

Preface

Career and technical education (CTE) is for all practical purposes education for work, impacting education in agriculture, business, health occupations, family and consumer sciences, technology and vocational guidance. As noted by Wenrich, Wenrich, and Galloway (1988, p. 16), primitive people did not need much formal education in order to work. They learned to work by associating with experienced workers as apprentices (Wang, 2008). For example, as Egyptians developed hieroglyphics (a form of picture writing) and papyrus (paper), they also developed apprenticeships where the students learned to write on-the-job with an experienced scribe (Wang, 2008, p. 5). Indeed, the history of CTE parallels the efforts of humanity from the Stone Age to modern civilization. The more civilized humans become, the more formal education we need.

With the shift from an agrarian society to an industrialized society, workers needed more formal education and training in order to be efficient. As the more highly developed nations have transitioned from the industrial revolution to an age of technology and information, the less developed world has just begun the industrial revolution. Formal education and training for workers have become all the more important everywhere. Writing in 2006, Wang (p. 39) argues, “Without exaggeration, as humans developed, so did the hard work of humanity from the Stone Age to modern civilization. Human beings cannot make any progress without hard, intelligent work.”

One of CTE’s important objectives is to meet the manpower needs of society. We need engineers, doctors, lawyers, and professors; we also need plumbers, carpenters, masons and technicians and technologists. Agriculture education, the foundation for CTE, began with the “common school movement” when former president Andrew Jackson articulated an equalitarian doctrine of all knowledge and ability, in which the attainments of a farmer or merchant were on the same level as the accomplishments of a classical educated scholar.

Why education for work? This is the most common question that most people ask. According to Marx (1890/1929), work produces surplus value and this surplus value is termed as “added value” in CTE. Without added value or surplus value, work would lead to meaningless activism, a waste of one’s physical and mental efforts directed towards some end or purpose. From this rationale, we can address the positive relationship between CTE and work.

CTE is defined as any organized educational programs that are directly related to the preparation of individuals for paid or unpaid employment or for additional preparation for a career requiring less than a baccalaureate degree. This definition is no longer accurate as it contains a mistaken perception. In fact, this definition only applies to one group of learners in CTE who are not college bound. We also have a large number of CTE learners preparing for careers requiring a baccalaureate or higher level degree.

In fact, more than 200 universities in the United States alone offer advanced degrees in CTE, and so do many other universities across the globe! As countries such as China and India became more industrialized, more and more programs in CTE are being offered by their educational institutions. CTE has thus become a vibrant sector in the education field.

Gray and Herr (1998, p.4) note that CTE serves to:

(1) promote individual opportunity by making students more competitive in the labor force, and (2) make a nation economically strong and firms internationally competitive by solving human performance problems of incumbent workers.

CTE will play an even more important role in the education and training of today's workers. CTE cannot be separated from one's occupations. Dewey (1963, 1966) was right in stating that occupations should be used as vehicles of instruction in CTE. He opposed CTE which was limited only to the acquisition of job skills; the underlying principles of the work processes and social significance of work must be included. He further believed that through vocational studies, culture might be made truly vital for many students (as cited in Wang, 2008, p. 14). From Dewey's rationale, we can conclude that CTE has a broader mission in the field of preparing people for the world of work.

The past two decades have witnessed the growth and expansion of the use of the World Wide Web (WWW) in CTE teaching and learning in this information society. As the majority of the universities in North America began to use WebCT or Blackboard programs to deliver their educational programs to students, especially working adults, educators and practitioners in the field of CTE have adopted these instructional tools. E-learning has become the buzz term in CTE. Technology is now at the core of schools' CTE offerings. Technology education prepares students for our technological world. Technology education is returning to the system that Dewey supported years ago when he stated that we should use the occupations as the vehicle of instruction (King & Wang, 2008, p. 86).

In the information society, E-learning is not a matter of whether some senior faculty like teaching with the use of technology. It has become a matter of how faculty will be able to teach with the use of information technologies effectively by integrating not just behaviorist teaching philosophies, but also principles of adult learning. Malcolm Knowles, the father of adult education, correctly predicted in the 1970s that education in the 21st Century would be delivered electronically (1975, as cited in Wang, 2005, p. 35).

Although adult education as an academic field has become a separate entity, we cannot address CTE without taking into consideration adult education first. When we think about our students/learners in the field of CTE, they are mostly persons over the age of sixteen. Most have completed or left high school; they may have already entered the labor market or be unemployed. CTE educators are preparing adult learners enter the world of work or reenter the world of work. Our mission has thus become two-fold: we prepare traditional age students as well as adult learners to enter the technological society for paid or unpaid employment.

The name of CTE reflects the culture and societal developments of our society. Because we live in this technological society, technology education has become a core subject for traditional age students as well as adult students. CTE first emerged as "manual training" as the nature of CTE determined its name. Then, "manual arts" was used to instead of "manual training" as a means of placing emphasis on artistic elements of manual activity (Ham, 1990). Later, "industrial arts" was used to replace "manual

arts.” With the passage of the Smith-Hughes Act of 1917 (Douglas, 1921), trade and industrial vocational education emerged as a major educational program in the field of CTE. All this illustrates that fact that CTE has come a long way. It has survived and will continue to thrive in order to meet the manpower needs of any society.

However, when we examine the literature of the CTE field, we find very few books, let alone handbooks in CTE. Evans and Herr published a book titled *Foundations of Vocational Education* in 1978. Gray and Herr published a book titled *Workforce Education, The Basics* in 1998. Gordon published a book titled *The History and Growth of Vocational Education* in 2003. Then, Wang and King published a book titled *Building Workforce Competencies in Career and Technical Education* in 2009.

Roberts’ (1965) definitive text titled *Vocational and Practical Arts Education* (2nd ed.) has become outmoded. Now we need a handbook linking CTE with adult education and technology. When I began to call for chapters for this Handbook, I stated, “As vocational education has adopted its new name, Career and Technical Education (CTE), it has become one of the most rapidly changing disciplines. No longer is CTE below the baccalaureate level. As adult students, older adults and even retired military personnel enter CTE, it has become closely related to adult education and tertiary education. As the field of CTE continues to evolve, e-learning has contributed to both CTE and adult education. In such an ever-evolving environment, teachers, researchers and professionals of the discipline need access to the most current information about the concepts, issues, trends and technologies in this changing field.”

With increasing confidence, we can claim that such a handbook has filled a much need void in the field and in the literature. With such a handbook, we are able to provide comprehensive coverage and definitions of the most important issues, concepts, trends and technologies in CTE. More importantly, this new publication will be distributed worldwide among academic and professional institutions and will be instrumental in providing researchers, scholars, students and adult learning professionals with access to the latest knowledge related to CTE.

As my proposal to publish such a handbook was approved by IGI Global, I began to collect chapter proposals. All proposals were carefully reviewed by the editor in light of their suitability, the researcher’s records of similar work in the area of the proposed topics, and the best proposal for topics with multiple proposals. The goal was to assemble the best minds in CTE, Adult Education and Technology fields from all over the world to contribute entries to the handbook. Upon the receipt of full entry submissions, each submission was forwarded to expert external reviewers on a double-blind, peer review basis. Only submissions with strong and favorable reviews were chosen as entries for this handbook. In many cases, submissions were sent back for several revisions prior to final acceptance. As a result, this handbook includes more than 50 entries highlighting current concepts, issues and emerging technologies in the field. All entries are written by knowledgeable, distinguished scholars from many prominent research institutions around the world.

These leading experts come from New Zealand, Australia, China, Kenya, Italy, Spain, United Kingdom, and the United States. Many of them are professors, program directors, department chairs and journal editors. Their cutting edge research will serve the field for many years to come. As readers flip through the pages of this handbook, they will learn not only perspectives regarding CTE from North America, but also they will be familiarized with perspectives in CTE from other continents and countries. It is these leading experts who have made such a handbook possible in the field.

The diverse and comprehensive coverage of CTE, adult education and use of technology in this authoritative handbook will contribute to a better understanding all topics, research, and discoveries in

this evolving, significant field of study. Furthermore, the contributions included in this handbook will be instrumental in the expansion of the body of knowledge in this broad field. The coverage of this handbook provides a reference resource for both CTE researchers and also aids decision makers in obtaining a greater understanding of the concepts, issues, problems, trends, challenges and opportunities related to this field of study. It is my sincere hope that this publication and its great amount of information and research will assist my fellow researchers/scholars, faculty, their students, and our organizational decision makers in enhancing their understanding of this discipline. Perhaps this publication will even inspire its readers to contribute to the current discoveries in this immense field, tapping possibilities to assist humankind in making more surplus or added value in CTE and in their work in general.

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