved Program Evaluation. Sixty three percent of teachers surveyed now provide their students with a final exam as a result of the program evaluation. When compared to the data in Table 18, a majority of administrators and teachers are now implementing year end evaluations due to the Approved Program Evaluation.

Table 19

Did the Program Evaluation Cause Students to be Given an End of Year Evaluation (Final Exam) to be Administered as an Assessment in your Class?

Teachers	Yes		No		Unsure	
Male	17	74%	3	13%	3	13%
Female	6	46%	7	54%	0	0%

p<.05

Research Question 3

Research Question 3 focused on: Pennsylvania's Approved Program Evaluation Process producing significant changes in Career and Technical Education Centers across Pennsylvania.

Data found within table 20 reveal a significant difference between male and female administrators. Male administrators seemed to notice changes in services to educationally disadvantaged students more than female administrators. The number of male and female administrators who noticed some type of change due to program evaluation was over double those who did not notice any changes. Over 50% of respondents noticed few or no changes. This would be an indicator that educationally disadvantaged students may be receiving adequate services within their career and technical class throughout the school.

Table 20

Did Administrators Perceive Changes to Services Provided to Educationally Disadvantaged Students due to Program Evaluation?

Administrators	Significant Changes		Moderate Changes		Few Changes		No Noticeable Changes		Unsure if changes were made or not	
Male	3	6%	14	29%	14	29%	15	31%	2	5%
Female	0	0%	8	20%	14	35%	15	38%	3	7%

p<.05

The data within table 21 uncover a significant difference between male and female teachers pertaining to their perception of changes made to provide services to educationally disadvantaged students. Males (65%) and females (49%) noticed changes in some services to educationally disadvantaged students; however the majority of teachers saw little or no change in service educationally disadvantaged students. This

would be an indication some teachers felt the program evaluation did bring about change to educationally disadvantaged students in their classes. The overall trend in perceptions indicates that the program evaluation had little impact on perceived changes within the organization.

Table 21

Did Teachers Perceive Positive Changes to Services Provided to Educationally Disadvantaged Students due to Program Evaluation?

Teachers	Significant Changes		Moderate Changes		Few Changes		No Noticeable Changes		Unsure if changes were made or not	
Male	1	5%	7	30%	7	30%	6	26%	2	9%
Female	2	14%	2	14%	3	21%	6	44%	1	7%

Analysis of table 22 provides data to indicate male and female administrators (36%) noticed no change in the services provided to handicapped students from the program evaluation. Only 2 male administrators noticed significant changes within this area.

Table 22

Did Administrators Perceive Positive Changes to Services Provided to Handicapped Students due to Program Evaluation?

Administrators	Significant Changes		Moderate Changes		Few Changes		No Noticeable Changes		Unsure if changes were made or not	
Male	2	4%	12	25%	18	38%	15	31%	1	2%
Female	0	0%	6	14%	13	33%	17	43%	4	10%

p<.05

Results of table 23 show a majority of teachers did not notice service changes to handicapped students as a result of program evaluation. A majority of male and female teachers (16%) observed no changes. Only 2 teachers reported the observation of significant changes in this area.

Table 23

Did Teachers Perceive Positive Changes to Services Provided to Handicapped Students due to Program Evaluation?

Teachers	Significant Changes		Moderate Changes		Few Changes		No Noticeable Changes		Unsure if changes were made or not	
Male	1	5%	4	18%	8	36%	6	27%	3	14%
Female	1	7%	2	14%	2	14%	8	58%	1	7%

p<.05

Based on table 24, no significant difference occurs between male and female administrators related to changes made with services provided to students with limited English speaking skills. A majority of all administrators indicated few or no changes occurred within this area. The high instances of no noticeable change could be a factor with this evaluation item based on a school's location and demographics.

Table 24

Did Administrators Perceive Changes to Services Provided to Limited English Speaking Students due to Program Evaluation?

Administrators	Significant Changes		Moderate Changes		Few Changes		No Noticeable Changes		Unsure if changes were made or not	
Male	1	2%	7	15%	17	35%	19	40%	4	8%
Female	0	0%	4	10%	11	28%	22	55%	3	7%

p>.05

Observation of data in table 25 represents no significant difference between male and female teachers related to changes made with services provided to students with limited English speaking students. A majority of all teachers indicated few or no changes occurred within this area. The high instances of no noticeable change could be a factor with this evaluation item based on a teacher's classroom demographics.

Table 25

Did Teachers Perceive Changes to Services Provided to Limited English Speaking Students due to Program Evaluation?

Teachers	Significant Changes		Moderate Changes		Few Changes		No Noticeable Changes		Unsure if changes were made or not	
Male	0	0%	3	14%	5	24%	8	38%	5	24%
Female	1	7%	1	7%	3	21%	8	58%	1	7%

p>.05

Table 26 shows a significant difference between male and female administrators response to changes made due to program evaluation which would allow students to take regular academic courses which correlate with the course the student takes at the Career and Technology Center. The number of male and female administrators who noticed moderate and significant changes to student course offerings is more than double those who did not notice any changes.

Table 26

Were Changes Made to Students' Schedules Which Would Allow Them to Take Academic Courses Related as a Result of the Program Evaluation? Administrator Viewpoint

Administrators	Significant Changes		Moderate Changes		Few Changes		No Noticeable Changes		Unsure if changes were made or not	
Male	3	6%	18	38%	17	35%	9	19%	1	2%
Female	6	15%	14	35%	10	25%	9	23%	1	2%

p<.05

Found within table 27, is a significant difference between male and female teachers responses. The majority (22) of teacher respondents did not notice any changes or few changes to the access their students had to take related academic courses such as physics or calculus at their home school district due to program evaluation.

Table 27

Were Changes Made to Students' Schedules Which Would Allow Them to Take Academic Courses Related as a Result of the Program Evaluation? Teacher Viewpoint

Teachers	Significant Changes		Moderate Changes		Few Changes		No Noticeable Changes		Unsure if changes were made or not	
Male	1	5%	6	26%	5	22%	7	30%	4	17%
Female	1	7%	1	7%	3	22%	7	50%	2	14%

p<.05

Findings of table 28 reveal no significant difference between male and female administrators regarding the conduction of annual Local Advisory Committee meetings.

96% of both male and female administrators confirmed these annual meetings do take place.

Table 28

Administrative Perception of Conducting Annual Local Advisory Committee Meetings

Administrators	Yes		No		Unsure	
Male	45	96%	2	4%	0	0%
Female	38	96%	1	2%	1	2%

p>.05

Analysis of table 29 finds no significant difference between male and female teachers as it relates to a CTC conducting annual Local Advisory Committee meetings. Over 90% of both male and female teachers indicated the annual Local Advisory Committee does take place as was required through the program evaluation.

Table 29

Teacher Perception of Conducting Annual Local Advisory Committee Meetings

Teachers	Yes		No	
Male	21	91%	2	9%
Female	11	92%	1	8%

p>.05

Observation of table 30 indicates no significant difference between male and female administrators regarding the conduction of bi-annual Advisory Committee meetings. The Approved Program Evaluation was instrumental in ensuring 22% of male and female administrators implemented recent changes to conduct the Advisory

Committee meeting on a bi-annual basis. Only one female administrator indicated Advisory Committee meetings were not being held bi-annually.

Table 30

Administrative Perception of Conducting Bi-Annual Occupational Advisory Meetings

Administrators	Yes		No		Yes – this is a recent change	
Male	39	83%	0	0%	8	17%
Female	27	69%	1	3%	11	28%
p>.05						

Table 31 shows there is no significant difference between male and female teachers regarding the conduction of bi-annual Advisory Committee meetings. Only one male teacher indicated Advisory Committee meetings were not being held bi-annually.

Table 31

Teacher Perception of Conducting Bi-Annual Occupational Advisory Meetings

Teachers	Yes		No		Yes – this is a recent change	
Male	21	92%	1	4%	1	4%
Female	13	100%	0	0%	0	0%
p>.05						

Table 32 depicts no significant difference between males and females with regard to updating the admissions policy following the conclusion of the program evaluation. A large portion of respondents indicating no changes were made, which would indicate they had existing admissions policies in place prior to the program evaluation. The remainder of the responses tended to be the highest in the category of “several changes were made” with males (29%) and females (45%) indicating this was the case with their admissions policy.

Table 32

After the Program Evaluation, Was the Admissions Policy Updated?

Administrators	Drastic changes were made		Several changes were made		No changes were made		I do not know the answer to this question	
Male	2	4%	14	29%	25	52%	7	15%
Female	1	3%	18	45%	17	43%	4	9%

$p > .05$

Observation of Table 33 depicts a significant difference between male and female teachers with regard to updating the admissions policy upon the conclusion of the program evaluation. A large portion of respondents indicating no changes were made, are likely to have existing admissions policies in place for their classroom prior to the program evaluation. The remainder of the responses tended to be the highest in the categories of “several changes were made” and “I do not know the answer”. Teachers being unaware of their schools admissions policy as well as any updates to this policy would explain the high rate of “I do not know” responses.

Table 33

After the Program Evaluation, Was the Admissions Policy Updated for your Class?

Teachers	Drastic changes were made		Several changes were made		No changes were made		I do not know the answer to this question	
Male	1	4%	7	30%	9	39%	6	26%
Female	0	0%	2	15%	8	61%	3	23%

$p < .05$

Looking at Table 34 indicates no significant difference between males and females as it pertains to safety procedures being updated within each instructional

program. The majority of respondents indicated several changes were made while the second highest response indicated no changes were made. Those indicating no changes were made can be considered meeting the existing criteria of the program evaluation prior to the conduction of the evaluation. If deficiencies existed during the evaluation, the school would be required to make changes to the safety procedures in order to be in compliance with the evaluation guidelines.

Table 34

After the Program Evaluation, Have Safety Procedures been Updated in Each Instructional Program?

Administrators	Drastic changes were made		Several changes were made		No changes were made		I do not know the answer to this question	
Male	2	4%	27	56%	17	35%	2	4%
Female	0	0%	23	59%	12	31%	4	10%

p>.05

Revealed within Table 35 is evidence from the administrative perspective that the program evaluation did impact the amount of guidance counseling and related services provided to students at Career and Technology Centers. The high frequency of no responses would likely indicated appropriate counseling services were already in place and existed at the time of the program evaluation to adequately meet the students' needs.

Table 35

Was Additional Access to Guidance Services, Which Includes Guidance Counselors, Provided to Students?

Administrators	Yes	No	I am not sure

Male	19	40%	26	54%	3	6%
Female	17	43%	23	57%	0	0%

p>.05

Data within Table 36 indicate no significant difference between the guidance services provided to students from the teachers' perspective of male and female respondents. As represented in Table 35, a portion of teachers also indicated they noticed a difference in guidance counseling and related services provided to the students as a result of the program evaluation. Those responding no would likely already have guidance programs in place which adequately served students prior to the evaluation.

Table 36

Was Additional Access to Guidance Services, Which Includes Guidance Counselors, Provided to Students

Teachers	Yes		No		I am not sure	
Male	8	35%	9	39%	6	26%
Female	4	33%	7	58%	1	9%

p>.05

Within Table 37 are data which reflect no significant difference between males and females with regard to administrators' viewpoint on changes made to their school's guidance services plan. The majority of administrators did notice several or few changes to the guidance services plan which outlines how students access guidance counselors, emotional support services, and other mental health related services within the school. Those who noted no changes were made to the guidance services plan most likely had an acceptable guidance services plan prior to the program evaluation taking place or they

also would have had to make changes to the plan in order to be in compliance with the program evaluation.

Table 37

What Result Did the Approved Program Evaluation Have on the School's Guidance Services Plan?

Administrators	Many changes took place		Several changes were made		A few changes took place		No changes took place		I do not possess knowledge to answer	
Male	3	6%	9	19%	19	40%	14	29%	3	6%
Female	1	3%	6	16%	20	52%	9	24%	2	5%

p>.05

Table 38 demonstrates no significant difference between male and female teachers with regards to updating the guidance services plan as a result of the program evaluation. A majority of the teachers did notice several and few changes taking place to guidance services students had access to within the classes of their school. Those teachers who indicated no response likely had adequate guidance services provided to their students prior to the program evaluation taking place.

Table 38

What Result Did the Approved Program Evaluation Have on the School's Guidance Services Plan?

Teachers	Many changes took place		Several changes were made		A few changes took place		No changes took place		I do not possess knowledge to answer	
Male	1	5%	3	14%	7	33%	5	24%	5	24%
Female	1	8%	2	15%	4	31%	2	15%	4	31%

p>.05

Results of Table 39 reveal no significant difference between male and female administrators with regard to the size of student classrooms. The high percentage of no responses can be interpreted to indicate that in most cases the space provided for instructional classes to take place were adequate prior to the program evaluation taking place.

Table 39

Due to a Lack of Space, Were Any Classrooms Relocated to Provide More Space for Instruction?

Administrators	Yes		No		I am not sure	
Male	6	13%	41	85%	1	2%
Female	6	16%	30	79%	2	5%

p>.05

Data within Table 40 reveal no significant difference between male and female teachers with regard to changing classroom spaces to increase the amount of space within their classroom. The overwhelming rate of no responses can be interpreted to indicate the space provided for instructional classes to take place were adequate prior to the program evaluation taking place.

Table 40

Due to a Lack of Space, Were Any Classrooms Relocated to Provide More Space for Instruction?

Teachers	Yes		No		I am not sure	
Male	0	0%	20	95%	1	5%
Female	0	0%	13	100%	0	0%

p>.05

Research Question 2

Research Question 2 focused on: The most significant changes perceived by vocational administrators and teachers that occurred as a result of the Pennsylvania Approved Program Evaluation.

Analysis of Table 41 reveals no significant difference between male and female administrators when asked to rate the value of the Approved Program Evaluation. The majority of administrators rated the program evaluation as either “extremely valuable” or “very valuable”. The high frequency of these two responses provides evidence that changes did take place in Career and Technology Centers as a result of the Approved Program Evaluation which were beneficial to the schools.

Table 41

How Would You Rate the Value of the Approved Program Evaluation?

Administrators	Extremely Valuable		Very Valuable		Neither valuable nor not valuable		Not valuable		I am not sure	
Male	5	10%	30	63%	9	19%	4	8%	0	0%
Female	10	26%	21	54%	7	18%	0	0%	1	2%

p>.05

Analysis of Table 42 reveals no significant difference between male and female teachers when asked to rate the value of the Approved Program Evaluation. The response from teachers provides information to suggest the program evaluation did have an impact on their awareness of the importance of the Approved Program Evaluation.

Table 42

How Would You Rate the Value of the Approved Program Evaluation?

Teachers	Extremely Valuable		Very Valuable		Neither valuable nor not valuable		Not valuable		I am not sure	
Male	1	5%	7	33%	8	38%	2	10%	3	14%
Female	1	8%	5	39%	3	23%	2	15%	2	15%
p>.05										

Table 43 provide data from administrators regarding areas they felt were the most important to change due to the program evaluation. The top five categories which received the highest number of responses from administrators are included within the table below.

Table 43

What Areas Would You Consider to be the Three Most Important Items You Felt Changed as a Result of the Program Evaluation?

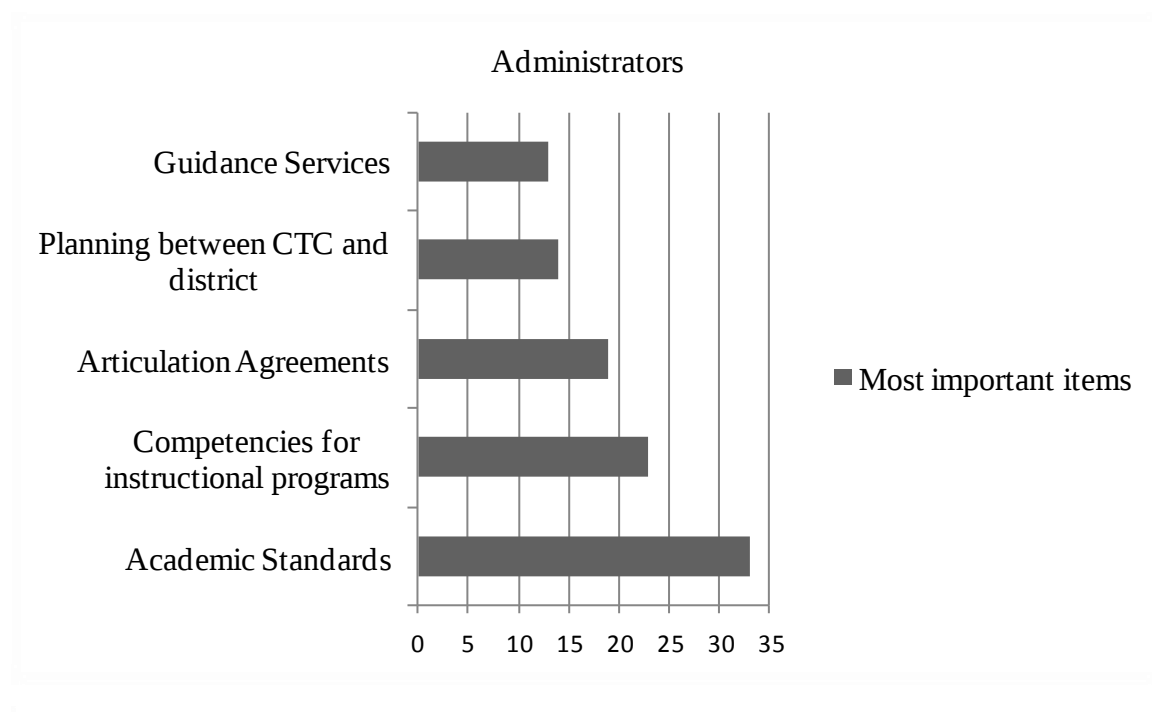


Table 44 provides data from teachers regarding areas they felt were the most important to change due to the program evaluation. The top five categories which

received the highest number of responses from teachers are included within the table below. Comparing teachers' responses from Table 44 with administrator responses from Table 43 indicates both teachers and administrators feel the areas of "Academic Standards" and "Competencies for instructional programs" are the two most important items changed due the program evaluation.

Table 44

What Areas Would You Consider to be the Three Most Important Items You Felt Changed as a Result of the Program Evaluation?

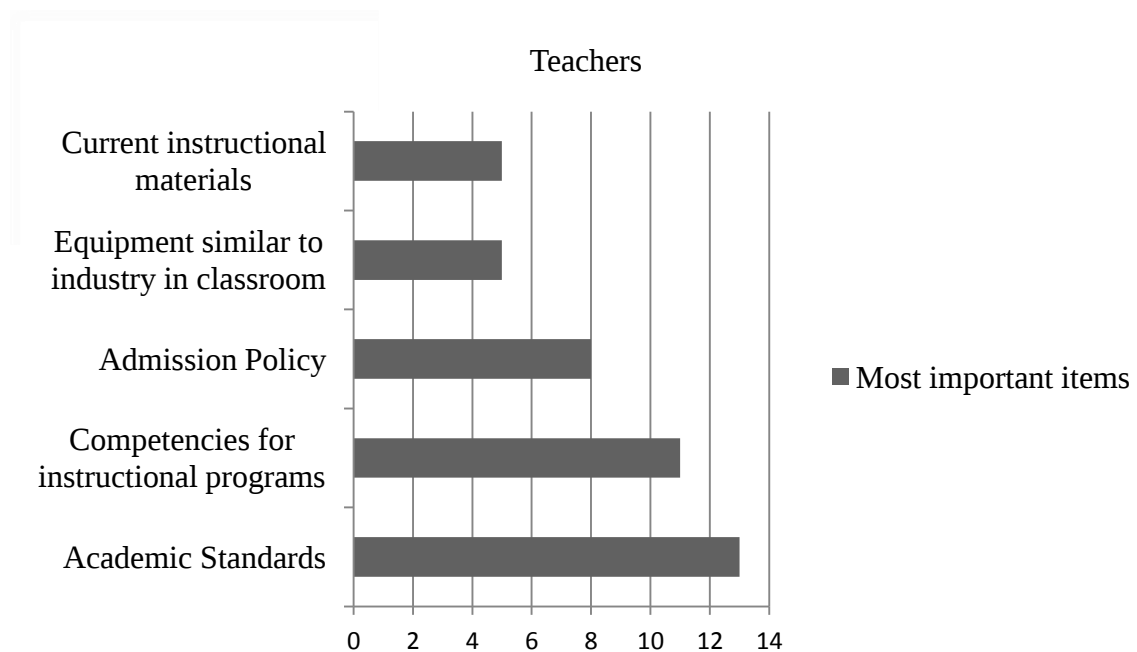


Table 45 provides data from administrators regarding areas they felt were the least important to change due to the program evaluation. The top five categories which received the highest number of responses from administrators are included within the table below.

Table 45

What Areas Would You Consider to be the Three Least Important Items You Felt Changed as a Result of the Program Evaluation?

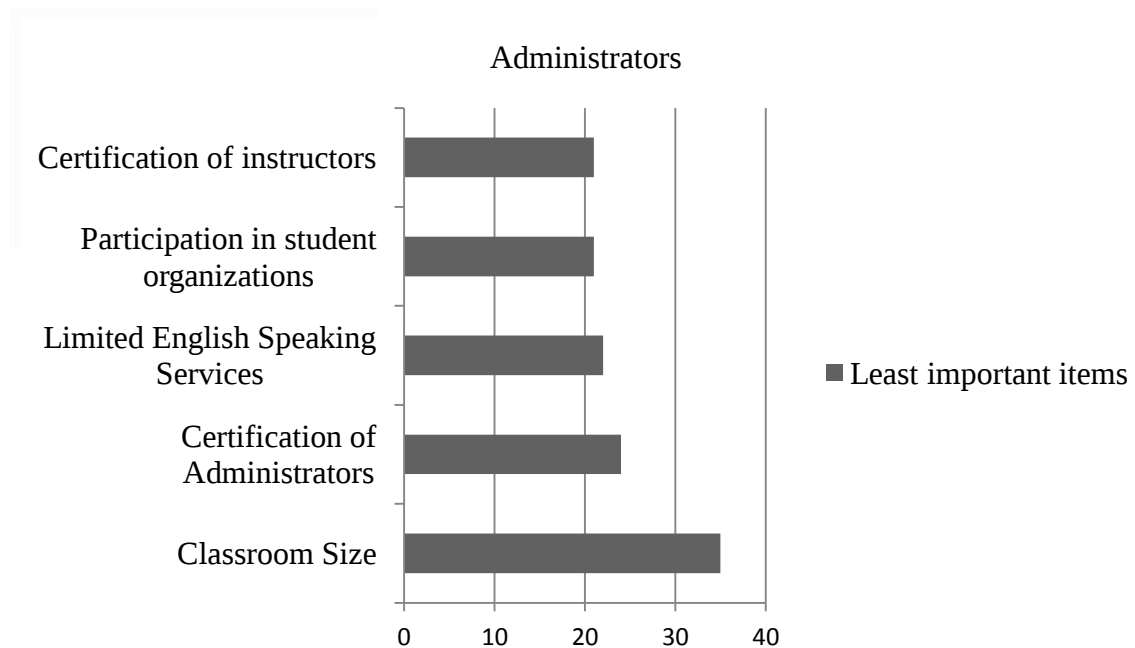
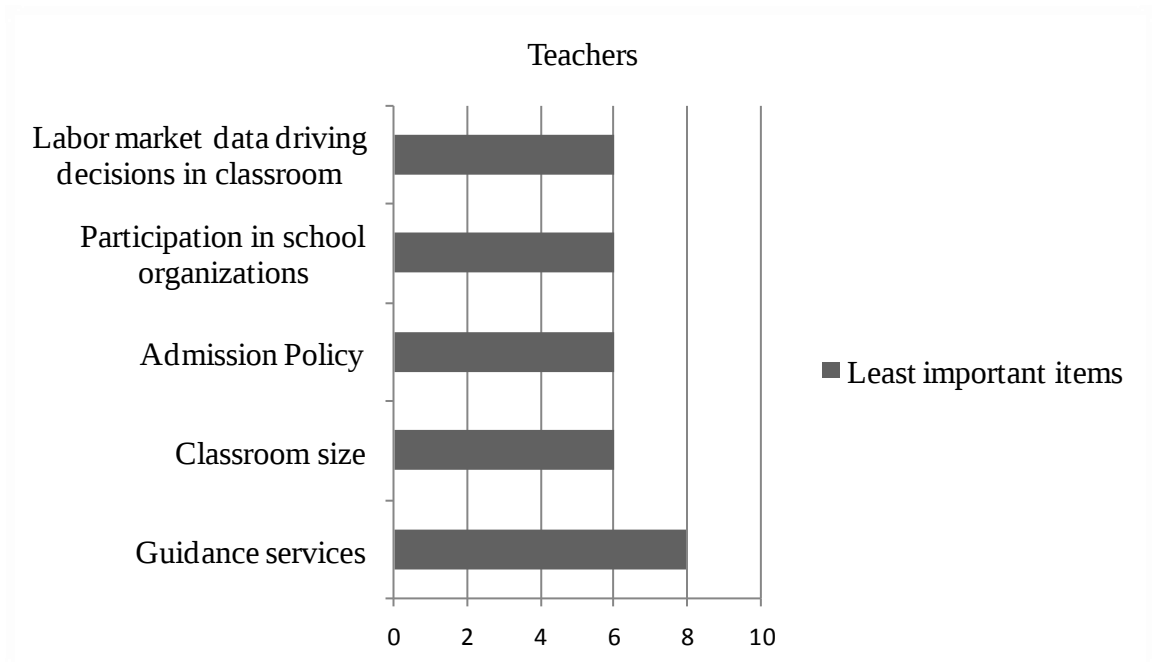


Table 46 provides data from teachers regarding areas they felt were the least important to change due to the program evaluation. The top five categories which received the highest number of responses from teachers are included within the table below.

Table 46

What Areas Would You Consider to be the Three Least Important Items You Felt Changed as a Result of the Program Evaluation?



Chapter Summary

The quantitative findings of this study answer the research questions which have been posed by the study. Chapter 5 will discuss the results of the survey and provide guidance and insight to Career and Technical administrators, teachers, the Bureau of Career and Technical Education, as well as politicians with regard to the impact of the Approved Program Evaluation changing career and technical education.

CHAPTER 5

CONCLUSION

Summary

The focal point of this study centered on the impact of the Approved Program Evaluation review on Career and Technical Education Centers (CTC) within Pennsylvania. The purpose of this study was to assess administrative and teacher perceptions of whether programs that are offered at Career and Technical Education Centers created changes after the conduction of an Approved Program Evaluation.

Summary of Findings

The first research question asked:

What were the perceptions of Vocational administrators and teachers to programs that exist within the Career and Technical Education Center in relation to Pennsylvania's Approved Program Evaluation?

Overall, administrators and teachers seemed to perceive that the Program Evaluation did have some impact regarding the use of labor market data to make decisions regarding the kinds of technical courses that are in high-demand.

Administrators and teachers felt that the Program Evaluation helped to promote the need to update both equipment and courseware within the technical programs to ensure that the technical schools can match industry standards. Administrators and teachers also agreed that the Program Evaluation did have an impact on technical programs as they relate to ensuring that adequate resource materials are available to students, that the programs have post-secondary articulation agreements with post-secondary institutions, and that there is integration of academic standards into existing courses.

There was a consensus among administrators and teachers when it came to changes taking place based on the Program Evaluation on the topic of providing end-of-year assessments to students. Fifty three percent of administrators and 64% of teachers perceived the Program Evaluation to have prompted end of year assessments to be given to students in specific program areas. It probably can be assumed that year-end assessments were already administered in the remaining technical schools prior to the state's Program Evaluation.

In general, the Program Evaluation had little impact on the update of occupational objectives for each course. The majority of administrators and teachers indicated that course occupational objectives were updated even before the Program Evaluation took place. Only 16% of administrators and educators indicated the Program Evaluation did cause the occupational course objectives to be updated. Seventy eight percent of administrators and 87% of the teachers did not see a change in any increased instructional time as a result of the Program Evaluation. Survey data also indicated that teachers were not transferred from one program area to another based on the teaching certification they possess.

About 50% of the administrators and teachers seemed to think that participation levels in student organizations increased due to the Program Evaluation. Planning between career and technical schools and regular school districts was another topic which administrators and teachers were not in consensus. Forty nine percent of administrators felt that the Program Evaluation was not responsible for district planning changes. Likewise, an overwhelming 72% majority of teachers indicated no changes were made as a result of the Program Evaluation when it came to planning with school districts.

The second research question asked:

What were the most significant changes perceived by vocational administrators and teachers that occurred as a result of the Pennsylvania Approved Program Evaluation?

Administrators and teachers agreed the two most important things that changed as a result of the Program Evaluation were (1) the integration of academic standards into career and technical programs and (2) the establishment of competencies for each career and technical program. Administrators and teachers indicated the Program Evaluation created changes to the following areas: current instructional material, equipment similar to industry, and articulation agreements in place between the school and post-secondary institutions.

The third research question asked:

Does Pennsylvania's Approved Program Evaluation Process produce significant changes in Career and Technical Education Centers across Pennsylvania?

Sixty six percent of administrators and 59% of teachers noticed very few or no changes in providing services to educationally disadvantaged students. Similar results were observed regarding services to handicapped students with 71% of administrators and 68% of teachers noticing few or no changes as a result of the Program Evaluation. Offering services to limited English speaking students was also found to be unaffected by the Program Evaluation. Seventy nine percent of administrators and 69% of teachers reported few or no changes to services provided to non-English speaking students.

The Program Evaluation results indicated that Local Advisory Committee meetings met on a regular basis. The same can be said about biannual Occupational Advisory meetings. Most teachers and administrators agreed that these meetings were

consistently held at the appointed time. An overwhelming majority of administrators and teachers indicated that little change was made regarding admission policy and the machine safety procedures or changes in the classroom space as a result of the Program Evaluation.

Administrators and teachers responded differently regarding access to guidance services, such as guidance counselors. Forty one percent of administrators and teachers noticed a change to guidance services due to the Program Evaluation.

Seventy six percent of administrators and 46% of teachers did notice some type of change from the Program Evaluation regarding the inclusion of academic courses for students which correspond to their career and technical program.

Conclusions

The program evaluation seemed to have little impact on organizational change within Career and Technology Centers throughout Pennsylvania. Evans (1996) described the key dimensions of the change process to organizations and the resulting dilemmas which can occur due to a changing organization. The results of the survey support the assumption that Career and Technology Centers did not experience the dilemmas as part of the Program Evaluation which Evans describes due to a lack of change. The majority of administrators' and teachers' responses regarding perceived changes due to the program evaluation were that of little or no change occurring. The responses of administrators and teachers leads to the conclusion that a major overhaul or reform of practices at Career and Technology Centers did not occur as a result of Program Evaluation. If an overhaul or reform were to have occurred, the Career and Technology Centers would have encountered dilemmas as described by Evans (1996).

Outside factors prompting the conduction of the Program Evaluation such as the Carl D. Perkins Career and Technical Act of 2006 required statewide accountability and results from Career and Technology Centers (Haigh, 2007). This concept is also supported by Bridges (2003) whereas he describes organizational change as a process which takes time from an initial idea to a full scale implementation. The process of preparing for and undergoing the Approved Program Evaluation took months of planning and preparation for each of the Career and Technology Centers over the multi-year initiative. Results of the survey allow one to conclude that minimal changes were found across a wide range of areas related to the instructional training programs found within Career and Technology Centers. Even though the data indicate many of the changes were not considered to be major, each Career and Technology Center was able to demonstrate their school was already exceeding expectations of a particular area being evaluated. A majority of administrators and teachers found the process beneficial to their school from the perspective that the Program Evaluation could be utilized to confirm that their school meets the standards established by the State. The PAPEPS survey found that if a school identified itself as being out of compliance in a particular standard being examined through the program evaluation, the school was able to make some minor adjustments to correct any existing deficiencies. This process of change allowed Career and Technology Centers to ensure they were in compliance with each area analyzed throughout the Program Evaluation. This reinforces the conclusion that the Program Evaluation did allow Career and Technology Centers to demonstrate existing adequate practices or the ability to make minor changes to become compliant and allows for the verification of

accountability and results required to receive federal Carl D. Perkins funding as described by Haigh (2007).

Administrators and teachers identified areas of Career and Technology Center operations that they perceived experienced some degree of change in order to meet State standards as part of the Program Evaluation. These areas include additional planning with partnering school districts, ensuring students take year end assessments, and student access to corresponding academic courses related to the career and technical program. Survey respondents who did not perceive change in these areas are assumed to have already been in compliance with existing State standards. If deficiencies were to exist, the Program Evaluation process was designed to bring each of the Career and Technology Centers into compliance. Results from the PAPEPS survey justify the conclusion that perceived change of administrators and teachers from the Program Evaluation was minimal and did not have a significant impact on the operations of each Career and Technology Center.

The Bureau of Career and Technical Education and the Pennsylvania Department of Education should now question the justification the expenses and time associated with the conduction of the Approved Program Evaluation. These organizations should analyze how the evaluations were conducted during the first round of implementation, review the finding of this study, and make improvements for future evaluations. These factors allow one to conclude that the Program Evaluation should be revised. The revisions should include areas where changes can be made to directly improve instructional methods, focuses on areas deemed critical by State or Federal mandates, and increase student achievement in career and technical programs. The revisions should target changes which

are measurable and allow each Career and Technology Center to set goals of compliance which are attainable. Future funding to continue the Program Evaluation should be linked to definitive improvements which can be made to career and technical programs and have a positive impact on student learning. The Program Evaluation should challenge schools which have identified they are already meeting State standards to push themselves further and achieve goals higher than previously achieved minimum requirements.

This study does confirm the research of Wentling (1980) who highlighted the benefits of career and technical education programs that undergo an on-site evaluation process. His research showed that an on-site evaluation process provides expertise otherwise unavailable to the program, identifies deficient program components, helps to update and insure relevance, provides an outside view of the program from a third party evaluation team, facilitates working relations of instructional and ancillary personnel, informs community personnel of program character, reinforces beneficial or outstanding aspects of the program, and provides in-service training for team members. Marzano (2005) reiterates the importance of the previous items by indicating the economy of the 21st century requires a shift in thinking and culture related to career and technical education. Ideally, the Program Evaluation should be refined based on the findings of this study to act as a catalyst of positive change for each Career and Technology Center to help prepare students for success in our 21st century workforce.

Overall, it can be concluded that Career and Technology Centers did undergo some degrees of change as they prepared for and took part in the Program Evaluation. Although the perception of significant changes did not emerge from the responses administrators and teachers, this does not mean the Program Evaluation was a complete

failure. The Program Evaluation did allow for a confirmation of adherence to State standards to take place at all Career and Technology Centers. The Program Evaluation process verified and ensured each school was committed to operating and creating a better learning experience for students of all learning abilities within the realm of Career and Technical Education. Regardless of whether changes were put into place prior to or as a result of the Approved Program Evaluation, data were collected by the State to document that each Career and Technology Center is being held accountable for each of the areas which were analyzed. This information can now be shared with other States, Federal agencies requiring data in exchange for funding, as well as with business and industrial groups interested in hiring our youth to expand industries such as Marcellus Shale, water purification, mine safety, and logistics.

Recommendations

The Approved Program Evaluation process can be made better by following several recommendations. The Bureau of Career and Technical Education should redesign the Approved Program Evaluation. The new design should focus on having a positive impact on student learning, assist students with special needs and disabilities, and ensure career and technical programs are accessible to as many students as possible throughout all of Pennsylvania's school districts. For example, the Program Evaluation did focus on special needs students and this was a positive move. However, if the Program Evaluation could be modified to incorporate achievement data of special needs students into the Program Evaluation, then these special needs students might benefit even more.

Additional research studies might compare Pennsylvania with other States' career and technical evaluation systems to analyze how effective the various evaluation systems are working. Data from such a study might influence a change in the current framework of the Approved Program Evaluation.

The Governor of Pennsylvania's most recent State of the Union Address emphasized the importance of providing Pennsylvania with a well skilled and well trained workforce. He indicated Career and Technology Centers within Pennsylvania are a building block from which our state can begin to train and prepare our youth for future employment in high skilled and high paying jobs. This commitment from the Governor corresponds with a recommendation from this study for Pennsylvania to improve and continue evaluations of Career and Technology Centers.

Results of this study indicated there was minimal perceived change to Career and Technology Centers based on the Program Evaluation. Based on these findings it is recommended that administrators and teachers provide feedback to the Bureau of Career and Technical Education (BCTE) pertaining to improving the on-site evaluation. The BCTE should actively solicit feedback, conduct its own surveys, and work hand-in-hand with administrators and teachers to seek ways that career and technical programs can be enhanced and evaluated to benefit future learners.

By complying with standards of the Program Evaluation, administrators hope to ensure an enhanced operation of their school. They utilize information from the program evaluation to show evidence that their school can provide students with a learning environment which is well balanced, designed for success, and ensures elements are in place for students to enroll and graduate from a Career and Technology Center prepared

for post-secondary education or begin a skilled position in the working world. Therefore, it is recommended the State standards of the Program Evaluation continue to be revised and updated in order to keep up with student needs, changing industrial trends, and demands of a 21st century workforce.

Educators within Career and Technology Centers should also embrace the concept of the Approved Program Evaluation. Teacher support creates a common bond between them and the administrators who are implementing the required elements at the building level. The teachers should embrace the State standards contained in the Program Evaluation. The Program Evaluation cannot be successful without the support and buy-in of teachers. Having teachers involved with the evaluation allows for an easier implementation of changes regardless of whether they are major or minor. Any degree of change resulting from evaluation cannot be successful without the support and embracement of those career and technical teachers who are responsible for integrating State standards into instructional delivery. Therefore, it is a recommendation of this study for administrators and teachers to work together as the school prepares for and undergoes any type of evaluation process.

It is recommended that data should be utilized to revise and update future evaluation procedures of career and technical programs to ensure career and technical education continues to thrive and enhance positive learning experiences to students throughout Pennsylvania.

Suggestions for Further Study

A qualitative study should be conducted within one or two schools. Such a qualitative study would provide more in-depth information with regard to the variables

that impacted the Program Evaluation. The impact of student learning should be the focus of future research.

A study could be conducted to compare career and technical schools which do not have a Program Evaluation versus schools which do have a Program Evaluation. It is also important for research to be conducted on the areas of this study which were perceived to change by administrators and teachers. Studying these areas will assist the Bureau of Career and Technical Education to revise and improve future Program Evaluations.

From a long term vantage point, research should be conducted to see how successful students were obtaining their career goals and employment. Again, this could be accomplished by studying schools and graduate alumni over a long period of time. A future study should also include more teachers to help further understand the impact a collaborative administration and the faculty can have when completing a Program Evaluation. Student achievement should be the focal point of future research involving the Program Evaluation process. The focus on student achievement will provide students with a learning environment designed to allow them the best opportunities available to pursue their lifelong dreams and goals upon graduation.

Closing Thoughts

The first cycle of the Approved Program Evaluation has recently concluded in Pennsylvania. An analysis of the results of this study have clearly identified that career and technical education programs were or now are meeting the State standards necessary for students to be successful within their program of study. The Program Evaluation should be revised, enhanced, and continue to be utilized as an evaluation tool in Career and Technology Centers. Pennsylvania should continue to commit resources to revise and

improve the Program Evaluation process. Other states might adopt Pennsylvania's model or develop an evaluation model to conduct career and technical program evaluations.

Program Evaluations help to ensure the highest possible standards are met when it comes to technical based instructional programs which are offered to our future workforce. An effective Program Evaluation of career and technical programs of study will provide a path for our nation to be successful for generations to come.

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APPENDIX A

Expert Panel

Bryan J. Boyd
Instructor, Mifflin-Juniata Career & Technology Center

Lewistown, Pennsylvania

Al Choman
Evaluator, PA Bureau of Career and Technical Education Approved Program Evaluation
process

Wilkes-Barre, Pennsylvania

Michael E. Lewis, Ph. D
Assistant Director, Mifflin-Juniata Career and Technology Center

Lewistown, Pennsylvania

Kevin J. O'Donnell
Administrative Director, Mifflin-Juniata Career and Technology Center

Lewistown, Pennsylvania

Thomas F. O'Donnell
Ed. D, Retired Administrative Director, Wilkes-Barre Area Vocational Technical School

Wilkes-Barre, Pennsylvania

APPENDIX B

Q1

Are you familiar with working, assisting, or helping with the evaluation conducted by the Bureau of Career and Technical Education that is referred to as the **Approved Program Evaluation** or **Chapter 339 Review**?

Yes - Please continue to Question 2

No - Thank you for your time and interest

Q2

What is your gender?

Male

Female

Q3

What is your age?

Under 30

30 - 39

40 - 49

50 or higher

Q4

What is your highest degree earned?

High school diploma

Associate's degree

Bachelor's degree

Master's degree

Doctoral degree

Q5

Which of the following best describes your current job title?

Administrator (Ex. Administrative Director, Principal)

Educational Specialist (Ex. Technology Specialist, Special Education)

Instructor (Ex. Classroom teacher)

Q6

How long have you been working within your current position?

Less than 5 years

5 - 10 years

11 - 15 years

16 - 20 years

21 years or more

Q7

How many approved instructional programs does your Local Education Agency offer?

Less than 5 programs

5 - 10 programs

11 - 15 programs

16 - 20 programs

21 programs or more

Q8

In what year was the Approved Program Evaluation conducted at your school?

2005

2006

2007

2008

2009

As a result of the Approved Program Evaluation, please rate the level of change for each of the following questions:

Q9

For all of the instructional programs that are offered at your school, **labor market data** were utilized to justify offering each course to students. (**Labor market data** is job related information that describes which jobs are currently in high demand and of high priority within your region)

Highly Agree

Somewhat Agree

Neither Agree nor Disagree

Somewhat Disagree

Highly Disagree

Q10

As part of the Approved Program Evaluation process, the school had developed a plan to update equipment for each instructional program.

Highly Agree
Somewhat Agree
Neither Agree nor Disagree
Somewhat Disagree
Highly Disagree

Q11

As part of the Approved Program Evaluation process, the school has developed a plan to update courseware for each instructional program.

Highly Agree
Somewhat Agree
Neither Agree nor Disagree
Somewhat Disagree
Highly Disagree

Q12

Was the amount of instructional time that students spend in an instructional program was increased over the course of a school year based on the Approved Program Evaluation taking place?

Yes
No

Q13

Were one or more teachers in your school transferred from one instructional program to another based upon the certification they possess?

Yes
No

Q14

Due to the Approved Program Evaluation, changes were made to ensure that adequate resource materials are available for each instructional program

Highly Agree
Somewhat Agree
Neither Agree nor Disagree
Somewhat Disagree
Highly Disagree

Q15

Changes were made to services available students that are considered educationally disadvantaged and enrolled in an instructional program

Significant changes occurred
Moderate changes occurred
Very little changes occurred
No noticeable changes occurred

Q16

Changes were made to services available students that are handicapped

Significant changes occurred
Moderate changes occurred
Very little changes occurred
No noticeable changes occurred

Q17

Changes were made to services available students that are considered limited English-speaking

Significant changes occurred
Moderate changes occurred
Very little changes occurred
No noticeable changes occurred

Q18

Changes were made to ensure that students able to take the appropriate academic courses for the career and technical instructional program

Significant changes occurred

Moderate changes occurred

Very little changes

No noticeable changes

Q19

As a result of the Approved Program Evaluation, changes were made to Articulation agreements that exist between your school and Post-secondary institutions

Highly Agree

Somewhat Agree

Neither Agree nor Disagree

Somewhat Disagree

Highly Disagree

Q20

As a direct result of the Approved Program Evaluation students are now able to participate in a student organization such as FFA or SkillsUSA that were not previously a part of your school

Yes

No

Q21

Planning now takes place between the students' member school districts and the Career and Technical Center because of the Approved Program Evaluation

Yes

No

Q22

Because of the Approved Program Evaluation, students are now given an assessment at the conclusion of each year of their instructional program

Yes

No

Q23

Academic standards were integrated into the existing curriculum as a result of the Approved Program Evaluation

Highly Agree
Somewhat Agree
Neither Agree nor Disagree
Somewhat Disagree
Highly Disagree

As a result of the Approved Program Evaluation, please rate the level of change for each of the following:

Q24

The Occupational Objectives for students are updated on an annual basis

This has been completed
This is now being completed
This is not done within our school

Q25

Local Advisory Committee meetings are held annually?

Drastic improvement
Moderate improvement
Adequate improvement
No improvement was necessary

Q26

Occupational Advisory Committee meetings are held twice a year?

Drastic improvement
Moderate improvement
Adequate improvement
No improvement was necessary

Q27

Was the school's admissions policy created or updated?

Drastic changes were made
Several changes were made
Small changes were made
No changes were made

Q28

Were competencies required for each instructional program created or updated?

Drastic changes were made
Several changes were made
Small changes were made
No changes were made

Q29

Was the integration of safety procedures into each instructional program created or updated?

Drastic changes were made
Several changes were made
Small changes were made
No changes were made

Q30

Was additional access to guidance services, which includes guidance counselors, provided to students of the school

Drastic changes were made
Several changes were made
Small changes were made
No changes were made

As a result of the Approved Program Evaluation, please rate the level of change for each of the following:

Q31

The schools guidance services plan

Many changes took place
Several changes took place
A few changes took place
No changes took place

Q32

Changes that were based on the certification possessed by administrative personnel

Many changes took place
Several changes took place
A few changes took place
No changes took place

Q33

Due to a lack of space, the size of a learning environment for a specific instructional program was changed

Yes
No

Q34

Equipment that is comparable to industry standards is found within each instructional program

No changes were necessary
A few changes were necessary
Many changes were necessary

Q35

The certification of instructors within the school was appropriate based on the instructional program that they are designated to teach.

Many changes took place
Several changes took place
A few changes took place
No changes took place

Q36

Currently dated instructional materials are utilized within instructional programs

Many changes took place
Several changes took place
A few changes took place
No changes took place

Q37

Special education services are provided to students within the school

They always have been
These services have been improved
There are no services of this type present

Q38

Partnerships exist between the school, local businesses, and community organizations

No partnerships exist
New partnerships were formed as a result of the Approved Program Evaluation
The same partnerships that existed before are still in place

Q39

How would you rate the value of the Approved Program Evaluation?

Extremely valuable
Very valuable
Neither valuable nor not valuable
Not valuable

Q40

From the following list, please rank in order the **top 3 most important items** that you felt changed as a result of the Approved Program Evaluation Process

Make your selections based on a ranking of importance with the first item you select representing the most important and continuing to select in order for each of the three

#1 Most important

#2 Very Important

#3 Adequately important

From the following list, please rank in order the **top 3 least important items** that you felt changed as a result of the Approved Program Evaluation Process

Make your selections based on a ranking of importance with the first item you select representing the least important and continuing to select in order for each of the three

#1 Not important

#2 Even less important

#3 The least important item out of all choices

Selections for the **most important** and **least important** are chosen from the following list:

Academic courses offered to students
Academic standards within curriculum
Adequate resource materials
Admission policy
Articulation agreements with post-secondary schools
Certification of administrators
Certification of instructors
Classroom size
Competencies for each instructional program
Courseware updated
End of year assessments
Equipment similar to industry found within program areas

Equipment was upgraded
Guidance services
Instructional time for learning
Labor Market Data driving decisions
Local Advisory Committee Meetings
Instructional materials are current
Occupational Advisory Committee Meetings
Occupational objectives
Participation in clubs such as FFA & SkillsUSA
Planning between the CTC and member school districts
Safety procedures
Services for educationally disadvantaged students
Services for handicap students
Services for Limited English speaking students
Special Education Services
Stakeholder partnerships

APPENDIX C

IUP Email

Date

To Whom It May Concern:

The purpose of this pilot study is to identify and assess the changes that have occurred to approved programs within career and technical programs at schools across Pennsylvania as a result of the Approved Program Evaluation that was conducted by the Bureau of Career and Technical Education. Your participation in this study will assist in determining perceived changes to approved programs within your organization. The survey should take approximately 15 minutes to finish.

{INSTRUCTIONS}

Indiana University of Pennsylvania supports the practice of protection of human subjects participating in research. There are no known risks associated with this research. Please be aware that even if you agree to participate in this survey, you are free to withdraw at any time. Although your participation is solicited through email, it is strictly voluntary. This web-based survey should take about 15 minutes to complete. Your email address is the only identified through the online survey system that is being used to host this survey. The email address remains confidential and is never viewed, stored or maintained, or linked to your responses by myself as the researcher. All information obtained will be kept confidential and incorporated into group data. Please complete this online survey by (insert date). Your completion of survey by clicking on the provided link or copying the link into the URL bar of a browser implies consent.

If you have any questions or require additional information, please feel free to contact either of us as listed below.

If you choose not to participate, please disregard this email communication.

We appreciate your time and cooperation and look forward to you taking the time to complete this survey.

Sincerely,

R. Lynn Hummel Jr.
Doctoral Candidate
51 North Pine Street
Lewistown, PA 17044
(814) 577-9274

Dr. Robert Millward
(Pilot Advisor)
Indiana University of Pennsylvania
Professional Studies
136 Stouffer Hall
Indiana, PA 15705
(724) 357-4815

THIS RESEARCH PROJECT HAS BEEN APPROVED BY THE INDIANA
UNIVERSITY OF PENNSYLVANIA INSTITUTIONAL REVIEW BOARD FOR THE
PROTECTION OF HUMAN SUBJECTS (PHONE 724-357-7730)