Chapter 12
Challenges and Opportunities in Career and Technical Education

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ABSTRACT

Career and Technical Education (CTE) is no longer just a training program for workers. CTE today prepares students for employment, industry credentialing, postsecondary education, and lifelong learning. This change, stimulated by demand and federal legislation, has brought many new challenges and opportunities for CTE. Federal legislation, CTE image, and decrease in secondary enrollment and in teacher education programs have created challenges and opportunities for all CTE stakeholders. In 2008, a National Career and Technical Education Research Agenda were approved by the Association of Career and Technical Education (ACTE). This agenda will be the framework for future research relating to the critical issues and concerns in CTE. This chapter addresses the challenges and opportunities for CTE as well as future trends.

12.1 INTRODUCTION

Federal support for Career and Technical Education (CTE), previously called Vocational Education, began with the Smith-Hughes Vocational Act of 1917. Historically, CTE provided job-specific training to non-college bound students. Today, required work skills include problem-solving, reasoning, flexibility, interpersonal skills, and technological skills. These skills cannot be obtained by simple job-specific training. In addition to cognitive skills, many jobs require postsecondary education (Rojewski, 2002). As CTE has strong ties to the workforce, changes in employer demands, economic conditions, educational philosophies, and funding support, have tremendously impacted even the definition and name of the field. The most recent reauthorization of the Carl D. Perkins Career and Technical Education Act of 2006 defines CTE as:

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Organized educational activities that offer a sequence of courses that provides individuals with coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in current or emerging professions; provides technical skills proficiency, an industry-recognized credential, a certificate, or an associate degree; and may include prerequisite courses that meet the requirements of this subparagraph; and include competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of an industry, including entrepreneurship, of an individual. (p. 4)

Unlike some academic areas, CTE must be in a constant state of change to serve all the stakeholders. Changes in labor market should drive constant and ongoing change in CTE. Attention must be paid to changes in the labor market and career-focused education must be redefined in response to emerging trends (Kazis, 2005). Abel (2006) discusses the book, *The Jobs Revolution: Changing How America Works*, and states that students should be equipped with concepts that relate to all problems, rather than specific job related problems. Just as we have witnessed tremendous changes in the labor market since 1917, so have we experienced tremendous changes in CTE. These changes provide new challenges and opportunities for CTE.

The purpose of this chapter is to address the challenges facing CTE, as well as the opportunities that may thrive from the challenges. This chapter is organized using the following sections: background, challenges and opportunities, future trends, and a conclusion. The challenges include meeting the requirements of legislation, CTE image, and decline of CTE enrollment and teacher education.

12.2 BACKGROUND

Early in the history of CTE, there was a need to prepare additional blue-collar workers for the nation's farms and factories (Lynch, 2000). Today there are CTE academies that are viewed as a passage way to Ivy League schools. These academies may offer programs such as science and technology, engineering, medicine, business, telecommunications and computer science, culinary and hotel administration, and the arts (Hu, 2009). The years from 1982-1994 reflected a steep decline in CTE programs and enrollment. Programs were not viewed as meeting the needs of the students, employers, and communities. In addition, CTE programs were not considered an option for the college-bound students and the curriculum was judged as being weak. There was a perception that CTE would inhibit rather than enhance a student's future (Catri, 1998). The goal of CTE today is to prepare students for employment, industry credentialing, postsecondary education, and lifelong learning.

Bill Gates said the following on March 9, 2007 at a U.S. Senate Committee Hearing:

Our current expectations for what our students should learn in school were set fifty years ago to meet the needs of an economy based on manufacturing and agriculture. We now have an economy based on knowledge and technology. Despite the best efforts of many committed educators and administrators, our high schools have simply failed to adapt to this change. As any parent knows, however, our children have not—they are fully immersed in digital culture. As a result, while most students enter high school wanting to succeed, too many end up bored, unchallenged and disengaged from the high school curriculum—'digital natives' caught up in an industrial-age learning model. Many high school students today either drop out or simply try to get by. For those who graduate, many lack the skills they need to attend college or to find a job that can support a family. Until