

Victor C. X. Wang

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efinitive Readings in the History,
Philosophy, Practice and Theories
of Career and Technical Education



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The History of Career and Technical Education

Ernest W. Brewer

Abstract: This chapter examines the history of career and technical education in the United States beginning with its earliest forms in the 16th and 17th centuries and continuing on through present-day society. Chronologically formatted, the primary focus is on how the nation's domestic and international issues during each time period affected the development of vocational education, leading to major federal government legislation. Following a brief introduction of the subject, the background section will provide the reader with basic definitions of career and technical education as discussed by various authors, noting the changes of such definitions over the years. The main body of the chapter is divided into several sections based upon time periods. Each section will discuss national issues and major legislation reflecting changes in vocational education. Finally, the future of career and technical education will be examined, followed by a brief conclusion.

1.1 Introduction

Career and technical education programs have been around for hundreds of years in one form or another. Well before this nation was founded, fathers and mothers were passing on important survival skills to their children (Evans, 1971; Keller, 1948). The first forms of formal education of any type were reserved for religious teachings and groups (Keller, 1948). However, as the needs of the people changed, so did education. In this nation, vocational education began in the form of apprenticeships in an effort to ensure that various aspects of community work were efficiently and effectively completed (Barlow, 1974; Brewer, Campbell, & Petty, 2000; Keller). With the onset of the Industrial Revolution, apprenticeships were no longer capable of providing all of the necessary training to operate the new forms of machinery (Barlow). Since that time, technological changes and the nation's workforce needs have dictated the direction of vocational education in the United States.

This chapter will demonstrate the various changes that career and technical education has undergone over the years. It will provide background information on these types of programs, including the changes in definition that vocational education has undergone over time. Furthermore, it will specifically discuss how the issues and controversies related to the history of our nation have affected the status of vocational education, as well

as how federal legislation has attempted to solve some of these issues. Finally future trends for the field of career and technical education will be presented, followed by a brief conclusion.

1.2 Background

Over the years, vocational education has gone through many changes in meaning and scope. In general, vocational education is characterized by teaching a skill or skills to students that will be useful in the workplace. However, this explanation does not satisfactorily describe the dimensions of vocational education, especially in how it is used in today's society. A review of literature provides a wide variety of perspectives on the subject, as well as descriptions of vocational education as it has changed over time.

F. J. Keller, a notable historian on this subject, looked at vocational education in a unique way. Instead of simply describing a method of educating students, Keller believed that vocational education was actually a way of living one's life (Keller, 1948). He believed that vocational educators were charged not only with teaching specific skills, but also with teaching students how to live and act in the workplace and in society. He attributed the first form of vocational education, to monks, going as far back in history as the 7th century. Even before more structured forms of apprenticeships evolved, Keller claimed that monks were teaching each other the skills needed to conduct research and teach, along with necessary life lessons needed to live a productive life in the monastery (Keller, 1948).

Eventually, the greater society began to see the benefits of this type of teaching, and apprenticeships became the common standard of passing on vital work skills to others during the colonial period of our nation's history. Several authors have defined apprenticeships as forms of education where a master provides direct instruction of mastering a skill to a student, or apprentice (Barlow, 1974; Evans, 1971; Keller, 1948; Kneller, 1963; Miller, 1993). As discussed in future sections below, some masters expanded their teachings to include other basic educational components, such as reading and writing (Barlow, 1974; Kneller, 1963; Miller, 1993). Many apprenticeships, especially during this time period, also included room and board for the students (Barlow, 1974).

It was during the Industrial Revolution, beginning in the late 18th century, that apprenticeships became obsolete and the more contemporary forms of vocational education were founded (Barlow, 1974). Barlow (1974) attributes much of this change to two movements during the 19th century: the practical arts movement and the trade school movement. While these movements are discussed in more detail in future sections, the core concepts of such movements are important in understanding the early definitions of vocational education. The practical arts movement provided skill-based learning by developing unique curriculum, such as domestic science and agriculture courses (Barlow, 1974). However, this movement also continued to stress the importance of general education. The trade school movement, in contrast, focused specifically on teaching a trade in a more

formalized way than apprenticeships had been able to do (Barlow, 1974). Thus began the debate as to how much general education should be included in vocational education.

Throughout the 20th century, the definition and scope of vocational education continued to adjust based upon the workforce needs of the nation. During wartimes, it appeared that vocational education focused less on general education courses and more on skill development. This was due in part to the fact that many men were overseas, and their jobs needed to be quickly filled by new employees (ACTE, 2002; Thompson, 1973). In addition, the government needed a variety of war materials developed in large amounts at a fast pace (Thompson, 1973). Technology has been another driving force that has changed the nature of vocational education. With the advent of modern computers and machinery, new skills have had to be taught in order for employees to remain competitive in the workplace (Calhoun & Finch, 1976). Often, these new skills require more knowledge in the areas of math and science, thus putting the pressure back on the programs to provide adequate general education in addition to skill development (ACTE, 2002; Thompson, 1973). It was during the latter part of this century that Congress defined vocational education as the process of preparing students for employment through instruction by providing skill-based learning. In addition, Congress specified that vocational programs were designed for individuals not interested in careers that required traditional four-year college degrees or higher (Brewer et al., 2000). In 1990, the Carl D. Perkins Act added that such classes should include a variety of academic and work skills, not merely the specific skills required to perform a job function (Brewer et al., 2000).

As our nation entered the 21st century, technological advancements have continued to shape the nature of vocational education programs. So many fields have become dependent on computer technology, ranging from auto mechanics to various medical fields. The types of courses involved in vocational education are constantly changing and adapting to the nation's needs, and the debate continues as to what actually constitutes a vocational education course in some cases. Advanced math and science courses are becoming more vital to our nation's workforce. Technology continues to propel our nation forward, and therefore, the definition, nature, and scope of vocational education will need to adapt in order to prepare students adequately for a technologically-based workforce.

1.3 The History of Vocational Education

Although the meaning of vocational education has become more complex, the idea of such education can be found throughout history. Before schools and programs of education were even ideas, generations of families were self-sustained by teaching sons and daughters skills to help the family survive (Evans, 1971; Keller, 1948). Examples of such teachings ranged from mothers showing daughters how to gather and prepare food to fathers teaching their sons how to hunt. In early history, even basic medical needs were often taken care of within the family. As society advanced, family members passed on newer and more efficient ways of completing such tasks. Eventually, however, society's ad-

vancements surpassed the family's ability to provide for itself, giving way for the need for families to find assistance outside of the home (Evans, 1971). These and future advancements paved the way for the field of vocational education. This section provides a chronological glimpse at how various stages of our nation's history has shaped the field of career and technical education. The first subsection discusses trends, issues, and problems as related to vocational education, and the remaining subsections add to this a discussion of relevant federal legislation regarding vocational education that attempted to solve such problems and issues.

1.3.1 16th and 17th Centuries

During the 16th and 17th centuries, before America was established as a nation, vocational education was informal at best. Kneller (1963) discusses the impact of the Puritans on education. In the early 1700s, Puritans believed that every person was destined to perform a specific duty, and those that performed that duty to the best of their ability would be rewarded by God. While they did not believe that people should attempt to rise up into other classes of society, this concept of mastering a skill is essential to the field of vocational education even today. The Puritans also impacted education through a "compulsory educational system" (p. 6), and they further required all persons to be involved in "some sort of productive work" (p. 7). Despite such early efforts, our nation did not adapt the idea of compulsory education until the 20th century. Although Puritanism failed in the end, some of the key points can still be found in modern day education.

During these centuries, very few people had the opportunity to take part in a formalized educational program of any type, much less vocational education. As noted in the Puritan system, education was often associated with religion, and more formal education other than the basic reading and writing was reserved for religious leaders. For centuries, monasteries were some of the earliest forms of sophisticated vocational education (Keller, 1948). As noted by Keller, "life was the profession, a most effective kind of professional education" (p. 37). Inside these monasteries, monks learned the basics of reading and writing, and such skills were then passed on to other monks. These skills were essential for the written research and duplication of books that were developed inside the monasteries. According to Keller, it was during the 16th and 17th centuries that monasteries truly became teaching schools that benefited society through their written and scholarly works. The internal teachings that occurred within the monasteries applied both classical and vocational methods of instruction, similar to modern vocational programs.

1.3.2 Apprenticeships in Colonial America

1.3.2.1 National Issues

Apprenticeships were one of the earliest forms of formal training for the general population (Brewer et al., 2000). Typical apprenticeships required the master to teach a trade or skill to the apprentice, while also often providing the student with basic needs, and in return, the student worked and produced for the trainer (Barlow, 1974, 1976; Evans, 1971;

Keller, 1948; Miller, 1993). Barlow (1974) suggested that “apprenticeships provided for five basic elements: (a) food, clothing, and shelter; (b) learning to read and write; (c) religious instruction; (d) instruction in the trade; and, (e) secrets of the trade (related science and mathematics)” (p. 16). Barlow also discussed voluntary versus involuntary apprenticeships. Voluntary apprenticeships allowed the apprentices to decide which type of occupation they wished to undertake, while apprentices in involuntary apprenticeships were simply placed with a particular tradesman. Typically, involuntary apprentices were those who did not have caregivers.

Barlow (1974) also demonstrated that early apprenticeships affected modern day vocational education in three ways. First, apprentices learned not only the skill for the specific trade they were involved in, but also many other educational concepts. This intertwining of vocational and general education could be found throughout history and is important in present-day programs. The next important lesson learned from apprenticeships is that “most occupations could be taught in school. It was entirely possible in the school environment to provide the basic instruction necessary for a person to enter an occupation” (p. 16). Apprenticeships could be seen as an example of modern vocational coop programs that many high school and postsecondary schools offer. The final concept that Barlow focuses on is that vocational education applied to all persons. Barlow’s intention behind this concept is that vocational education should not only be for children. Instead, it can extend throughout a person’s existence, from early schooling on through adulthood. In addition, this concept can also be interpreted to mean that vocational education is not for one class of people; all people can participate in such programs.

1.3.2.2 Important Legislation

At this point in American History, the American colonies were not united and were still under the control of Great Britain. However, one colony, the Massachusetts Bay Colony, did successfully pass a law regarding apprenticeships (Miller, 1993). In 1642, a “comprehensive apprenticeship law” was passed that forced families and apprenticeship masters to ensure that children were learning not only a specific trade, but also about the colony’s laws and religious views (p. 4). This law stressed the importance of combining both technical skill and general education to ensure that all students would be productive members of society, and these two issues continue to be an important part of modern-day vocational education programs.

1.3.3 19th Century America

1.3.3.1 National Issues

At the turn of the 19th century, America began to undergo significant changes that forever changed the way the nation would prepare for work. It was during this time that Americans moved from an agrarian, farm-based society to one of factories and machines, and eventually people moved to the cities to find work (Brewer et al., 2000; Evans, 1971; Miller, 1993). Referred to as the Industrial Revolution, this period in our nation’s history

marked an increase in technology and efficiency in many occupations. This was the era of mass production, and machines replaced individual craftsmen efforts (Miller, 1993; Thompson, 1973). New technology and new skills meant that people had to learn to effectively use such devices, and schools and training programs began to replace apprenticeships (Barlow, 1974). Schools began to include “practical arts” in addition to the traditional education curriculum. The practical arts courses resembled basic life skills courses that students could use in their home and community (Barlow).

During the latter part of the 19th century, trade schools also became prevalent. Much more sophisticated than the practical arts courses offered in regular schools, the trade schools more closely resembled vocational education programs. Barlow (1974) described three types of trade schools: “(a) schools that provided trade instruction only; (b) schools that provided trade instruction and general instruction—reading, writing, arithmetic and citizenship; and (c) schools that provided residential facilities for youth” (p. 18). Barlow further explained the impact of such schools on contemporary vocational education by stating again that almost any trade can be taught in school (p. 18), and the nation as a whole benefits from such training.

1.3.3.2 Important Legislation

By the middle of the 19th century, the federal government realized that legislation must be passed in order to provide adequate training and help to develop a competent workforce. At first, the idea of government supported education, referred to as common schools, was met with opposition from some groups (Kneller, 1963). As noted by Kneller, up until this point, religion was a major focus of education, and many educational programs were funded through religious organizations. These groups were wary of the government-funded common schools for two reasons. First, some religious groups thought that one type of religion would become the primary religion for such schools, leading to abandonment of other religions. Second, religious leaders were also skeptical of the common schools because they feared that religion would be exempted from the curriculum all together. Kneller also points out that the lower classes were displeased about the common school movement because they did not believe it should apply to them. Despite these issues, the first piece of legislation passed by the government to promote vocational education was passed during this time period.

MORRILL ACT. In 1862, the Morrill Act was passed by the federal government, essentially marking the beginning of land grant colleges. The Act provided land to the states, and the states used the income from the sale of such land to develop agricultural and mechanical arts colleges (Barlow, 1976; Brewer & Achilles, 2008; Calhoun & Finch, 1976; Hawkins, Prosser, & Wright, 1966; Miller, 1993). This marked the “first legislation passed by the national government to support vocational education” (Brewer & Achilles; Calhoun & Finch, p. 34). This Act was reinforced by the Second Morrill Act of 1890, which essentially provided additional money to support the colleges (Calhoun & Finch; Hawkins et al.).

HATCH ACT. In 1887, the Hatch Act provided funding for states to develop agricultural experiment stations “to provide help to farmers and to upgrade the nation’s agricul-

tural methods” (Calhoun & Finch, 1976, p. 34). Another objective of this Act was to disseminate information regarding agriculture to the nation at large (Hawkins et al., 1966). As noted by Hawkins et al. (1966), this Act has been referred to as the Experimental Stations Act. Funding was later increased by means of the Adams Act of 1906 (Hawkins et al., 1966).

1.3.4 Early to Middle 20th Century America

1.3.4.1 National Issues

By the early 20th century, it became obvious to state and national leaders that the nation needed to focus on education. Calhoun and Finch (1976) describe this period as one of “rapid economic and industrial development . . . characterized as a period of conflict in the beliefs of the American people” (p. 32). Americans were torn between wanting freedom from government intervention and wanting the government to take the lead in providing quality education for all citizens (Calhoun & Finch). At this point in history, secondary educational programs were available but not mandatory, and post-secondary educational programs were for the academic elite and were not geared toward vocational education (Barlow, 1976). The majority of students were not motivated to remain in school, and thus they were not learning necessary skills required to be successful in the work industrial work environment (Calhoun & Finch). Even the Agricultural and Mechanical colleges previously established by the Morrill Land Grant Act began to incorporate substantial general educational components, limiting vocational education curriculum (Barlow, 1974). Ironically, many vocational education programs were aimed working with social deviates and known as reform schools (Keller, 1948). The failure of schools to properly educate and train people to perform in the workplace led to a substantially underproductive society (Calhoun & Finch).

In 1906, the National Society for the Promotion of Industrial Education was created to essentially rediscover and revisit the idea of vocational education (Barlow, 1974). In 1914, this group successfully encouraged the federal government to establish the Commission on Vocational Education, whose main purpose was to provide an extensive report on the status of vocational education (Hawkins et al., 1966). This group changed its name over the years and in 1926 became what is now known as the American Vocational Association (AVA) (ACTE, 2002; Barlow, 1976). It was this group of individuals, including the noteworthy “father of vocational education” Dr. Charles A. Prosser, that was responsible for much of the legislation that was passed during the beginning of the 20th century, as discussed in following subsection (Barlow, 1976).

As discussed by Thompson (1973), wars also forced the federal government to take a look at the state of vocational education in the nation. During World War I, the government required trained and skilled craftsmen to supply the military with appropriate equipment, “trained mechanics, technicians, and highly experience supervisory forces would be needed in addition to troops” to fight this “mechanical war” (p. 32). Furthermore, with so many men serving their country in the war effort, factories at home needed skilled

replacement workers (Brewer et al., 2000; Thompson, 1973). The solution was to provide short, intensive courses to workers in order to teach them a skill both quickly and efficiently. In addition, the nation turned to women to fill the spots left open by men who had left for the war. This war had a huge impact on vocational education, opening the eyes of both the government and the American people to the importance of skilled workers (Thompson).

The 1930s brought new challenges for the nation as unemployment rates rose to new heights. The Great Depression not only affected the adult population, but the youth population also suffered tremendously as adults took over jobs once held by them (Evans, 1971). Employers would rather have adults with some work experience working for them than youth who were untrained and lacked experience (Evans). It was also during this time period that the federal government recognized the need for youth programs, as noted in the following subsection regarding legislation. It was during the 1930s that vocational education and training truly made a difference in preparing the nation's youth and adult population for the workforce (ACTE, 2002).

World War II once again brought to light the nation's need for proper vocational education (Brewer et al., 2000, Thompson, 1973). However, by this time, many vocational education programs had been in existence due to the efforts of vocational education commissions and legislation. Instead of needing to create new programs, the federal government was pushed to expand current programs and increase appropriations. Two major training programs were developed to address the rising vocational needs during World War II: Vocational Training for War Production Workers (VTWPW) and Vocational Educational for National Defense (VEND) (Thompson, 1973).

It was also during World War II that women became essential in factories and industries while the men were off fighting in the war (ACTE, 2002). Despite their efforts, there were many people, men especially, who did not necessarily approve of women working in the plants and factories. As noted by ACTE, "some Congressmen saw it as the death knell for the American home if women went to work in factories. Some men feared for their own jobs, and others believed that women simply did not have the mechanical ability required for the tasks" (p. 28). Women proved the pessimists wrong, and "by April 1943, 741,322 women were enrolled in training programs" (p. 29). With women becoming prevalent in the workforce, vocational education programs had to adapt.

While jobs were plentiful during the war, it was in its aftermath that the nation faced a tremendous challenge. All of the men returning from service would need both training and employment in the workforce (ACTE, 2002). This meant that vocational education programs would require more funding and more trained instructors in order to meet the needs of the thousands of veterans returning from war. In order to achieve these ends, the federal government would have to supply additional funding through legislation (ACTE).

1.3.4.2 Federal Legislation

During the first half of the 20th century, the federal government realized the importance of funding vocational programs to increase the productivity of the nation's citizens. It was

during this time period that several key pieces of legislation were passed by congress, and in turn, vocational programs became strong entities in the world of education in this country. These particular pieces of legislation laid the foundation for many more government-funded vocational education programs in the future.

SMITH-HUGHES ACT OF 1917. After tremendous lobbying by the vocational education supporters in the states, as well as huge efforts from the Commission on National Aid to Vocational Education and the National Society for the Promotion of Industrial Education, the federal government passed the Smith-Hughes Act of 1917 (Calhoun & Finch, 1976; Hawkins et al., 1966). Also known as the Vocational Education Act of 1917, this Act provided funding to the states to support vocational education in secondary schools (Calhoun & Finch; Hawkins et al.). Specifically, this Act allotted funds to develop secondary school programs in agriculture, trade and industry, and home economics, as well as to train instructors to teach such subjects (Calhoun & Finch). The Act further required the state's to submit detailed plans, including plans to evaluate the efficiency of such programs on a regular basis. As noted by Calhoun and Finch, "this example of the federal government's concern of the preparation of the nation's young people for productive adulthood established another precedent for future generations to follow" (p. 36).

FESS-KENYON ACT OF 1920. This Act provided funding for the "vocational rehabilitation of industry-disabled persons" (Calhoun & Finch, 1976, p. 41). This Act has also been referred to as the Industrial Rehabilitation Act, and further funding authorizations were made through subsequent acts and amendments (Calhoun & Finch). Because of this act, many disabled persons are able to take part in our nation's workforce.

GEORGE-REED ACT OF 1929. A decade after passing the Smith-Hughes Act, vocational education leaders lobbied for additional funds to support home economics and agricultural programs. This Act provided funds for such purposes, but only through 1934 (Calhoun & Finch, 1976; Hawkins et al., 1966). Because of this constraint, additional legislation would need to be passed in order for vocational education programs to receive funding.

GEORGE-ELLZEY ACT OF 1934. The Act was another extension of the original Smith-Hughes Act, and it provided additional funding following the close of the authorization period set forth by the George-Reed Act of 1929 (Calhoun & Finch, 1976; Hawkins et al., 1966). In addition, the Act included appropriations for trade and industry programs. As with the George-Reed Act of 1929, funding was time-limited and not authorized past 1937 (Calhoun & Finch).

GEORGE-DEEN ACT OF 1936. This Act continued the funding for the vocational education programs mentioned in the George-Ellzey Act of 1934. In addition, this Act provided funding for programs in U.S. territories, thus extending vocational education programs into a larger geographic area. In addition, this Act provided additional funding for the training of instructors (Calhoun & Finch, 1976; Hawkins et al., 1966).

SERVICEMEN'S READJUSTMENT ACT OF 1944. What is more commonly referred to now as the G. I. Bill, this Act provided funding to help the soldiers following their service during World War II. Based upon the number of years of service, veterans

were given the opportunity to receive education and training in any field of interest. Many veterans over the years have taken, and continue to take, advantage of the services and funding provided by this Act (Calhoun & Finch, 1976).

GEORGE-BARDEN ACT OF 1946. While this Act provided additional funding following the close of the authorization period of the George-Deen Act, it also expanded the scope of the previous acts. This Act provided the states with the authority to determine how the funds are spent for vocational programs, including training programs for teachers and salaries for program administrators (Calhoun & Finch, 1976; Hawkins et al., 1966). Unlike the Smith-Hughes Act, this Act allows the states to purchase equipment needed to carry out the vocational programs (Hawkins et al.).

1.4 Other Federal Activities Assisting Vocational Education

During the first half of the 20th century, the federal government has tremendously expanded its role in preparing its citizens for the world of work. In 1935, the National Youth Administration was created to assist youths who wished to enter the workforce (Calhoun & Finch, 1976). Beginning in 1933, the Civilian Conservation Corps helped “unemployed young men obtain work” (Calhoun & Finch, p. 42). Finally, the creation of the National Science Foundation supported research and education primarily in the mathematical, physical, engineering, biological, and medical sciences (Calhoun & Finch).

1.4.1 Latter 20th Century America

1.4.1.1 National Issues

The beginning of the second half of the 20th century could be characterized by restlessness and chaos as our nation entered the Korean War in the 1950s and the Vietnam War in the 1960s. Once again, the nation was faced with the need to produce war materials and to fill the employment gaps left when the soldiers went off to fight. It became necessary for youth and women to take on more employment roles in the workforce. Due to the nature of the Vietnam War and much of the nation’s reaction, many soldiers returned to the country physically and mentally disabled, and they were often unprepared for the workforce (Thompson, 1973). As noted by Thompson (1973), these wars forced the federal government to again focus on vocational programs.

In addition to these actual wars, the cold war began during the 1950s between the U.S. and Russia. Russia was beginning to assert itself by improving “production in order to become a competitor in the world marketplace” (ACTE, 2002, p. 31). The U.S. government and its citizens were scared that Russia would soon surpass the U.S. in production of international goods and services. The American Vocational Association (AVA) took the lead in planning against this possibility, and it was the AVA’s efforts that encouraged the federal government to reevaluate vocational education at this time (ACTE).

The second half of the 20th century was also marked by tremendous technological ad-

vancements, ranging from assembly lines to computer engineering at the end of the century. Although automation had begun earlier in the century, it was not until the 1950s that its full impact was evident (Thompson, 1973). While automatic machines and assembly lines replaced many hands-on worker, it required that new workers be trained to operate such machines. According to Thompson, "this era produced a number of changes in work and its significance to man. It raised the level of preparation needed by workers, which resulted in more demands for vocational and technical education" (p. 50). The 1960s presented new challenges as our nation, amongst others, began to look towards the sky. In order to be truly marketable in the area of space exploration, the U.S. needed to advance the nations technological skills tremendously (ACTE, 2002). Technology continued to have a huge impact on vocational education, as well as education in general. Several pieces of legislation were passed during this time period to address the changing needs of nation as they related to vocational education. It was no longer possible to simply teach specific skills. General education and career development became key aspects of vocational programming.

Technology continued to become more complex over the years on a massive scale, requiring the need for more education and training in order for employees to remain marketable in such a society (Thompson, 1973). During the 1980s, the first personal computers became available, marking the beginning of a new era in our nation and the world of technology (ACTE, 2002). At the same time, reports such as *A Nation at Risk* showed that schools were failing to adequately teach students the basic academic subjects, essential for living in a technologically-based society (ACTE). Once again, the federal government was forced to revisit education and training programs, and during the 1990s, the federal government passed a series of acts presented by Carl D. Perkins in the 1990s. These Acts were an effort to bring the nation's workforce up to par with the complex world of technology (ACTE; Wonacott, 2003).

1.4.1.2 Federal Legislation

The latter half of the 20th century in the United States was met with huge changes in workforce development and production. The large-scale wars left our nation wanting for workers and materials to support the military, as well as to keep domestic production up to standards. Sweeping technological advancements in both this country and amongst other world powers required major changes in vocational education in order for the United States to remain competitive. Because of these issues, the federal government was compelled to revisit vocational education legislation once again.

MANPOWER DEVELOPMENT AND TRAINING ACT OF 1962. Due to the increase in unemployment in the nation, the federal government sought to train adult workers so that they would have usable skills in the nation's workforce. This Act brought vocational education and training to the job market through state-based vocational agencies (Calhoun & Finch, 1976; Hawkins et al., 1966). Specifically, "training is provided by a project method requiring federal approval for each project" (Hawkins et al., p. 113).

VOCATIONAL EDUCATION ACT OF 1963. Hawkins et al. (1966) assert that this

particular Act actually supplemented the original Smith-Hughes Act and the George-Barden Act. More flexible than prior legislation, this Act substantially increased funding for vocational education and broadened the scopes of the original acts (Calhoun & Finch, 1976; Hawkins et al.). Under this Act, vocational education included business occupations and nursing, and it focused major efforts on secondary school vocational education. It also specified that funds could be used for those young people who had either graduated or dropped out of high school, as well as for disadvantaged and disabled populations (Calhoun & Finch). As with prior legislation, the Act required states to submit a plan for use of funds, as well as to continuously evaluate the use of such funds.

ECONOMIC OPPORTUNITY ACT OF 1964. Essentially, this Act aimed at helping those individuals living in poverty-stricken areas of the country (Hawkins et al., 1966). Under this Act, several programs were created to serve such populations, many of which have been successful over the years. The Job Corps assisted youth by providing housing for youth and young adults while they train in specially designed Job Corps centers. Work-Training Programs also provided jobs for youth; these jobs were typically under the supervision of community or government-funded programs. Work-Study Programs assisted students in postsecondary education programs by allowing them to work for their postsecondary institution. The Act provided for Adult Basic Education Programs that taught basic reading and writing skills to adults. It also created A Program to Assist Migrant and Seasonally Employed Agricultural Employees by providing funding to state and agencies to work with such populations. Finally, Work-Experience Programs were aimed at training "persons who are unable to support or care for themselves or their families" (Hawkins et al., 1966, p. 114).

VOCATIONAL EDUCATION AMENDMENTS OF 1968. Through these amendments, the federal government increased the seats on the National Advisory Council and required that members be appointed directly by the president (Calhoun & Finch, 1976). According to Calhoun and Finch, the council has issued numerous reports dealing with

- (a) the national attitude toward vocational education as a system designed for someone else's child;
- (b) the approach of federal funding to reduce the flow of untrained manpower into the pool of unemployment;
- (c) employment as an integral part of education;
- (d) the problems involved in local support, state plans, the lack of federal initiative, and the need for effective national planning for vocational education;
- (e) those forces that appeared to prevent the adoption of some of the recommendations of the first four reports;
- (f) counseling and guidance and what must be done to provide sound counseling systems;
- (g) vocational student organizations and their role in vocational and career education;
- and (h) a national policy on career education. (p. 47)

These amendments further required states to submit more detailed plans of action for usage of funds. In addition, a major component of the amendments was to help students

stay in school and successfully transition to the workplace following graduation. Through these amendments, the federal government provided assistance with defining vocational education courses and for developing adequate curriculum. Provisions were made for vocational education instructors to receive additional schooling, and the amendments encouraged vocational education program personnel to work closely with area businesses and industries in order to provide further training for instructors (Calhoun & Finch, 1976).

ELEMENTARY AND SECONDARY EDUCATION ACT OF 1965. While not specifically dealing with vocational education, this Act aimed to improve learning conditions across the nation for those students who were living in poverty. To do so, the Act called for increase in quality of vocational equipment, classrooms, and teaching for all students (Calhoun & Finch, 1976).

EDUCATION AMENDMENTS OF 1972. The federal government realized that vocational counseling needed to start earlier in education, thus amending earlier legislation to include programs to provide such counseling beginning in elementary school. Further, the amendments called for such vocational counseling to continue not only through high school but also through post-secondary school as well. These amendments created the Bureau of Occupational and Adult Education, and they also expanded the definition of vocational education once again. These amendments also brought consumer education to the forefront (Calhoun & Finch, 1976).

EDUCATION AMENDMENTS OF 1974. These amendments further strengthened the previous amendments in the area of career education. It was no longer enough for students to graduate with a degree and basic skills. With these amendments, educators were charged with the job to ensure that all students who were graduating from high school were prepared to enter into a career that met the students' needs, goals, and abilities. Additionally, it created the Office of Career Education (Calhoun & Finch, 1976).

EDUCATION AMENDMENTS OF 1976. As noted above, the GAO reported on the biases and inadequacies found in vocational education programs. These findings prompted the federal government to pass the 1976 amendments, with primary focus on program evaluation. Unfortunately, the National Assessment of Vocational Education (NAVE) found that the legislation had not been successfully implemented. According to Hayward and Benson (1993), the funding was used inappropriately and ineffectively. Instead of aiding the disadvantaged students, the amendments served to "segregate such persons into training for dead-end occupations" (p. 13). Finally, there were limited efforts towards eliminating sexual discrimination against women (Hayward and Benson, 1993).

CARL D. PERKINS VOCATIONAL EDUCATION AND APPLIED TECHNOLOGY ACT OF 1984. This Act sought to regain credibility for vocational education in two ways. First, focusing on the need for the nation to improve its workforce productivity, it called for major improvements in the quality of vocational education programs. Secondly, the Act sought to address needs of students who have previously been denied proper vocational education services and to correct such wrongdoings (ACTE, 2002; Hayward & Benson, 1993; Wonacott, 2003).

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EDUCATION ACT OF 1990 (PERKINS II). Perkins II provided additional directives from the federal government to vocational programs regarding implementation. The focus of this Act was to improve not only vocational components but also to increase academic components in vocational education programs in the effort to meet the needs of increasing technology. This Act reinforced the idea that in order to meet such demands, students needed to continue education past high school on into postsecondary programs, and it was the job of the vocational programs to encourage and support this (ACTE, 2002; Wonacott, 2003).

NATIONAL SCHOOL-TO-WORK OPPORTUNITIES ACT (NSTWOA) OF 1994. Feeding off of the funds from prior legislation, this Act sought to “address the nation’s serious skills shortage through partnerships between educators and employers” (ACTE, 2002). These partnerships developed into learning opportunities for students while still participating in secondary school. Most school-to-work programs were designed to allow vocational education students to attend regular classes for part of the day, and the remainder of the school day was spent interning in a business or industry (ACTE).

CARL D. PERKINS VOCATIONAL EDUCATION AND APPLIED TECHNOLOGY EDUCATION ACT OF 1998 (PERKINS III). Perkins III continued the basic ideas of Perkins I and II, requiring improvements in vocational programs to meet the needs of the nation in the midst of increased technology. As with the prior legislation, vocational education programs were again asked to pair strong academic components with vocational and technical components in an effort to create success in both secondary and postsecondary programs. Again, vocational programs were also asked to work with disadvantaged and other special populations. In addition, this Act required states to provide performance data regarding student aptitude, secondary education completion, postsecondary or military service completion, and other forms of job training program completion (ACTE, 2002; Wonacott, 2003).

1.5 Future Trends

As noted from our nation’s history, technology is fluid, constantly changing and progressing. With so many technological advancements, vocational education must adapt to such changes in order to be considered essential in our society. Vocational program educators and administrators are responsible for updating themselves and their students on current methods and skills required by a modern workforce. While modern machines and computers may have replaced some vocational workers, new skills can be learned to run those machines and computers. Such skills must be taught in schools and technical education programs (Calhoun & Finch, 1976).

Another important issue to consider is that general education requirements, as well as occupational preparedness, should continue to be included and may need to be increased in order for a vocational student to truly be successful (ACTE, 2002; Calhoun & Finch, 1976). It is already apparent in our nation’s society that advanced mathematics and sci-

ence courses are mandatory educational fields necessary to keep up with the ever-changing world of technology (ACTE, 2002; Wonacott, 2003). It is no longer relevant to simply teach single skills to students and expect that they will be able to survive in society that our nation has created (Wonacott). Vocational programs must continue to provide strong career guidance to students, as well as onsite learning opportunities through internships and partnerships with businesses and industries. It will be through these efforts that vocational education students will truly be successful in their transition from school to the workplace.

A final lesson learned from the history of vocational education is the power of groups. Without the work of groups such as the National Society for Vocational Education, the American Vocational Association, and the current Association for Career and Technical Education, the federal government would not have passed the tremendous amount of legislation that has brought vocational education to where it is today. These groups were also responsible for changing the curriculum and programming aspects of vocational education in order to keep our nation updated with technologically-skilled individuals. Such groups will be assets as vocational education continues in the future (ACTE, 2002).

1.6 Conclusion

Vocational education has gone through many changes since its inception, beginning as informal lessons to becoming the formal instruction that it is today. The definition, scope, and audience of vocational education in the past, present, and future fluctuate based upon national and international issues and events. When the nation has required a skillful, competent workforce, vocational education has successfully trained new workers to meet those needs. This will no doubt continue into the future. In addition to training and educating new students, vocational education programs must also focus on retraining and updating existing workers so that they do not become obsolete. Because the nature of our nation's needs is constantly changing, it is imperative for vocational education programs to be abreast of new technologies and skills needed to successfully compete in the international market.

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