Chapter 13
Technical and Vocational Education and Training:
Thriving in Challenging Times

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ABSTRACT

Today, no issue is as important to a global community’s continued prosperity as education. Research has illustrated those societies who invest in a 21st century education benefits immediately by transforming an outdated system to a more sustainable approach. As the primary consumer of the world’s education system, the business community needs capable, enterprising employees to compete in a global economy. Technical and Vocational Education and Training (TVET) educators worldwide must develop challenging and relevant learning environments to prepare the future workforce of tomorrow. This strategy must incorporate workforce and economic development policies in K-12 education to be sustainable. The intent of this paper is to highlight challenges that are facing the future of the global workforce and provide guidance for a more sustainable TVET system. Twenty first century pedagogy and employability skills, universally accepted certifications, public-private partnerships, and program outcomes which have the potential to significantly increase a workforce prepared to thrive in rapidly changing times will be emphasized.

INTRODUCTION

The knowledge, skills and belief systems of vocational education have been transmitted from one generation to another since humankind. This discipline evolved over the centuries as the demands have changed in the societies it serves. According to Anderson (2009) the field of technical and vocational education and training (TVET) emerged during the industrial revolution in Europe and North America as part of a philosophy of “productivism” where efficiency and profit were key components of the educational...
framework. TVET eventually was perceived to be integral to the labor planning process by providing the necessary human capital required by industry demands. By early 1900’s economic developments had major influences on the content and the curricular at the secondary and postsecondary levels.

Over the years, TVET has been called a variety of different names-apprenticeship training, vocational education, industrial education, technical education, technical/vocational education (TVE), occupational training (OT), vocational education and training (VET), career and technical education (CTE), etc. The term used varies depending on the geographic location. Continuing vocational education and training (CVET) or lifelong learning is a core concept that is more important today than ever before in the field. Additionally, there are several dimensions that can be used to describe vocational education and training (company-based, apprenticeships, and school-based.)

The association is an international network of 199 countries and 280 organizations all focused on promoting learning for the world of work. TVET plays important roles in (1) providing the skill sets required by enterprises and across national economies; (2) supporting pathways into employment for young people; (3) strengthening mobility between occupations for experienced workers; and (4) supporting the development of new skills and assisting workers to be prepared to change or progress in their occupations/careers (Paryono, 2013).

Economic change has been occurring rapidly over the past three decades impacting all societies. The new economy emerging around the world is often referred to as globalization. Understanding globalization and the effect it will have on TVET globally is of critical importance for all societies. The article “Preparing the Workforce for Tomorrow” by Jay Rojewski (2002) identified core characteristics of globalization.

- Technology is advancing the level of growth in productivity causing manufacturers to be in a continual production mode. The new emerging system is shifting away from high-volume mass production to high-value production, and from standardization to customization.
- The globalization of business markets has seen substantial increases in competition for labor and goods. Competition is especially keen for highly skilled workers who possess innovative and creative methods for producing new products and services, or promoting and marketing these new goods and services to consumers (Reich, 2000).
- Handling information will continue to increase in importance in this new economy. Workers now will be required to manipulate data and provide customized services.
- Business management practices are continually undergoing restructuring and now there is a premium placed on managing knowledge as opposed to people. Job functions will converge and new work teams will now be created consisting of individuals who alternate expert, brokering, and leadership roles. Rewards will be based on performance of teams and networks (Kerka, 1993).
- Fierce competition will affect for-profit and not-for-profit businesses, resulting in continuous pressure to be innovative. Restructuring will occur frequently in order to achieve the greatest efficiency and productivity.

The term “knowledge-based economy” results from the recognition of the role knowledge and technology have in economic growth. Knowledge, as embodied in human beings (as “human capital”) and in technology, has always been central to economic development. As the momentum of change increased over the years, both concepts have grown markedly more important and central to economic development in the 21st century. Employment and output in the high-technology industries, such as computers,