

A FUTURE OF POSSIBILITIES FOR
WORKFORCE DEVELOPMENT:
CUSTOMIZED TRAINING
FOR BUSINESS AND
INDUSTRY

By

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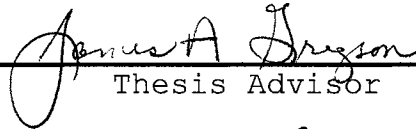
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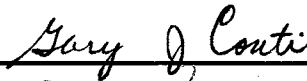
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CHAPTER 1

INTRODUCTION

It is clear that for America to remain competitive and prosperous, we must expand the pool of available workers and ensure that all workers are as well trained and productive as possible. Workforce issues are a top priority. (Tom Donohue, President and CEO, U.S. Chamber of Commerce, 2001)

Workforce Development: What is it?

As the United States entered the 21st century full of optimism and promise, many unexpected challenges and issues loomed ahead in the realm of workforce development and economic development. The robust economy as experienced in the first half of the year 2000 with record-setting, low unemployment rates began to subside mid-year and headlines announcing mass layoffs appeared with increasing frequency. Then the totally unbelievable occurred: the unparalleled terrorist attacks of September 11, 2001, resulted in the tragic loss of thousands of lives. Together with the immense impact of the tragedy, significant disruptions affected local economies along with secondary disruptions to economies outside the directly impacted area and many businesses were forced to curtail activities and lay off workers (Bureau of Labor Statistics, 2001b).

Even with the drastic swing in the health of the economy as observed over this eighteen-month period of time, globalization, intense competitiveness, galloping technology, and change/change/change remained as descriptors of a world in which human potential is the primary source of competitive advantage in almost every industry (Atkinson, & Court, 1999; Atkinson, Court, & Ward, 1998; Drucker, 1999; Gray & Herr, 1998; Greenspan, 2000; Herman, 1999b). The ability of the United States to maintain its economic viability in the face of increasing global competition is dependent upon a number of factors. As America's business environment becomes increasingly global, technology-based, and highly competitive companies are coming to the realization that information, technology, communications, and intellectual capital rather than energy and raw materials, power today's businesses (Gray & Herr, 1998; National Governors' Association, 2000).

Workforce skills required by business and industry today are substantially different than those necessary only a few years ago (Atkinson & Courts, 1999; Atkinson, Courts, & Ward, 1998; Bassi & Van Buren, 1999; Drucker, 1999; Gamble, 1999; Herman, 1999a, 1999b; Knutson, 2000; National Alliance of Business, 2000; Peters, 1997; U. S. Department of Labor, 1992). Worker skills were identified as the most serious competitiveness hurdle for the United States in the

next decade by chief executives from industry, academia, and labor involved in the Council on Competitiveness Executive Committee (Allaire, Everhart, Stata, & Sheinkman, 1995). Research conducted by both academic and government sectors suggested that the training currently provided to workers is not sufficient to ensure a workforce with the skills needed for fostering economic growth and improved living standards (Allaire et al., 1995; NGA, 2000; National Institute of Standards and Technology, 2000;).

With regard to the competitiveness of business and industry in a global economy, workforce development is increasingly identified as a significant factor, if not the most important factor.

Those factors that make a country's firms competitive, factors that give it a strategic advantage in commerce and that allow it to produce goods and services of the best quality at the best price, become in fact, essential to a nation's economic wealth, its economic growth, and the standard of living its citizens enjoy. Workforce education [development] is one of these factors and arguably the most important. (Gray & Herr, 1998, p. 42)

Business and industry is faced with enormous challenges, and the key issue in economic development is workforce development. The role of workforce development is so critical to economic development that the National Center for Research in Vocational Education recently commissioned a \$4.5 million project to study the implications of workforce development systems across the nation (Salzman, Moss, &

Tilly, 1998). Communities will not have the attributes necessary to attract or retain companies providing quality jobs without a well-trained base of workers (Gambale, 1999; Gamble, 2000; Luttrell, 1996).

Workforce development, also referred to as workforce education, is defined as:

The form of pedagogy that is provided at the pre-baccalaureate level by educational institutions, by private business and industry, or by government-sponsored, community-based organizations where the objective is to increase individual opportunity in the labor market or to solve human performance problems in the workplace. (Gray & Herr, 1998, p. 4)

This definition suggests two missions for workforce development: (a) to promote individual opportunity by making both the emerging workforce and the incumbent workforce more competitive in the labor force (p. 4); and (b) to make a nation economically strong and firms internationally competitive by solving human performance problems of the incumbent, already employed, workforce (p. 21). Workforce development initiatives are most frequently located within career and technical education institutions providing certificate and two-year degrees (p. 4).

A Changing Economic Framework: The New Economy

Changes in workforce development are directly linked to the changes emerging in the new economy and are reflected in the major shifts that are characteristic of the new economy.

1. The nature of business is changing, and knowledge workers are leading the changes;
2. Businesses are under increased pressure for growth and productivity;
3. Businesses are under efficiency pressures;
4. Many businesses are under serious pressures to lower their costs to remain competitive.
(D'Amico, 1998, p. 12)

Firms, both large and small, are addressing these challenges in a variety of ways. Most importantly, companies are increasing the focus on learning, training, and employee empowerment as evidenced by the new benchmark for training of more than forty hours per employee per year (D'Amico, 1998; Judy & D'Amico, 1999). The trend of increasing opportunities for employee training is reflective of the compelling need for companies to reduce the skills gap within the ranks of the incumbent workforce.

A world-class workforce is indeed the baseline for global competitiveness, and the fastest growing and best-paid jobs will require some level of career and technical education.

More than 60% of new jobs will require workers to have the basic skills requiring high school graduation (24%) or competent skills requiring at least some postsecondary education (38%). Only 12% of new jobs can be filled by workers with minimal skills found in individuals with less than a high school diploma or equivalent, and the number of minimal skill jobs in the economy is expected to continue to shrink. (Porter & van Opstal, 2001, p. 48)

The economic consequences are profound; and the ability to maximize the productive potential and quality of life of every American of working age, through investments in education and training, will be imperative to sustain future growth.

The new economy is changing the way public- and private-sector organizations approach the issue of workforce development, and career and technical education institutions continue to emerge as a major resource for both needs-based workforce training and state-directed training incentive programs designed to influence firm location, expansion or hiring decisions.

A company's decision to expand or relocate often involves a multimillion dollar investment. For most manufacturing companies, labor costs constitute their major operating expense. Success or failure depends upon their ability to understand and incorporate this cost information into the decision-making process. (King, 2000, p. 2)

The connection between increased productivity and workforce development is notable. The 1997 Economic Report to the President (as cited in Hartzler, 2000) revealed that increased training and education accounted for 27% of the recorded increases in productivity between 1973 and 1994. Moreover, the challenges facing American companies related to workforce are tremendous and finding the necessary resources to address the demand for workforce development is not a simple task.

Providers of Customized Training

It is not surprising that the demand for high-quality, affordable training has been identified as a key factor to stimulating economic development in the New Economy, and the knowledge worker is identified as the key to the future (Drucker, 1999; Gamble, 1999; Gamble, 2000; Gray & Herr, 1998; Greenspan, 2000; Hartzler, 2000; Herman, 1999a, 1999b; National Governors' Association, 2000;). In order to provide business and industry with the new worker, the knowledge worker, it is increasingly essential to create more partnerships between business and education (Crist, Miller, & Presley, 1996; Greenspan, 2000; Herman, 1999a, 1999b; Knutson, 2000; U.S. Department of Labor, 1992).

Responsiveness by career and technical education institutions to the training needs of existing, new and expanding business and industry is critical to economic development. While several types of public-sector career and technical education institutions provide customized training to business and industry, the community college system is the most frequently cited in the literature. Central to the mission of the community college system as well as to other forms of career and technical education institutions is responsiveness and service to the community (Roueche, Taber, & Roueche, 1995, p. 27).

Community Colleges

The community college system was designed in the early 1920s to educate technologists who have both the needed theoretical knowledge and the manual skill and is recognized as an important resource for the competitiveness of the American economy.

On this, I am convinced, rests both the still huge productivity advantage of the American economy and the—so far unique—American ability to create, almost overnight, new and different industries. Nothing quite like the American community college exists anywhere else so far. The famous Japanese school system produces either people prepared only for manual work or people prepared only for knowledge work But these other developed countries should be expected to catch up with the United States fairly fast. (Drucker, 1999, pp. 151-152)

During the last two decades the role of community colleges in economic development has changed sharply. Many community colleges, for example, have broadened and diversified their role to add a range of new activities in the area of workforce development and economic development to include a focus on customized industry-specific training (Day, 1997; Dougherty & Bakia, 1999; Roueche et al., 1995).

This changing role is taking the community colleges in a very new direction: "from an institution focused on training students to one that is centered on meeting the needs of business and the economy" (Dougherty & Bakia, 1999, p. 1).

The new role for community colleges is to develop partnership opportunities with external entities The economic development arena offers perhaps the quickest and possibly the most significant opportunities for collaboration with business and industry. (Roueche et al., 1995, p. 230)

Community colleges are only one of several public-sector providers of customized industry-specific training. While not mentioned in most of the literature, several other forms of career and technical education institutions are prominent players in workforce development and economic development as well, specifically in the area of customized industry-specific training. These institutions include, but are not limited to: vocational education institutions, technical institutes, technical colleges, poly-technical colleges, and four-year colleges and universities. An example of an internationally-recognized resource for customized industry-specific training is found in the career and technical education arena in states such as Oklahoma (Peters, 1987; Yoder & Hedgcoth, 2000).

Career and Technical Education

Formerly known as vocational and technical education, career and technical education (CTE) was founded in the early 1900s in response to the 1917 Smith-Hughes Act to support the needs of an agrarian economy. An example of an internationally recognized player in the career and technical education arena is the Oklahoma Career and

Technology Education system. The Oklahoma Career and Technology system (CareerTech) reflects the mission of CTE across the nation and has "since adapted to a changing direction in economic development that demands new skills and emphasizes technology" (Oklahoma Career and Technology Education, 2000b, p. 1).

Support for economic development in the form of customized industry-specific training provided through career and technical education institutions such as the Oklahoma Career and Technology Education system plays an important role in ensuring the competitiveness of business and industry across the nation. Enrollments in training for business and industry programs in Oklahoma, for example, have increased significantly since 1990 with "the largest gains occurring between 1994 and 1999 Customized training programs accounted for more than half of all the business and industry training enrollments" (p. 12).

Growing commitment to enhancing the role career and technical education institutions play in economic development is reflected in the Oklahoma Department of Career and Technology Education's Strategic Plan 2000, Goal Four: Unleash the Power of Partnerships. One of the primary objectives for this goal is to strengthen relationships between workforce and economic development partners to

effectively and efficiently build the state and local economies (ODCTE, 2000a, p. 9).

Barriers

Why are companies hesitant to utilize career and technical education institutions for training incumbent employees? A look at the history, philosophy, legislative effects, and structure of career and technical education will provide insight as to the challenges faced by pre-baccalaureate institutions across the nation and may best be summarized through the voice of Dr. J. N. Baker. Baker's first association with career and technical education began in Oklahoma in 1936. In an interview, Dr. Baker's comments reflected the sentiment of many regarding the image of career and technical education formerly known as vocational education.

In 1961 . . . I found that as a general rule vocational-technical offerings were looked down on as a kind of second class program The prevailing attitude was that the junior college curriculum should be entirely university preparatory and not "watered down" with occupation-type offerings. (Stewart, 1982, p. 103)

While, "Oklahoma's vocational education administrative leadership, early on, was in the mainstream of a changing economic growth pattern within the state . . . and initiating a thrust toward stepped up industrial training" (Stewart, 1982, p. 103), the image of career and technical education from the early 1960s still reflects the thinking

of many decision makers in business and industry today when seeking resources and partners to provide high-quality training for their organizations.

In today's business world, quality is frequently described as the key to competitiveness (Allaire et al., 1995; National Governors' Association, 2000; National Institute of Standards and Technology, 1998, 2000; Seymour, 1993, 1994, 1995). Other perspectives indicate that worker skills are the most serious competitiveness hurdle for the United States. If indeed, both statements are valid, then organizations that provide customized industry-specific training would be well served to identify models for continuous improvement and performance excellence.

Models for Performance Excellence

Quality refers to continuous improvement to an organization's systems and processes in support of its mission. The pursuit of quality never ends, because an organization, no matter how excellent its component systems and processes may be, must continuously be improved (Academic Quality Improvement Project, 2000a, 2000b; Baldrige, 2000; National Institute of Standards and Technology, 1998, 2000).

Historical Perspective

In order to understand today's quality initiatives, a brief overview from the historical perspective will be

provided. Quality initiatives in the United States can be traced as far back as the pre-Industrial Revolution when quality was "embedded in the hearts and hands of skilled artisans" (Seymour, 1993, viii). In the 1980s and 1990s, a resurgence and focus on quality appeared in the form of Total Quality Management, commonly referred to as TQM. Two names frequently linked to the birth of TQM are W. Edwards Deming and Joseph M. Juran. The concepts of quality as represented in the works of Deming and Juran provided the foundation for much of the quality initiatives in existence today (Bonstingl, 1992, 2001; Seymour, 1993). While TQM is periodically lambasted by management gurus and the business media for its supposedly lackluster impact on financial performance and other key business measures, a study of nearly 600 quality award winners suggested that effective implementation of TQM and performance excellence systems substantially improved financial performance and productivity (Hendricks & Singhal, 2000). TQM has since evolved into a focus on continuous improvement.

Organizations that self-assess through processes and models such the Baldrige Criteria for Performance Excellence, state quality awards, and the Academic Quality Improvement Project and use the data for continuous improvement out perform organizations that do not (p. 5).

In essence, quality is a philosophy or foundation by which to develop a management system; and a system based on quality principles can, and does, substantially improve the probability of making the right decisions (Singhal, 2000, p. 18). Today's quality is best understood as principles and methods to improve the performance of organizations in achieving their objectives and adapting to changing environments (Allaire et al., 1995).

In principle, we all recognize the importance of quality; in practice, only a small percentage of American companies has fully adopted it. (p. i)

Two models for performance excellence, the Baldrige Criteria for Performance Excellence and the Academic Quality Improvement Project, served as the theoretical and conceptual framework for this study.

Baldrige Criteria for Performance Excellence

In an effort to promote quality awareness and to provide information on successful quality strategies to increase the competitiveness of U.S. companies, the Baldrige National Quality Program was created by United States Public Law 100-107, August 20, 1987. Since 1987, the Baldrige Criteria for Performance Excellence has evolved into a standard of excellence that is accepted and emulated around the world and has served as a model for successful organizations in the business, healthcare, and education sectors (Alstete, 1995; Baldrige National Quality Program,

2000; Blazey et al., 2000; Harris, 1998; National Institute of Standards and Technology, 2000).

The Malcolm Baldrige National Quality Improvement Act of 1987, Public Law 100-107 stated that:

American business and industry are beginning to understand that poor quality costs companies as much as 20 percent of sales revenues nationally and that improved quality of goods and services goes hand in hand with improved productivity, lower costs, and increased profitability.

The concept of quality improvement is directly applicable to small companies as well as large, to service industries as well as manufacturing, and to the public sector as well as private enterprise. (National Institute of Standards and Technology, 1998, p. 45)

Application of the quality principles embodied in the Baldrige Criteria for Performance Excellence and in state quality award programs has demonstrated its worth in improving levels of customer satisfaction, employee satisfaction, and profitability (Singhal, 2000; U.S. Department of Labor, 1997). While the Baldrige Criteria were originally designed for the manufacturing environment, there now exists a set of criteria designed to specifically address the educational and the health care environments. The success of the Baldrige Performance Excellence Model has led other organizations to create similar models such as the Academic Quality Improvement Project.

Academic Quality Improvement Project

Educational institutions, K-12 through higher education, have begun to recognize the value of the Baldrige Criteria as a systems perspective to incorporating quality principles and concepts for continuous improvement within and throughout their organizations (Alstete, 1995; Blazéy et al., 2000; Bonstingl, 1992, 2001; Jaspardo, 1998; Koalaty Kid, 1998; National Institute for Standards and Technology, 1998, 2000; Seymour, 1993, 1994, 1995). Twelve years after the Malcolm Baldrige National Quality Improvement Act was signed into public law, the North Central Association (NCA) Commission on Institutions of Higher Education initiated the Academic Quality Improvement Project (AQIP, 2001b). Modeled after the Baldrige Criteria and values, the goal of the Academic Quality Improvement Project is to provide higher education with a quality-focused, challenging alternative to the accreditation process.

Design an innovative, more challenging alternative to current re-accreditation, one that engages institutions [higher education] by increasing the tangible benefits it delivers to them . . . provides NCA [North Central Accreditation] members with concrete feedback and practical support they can use to reach higher levels of performance and effectiveness. (p. 2)

Both the Baldrige Criteria and the Academic Quality Improvement Project criteria include categories which provide organizations with a model for a systematic approach by which to "build in the opportunity for evaluation and

learning, and thereby permit a gain in maturity" for continuous improvement (Oklahoma Quality Award, 2000, p. 40). The categories from these models for performance excellence served as the framework for this study.

Statement of the Problem

As America's businesses increasingly recognize that human potential is the primary source of competitive advantage in almost every industry, the necessity for workforce development escalates as well. "Inadequate links between workforce development and economic development is a real weakness" in the United States today (Sargent, 1998, p. 19). Training and retraining incumbent workers is recognized as a key factor to helping many businesses maintain their competitive edge in a rapidly changing, global economy and as such has a major impact on our nation's economic viability (Gamble, 1999, 2000; National Governors' Association, 2000; Sargent, 1998).

The demand for increased skills is rising much faster than the capacity of U.S. companies, workers, or the nation's traditional educational system to respond. In an effort to address the critical need for workforce development options, companies are searching for resources to provide affordable, high-quality training and retraining for their workforce.

While the nation's career and technical education system is increasingly identified as a potential resource for the development and delivery of customized industry-specific training for these companies, research and data describing the characteristics of high-performing, public-sector training organizations with a focus on the future is limited and inadequate (Bailey & Averianova, 1998; Dougherty & Bakia, 1999; Presley, 1995).

Purpose Statement

The purpose of this study was to describe the characteristics of high-performing career and technical education institutions delivering customized industry-specific training to business and industry in the United States five years from today and beyond. The study was prompted by the crisis facing business and industry in attracting and retaining a high-quality workforce in the New Economy, and the linkage between workforce development and economic development is real. Therefore, addressing the issue of workforce development in the form of customized industry-specific training is viewed as a top priority in ensuring the economic prosperity of the nation.

This study focused on the future by describing the characteristics of high-performing organizations providing customized industry-specific training five years from today and beyond. It is clear that providers of customized

training must be unwilling to rest on past achievements of success. To ensure success in the future for both the provider of customized industry-specific training as well as for the customers and major stakeholders, there must be a framework upon which to identify continuous improvement opportunities along with an incessant drive to build on past success in order to create a future embodied in a performance excellence perspective.

This study provides a framework by which career and technical education institutions delivering customized industry-specific training may self-assess their current state as compared to the characteristics identified by the practitioners who participated in the study as representative of high-performing institutions five years and beyond in the New Economy. The gaps between the current state and the futuristic characteristics described by the participants can provide institutions with opportunities to not only meet higher performance standards but also to improve continuously in order to meet future, unknown challenges.

Research Questions

To accomplish the purpose of this study, the following research questions were addressed:

1. What are the major challenges facing high-performing career and technical education institutions delivering customized industry-

specific training five years from today and beyond?

2. What are the "vital few goals" that will allow these institutions to address the major challenges described by the members of the panel of practitioners who participated in the study?
3. What will be the characteristics (skills and attributes) of effective leaders of the highest-performing customized training department in career and technical education institutions five years from today and beyond?
4. What will be the characteristics for future customers and major stakeholders for customized training?

Definitions of Terms

Academic Quality Improvement Project (AQIP): Developed by the North Central Association of Colleges and Schools, AQIP is a new alternative model of accreditation based on quality principles and values (AQIP 2000). The Baldrige Criteria for Performance Excellence served as the model for the design of the AQIP Guiding Values, Quality Criteria, processes, and set of services that support the model.

Baldrige Criteria for Performance Excellence: Also referred to as "The Baldrige", this model for performance excellence provides a systems viewpoint for understanding performance management and serves as the basis for the Malcolm Baldrige National Quality Award process. The criteria "reflect validated, leading-edge management practices against which an organization can measure itself. With their acceptance nationally and internationally as the model for performance excellence, the Criteria represent a common language for communication among organizations for sharing best practices" (Baldrige, 2000a, p. 1).

Career and Technical Education (CTE): This term is used to "describe what was vocational education" (Kister, 2001, p. vi). The terms career and technical education is, therefore, used interchangeably with vocational and technical education.

Contract Training: This term is used interchangeably with customized training.

Customized Training: The training implemented for the purpose of improving the job skills and academic skills of current or prospective employees. Customized training is provided under contract to employers or to government agencies (Dougherty & Bakia, 1999).

Effectiveness: The extent to which a work process produces intended results (Blazey et al., 2000).

High-performance Work: The work approaches systematically pursuing ever-higher levels of overall performance, including quality and productivity (Blazey et al., 2000).

Incumbent Worker: The permanent, full-time workers who have been employed by the same company for a period of time; new, entry-level employees; and contingent workers who are generally part-time, temporary, or self-employed workers.

Leadership: The executives, administrators, and academic leaders.

Leadership System: The manner in which leadership is exercised throughout the organization—the basis for and the way that key decisions are made, communicated, and carried out. It includes the formal and informal mechanisms for leadership development used to select leaders and administrators, to develop their leadership skills, and to provide guidance and examples regarding behaviors and practices (Blazey et al., 2000).

Mission: A statement that communicates a broad understanding of what an institution does and whom it does it for (Academic Quality Improvement Project, 2000).

Performance: The output results obtained from processes, products, and services (Blazey et al., 2000).

Postsecondary Institution: For the purposes of this study, a postsecondary institution is a tax-supported, educational institution that provides education and training to individuals who are not pursuing a high school diploma and are 18 years of age or older (Friedemann, 1991; Presley, 1995). These institutions may include, but are not limited to: vocational

technical centers, technical institutes and colleges, community colleges, junior colleges, polytechnic institutes, and four-year colleges and universities.

Stakeholders: All of the people and groups that have a critical stake or investment in the institution's future, including faculty, staff, and administrators, students' families, employers, funding and oversight agencies, and those institutions and organizations with which the institution has established collaborative relationships. Students and other stakeholders judge whether an institution is a success or failure in meeting their particular needs; these judgments ultimately determine the institution's well-being and continuation (AQIP, 2000).

Strategic Objectives: Broadly stated, strategic objectives are what an organization must change or improve to remain or become competitive (Blazey et al., 2000).

Trend: Data that have been collected over time, and when displayed (preferably on a graph or chart), they illustrate changes in a particular direction such as: positive/negative or increase/decrease (Blazey et al., 2000).

Values: The principles and beliefs that "guide or govern the behavior of an organization and its people toward the accomplishment of its mission and vision" (Blazey et al., 2000, p. 295).

Vital Few: This term refers to those goals that, when achieved, would move an organization to levels of performance excellence. The "vital few" are the goals that organizations pursuing performance excellence would dedicate resources and energy toward achieving.

Vocational Education: This term reflects the "historical references and attributes" (Kister, 2001, p. vi) of what is currently known as career and technical education.

Workforce Development: The form of "pedagogy that is provided at pre-baccalaureate level by educational institutions, by private business and industry, or by government-sponsored, community-based organizations where the objective is to increase individual opportunity in the labor market or to solve human performance problems in the workplace" (Gray & Herr, 1998, p. 4).

CHAPTER 2

PERSPECTIVES FROM THE LITERATURE

Introduction

Demand for quality, skilled employees continues to escalate. Unemployment during the month of October 2000 in the United States stood at a record-setting, 30-year low of 3.9% (Bureau of Labor Statistics, 2000). In contrast, statistics from the month of September 2001 revealed 1,316 mass layoff actions resulting in the loss of jobs by 158,859 Americans. Each mass layoff action involved at least 50 persons from a single establishment (Bureau of Labor Statistics, 2001b). Even with the increasing number of layoffs, job churning continued to create new challenges for employers. Even when an employer has the ability to attract new employees, retaining workers has become increasingly difficult creating a churning or turnover of employees within companies' ranks (Atkinson, Courts, & Ward, 1999; Atkinson & Courts, 1998).

As America's business environment becomes increasingly global, technology-based, and highly competitive companies are coming to the realization that information, technology, communications, and intellectual capital rather than energy

and raw materials, power today's businesses (National Governors' Association, 2000). In light of this new way of thinking, challenges focused around workforce development abound for business and industry as the United States enters the 21st century.

If we are to ask workers to take the risks inherent in embracing the New Economy, we must equip them with the tools to allow them to prosper and cope with change and uncertainty. If we fail to invest in a knowledge infrastructure—world-class education, training, science, and technology—our enterprises will not have the skilled workers and cutting-edge tools they need to grow and create well-paying jobs. (Atkinson & Court, 1998)

A new set of skills previously reserved for only the supervisory or management level positions is now required of the majority of employees. A significant shift in the number of professional and skilled jobs supports the necessity for new management and leadership approaches for companies in the 21st century. No longer will companies that hold the Tayloristic mind-set which views management as "the experts who do the thinking and the workers who execute the prescribed tasks upon command" (Wirth, 1992, p. 54) continue to sustain a competitive edge in the New Economy.

The percentage of professional or skilled jobs rose from 40% in 1950 to 65% in 1991 and is expected to reach 85% by 2005 (Bureau of Labor Statistics, 2000). Even more alarming is the fact that "60% of future jobs will require skills that only 20% of present workers possess" (National

Alliance of Business, 2000, p. 1). In light of this changing dynamic in the workplace, Taylor's scientific management approach is antiquated. If employers expect to retain workers—especially the knowledge worker—in the New Economy, a new approach to management and leadership must be adopted (Bryne, 1990; Drucker, 1999; Rubenson & Schutze, 1995; Stitz, 1995; Wheatley, 1999; Wirth, 1992).

Three variables that account for one nation having strategic advantage over the firms of another nation in commerce were suggested in the literature. The key variables that determine differences in a nation's wealth are: natural resources, capital and technology, and the skills and ingenuity of its people—its human capital. "In modern terms, human capital is the most important of the three" (Gray & Herr, 1998, p. 43). Contrary to the philosophical approach under Taylor's scientific management approach, knowledge-worker productivity requires that the worker is both seen and treated as an asset rather than as a cost (Drucker, 1999, p. 142).

The knowledge worker is indeed the key to substantive and sustained growth of business and industry in the United States. To become a competitive player in high-technology industries two requirements must be satisfied: (a) a critical mass of human capital in the form of a highly-educated and skilled workforce; and (b) investment capital

in the form of seed, venture, and leveraged traditional capital. The former, human capital, attracts the latter, investment capital (Knutson, 2000). The knowledge worker is indeed the key to the future, and it is essential to create more partnerships between business and education to support the demand for the highly educated and skilled workforce requirements of the New Economy.

If indeed the knowledge worker is the key to the future, what then is the role of career and technical education in providing customized industry-specific training services? To address this question, the perspectives from the literature will address the following elements: the New Economy and its implications for changes in the workplace; a model for understanding and applying performance excellence; and the implications for career and technical education institutions that provide customized business and industry training services. Followed by these segments, the conceptual framework upon which the study is based will be presented.

The New Economy

The term "New Economy" is bantered about in both conversation and literature. What does the term "New Economy" mean? While few have been able to clearly define the term, there are some fundamental structural changes that collectively mark the transition from the Old Economy to the

New Economy, such as: industrial and occupational change, globalization, the changing nature of competition and economic dynamism, and the progress of the information revolution (Atkinson & Court, 1998).

This section will provide an overview of the areas that have implications for business and industry as it relates to the work force in the New Economy. Paramount to the characteristics of The New Economy is the sense that the speed of change is outpacing the ability of companies and individuals to "keep up." What then is meant by the speed of change?

The Speed of Change

Change will happen—either by chance or by design. . . . Innovation is not "flash of genius." It is hard work. And this work should be organized as a regular part of every unit with the enterprise . . . A policy of systematic innovation produces the mindset for an organization to be a change leader. It makes the entire organization see *change as an opportunity*. (Drucker, 1999, p. 84-85)

Indeed the challenges of today are increasingly dramatic and complex. How do we know that change is accelerating? When we speak of the rate of change, we refer to the number of events crowded into an arbitrarily fixed interval of time (Toffler, 1970). While the rate of change can be measured for some events, "we know far better, for example, how to measure the rate at which blood flows through the body than the rate at which a rumor flows through society" (p. 22).

Even with all these qualifications, however, there is widespread agreement, reaching from historians and archaeologists all across the spectrum to scientists, sociologists, economists and psychologists, that, many social processes are speeding up—strikingly, even spectacularly. (p. 22)

Slowing down the rate of change in our fast-moving world is simply not an option. Change is all around us, and there is no escaping the implications for individuals and organizations. Today's organizations are faced with change that is complex and occurring at an increasingly rapid rate.

"Future shock", a term coined by Toffler (1970) to describe what happens to people when they are overwhelmed by change, has arrived. It is about the ways in which we adapt, or fail to adapt, to the future (p. 3). Signs of future shock confront the business community on a daily basis as well, with things like the "full value of new technology seldom being realized and the desired increase in commitment to quality often being unattainable" (Conner, 1995, p. 51). For example, the well-known "Moore's Law" states that chip density, the processing power of the computer, will double every 18 months with no increase in price, or alternatively, that in the same time period the same computing power will cost half as much. While "Moore's Law" was propounded by Gordon Moore in 1965, three years before he co-founded Intel, this astounding guideline still holds true today (Davis, 2001; Judy & D'Amico, 1999). What

does this mean for workforce development? Simply stated, rapid technological change in America has tended to require more workers who are highly skilled and fewer workers who are low skilled.

Not all organizations within a system, in this case a national career and technical education system comprised of providers of customized industry-specific training, will identify and adopt an innovation at the same time. Two schools of thought surface when attempting to answer the following question: Which comes first, needs or awareness of an innovation? On one end of the spectrum, it may be argued that "one becomes aware of an innovation quite by accident, as one cannot actively seek an innovation until one knows that it exists" (Rogers, 1983, p. 164). The other end of the spectrum shares the belief that an individual or organization must be active participants in the process of innovation. Innovation most often follows the identification of a need. A need is a "state of dissatisfaction or frustration that occurs when one's desires outweigh one's actualities, when 'wants' outrun 'gets'" (p. 166). Conversely, there is also the possibility that knowledge of a new innovation may create a need for that new idea. "Thus knowledge of the existence of an innovation can create motivation for its adoption" (p. 166).

Increasing numbers of providers of training solutions are actively pursuing alternative delivery methods such as web-based curriculum. Did this occur because organizations were seeking alternative delivery methods, or did the knowledge about the web cause the idea that it could be used as an alternative method of delivery training? Perhaps this is the age-old "chicken-or-egg problem."

Innovator or Laggard

"Keeping up" with the speed of change requires deliberate decisions by organizations as to their willingness and capacity to take risk and become innovative. What then is the difference between innovative organizations and passive, laggard organizations? While there are a plethora of adopter classifications and descriptions, many of which are rather confusing, one method of adopter categorization is based on measuring innovativeness.

The degree to which an individual or other unit of adoption is relatively earlier in adopting new ideas than other members of a social system. Innovativeness is a "relative" dimension, in that one has either more or less of it than others in a social system. (Rogers, 1983, p. 245)

Rogers' adopter classification model conceptualized a simplified approach to understanding where along the continuum of adoption of innovative and new ideas an individual or organization falls. Adopter categorization in Roger's model is configured on the basis of innovativeness.

The innovativeness dimension, as measured by the time at which an individual adopts an innovation or innovations, is continuous . . . and shows the normal frequency distribution divided into five adopter categories: (a) innovators (2.5%); (b) early adopters (13.5%); (c) early majority (34%); (d) late majority (34%); and (e) laggards (16%). (Rogers & Shoemaker, 1971, p. 182)

Regardless of the perspective held by an individual leader or an entire organization, the bottom line is that "change will happen, either by chance or by design" (Drucker, 1999), and providers of customized industry-specific training have a choice. Which category is most appropriate for the high-performance postsecondary institutions that provide customized industry-specific training to business and industry five years from today and beyond? The "venturesome innovator"? The "respectable early adopter"? The "deliberate early majority"? The "skeptical late majority"? Or, the "traditional laggard"? Perhaps there is a correlation between the percentage represented in each of the adopter categories and the survival rate of the organization. Will the 50% of organizations, including providers of customized industry-specific training, that fall in the categories of "skeptical late majority" and the "traditional laggard" exist five years from today?

Workers of the Future: A Profile

Who are the workers of the future, and what are some of the characteristics that have relevance to the workplace?

As the U.S. population is becoming larger and more diverse, several trends are gleaned from the literature that will have direct impact on the workforce of the future.

- Over the next 50 years, the population of the U.S. is expected to grow by nearly 50% (from 275 million in the year 2000 to an estimated 394 million people in 2050).
- Growth is influenced by immigration, emigration, birth rates, and death rates. Immigration will play the largest role in growth (820,000 annually) representing fully two-thirds of the projected total growth.
- The baby-boom generation (1946-1964) makes up about 47% of the current workforce. As this segment of the population ages, the median age of the workforce will rise. Retirements over the next 20 years will dramatically decrease the number of workers available in the future.
- Life expectancy is projected to rise from 76 years in 1995 to 82 years in 2050.
- The elderly segment of the population (age 65 or older) is expected to more than double, representing 20% of the population by 2050.
- Racial and ethnic makeup of America will be considerably different in 2050 than it is today. By 2010, Hispanics are likely to become the largest minority group.
- By 2050, minorities are projected to rise from one in every four Americans to almost one in every two. (BLS, 2000; Herman, 1999)

What are the implications of these changing demographics in light of a new economy that is powered by technology, fueled by information, and driven by knowledge? While the workforce will benefit from increased diversity in terms of ethnicity, age, disabilities, and gender, the

workforce as a whole is shrinking. The economy will need more educated and better-trained workers not only to compete but also to offset a slowdown in the projected growth of the workforce over the next several decades.

The increasing requirements to attract and retain a better educated workforce is placing many companies in a crisis mode. More than 10% of young Americans fail to complete high school, and substantial numbers of those who do graduate lack the most basic literacy skills (Porter & van Opstal, 2001).

The Role of Educational Attainment

Why is career and technical education and training important? The answer is quite simple: the fastest-growing and best-paying jobs require postsecondary education. Postsecondary education is not necessarily in the form of a degree program but also includes industry certifications and job-specific training. However, the implications for postsecondary institutions inclusive of career and technical education institutions providing customized industry-specific training are not nearly as simple.

The nation's most urgent challenges in boosting workforce skills are to strengthen the foundation of math and science education in K-12, bring underrepresented minorities into the science and engineering workforce, and extend training opportunities to more workers. (Porter & van Opstal, 2001, p. ii)

When opportunity in America is often defined as "the ability to obtain or retain socioeconomic status," (Gray & Herr, 1998, p. 31), it is cause for concern that data indicate the middle class in America is shrinking.

Between 1973 and 1993, the real income of all but the top 20 percent of wage earners fell. Wages of young men, ages 25-34, fell 25 percent during this time. Thirty-two percent of all men in this age group in 1993 earned less than the amount needed to keep a family of four above the poverty level. The median wage for women also has fallen for all except the college educated. All this happened during a time when the real domestic product rose 20 percent and corporate profits were increasing Some must be benefiting—namely the top third of wage earners. (p.31)

While economic development is often discussed in the context of the well-being of business and industry, economic development is also directly related to the well-being of the citizens within the local economies. The social implications of the worsening distribution of wealth are of serious concern in the United States. Rapid changes in the nature of work and the technological workplace are increasing the divisions between the "skilled" and the "unskilled" worker. Another set of terms often used to describe this phenomenon is "haves versus have-nots." The role of educational attainment is a critical factor in whether an individual in the United States is part of the "haves" or part of the "have-nots."

The essential point for those involved in workforce development is that "if one major cause of the shrinking

middle class is the decline of unskilled employment, the long-term solution is to increase the skill levels of the workforce" (Gray & Herr, 1998, p. 32). Increasing individual opportunity through job skill and academic enhancement is a primary objective of customized industry-specific training as provided by career and technical education institutions.

Educational attainment through formal and informal avenues plays a critical role in virtually every labor market outcome and is key to the well being of our nation and its people (Greenspan, 2000; Herman 1999; Phillips, 2000). Deciding how far to go in school is one of the most important decisions an American worker makes regardless of his or her gender or ethnicity. Nearly 83% of all adults ages 25 and over have completed high school and 24% have obtained a bachelor's degree or more. This is a dramatic increase from 30 years ago when fewer than 54% completed high school and fewer than 10% completed college (Herman, 1999, p. 5).

While the statistics appear to be improving, the demands for higher levels of knowledge in the workplace have increased at a more rapid pace. Results of a national survey of major U. S. companies conducted by the American Management Association (AMA) revealed that "40 percent of job applicants flunked basic math tests and 32 percent

lacked the reading skills needed to do the jobs they sought" (Gordon, 2000, p. 9). The AMA report concluded that increasing deficiencies were not attributable to a "dumbing down" of the emerging workforce, but rather to the higher literacy and math skills required in today's workplace (Hermann, 1999, p. 52).

In 1994, a national literacy audit by the U.S. Labor/Education Departments contained the disquieting statistic that only about 20 percent of the current American workforce will fit well in the next century's demanding new workplace. These same government agencies also estimated that 80 percent of all U.S. jobs will require 12th- or 13th-grade reading comprehension levels. At present, more than 90 million American workers (including 20 percent of all managers) fall below this benchmark. From a practical standpoint this means that one out of five Americans do not understand the directions on an aspirin bottle. Eighty percent of these employees will still be in the workforce in the year 2010. It appears that a staggering number of younger and older workers alike are so poorly educated that they are now in real danger of permanently becoming the new "techno-peasants" of the information age. (Gordon, 2000, p. 9)

The U.S. Department of Labor Secretary's Commission on Achieving Necessary Skills (SCANS, 1992) heard the same message across the country and in every kind of job: good jobs depend on people who can put knowledge to work, and there are not enough of these workers to meet employers' requirements. While traditional jobs, which require low skills and hard work, are rapidly declining in numbers, new jobs requiring a skilled, knowledgeable workforce are created every day. The core competencies described in the

SCANS report are the skills and abilities required of today's workers who will be successful in higher-wage jobs in organizations requiring higher-level skills. Those workers who do not have these skills, will be limited to low-skill, low-wage jobs in organizations with the automated culture (SCANS, 1992; Wirth, 1992). In the information-based, skills-intensive economy of the twenty-first century, one thing is clear: knowing means growing. The best jobs will be those requiring lifelong education and training (Herman, 1999; Phillips, 1999; Porter & van Opstal, 1001).

We are a nation with working poor, the middle class is disappearing, and the gap between the "haves" and the "have-nots" is widening. Training provided by employers through career and technical education institutions providing customized industry-specific programs can, and do, make a difference in closing the gap.

Implications for Business and Industry

Employers are concerned that the pool of qualified workers is drying up. Perspectives from the literature suggested that 60% of future jobs will require skills that only 20% of present workers possess (National Alliance of Business, 2000, p. 1). While business and industry recognize that there is no quick fix to the skills shortage, there is cause for concern that educational systems will not keep up.

Fear is that education systems, unable to keep up with demand now, will become even more overextended in the future, and the shortage of skilled workers will escalate, forcing employers to increase training costs and compensation packages to attract skilled employees or look overseas for qualified workers. (p. 3)

Chief Executive Officers and site locators representing manufacturers across a broad range of industry sectors revealed that availability of skilled labor is the number-one factor impacting competitiveness in the United States.

With today's record-low unemployment numbers, it is not surprising that the number-one-ranked factor this year is availability of skilled labor, which moved up from second place last year. The shortage of skilled labor would seem to account for the increased importance of worker/technical programs But more significant perhaps is the fact that availability of unskilled labor moved from eighteenth place last year to thirteenth place in 1999 Even those workers considered unskilled are harder to find—and hold on to—these days (Gamble, 1999, p. 2).

As we move into the 21st century, the realities of the New Economy and the impact on the workforce are becoming increasingly evident. The structure of companies, the nature of jobs, and the requirements for the workforce are very different than those that existed even a decade ago. In addition to globalization, intense competitiveness, galloping technology, and change/change/change, what are the major changes? (see Table 1)

Table 1: Transition from 20th Century to 21st Century
New Economy Organizations

	<u>20th Century</u>	<u>21st Century</u>
Organization of Production	Mass Production	Flexible Production
Key Factor of Production	Capital/Labor	Innovation/Knowledge
Source of Competitive Advantage	Lowering of Cost Through Economies of Scale	Innovation, Quality, Time-to-Market, Cost
Markets	Stable	Dynamic
Relations with Other Firms	Go It Alone	Alliances & Collaboration
Skills	Job-Specific Skills	Broad Skills, Cross-Training, Knowledge
Requisite Education	A Skill	Lifelong Learning
Nature of Employment	Stable, Entitlement	Marked by Risk & Opportunity
Career Progression	Vertical with a Limited Range	Vertical and Horizontal with a Full Range of Opportunity

(Atkinson & Court, 1998; Atkinson, Court, & Ward, 1999; Schray & Sheets, 2001)

Quality Initiatives in the United States:
A Historical Perspective

Prior to the Industrial Revolution, quality was embedded in the hearts and hands of skilled artisans. With the advent of mass production, the embodiment of quality was sliced and diced as different people on the production line were assigned the task of making interchangeable parts. Inspectors were hired and placed at the end of each line. Their job was to analyze each and

every product with the intention of detecting errors. (Seymour, 1993, p. viii)

Recognizing that with basic tools for data collection and analysis, variability in error rates could be understood and root causes identified (p. viii). From these humble beginnings, the quality movement began to take shape. The next major shift of thinking was entwined with "the legend of Japan's phoenix-like resurrection from the ashes of World War II" (Bonstingl, 1992, p. 4). The philosophy of what is known today as Total Quality Management (TQM) transformed the Japanese industry, once known for cheap, inferior goods, into an economic powerhouse. Lessons learned from the Japanese model led to views of how quality principles and tools could be built into processes revolutionizing quality-minded manufacturing organizations. It was not until the 1980s that American companies began to implement TQM along with some of the ideas that appeared to defy common logic:

Quality did not cost more, it cost less; inspectors didn't decrease the number of defects, they increased them. . . . TQM has made a difference in organizations around the world It is well grounded in a scientific approach to problem solving, and it has been tested, scrutinized, and revised in thousands of organizations over a period of more than three decades. Bottom line: it works. (Seymour, 1993, p. viii)

Four motivating forces are driving organizations, including education, to pursue and incorporate quality initiatives. Unfortunately, survival appears to be the

primary driving force for many organizations. Recognition that it is the Age of Consumerism in education, a buyer's market, educational organizations are jumping on the quality bandwagon. Quality is a discriminating feature of the survivors and includes four motivating factors.

1. Survival in an increasingly competitive environment
2. The escalation of the costs of doing business
3. A trend to make organizations more accountable for their actions and outcomes
4. A blurring of the distinction between products and services. (Seymour, 1993, p. 3)

An essential set of four fundamental tenets has been proposed for the incorporation of Total Quality Management in educational environments.

1. The organization must focus, first and foremost, on its suppliers and customers.
2. Everyone in the organization must be dedicated to continuous improvement, personally and collectively.
3. The organization must be viewed as a system, and the work people do within the system must be seen as ongoing processes.
4. The success of Total Quality Management is the responsibility of top management. (Bonstingl, 1992, p. 6-7)

Observing the impact of quality consciousness and a systems perspective approach on the turnaround for organizations in the manufacturing sector, educational sector organizations have embraced two models for

performance excellence in recent years. These two models are the Baldrige National Quality Program and the Academic Quality Improvement Project.

Models for Performance Excellence

Clearly, sustaining the status quo or relying on minor adjustments to the current system will not enable us to achieve that goal We have regressed, but our competitors have improved. We have not kept pace with the rate of improvement. (Blazey et al., 2000, p. 5)

In today's turbulent and rapidly changing world of work, organizations are confronted with a constant flow of information and new ideas. Survival in this competitive world means understanding our organizations, keeping up with new ideas about organizations and about the way work gets done. The challenges of the new economy will affect all organizations in today's society (Drucker, 1999; Wheatley, 1999).

In fact, some of them will affect non-businesses even more, if only because a good many non-business organizations—the university [academic institutions in general], for instance, or the hospital, let alone the government agency—are more rigid and less flexible than businesses are, and far more deeply rooted in the concepts, the assumptions, the policies of yesterday or even, as are universities, in the assumptions of the day before yesterday (i.e., of the 19th century). (Drucker, 1999, p. xi)

Every private sector, public sector, for-profit, non-profit, manufacturing, service, health care, or educational organization has its own people, culture, work, and customers that create unique challenges for leadership and

management. "For more than 12 years, thousands of U.S. organizations have used the Baldrige Criteria for Performance Excellence to stimulate improvements in their competitiveness and business performance that lead to global success" (National Institute for Standards and Technology, 2000, p. 1).

In the early and mid 1980s, many industry and government leaders saw that a renewed emphasis on quality was no longer an option for American companies but a necessity for doing business in an ever-expanding, and more demanding, competitive world market. But many American businesses either did not believe quality mattered for them or did not know where to begin. (p. 2)

Performance Excellence in Education: An Imperative

Educators in all sectors, both public and private, are increasingly required to meet new demands for accountability (Bonstingl, 1992, 2001; Divoky & Tarlor, 1996; Jasparro, 1998; Seymour, 1993, 1994, 1995).

Competitive pressures have forced business organizations to be attentive to the concept of quality. While concepts relating to quality have traditionally been focused on manufacturing and service-oriented businesses, competitive pressures are facing education as well. (Divoky & Taylor, 1996, p. 173)

An increased awareness by educational organizations to be responsive to societal needs and expectations has necessitated the urgency of initiating and implementing similar quality concepts and strategies. Total quality management principles and tools are being implemented with increasing frequency in the educational arena as higher

standards and expectations for accountability are being set by professional organizations, national and state reform, and societal pressures (Jasparro, 1998).

Leaders at all levels of education including K-12, common education, career and technical education, and higher education must improve their organizations and regain a competitive edge. In order to do this, they must not only understand the parts of a high performance management system, but more importantly, they must know how these parts connect and align. "The work of education must be managed more effectively at all levels—from the classroom teacher to the top administrators—to enable our children [and adults] to remain competitive in a global economy" (Blazey et al., 2000, p. vii). Models for performance excellence exist for educational entities and have demonstrated effectiveness in raising the bar for those organizations who have incorporated the quality-focused, systems perspective approach within their structure.

The Baldrige Criteria:
A Framework for Excellence in Education

The Baldrige National Quality Program, named after the U.S. Secretary of Commerce Malcolm Baldrige, was established by Congress in 1987 to promote national awareness about the importance of improving quality, to provide a model for effective business, and to recognize the quality achievements of U. S. companies (Alstete, 1995; Baldrige,

2000a, 2000b; Bogan & English, 1994; Bonstingl, 1992, 2001; National Institute for Standards and Technology, 2000; Seymour, 1993, 1994, 1995).

The Baldrige model—including the many national, state, and organizational assessment systems based on it—is accepted worldwide as the standard for defining Performance Excellence in organizations. A decade of extraordinary performance results shown by Baldrige Award-based winners (including schools) have helped convince those willing to listen and learn. (Blazey et al., 2000, p. 36)

Leaders in other sectors vital to the U.S. economy, especially education and health care increasingly realized that they too must adopt the same tough performance excellence standards as business. The Baldrige Criteria provide a well-tested approach to help achieve higher levels of excellence. Legislation was passed in October 1998 to establish and incorporate Baldrige Criteria for education organizations and health care providers. Education and health care are now full partners in the Baldrige National Quality Program “including applying to receive the Baldrige Award and sharing best practices with schools . . . around the country” (National Institute for Standards and Technology, 1998, p. 10).

The need for change in today’s educational institutions at all levels is urgent, and the Baldrige model can serve as an excellent road map for enhancing performance excellence.

The folklore of “this is how we do things around here” cannot begin to handle the demands placed on

our institutions of higher education [education in general] in a new global economy.

We are kidding ourselves if we believe that educating [training] people for the year 2000 is essentially the same as educating them for the year 1975. Everything has changed—technology, lifestyles, and culture. Our educational institutions must change as well. Not by cosmetic retouching, one-shot consultants, or slick marketing, but by challenging the basic assumptions. (Seymour, 1993, p. viii)

Recognition that the Baldrige Criteria for Performance Excellence is suitable for not only manufacturing but also for healthcare, service, and education as well has been slow to be embraced by the educational sector. However, the concepts provided in the broadened application of this systems approach to performance excellence are rapidly being adopted by all levels of education across the nation.

The Baldrige framework as applied to education challenges the basic assumptions of tradition and provides a proven framework for change (Baldrige, 2000a, 2000b; Balzey et al., 2000; Bonstingl, 1992, 2001; Koalaty Kid, 1998; National Institute for Standards and Technology, 2000; Seymour, 1993, 1994, 1995). The criteria provides a useful framework for assessing and measuring performance excellence and is suitable for all educational institutions, large or small; PreK-12, career and technical education, community colleges, or universities; a single location or multiple locations around the world; public sector or private sector.

The Baldrige Criteria provide a framework by which organizations can effectively assess and measure performance in a wide range of key performance indicators. For the purposes of this research, the business and service sector terminology will be used for each of the categories. Where the terminology is different for the educational sector, the education terminology is shown in parentheses.

1. Leadership
2. Strategic Planning
3. Customer Focus (Student and Stakeholder Focus)
4. Information and Analysis
5. Human Resources Focus (Faculty and Staff Focus)
6. Process Management (Educational and Support Process Management)
7. Business Results (Organizational Performance Results) (Baldrige, 2000a, 2000b; Blazey et al., 2000)

The Baldrige Criteria provide a systems perspective approach for managing an organization and achieving performance excellence. The building blocks of the system are formed through the seven criteria and are built upon a foundation that includes eleven core values and concepts (see Appendix).

1. Visionary leadership
2. Customer-Driven Excellence (Learning-Centered Education)
3. Organizational and Personal Learning

4. Valuing Employees and Partners (Valuing Faculty, Staff, and Partners)
5. Agility
6. Focus on the Future
7. Managing for Innovation
8. Management by Fact
9. Public Responsibility and Citizenship
10. Focus on Results and Creating Value
11. Systems Perspective (Baldrige, 2000a, 2000b; Blazey et al., 2000)

The values, criteria, and concepts assist organizations, both business and non-business, in aligning resources to improve communication, productivity, customer satisfaction, overall effectiveness, and achievement of strategic organizational goals (Alstete 1995; Blazey et al., 2000; Bonstingl, 1992; Koalaty Kid, 1998; Seymour, 1993, 1994, 1995). As the core values of the Baldrige Criteria establish the theoretical framework for the study, the following section will briefly describe the intent of each core value.

Visionary Leadership

Every successful organization, strategy, and method for achieving Performance Excellence is guided by effective leadership.

Leadership, like creativity or human potential, is not a scientific concept The best we can do is to reconnoiter the conceptual landscape of leadership and pick out aspects of that landscape for closer study . .

. . Leadership, like a host of other words—refers both to certain tasks or activities, on the one hand, and to certain achievements or outcomes on the other. Which is to say, that leadership is both a “process” and a “product” word. (Howard & Scheffler, 1995, pp. 104-105)

Customer-Driven Excellence

Customer-driven excellence is a strategic concept that demands constant sensitivity to rapidly changing and emerging customer and market requirements as well as to the factors that drive customer satisfaction and retention (Baldrige, 2000a, 2000b; Blazey et al., 2000; Koalaty Kid, 1998). In the case of career and technical education, learner-centered education and training places the focus on learning and the real needs of learners and the employers. In the case of training for business and industry, the learners are most frequently incumbent workers as compared to the traditional student.

In today's knowledge-based society, where human capital is an organization's most competitive asset, learning is serious business requiring a focused philosophy of learning, choosing the best approach to planning programs and activities, and developing appropriate systems for assessing results. Linking solid theory and current as well as future practices challenges the quality expectations that organizations and learners have for maximizing learning. Learner centeredness implies that the provider of learning understands the learner's needs through both the theoretical

as well as the practical lenses. The learner, in the context of business and industry, has changed tremendously from the pre-industrial era to the post-industrial era (National Governors' Association, 2000; National Institute for Standards and Technology, 2000).

Organizational and Personal Learning

High-performing organizations create a culture of learning, evaluating, and improving everything they do. They strive to get better and get faster at getting better. (Blazey et al., 2000, p.18)

As time passes, the organization grows stronger and smarter. Organizational learning includes both "continuous improvement of existing approaches and adaptation to change, leading to new goals and approaches" (Baldrige, 2001, p.2). A relatively new source of competitive advantage is the implementation of the concept of the learning organization. Organizations that subscribe to this concept are those that are poised to clearly understand threats and seize new opportunities. Successful organizations must learn faster than their competitors. Those who do not subscribe to the concept of the learning organization and suffer from organizational learning disabilities face a potential early death.

Learning disabilities are tragic in children, especially when they go undetected. They are fatal in organizations. Because of them, few corporations live even half as long as a person—most die before they reach the age of forty. (Senge, 1990, pp. 17-18)

Valuing Employees and Partners

An organization's success depends increasingly on the knowledge, skills, innovation, creativity, and motivation of its employees and partners (Baldrige, 2000a, 2000b; Blazey et al., 2000; Koalaty Kid, 1998). Demonstrating a commitment to mutually beneficial relationships with both employees and partners is at the heart of this core value. Success of any one part of the relationship whether it is the organization, the employee, or the partner should not be at the sacrifice of the other and should result in success for all parties. Embracing this core value provides each party with a meaningful experience that results in being part of "something larger than themselves, of being connected, of being generative" (Senge, 1990, p. 13).

Agility

Success in globally competitive markets, swiftly changing, and constantly elevated levels of technology requires agility. The capacity for rapid change and flexibility signify organizations that embrace the core value of agility.

Focus on the Future

In today's competitive climate, a focus on the future requires comprehension of both the short- and longer-term factors that affect an organization's business and the marketplace. Pursuit of sustainable growth requires a

strong future orientation and a willingness to make long-term commitments to all customers and stakeholders including community, employers, faculty, and staff (Baldrige, 2000a, 2000b; Blazey et al., 2000; Bonstingl, 1992, 2001; Koalaty Kid, 1998).

Managing for Innovation

"Innovation is no longer strictly the purview of research and development departments; innovation is important for all aspects of your business and all processes" (Baldrige, 2000b, p. 3). Successful, competitive organizations must create an environment where innovation is integrated into daily work and in which all employees and partners are concerned with innovation and creativity.

Management by Fact

High-performing organizations depend heavily upon the measurement and analysis of performance as a basis for decision-making. Such measurements and metrics must be derived from the organization's mission and strategy and provide critical data and information to address all key requirements and activities (Baldrige, 2000a, 2000b; Blazey et al., 2000; Koalaty Kid, 1998).

Public Responsibility and Citizenship

An organization's leadership needs to stress the importance and responsibility of the institution serving as a role model in its operations beyond mere compliance

(Baldrige, 2000a, 2000b; Blazey et al., 2000; Koalaty Kid, 1998). Practicing good citizenship, within the limits of the resources of the organization, is a key characteristic of performance excellence organizations.

Focus on Results and Creating Value

An organization's performance measurements should focus on key results. Results should be focused on creating and balancing value for learners and all stakeholders. By creating value for key stakeholders, the organization builds loyalty and contributes to economic growth (Baldrige, 2000a, 2000b; Blazey et al., 2000).

Systems Perspective

Successful management of the overall organization requires integration and alignment. Integration means looking at the organization as a whole and focusing on what is truly important. Alignment means concentrating on key organizational linkages among requirements given in all of the seven Baldrige Criteria (Baldrige, 2000a, 2000b; Blazey et al., 2000).

What is a system? Simply defined, "a system is a collection of parts which interact with each other to function as a whole" (Kauffman, 1980, p. 1). The key word is "interact": if one part has an effect on the rest of the system and the system as a whole has an effect on that one

part, then a circular relationship, or loop has been created.

What then is systems thinking? While some may think the "structure" of an organization is the organizational chart, others may think "structure" means the design of organizational workflow and processes. Systems thinking encompasses a holistic perspective.

In systems thinking, the "structure" is the pattern of interrelationships among key components of the system. That might include the hierarchy and process flows, but it also includes attitudes and perceptions, the quality of products, the ways in which decisions are made, and hundreds of other factors You begin to see that every element is part of one or more systemic structures. The word 'structure' comes from the Latin word *struere*, "to build." But structures in systems are not necessarily built consciously. They are built out of the choices people make consciously or unconsciously, over time. (Senge, Roberts, Ross, Smith, & Kleiner, 1994, p. 90)

Simply stated, "if something is made up of a number of parts, and it does not matter how those parts are arranged, then we are dealing with a 'heap' and not a system" (Kauffman, 1980, p. 2). Rapid change and turbulence in the new economy is evidence of the need for and the value of systems thinking approach.

The concepts and framework of a systems perspective reflect a new awareness that "we participate in a world of exquisite interconnectedness" (Wheatley, 1999, p. 157).

We are learning to see systems rather than isolated parts and players We are discovering many things worthy of wonder. We can now see the webs of interconnections that weave

the world together; we are more aware that we live in relationship, connected to everything else; we are learning that profoundly different processes explain how living systems emerge and change. Many disciplines, in different voices, now speak about the behavior of networks, the primacy of relationships, the importance of context, and new ways to honor and work with the wholeness of life" (p. 158)

An increasing number of organizational and leadership theorists and leaders are drawing on insights emerging from ecology, biology, and evolutionary theory to look to nature to explain and teach us how to do what living systems accomplish with such skill—learn, adapt, and change (Wheatley, 1999; Drucker, 1999; Senge, 1990; Senge et al., 1994; Peters, 1997; Kauffman, 1980).

Academic Quality Improvement Project

In 1999, the accrediting body for higher education launched a new initiative, the Academic Quality Improvement Project (AQIP). AQIP is modeled after the Baldrige National Quality Program and a crosswalk of the two models indicates that while the terminology of AQIP reflects that of higher education, the elements encompass essentially the same criteria and core values. The goal of AQIP is to design an "innovative, more challenging alternative to current re-accreditation, one that engages institutions by increasing the tangible benefits it delivers to them" (AQIP, 2000b, p. 1). The project is currently in the second of a three-year

pilot testing with institutions interested in systematic, continuous improvement.

The Intersection of Work and Education

The New Economy is here to stay, and there's no going back. This new time brings with it not only enormous potential for the growth of state economies but also introduces challenges. Challenges to the nation, states, and local economies exist in many forms with the challenge to invest in human capital at the top of the list.

If states do not invest in a knowledge infrastructure—world class education, training, and technology—companies will not have the skilled workers and cutting edge tools needed to grow and create well-paying jobs. . . . Simply put, states that meet the challenges of the New Economy—focusing on innovation, learning, and constant adaptation—will be the ones that succeed and prosper. (Atkinson et al., 1999, p. 10)

"We are kidding ourselves if we believe that educating people for the year 2000 is essentially the same as educating them for the year 1975" (Seymour, 1993, p. viii). Applying models such as the Baldrige Criteria for Performance Excellence and the Academic Quality Improvement Project will provide a solid, sustainable framework for career and technical education institutions to meet the needs of business and industry for customized training for the incumbent workforce.

America needs a better-educated, flexible workforce capable of lifelong learning. What is needed is a new

system of management and learning (Atkinson & Court, 1998; Atkinson et al., 1999; National Governors' Association, 2000; Seymour, 1993; Wirth, 1992). As suggested by the National Governors' Association (NGA) (2000), one segment of customized training for business and industry—state-funded, employer-focused job training programs—originated more than thirty years ago and have evolved from “smokestack-chasing” programs to programs that increasingly focus on encouraging job expansion and skill upgrading among existing firms (National Governors' Association, 2000).

In 1998 state spending on employer-focused job training programs totaled about \$575 million and was expected to reach \$600 million in 1999. This level of investment is a sharp increase over the level of investment in the late 1980s and early 1990s, when total state spending ranged from \$350 million to \$375 million. (p. viii)

Aside from the state-funded job training, what are the trends in corporate training? With an abundance of challenges and opportunities, corporate training is in a state of flux, much like the career and technical education system.

There is no doubt about it: The World of Work is changing. We in HRD [Human Resource Development] are part of it—as witnesses, agents, victims, scapegoats, surfers, divers, cynics, optimists, rein pullers, bronco riders, nail biters. Some of us are hunkering down, battening the hatches, and waiting for the storm to beat itself out. Others are digging in their heels, reaching backward for old success patterns, and charging full-steam ahead. At times, we look straight into the crashing surf and ride the waves we can't see—try to tame them, show them who's boss. Or we try to

swim ahead. Or, like the mythic Phaethon, we fly a chariot driven by horses we can't control too close to the sun and are consumed in the heat. (McLagan, 1999, p. 20)

A national study revealed data and trends that provide meaning for vocational educators in all areas including secondary, adult, and customized industry-specific training (Bassi & Van Buren, 1999). Of 2,104 U.S. organizations with 100 or more employees, across 10 major industry sectors, training budgets reached the \$62.5 billion mark in 1999, up more than 3% from the previous year (p. 42). This amount includes only direct costs and does not include the tremendous investment made by companies to train incumbent workers during paid time. Expenditures of \$15 billion for outside training, the amount corporations spend on training products and services, represented an increase of 4.9% over 1998 and 26% since 1993 (p. 48). This represents an extraordinary opportunity for career and technical education institutions providing customized industry-specific training to complement to corporate training departments.

A major challenge career and technical education institutions face in providing customized industry-specific training to business and industry is "bridging" between current needs of employers and learners and the needs of future employers and learners (Atkinson et al., 1999; Baldrige, 2000a; National Governors' Association, 2000). The success of these educational institutions depends

heavily upon translating these needs into effective services and experiences.

“Even with the strong economy and low unemployment, rapid technological changes mean American businesses and workers will continue to face insecurities unless there are improvements in job training” (Greenspan, 2000, p. 1). Whether it is by empowering workers with cutting-edge, high-tech skills, providing downsized workers with transition assistance, or helping young people get a foothold on the career ladder, the fundamental challenge is to equip all Americans with the tools to succeed in this new economy. State’s economic future will largely depend on the ability of the career and technical education institutions to provide customized industry-specific training that ensures a high-quality workforce for new and existing business and industry to remain competitive and grow in the global marketplace.

With regard to achieving economic security and the decreasing the possibility of workers becoming “jobsolete” (Herman, 1999a), career and technical education institutions have a tremendous opportunity to become a resource in answering some fundamental questions asked by Secretary of Labor Herman (1999a).

- How can workers get the education and training they need to keep their skills up to date and to ensure that they do not get stuck in low-wage jobs?

- What incentives will keep individuals learning over the course of their work lives to bolster their lifelong economic security?
- How can training be delivered most effectively?
- How do we ensure that workers get the skills they need to succeed in the 21st century workplace?
- What happens to the worker laid off from a manufacturing job at age 55—does he get training in new technologies or is he stuck in lower-wage jobs?
- How do we make sure that people with disabilities have access to the technologies that facilitate their participation in the workplace?
- How will e-commerce impact employment? (p. 58)

Career and technical education (CTE) institutions should be asking these same questions and others as well, such as:

- How will CTE ensure that faculty and staff have the capabilities to meet the challenges in the "new economy"?
- How will CTE identify their market niche?
- How will CTE provide delivery of education and training to their customer sectors anytime, anywhere?
- How will CTE ensure that the training and education delivered is based on industry standards and needs?
- How will CTE position their system in such a manner that their stakeholders, citizens of each state, business and industry, and the legislature will perceive that it would be disastrous for each state and local economy if the CTE system no longer existed?

While it seems that there may be more questions than answers, answers to these questions along with effective implementation strategies will ensure the economic security of each state while achieving the mission of career and

technical education which is to ensure success for its constituents in the workplace.

The research for this study used selected dimensions of the Baldrige National Quality Program Core Values and the Academic Quality Improvement Project as the theoretical framework for seeking to describe the key characteristics of high-performing career and technology education institutions providing customized industry-specific training of the future. The career and technical education system within the United States is perceived as the best in the world, and only with a focus on the future and a commitment to quality concepts will the nation have the resources necessary to sustain its competitive edge.

Only in educating technologists can the developed countries still have a meaningful competitive edge The United States is the only country that has actually developed this advantage—through its so far unique nationwide system of community colleges. The community college was actually designed (beginning in the 1920s) to educate technologists who have both the theoretical knowledge and the manual skill. On this, I am convinced, rests both the still huge productivity advantage of the American economy and the—so far unique—American ability to create, almost overnight, new and different industries. Nothing quite like the American community college exists anywhere so far. (Drucker, 1999, p. 151).

Those who address the challenges of the New Economy today and prepare for the future, the innovators and early adopters (Moore, 1999; Rogers, 1983; Rogers & Shoemaker, 1971) will be the leaders and dominate tomorrow. "Those who

wait until these challenges have indeed become 'hot' issues are likely to fall behind, perhaps never to recover" (Drucker, 1999, p. ix). This is indeed a "Call to Action" for career and technical education institutions who serve as providers of customized industry-specific training services to business and industry across the United States.

Conceptual Framework

When the foundation of an economy changes, major shifts in the operating model of every sector in the economy will shift as well. Indeed, there is a paradigm shift in the "three largest sectors of the United States economy: health care (\$1 trillion), education (\$665 billion), and defense (\$270 billion)" (Davis, 2001, p. 81). While the cycle of change for education, the second largest sector of the economy, has traditionally been slower than that of the other two sectors, the "impact of the shifting infrastructure on changing the basic models is also working here just as surely" (p. 84).

An overview of the historical prelude that guides practice in career and technical education, formerly referred to as vocational education, as well as the philosophical basis for practice will provide a conceptual framework for understanding the evolution of this sector of education as it exists today and the importance of focusing on the future. Understanding the historical background and

the philosophical perspectives that guide decision making in career and technical education will provide a basis for understanding the activities and practices involved in the delivery of customized industry-specific training through career and technical education institutions.

From the historical perspective, the "arguments between the proponents of liberal arts and vocational education stem from basic philosophic issues related to the purposes of a free society" (Elias & Merriam, 1995, p. 5). It is the underlying philosophical beliefs of an organization that inspire the actions of that organization and give direction to practice.

The progressive period of history is perceived as the beginnings of the Adult Education movement in the United States and has greatly influenced the philosophy of education in general (Elias & Merriam, 1995). The historical origin of the progressive movement was conceived in politics, social change, and education. In broad terms, progressive philosophy emphasizes the relationship between education and society, experience-centered education, vocational education, and democratic education. The term pragmatism is frequently substituted for progressivism and in the most basic lay person's definition means "practical".

If philosophy serves to explain why we do things and the views we embrace, how then does the pragmatic or

progressive philosophy impact the role of the instructor, the role of the learner, the role of curriculum, and the nature of research in career and technical education as related to the delivery of customized industry-specific training? Before addressing these issues, however, it is helpful to understand progressivism, also referred to as pragmatism, from the historical perspective.

Career and Technical Education: The Big Picture

"Career and Technical Education is an essential component of the total educational system in the United States and is critical to the country's ability to compete in a global economy" (National Association of State Directors of Vocational Education Consortium, 2001, p. 1). Since its beginnings in the early 1900s, this education for the workplace has been known as vocational education, technical education, career education, professional-technical education, occupational education, workforce training, and workforce development. Education for the workplace is provided in a variety of settings and levels including "middle school career exploration, secondary programs, postsecondary certificates and degrees, and customized training for employees in the workplace" (p. 1). The focus of this study is within the context of customized training for employees in the workplace arena.

Dramatic changes in education for the workplace have occurred over recent years. Among these changes is the shift in terminology from vocational education to career and technical education. The decade of the 1990s brought controversy among vocational educators as to the most appropriate term to describe this system, and the national professional association along with the majority of states have since adopted the terminology of career and technical education. While a multitude of names are currently being used to describe what was once referred to as vocational education, the vision and mission of this system remain fundamentally intact. To reflect the most current terminology, the verbiage "career and technical education" in lieu of "vocational education" will be used in the context of this study in most instances.

In order to understand the present and make predictions for the future, one must first understand the foundation upon which career and technical education is based. Cornerstones that provide insight and guidance in making professional decisions must be understood to build an intellectual context for career and technical education as it is practiced today in the United States (Ryan & Cooper, 1999, p. xi).

- History: explains how we came to be; why things are the way they are.
- Philosophy: informs us why we do things as we do; the views we embrace.

- Legislation: explains how legislative initiatives have shaped and directed the development of vocational education or career and technical education, both positive and negative. (Gray & Herr, 1998, p. 3)

While the roots of career and technical education can be traced to ancient times (Ryan & Cooper, 1999; Thompson, 1973), career and technical education as we know it in the United States today began in the early part of the twentieth century. "The history of vocational education is essentially a history of man's efforts to improve his technical competence in order to upgrade his economic position in society" (Thompson, 1973, pp. 29) and the focus "has always been toward some concept of the world of work" (p. 30). From a historical perspective, arguments between the proponents of liberal education and vocational education stem from basic philosophical issues related to the purposes of a free society.

While businesses take risks and glorify risk takers, educational organizations are often perceived as filled with risk-averse individuals. Contrary to this perception, the history of American education is not lacking in great reformers who took risks. One such individual is John Dewey whose bold new thinking rejected "Old World social class ideas as inappropriate for a country 'where any boy . . . had a chance to become president'" (Wirth, 1992, p. 164).

Toffler (1970) in his classic work, Future Shock, reflected on the impact made by Dewey on the educational system.

The historic struggle waged by John Dewey and his followers to introduce "progressive" measures into American education was in part, a desperate effort to alter the old time-bias. Dewey battled against the past-orientation to traditional education, trying to refocus education on the here-and-now. "The way out of scholastic systems that make the past an end in itself," he declared, "is to make acquaintance with the past a *means* of understanding the present." (p. 356)

A look at the history, philosophy, legislative effects, and structure of career and technical education may best be summarized through the voice of Dr. J. N. Baker, an Oklahoma vocational educator, whose first association with career and technical education began in 1936 as a vocational agriculture student (Stewart, 1982). Even though this interview was conducted prior to the Total Quality Movement and the launch of the Baldrige National Quality Program in the United States, many of the concepts and terminology expressed have a direct link to both of these initiatives. While this interview focuses on career and technical education in Oklahoma, the message reflects the transformation of career and technical education across the nation.

Image and transition.

In 1961 . . . I found that as a general rule vocational-technical offerings were looked down on as a kind of second class program The prevailing attitude was that the junior college curriculum should be entirely university

preparatory and not "watered down" with occupation-type offerings. At about this time the growing shortage of skilled technicians began to be recognized As the wages being offered technicians and skilled craftsmen increased and more federal funding for occupational-type training became available, respect for these programs increased on campuses. (p. 104)

Philosophy and quality.

The 1960s and 1970s, much to my liking, showed a vast increase in technical offerings. In some junior colleges enrollment in the technical division equaled or exceeded that in the academic division We frequently hear of an idea whose time has come. This seems to have been the case for occupational-type training in the 1960s and 1970s. . . . It seems to me, the value of public education institutions to citizens has been greatly increased by the addition of quality technical programs, along with quality academic programs. The time we live in requires excellence in both the theoretical and the practical. (p. 104)

Visionary leadership.

Later [Dr.] Francis Tuttle brought to administration of the SDVTE [State Department of Vocational Technical Education] a background in education, as well as manpower programs which were beginning to come into play in the industrial growth of Oklahoma [from agriculture and oil] Oklahoma's vocational education administrative leadership, early on, was in the mainstream of a changing economic growth pattern within the state . . . and initiating a thrust toward stepped up industrial training. (p. 105)

Legislation and collaboration.

When Dewey F. Barlett became governor, industrial development for Oklahoma was his priority, and the vocational education climate was prepared for the challenge. Tax incentives and other enticements for new industries were coupled with a recognized need for trained skilled personnel. The need for cooperative planning among public and private entities was obvious, and aggressive action got

underway This, coupled with industrial growth and skills training already begun by administrative decision makers, enlarged the number of individuals involved in mounting an offensive. Business, industry, labor, education, and the general public became more cooperative in planning, with its implementation as a goal. With many cities seeking new industries, chambers of commerce and citizens became more aware of vocational education and their need for such facilities in their communities. This fostered support for the area school concept. (p. 106)

Forward thinking.

How all this happened is a result of forward thinking, by the executive and legislative leadership, educational and industrial leaders. It was a many-pronged thrust . . . public support has been on-going. . . area schools have done a good job in identifying themselves as a part of each community's school system Historically, citizens endorse and support programs which meet their individual needs, and abandon failures. (p. 106)

In summary, as society shifted from agrarian to industrialized worlds, schools and schooling shifted as well in an effort to spur economic growth. "Workforce education as it exists today is a function of industrialization" (Gray & Herr, 1998, p. 7) and supports Dewey's progressive philosophical orientation focused on the development of people for the betterment of society with its broadened view of education.

This broadened view of education reconciles liberal nurture with training in social serviceableness, with ability to share effectively and happily in occupations which are productive The problem of education in a democratic society is to do away with the dualism and to construct a course of studies which makes thought a guide for free practice for all and which makes

leisure a reward of accepting responsibility for service, rather than an exemption from it. (Dewey, 1916, as cited in Elias & Merriam, 1995, p. 56)

Career and technical education has adopted two missions that reflect the history and philosophy of career and technical education: one focused on the individual, and the other focused on economic development.

1. To promote individual opportunity by making students more competitive in the labor force, thus allowing them to pursue personal career goals.
2. To make a nation economically strong and firms internationally competitive by solving human performance problems of incumbent-already employed-workers. (Gray & Herr, 1998, p. 4)

As the transition from the 20th century to the 21st century has occurred, more than a change in name has transpired. Early 20th century federal vocational education legislation established a mission and curriculum focus for vocational education that focused on occupational training for students not going to college. Curriculum was designed and organized to provide students with occupation-specific skills, and vocational education remained separated from academic curriculum at the secondary level. Recent initiatives such as industry-led skill standards usher career and technical education into the 21st century. A summary of the changes in direction is reflected in Table 2.

Table 2: Transition from 20th Century Vocational Education to 21st Century Career and Technical Education

	<u>20th Century</u>	<u>21st Century</u>
Mission	Occupational training	Career development
Career Focus	Non-professional careers	All careers
Academic Expectations	Different for vocational students	Same for all students
Student Focus	Non-college bound	All students choosing to participate
Vocational curriculum focus	Occupational tasks	All aspects of industry career clusters
Relationship to academic curriculum	Separated	Integrated
Linkages to postsecondary education	Separated; limited articulation	Integrated

(Schray & Sheets, 2001, p. 23)

In order to effectively respond to workforce development requirements of business and industry via customized training, how then is history, philosophy, and legislation of career and technical education reflected in the role of the instructor, the role of the learner, the role of curriculum, and the role of research in today's career and technical education system?

Role of the Instructor

Education in a formal setting is a human activity and as such involves both instructors and students. "As educators strive to improve learning, common sense tells them that the efficiency of learning can be increased by learning more about each of these human elements" (Conti & Welborn, 1986, p. 20). What does this mean for the educator or instructor involved in customized training for business and industry?

Traditionally, "adult educators were conceived loosely as 'those who educate adults,' in the sense of transmitting knowledge to them, telling them what they ought to know, or at best enticing them to learn" (Knowles, 1988, p. 37). In contrast, notable progressive educators such as Dewey, James, Lindemann, Benne, and Rousseau questioned tradition and viewed the role of the teacher or instructor as that of a co-learner and placed considerable value in learning by doing and experiencing (Elias & Merriam, 1995; Miller, 1985). "The mainstream adult education literature base supports the collaborative mode as the most effective method for teaching adults" (Conti & Welborn, 1986, p. 23). An instructor whose philosophical grounding is progressive or pragmatic is open to the possibility that the learner may have, in selected areas, an expertise greater than that of the instructor (Miller, 1985, p. 20). The pragmatic teacher

or instructor aligns with "Teachers in Quality Schools philosophy of viewing themselves as 'guides on the side' rather than 'sages on the stage'" (Bonstingl, 2001, p. x). The role of the instructor is to not only educate the student in the content of a subject but also to instill a "zest for learning" (Houle, 1980, p. 125).

The term "learning" is used rather than the customary term "education" because primary emphasis is upon the actions of individuals and groups who seek to fulfill their own potentials. Learning is the process by which people gain knowledge, sensitiveness, or mastery of skills through experience or study. (p. xi)

Learning, by its very nature, transcends the walls of the classroom and should prepare all students for "life-long, life-wide, and life-deep learning: three-dimensional learning that pervades every aspect of life's journey" (Bonstingl, 2001, p. 43).

Understanding the needs of the students and their unique learning styles is an important role for the instructor (Conti & Welborn, 1986). The instructor guides and facilitates the learning experience based on the learning requirements and style of the individual learner through problem-solving, experience-based education, and social responsibility rather than merely transmitting knowledge or banking education (Freire as cited in Elias & Merriam, 1995, p. 61). Learning is viewed as a lifelong activity, and the pragmatist instructor emphasizes the

nature of change and the need for each person to maintain continuity in living by participating in and interacting with a changing world throughout life as is evident in the rapidly changing environment of business and industry.

In sum, "being is becoming" is at the heart of the pragmatist or progressive philosophy. Within this philosophical framework, the role of the instructor is to provide an environment where "becoming" is possible for all students regardless of whether the setting is a traditional program for secondary and adult students or customized industry-specific training at the trainee's workplace.

Role of the Learner

A concern for social justice, a belief in the possibilities of education and human action, and a deep commitment to democracy are at the heart of the progressive or pragmatic philosophy (Smith, 1999). Human potential is paramount within the philosophical beliefs and values of progressivism or pragmatism. A leader in the progressive movement, Lindemann (1926), described those who need to be learners.

In what areas do most people appear to find life's meaning? We have only one pragmatic guide: meaning must reside in the things for which people strive, the goals which they set for themselves, their wants, needs, desires, and wishes. (p. 13)

Hence, in progressive education environments, the learner's wants, needs, desires, and wishes define the environment and

the activity. In the case of customized industry-specific training, the employer brings another dimension to the wants, needs, and desires to the environment and the activity. Both the needs of the institution and the individual can, and should, be considered (Fisher & Podeschi, 1989; Knowles, 1988).

The learner is a transactional being, one who transacts business with the world. Transaction is a process, and process to the pragmatist is experience. The learner is subject to change just as is the world. Each transactional event causes the learner to change dimensions in some fashion—reconstruction of experience. To define forever that the learner is this or that or something else is to deny the very nature of being Being is becoming. (Miller, 1985, p. 198)

Role of Curriculum

Regardless of the delivery mode, if learning is to be achieved by relating activity to past experiences, current interests, and practical applications in the here and now, the curriculum must accommodate these needs. "In conventional education, the student is required to adjust himself to an established curriculum; in adult education the curriculum is built around the student's needs and interests" (Lindemann, 1926, p. 8). Dewey's vision of proper vocational education lives on within today's career and technical education system and "restores a wholeness of meaning to the occupations of mankind" (Howard & Scheffler, 1995, p. 37).

An education in the fullest meaning of vocations is at the same time an education in the fullest capacity of control and hence of democratic freedom. (p. 37)

Doing away with "dualism in education and establishing curriculum that reflected the needs of work and leisure, including the humanities and the sciences, the liberal and the pragmatic" (Dewey as cited in Darkenwald & Merriam, 1982, p. 55) are ingrained in progressivism. The methodology most favored by pragmatic educators is the scientific method of arriving at knowledge: problem solving, project methods, or the activity method. These methods are not only appropriate for customized industry-specific training but have also been proven to be extremely effective for increasing the degree by which the training is transferred to the workplace (Broad & Newstrom, 1992).

Role of Research

While notable adult educators such as Dewey, Lindemann, and Knowles were not reticent about questioning the established practices in education, there currently exists a need for increased research in career and technical education.

While the beliefs of vocational education—the principles that we accept as truths—must be open to research, few of these beliefs and practices have been tested through research. These beliefs have largely been assumed, and the assumptions have gradually taken on the character of wisdom and truth, to be adopted as policy through legislation. At that point they are no longer subject to question.

The fact that they are no longer subject to question, however, does not mean that they should not be questioned Truly, research, on a continuing basis is fundamental to the dynamics and ultimate success of vocational education. (Miller, 1985, p. 188).

Bold New Thinking: Training for Business and Industry

Workforce development is increasingly associated with higher earnings, less unemployment, and increased job satisfaction. It is no surprise, therefore, that futurists predict that "employee learning is the growth segment and consumer learning, still only in gestation, is, nevertheless, potentially the largest education market of all" (Davis, 2001, p. 85). "Staying abreast of current business trends is more than many corporate executives can handle unless they have some outside help (e.g., educational institutions) to enrich their own observations and perceptions" (Warren, 2000, p. 667). While career and technical education institutions have provided customized industry-specific training to business and industry since the late 1960s, the private sector is increasingly becoming involved in workforce education as well.

The value creation shift is for the private sector to see value and, thus, wealth in assuming the educator's mantle. That is beginning to happen and entrepreneurial leaders are seeing how to make money in this newly embraced role. (p. 85)

If career and technical educators truly embrace the mission of contributing to ensuring a nation that is

economically strong and firms that are internationally competitive by solving human performance problems of incumbent workers, then it is imperative that new models of performance excellence be adopted. Whether career and technical education institutions survive as the dominant provider of customized training to business and industry remains to be seen. While career and technical education has demonstrated the ability to be early adopters (Rogers, 1983) in support of workforce education and economic development over the past two to three decades, historical records and trends suggest that public education in general is "more likely to hold onto the old models, eschewing risk and continuing to lose market share to new entrants . . . who are better at applying the new technologies to education" (Davis, 2001, p. 87).

Embracing performance excellence models such as the Baldrige Criteria has proven successful in stimulating improvements in both quality and competitiveness for business and industry over the past decade (Hendricks & Singhal, 2000). The potential for similar performance excellence models such as the Baldrige Criteria for Performance Excellence in Education and its educational counterpart, the Academic Quality Improvement Project, to benefit academic settings is tremendous.

Approximately 81% of all business establishments provided structured or formal training for their employees in 1994 (Darkenwald, Kim, & Stowe, 1998); and "it is predicted that corporate training will continue to increase, through both corporations and postsecondary institutions" (Warren, 2000, p. 667) such as career and technical education. As the need for incumbent training continues to increase, will career and technical education institutions accept the challenges inherent in achieving their mission to provide customized industry-specific training in the New Economy and adopt new models for performance excellence? Will these institutions be the innovators, the early adopters, the early majority, the late majority, or the laggards? Only time will tell: however, the opportunity to create the future is now.

It is not the strongest of the species that survive, nor the most intelligent, but the ones most responsive to change.

-Charles Darwin

CHAPTER 3

METHODOLOGY

Introduction

This study utilized a descriptive research design and asked questions that were future oriented and had not been asked before (Gay, 1992). The characteristics of high-performing career and technical education institutions delivering customized training to business and industry five years from today were described through the voices of members of a panel of high-performance practitioners who responded to an open-ended questionnaire utilizing the logic of the Delphi Technique.

With regard to workforce education research, "where once only quantitative research dominated, qualitative forms of inquiry now flourish and a multitude of theoretical positions abound" (Bettis & Gregson, 2001, p. 2). A review of literature on alternative methodologies revealed the Delphi Technique as meeting the criteria to obtain the results desired from the research. In order to prepare for the future along with its often unknown challenges and issues, it is beneficial to describe the characteristics of high-performing career and technical education institutions

that deliver customized training to business and industry for the future. The perspectives, experience, and opinions of practitioners in the field of study formulated the answers to this study's research questions.

Rationale for a Qualitative Study

With the goal in mind of exploring, describing, interpreting and explaining the "total complexity of human institutions, behaviors, and events in-depth Qualitative researchers are concerned with understanding the social phenomenon from participants' perspective" (Gregson, 1998, p. 266). For the purposes of this study, the logic of the Delphi Technique utilized a qualitative approach to glean perspectives regarding the future from a panel of practitioners representing high-performance career and technical education institutions providing customized industry-specific training. From the qualitative, or naturalistic perspective, the voices of the participants were heard (Guba, 1998; Kvale, 1996; Merriam, 1998; Rubin & Rubin, 1995) through a telephone dialogue between the potential participant in the study and the researcher followed by an electronic, open-ended questionnaire.

Qualitative inquiry is a fluid, subjective approach to research used to inquire, discover, describe, understand, and interpret within a specific context, and the researcher is the primary data collection instrument (Guba, 1978;

Kvale, 1996; Merriam, 1998). While rigor and trustworthiness are concerns for qualitative research, there are ways to conduct the study so that the methodology and data are credible and trustworthy. "Researchers judge the credibility of qualitative work by the standards of transparency, consistency-coherence, and communicability" (Rubin & Rubin, 1995, p. 85), and they design the process to achieve these standards. Credibility is enhanced by selecting participants who are knowledgeable, willing to speak openly, and have firsthand experience (p. 92). Triangulation also helps to establish the trustworthiness of the research (Guba, 1998; Kvale, 1996; Merriam, 1998; Rubin & Rubin, 1995; Yin, 1994).

Two types of generalizability exist: (a) statistical generalizability and (b) analytic generalizability. While statistical generalizability provides the researcher with the ability to make "inferences about a population (or universe) on the basis of empirical data collected about a sample" (Yin, 1994, p. 30), the qualitative researcher also has the ability to make generalizations from the results of a study back to a theoretical framework. In the instance where the research embodies a theoretical framework around which the research has been designed, the opportunity for "analytic generalization is legitimate" (p. 31). Analytic generalization occurs in circumstances where "a previously

developed theory is used as a template with which to compare the results of the study" (p. 31). The use of a theoretical framework is not only an immense aid in designing the research study but also becomes "the main vehicle for generalizing the results" (p. 32). In order to generalize the findings back to the theory thus setting the stage for analytic generalization, it is incumbent upon the researcher to identify the appropriate theoretical framework prior to the collection of the data.

For the purpose of this study, the Baldrige Model for Performance Excellence and the Academic Quality Improvement Project (AQIP) provided a substantive, "rich theoretical framework for designing the study" (Yin, 1994, p. 28), and the findings of the study were compared for alignment with these two models. This study was designed to achieve the standards of rigor, trustworthiness, and generalizability.

Descriptive studies provide rich contextual information within which more rigorous quantitative findings can be interpreted (Guba & Lincoln, 1989). The process for this study as designed on the front-end was systematic and resulted in descriptive findings that are also expressed in quantitative form. The qualitative findings are reported in narrative form which allows the voices of the participants to be heard. The findings are also reviewed for alignment to the criteria of the Baldrige and the AQIP.

Rather than focusing on the instrument or whether or not the research design should be qualitative or quantitative, the ultimate goal of the researcher is to have a cautiously designed study that focuses on worthwhile questions. The research purpose and questions should be the driver in the process of selecting an appropriate methodology (Yin, 1994). "The issue of design assumes the role of a link in a chain that connects the research question(s) to the data-based conclusions. If the design link is weak [or inappropriate], the chain breaks" (Huck & Cromier, 1996, p. 577).

As the role of workforce development in business and industry is rapidly changing and intensifying with new needs emerging on an almost-daily basis, it is critical that career and technical education institutions delivering customized industry-specific training look beyond the reactive mode for strategies and focus on "what-will-be" research methodologies. "Training and development's repertoire must be expanded to include proactive (predictive) research methods . . . employing research techniques designed to forecast" (Somers, Baker, & Isbell, 1984, p. 26) and describe a future state.

When properly utilized, a forecast or projection is a dynamic interpretation of future events.

It is dynamic because it is a mere prediction, made at a single point in time, of events that

have no certainty of occurrence. With a change in time, the prediction may have to be altered materially or only insignificantly as a result of the interaction of forces from the sociological, economic, or geopolitical spheres. (McLoughlin, 1970, p. 149)

This statement holds true in today's rapidly changing, highly complex world as much as it did 30 years ago, perhaps more so. The term dynamic implies energy, flexibility, and power and is appropriate for the purpose of this study.

Several research tools are available and "span a range from the . . . Delphi method, which employs the structured opinions of a group of high-performance practitioners, to the semi-empirical mathematical models which attempt to quantify the variables that determine the course of a changing technology" (Stern, Ayres, & Shapanka, 1976, p. 120). The logic of the Delphi technique uses a "panel of experts or high-performance practitioners within a field to gather consensus on future alternatives, expected breakthroughs, and value judgments" (Somers, et al., 1984, p. 26). A panel of high-performance practitioners comprised the sample in this study in lieu of "a panel of experts" as described in the traditional Delphi methodology.

Conducting Research Electronically: A New Tool

While the use of online survey research is relatively new, a review of literature by Heflich and Rice (1999) uncovered discussions of "the possible use of computer-mediated communication as an opinion research tool,

especially using predictive data gathering techniques such as Delphi" as early as 1978. For decades, educational research conducted by mail, telephone, and face-to-face interviews has successfully been used in survey research. The evolution of the Internet offers yet another medium over which research can be conducted.

Electronic mail (e-mail) has revolutionized communication processes by allowing users to transmit and receive information from virtually anyplace in the world with a computer node connected to an online service . . . This type of information system obviously has other applications such as . . . access to expert opinion . . . However, one application which hasn't been discussed as widely is the use of electronic mail for survey research.

E-mail Survey Research is the systematic data collection of information on a specific topic using computer questionnaires delivered to an online sample or population. Respondents receive, complete, and return their questionnaires via e-mail. (Thach, 1995, p. 27)

There are many advantages to electronic survey research via the Internet over traditional paper questionnaires and interview formats; however, there are also disadvantages. The competent researcher must weigh the advantages and disadvantages in order to match the appropriate research methodology to the purpose of the research and the research questions (Yin, 1994).

The advantages and disadvantages of conducting the study using electronic media were carefully considered prior to making a decision as to the most appropriate tools.

Advantages to electronic media included: cost-savings; ease of editing and analysis; faster transmission time; rapid data collection from a variety of populations; easy use of pre-letters (invitations); higher response rates; more candid responses; potentially quicker response time with wider magnitude of coverage; reflective nature of online conversation; and ability to overcome barriers imposed by space, time, and location (Furlong, 1997; Ghost Bear, 2001; Heflich & Rice, 1999; Matz, 1999; O'Brien, 2001; Spencer, 2000; Stevens, 2000; Thach, 1995). Four primary characteristics of electronic media that make it useful for communication, specifically for survey research, included:

1. Speed: Messages can be transmitted in seconds to any location in the world, depending on the scope of the network.
2. Asynchronous Communication: Messages can be sent, read, and replied to at the convenience of the user. It is not required that the participants communicate synchronously, but instead can take their time to think about their response and answer when ready.
3. No Intermediaries: E-mail messages are generally only read by the [intended] receiver . . . have a better chance of being "opened" and read by the receiver than a traditional letter might.
4. Ephemerality: E-mail messages appear on screen and can easily be deleted with no trace of a hard copy. (Thach, 1995, pp. 27-28)

While the advantages provide substantial enticement as a vehicle for conducting research, several cautions and

drawbacks were revealed, such as: online interview protocols must be more self-explanatory and explicit than those conducted in face-to-face or telephone interviews; the demographics of the sample are limited to those people who have access to online networks; electronic questionnaires take much longer to create and are subject to users being more critical of format issues such as color, spacing, and location of items; the researcher cannot immediately probe responses to open-ended questions as in telephone and face-to-face interviews (Furlong, 1997; Ghost Bear, 2001; Heflich & Rice, 1999; Matz, 1999; O'Brien, 2001; Spencer, 2000; Stevens, 2000; Thach, 1995). One of the most challenging drawbacks is the potential for technical problems with hardware and software (Thach, 1995).

The recent successfulness of conducting survey research using modern technology such as electronic mail and the Internet has the potential to provide a powerful investigative option for researchers (Ghost Bear, 2001; O'Brien, 2001; Spencer, 2000). Surveying electronically has the capability of becoming an excellent tool and, perhaps, the "wave of the future in communicating and gathering information, attitudes, and opinions from a wide variety of respondents" (Young & Rice, 2000, p. 4). After thoroughly assessing the advantages and disadvantages, the researcher determined the possibilities for collecting data via

electronic media far outweighed the disadvantages. With the assistance of a highly-competent technical advisor, the study was then designed incorporating the electronic format.

The Sample

A population is defined as an entire group that has a similar set of characteristics, and a sample is a subset of the population to which the researcher intends to generalize the results (Gay, 1992; Wiersma, 1991). Regardless of the technique to be used in selecting a sample, "the first step in sampling is defining the population The defined population has at least one characteristic that differentiates it from the other groups" (Gay, 1992, p. 125). The key is to define the population clearly enough so that others may determine how relevant the findings of the research might be to their situation (p. 125).

The population for this study included all states represented by membership in the National Association of Industry-Specific Training Directors (NAISTD). At the time of the study, 47 states were represented in this population. This population was chosen because as a career and technical education provider of customized industry-specific training, the researcher has found the states represented by NAISTD membership to be knowledgeable and committed to high-performance and quality in meeting the workforce development requirements of business and industry.

While it is generally not feasible, or even necessary, to include all members of a population, it is imperative that the sample, or the individuals actually involved in the research, be representative of the larger population (Gay, 1992, 124; Wiersma, 1991, p. 257). A good sample is one that is truly representative of the population from which it was selected.

Regardless of the specific sampling method used, "the steps in sampling are essentially the same: identification of the population, determination of required sample size, and selection of the sample" (Gay, 1992, p. 126, p. 141). The "two basic types of sampling are probability and non-probability. Probability sampling (of which random sampling is the most familiar example) allows the investigator to generalize results of the study from the sample to the population from which it is drawn" (Merriam, 1998, p. 60). Non-probability sampling methods are appropriate for solving "qualitative problems, such as discovering what occurs, the implications of what occurs, and the relationships linking occurrences" (p. 61). The most common form of non-probabilistic sampling is called purposeful sampling.

Since the study sought to describe the characteristics of high-performing, career and technical education institutions that deliver customized training to business and industry five years from today, generalization in a

statistical sense is not the principal goal of this study. Therefore, this study was primarily classified as descriptive qualitative research; and, as such, purposeful sampling was used.

Purposeful sampling is based on the assumption that the investigator wants to discover, understand, and gain insight and therefore must select a sample from which the most can be learned The situation is analogous to one in which a number of expert consultants are called in on a difficult medical case. These consultants—also a purposive sample—are not called in to get an average opinion that would correspond to the average opinion of the entire medical profession. They are called in precisely because of their special experience and competence. (Merriam, 1998, p. 61)

Much like the example described by Merriam (1998), this study selected a purposeful sample of high-performance practitioners in the field of customized industry-specific training from across the nation. The membership of the National Association of Industry Specific Training Directors (NAISTD) served as the avenue for soliciting candidates for the sample, the panel of high-performance practitioners. "Membership in NAISTD is limited to those persons who are responsible for the statewide administration of any state-funded industry-specific training program intended to promote or support economic development for new and/or existing businesses and industries" (NAISTD, 1999). Because of the role that the NAISTD members serve in their individual states, it was ascertained that they would be the

most knowledgeable in identifying the high-performance practitioners to be included in the purposive sample for the study.

One of the premises for conducting research using the logic of the Delphi technique was that a panel of experts comprised of high-performance practitioners in the field being studied would have the ability to respond knowledgeably to the questions asked by the researcher. Representatives from institutions currently perceived as high-performing in delivering customized training to business and industry were asked to serve on the panel of practitioners for this study and to describe the characteristics of high-performing organizations five years and beyond based on their individual perspectives and experiences. The objective was to identify and reach an appropriate individual in each of these 47 high-performing institutions.

In order to identify the appropriate individuals to serve on the panel of practitioners, the NAISTD membership was requested by the NAISTD President Elect to make nominations of institutions and individuals to serve on the panel of practitioners. The NAISTD members were informed at the 17th Annual NAISTD Conference in May 2000 that the study was forthcoming and that participation from the membership would be requested. In April of 2001 the members from 45 of

the 47 states received an e-mail from the NAISTD President Elect that informed them of the study and requested their assistance in the study by nominating two career and technical education institutions in their home state that were perceived by the member as high performing in delivering customized training to business and industry. Individuals nominated by the NAISTD members to serve on the panel of practitioners were viewed as knowledgeable about the field of study and could provide an overall sense of meaning of the concept, theme, or process (Rubin & Rubin, 1995).

The NAISTD members were asked to nominate two individuals from their home state to participate in the study. The nominators were informed that should the first institution nominated from a state choose not to participate, the second institution nominated from that state would then be invited to serve on the panel of high-performance practitioners for the study. Of the 45 members asked to nominate participants in the study, 24 submitted nominations. The response rate was consistent with the number of states that are active members in the NAISTD organization. Of the 24 nominating states, the researcher was unable to contact the nominees from two of the states. In one case, the phone numbers and e-mail addresses for the individuals nominated were not functioning properly; thus,

the researcher was unable to make contact. In another instance, the individual nominated was out of the office for an extended period of time, and the second nominee for that state was no longer employed by the institution. Another participant called the researcher to apologize for not having completed the questionnaire and requested a copy of the study. The interest in participating in the study was apparent by this individual, but circumstances and timing prevented her from participating. There was no evidence that the use of electronic communication was a barrier to either the nomination process or the participation of nominees.

The findings of this study represented a cross section of perspectives gleaned from 18 leaders of high-performing customized training departments in career and technical education institutions representing 17 states. This number is consistent with the number of states actively involved in the NAISTD organization.

Currently, there are eighteen states that are among the most active in recruiting, expanding, and retraining their workforce as an economic development incentive. (L. Keen, personal communication, April 2001)

As career and technical education represents a variety of types of institutions with the mission of serving the workforce development needs of business and industry through

customized training, the members of the panel of practitioners also reflect that diversity (see Table 3).

Table 3: Types Career and Technical Education Institutions Represented by Members of the Panel of Practitioners

Type of Institution	Frequency	Percent
Community College	11	61.10
Technical College	3	16.70
Other*	2*	11.10
Vocational-Technical	2	11.10
Total	18	100.00

*1 - Community College with 4-year Degree
 1 - Community/Vocational-Technical College

The institutions represented by members on the panel of practitioners were diverse in nature as shown by the size of institution, the size of full-time employees in the customized training department, the number of full-time consultants dedicated to training for business and industry, and the number of adjunct faculty (see Table 4). While the ranges within each category are notable, the responses received from the members of the panel did not reflect meaningful differences in perspectives. In addition, the size of the institutions does not necessarily represent the size of the community served.

Table 4: Demographics of Participant Institutions

	Mean	Median	Mode	Smallest	Largest
Full-Time Employees (Institution)	601.28	261.00	250.0 ^a	104.0	5,200.0
Full-Time Employees (Department)	9.80	6.00	6.0	1.0	35.0
Full-Time Consultants (Department)	4.29	3.15	1.0	1.0	15.0
Adjunct Faculty (Department)	47.77	35.00	25.0	5.0	175.0

a. Multiple modes exist. The smallest value is shown.

Every region, as designated by the Bureau of Labor Statistics (see Appendix), except the Mountain region was represented in the study. The region with the greatest representation was the West North Central region: practitioners from five of the seven states (71.43%) included in the region participated in the study. The East South Central region, which includes four states, was represented by three states (75% of the region). This representation is consistent with the demographics of active NAISTD membership.

The Instrument

"Qualitative interviewing is not only a tool of research but is also an approach to learning and a philosophy. Encouraging individuals to describe their world in their own terms is one element of this philosophy" (Crawford, 2000, p. 48). When face-to-face interviews are not feasible to capture the voices of people as they

describe their perspectives of the worlds in which they live and work, open-ended questionnaires are frequently used as a tool.

Designing well-thought out questionnaires is critical to the credibility of the data collected. The questionnaire must be composed of open-ended questions that ensure essential exploratory, unstructured responses are forthcoming (Osgood, 1999, p. 63). The questionnaire cannot be allowed to destroy the elements of freedom and variability, nor should it abolish the messiness of qualitative data (Merriam, 1998; Osgood, 1999).

The questionnaire used was designed with the elements of freedom and variability in mind and consisted of two parts. Completion of the questionnaire was estimated to take the members of the panel of practitioners approximately 30-40 minutes. Based on the thoroughness of many of the responses, it is estimated that the majority of the members of the panel of practitioners spent approximately an hour completing the questionnaire. Part 1 of the questionnaire included demographic questions regarding each individual's institution, and Part 2 included open-ended questions asking the high-performance practitioners to describe their perceptions and opinions of the characteristics of high-performing institutions providing customized training to business and industry five years and beyond. The open-ended

questions for the questionnaire were designed using the framework, criteria, and core values from the Baldrige Criteria for Performance Excellence and the Academic Quality Improvement Project Criteria (AQIP). As shown in Table 5, the questions on the electronic questionnaire were linked to the research questions for the study as well as to the two models of performance excellence that served as the theoretical framework for the study.

The "issue of replicability is frequently invoked by critics of naturalistic inquiry" (Guba & Lincoln, 1981, p. 120); however, "replications can be built into the several stages or steps of any study" (p. 121). So that "the data collection procedures can be repeated" (Yin, 1994, p.33) for this study by another investigator at a later date, samples of the electronic communications including e-mails, nomination forms, and questionnaire along with a description of the regions that were used to describe the members of the panel of practitioners are included in Appendix.

Table 5: Linking Research Questions and Questionnaire to Baldrige Criteria and AQIP Quality Criteria

Research Question Number	Electronic Questionnaire Question Number	Baldrige Criteria for Performance Excellence	AQIP Quality Criteria
1 -2	1 - 7	2.0 Strategic Planning	8.0 Planning Continuous Improvement
4	8 - 9	3.0 Customer and Market Focus	3.0 Understanding Students' and Other Stakeholders' Needs
4	10	4.0 Information and Analysis	7.0 Measuring Effectiveness
3	11	1.0 Leadership	5.0 Leading and Communicating
3	12	5.0 Human Resource Focus	4.0 Valuing People
1, 2, 3, and 4	13 - 14	6.0 Process Management	1.0 Helping Students Learn 2.0 Accomplishing Other Distinctive Objectives 6.0 Supporting Institutional Operations 9.0 Building Collaborative Relationships
Other	15	Other	Other

Prior to implementing the questionnaire, a pilot group comprised of individuals involved in providing customized industry-specific training who were knowledgeable about the Baldrige Model for Performance Excellence was asked to

evaluate the questionnaire in two areas: (1) to determine if the questions collectively covered the material that the instrument was designed to collect and (2) to determine the clarity of the questions. This step in the process served to ensure that the questions were clearly worded and would solicit the information intended for the study while minimizing the potential for researcher bias. Changes recommended by the pilot group were incorporated in the questionnaire.

As one of the disadvantages to electronic research is the potential for technical difficulties with hardware and software, another pilot group consisting of a cohort group of Oklahoma State University doctoral students tested the electronic version of the questionnaire prior to implementation. This cohort group was also asked to review the instructions for clarity. Changes were once again made to the instrument based on recommendations made by this group.

The voices of the participants were "clear and compelling . . . providing vividness and clarity of examples" (Rubin & Rubin, 1995, p. 92). The traditional Delphi methodology is iterative; however, the extensiveness and congruence of the responses provided by members of the panel of high-performance practitioners provided in the first round pre-empted the necessity of conducting a second

round of inquiry. As is inherent in the Delphi methodology, the process concluded when consensus was approached among the participants in the study (Dalkey, 1967, as cited in Delbecq, 1975). A characteristic of qualitative research is that the study drives the design rather than the design driving the research. As qualitative research cycles are intended to "bring together what you want to learn with what the conversational partners know and experience . . . A self-corrective design ensures the accuracy and credibility of the research" (Rubin & Rubin, 1995, p. 92). The credibility of the members of the panel of practitioners along with the completeness and trustworthiness of the responses to the research questions in round one truly exceeded the expectations of the researcher.

Procedures for Data Analysis

The process began with a request to the NAISTD membership for nominations of institutions and individuals to serve on the panel of high-performance practitioners. This request was made using a group e-mail list of the NAISTD members. The e-mail included information regarding the study and the importance of the nominations. Included in the e-mail was a link to the researcher's URL which contained the nomination form. Upon completion of the nomination form, the NAISTD members clicked the "Submit" link, and the form was submitted electronically to the

researcher's e-mail account. The nominators were asked permission to use their name when contact was made with the nominees. In all cases, permission was granted.

Whenever a new technology is used, "there must be a counterbalancing human response—that is, *high touch*. The more high tech, the more high touch" (Naisbitt, 1982, p. 39). In order to address the issue of lack of personal interaction as one of the disadvantages to electronic research, the researcher personally contacted each of the nominees for the panel by telephone. The researcher spoke directly with 68% of the nominees. With the exception of one nominee who was unable to be contacted by either telephone or e-mail, the other 22% of nominees received a voice-mail message notifying them of their nomination, explaining the purpose and process of the study, and requesting their participation.

Following personal contact by the researcher, the nominees were contacted electronically via the potential participant's e-mail address. These individuals received an e-mail from the researcher informing them of their nomination, providing information regarding the study, and requesting their participation in the study. Those who consented to serve on the panel were instructed to click on an Internet address that linked them directly with the

website of the researcher's technical advisor where the questionnaire was be located.

Both qualitative data and quantitative data were to be collected from the initial questionnaire. Qualitative data was collected through the responses to the open-ended questions, and quantitative data was collected through responses to the questions regarding demographic information.

The members of the panel of high-performance practitioners completed the questionnaire electronically and submitted the responses directly to the Internet website created for the purposes of this study. Upon receipt of the responses, the researcher downloaded the responses to a data management file. Quantitative data were subsequently transferred to SPSS for analysis, and qualitative data was transferred to a word processing program for analysis.

Coding

One of the greatest challenges of qualitative research is to make sense of the descriptive or inferential information compiled during the data collection stage of the research. "Comparing one segment of data with another to determine similarities and differences" (Merriam, 1998, p. 18) is a widely used method of data analysis in all kinds of qualitative research. This methodology is known as constant comparison, and the overall objective of this form of

analysis is to seek patterns in the data. The researcher, as the primary instrument of data collection and analysis, assumed an "inductive stance" and endeavored "to derive meaning from the data" (Glasser & Strauss, 1967, p. 17) using the constant comparative methodology during the analysis stage of the study.

Dissecting the information "meaningfully, while keeping the relations between the parts intact, is the stuff of analysis" (Miles & Huberman, 1994, p. 56). While it is not the words themselves but their meaning that matters, a word or phrase has "the meaning it does by being a choice made about its significance in a given context" (p. 57). Codes, also referred to as labels or tags, were assigned to words and phrases to give meaning to the information gathered and analyzed throughout the study.

The researcher placed verbatim responses to the open-ended questions along with the state or region submitting the responses into a table using word processing software. One additional column was added to the table which was used to capture the researcher's thoughts and reflections. A second document was then created using the initial document as a template, and a fourth column was added to the table for coding purposes. Responses on the second document were then dissected and separated out according to topics, concepts or themes addressed in the statement. Each of

these thoughts was then coded according to the theme contained within the statement. The statements and the codes were then clustered so as to set the stage for analyzing the data and drawing conclusions. The codes were then used to cluster or "group similar ideas together and figure out how the themes related to each other" (Rubin & Rubin, 1995, p. 229). The data analysis ends "when you have found overarching themes and put them in the context of broader theory and answered the question, 'So What?'" (p. 256).

Statistical Representation of the Data

A frequency distribution was then constructed for each variable identified within the findings. The statistical distributions were graphed and provided a pictorial summary of the patterns obtained in the data (Gay, 1992; Huck & Cromier, 1996; Shavelson, 1996). Following the process of clustering the codes for each of the research questions, the codes were transferred to SPSS for further analysis in order to report the data with a high degree of precision. The use of SPSS permitted the researcher to further analyze the data according to descriptive frequency distribution resulting in bar graphs representing four areas: (a) the major challenges, (b) the vital few goals, (c) the leadership characteristics, and (d) the customers of customized industry-specific training five years from today and beyond.

All responses were transferred from document to document electronically thus eliminating the need for physical transcription by the researcher. In addition to saving time in transcription and eliminating researcher bias that occasionally occurs during transcription, the integrity and trustworthiness of the data were ensured.

Triangulation

"Triangulation is supposed to support a finding by showing that independent measures of it agree with it or, at least, do not contradict it" (Miles & Huberman, 1994, p. 266). The purpose of triangulation is to obtain corroboration and may be obtained in multiple manners such as: "data source (which can include persons, times, places, etc.; by method (observation, interview, document); by the researcher; by the theory" (p. 266). The objective was to select triangulation sources that had different biases and different strengths so that they complemented each other. In addition to the responses obtained from the members of the panel of practitioners, this study used peer review, member checking, and document analysis. The researcher reviewed the websites of several of the institutions represented by members of the panel with selected pages printed and placed in the researcher's files for reference. The researcher was looking for references to the institution's mission as well as products and services

offered through the customized industry-specific department. Following the initial telephone conversation with one of the panel members, the individual sent the researcher a packet of material regarding a consortium of institutions collaborating to provide customized training to business and industry in his community. Conversations via e-mail also occurred with three of the members of the panel after completion of the questionnaire.

Member check is another way to confirm the research findings by reviewing the researcher's insights with the participants in the research project (Guba & Lincoln, 1981; Merriam, 1988). After the majority of data was collected, the researcher presented the preliminary findings to three different groups for peer briefings and member checks. The preliminary findings were presented to the members of NAISTD who had earlier submitted nominations for the participants on the panel. First, a presentation was made to this group at the 18th Annual NAISTD Conference regarding the purpose of the study and the methodology. This provided the researcher the opportunity to publicly thank the NAISTD members for the important role they played in identifying the high-performance members of the panel. Attendees at the conference were provided with copies of the preliminary data and divided into eight small groups for discussion of the data. An Oklahoma State University doctoral student and

professional colleague accompanied the researcher and assisted in facilitating the small-group discussion. After a review of the data and a discussion of the meaning of the findings, each small group then recorded their conclusions as to the meaning of the data and submitted this information in written form to the researcher. The analysis by the NAISTD members was included in the findings section of this study.

Peer briefing is a consultation with other experts who help to confirm the initial research findings to provide additional insights in the interpretation of the data (Guba & Lincoln, 1989; Merriam, 1988). The process of having findings verified by another independent source such as peer review is one means of triangulation and helps to confirm the credibility of the study (Guba & Lincoln, 1989; Merriam, 1988). A cohort group of doctoral students from Oklahoma State University (OSU) was used for peer briefings. This group, known as the MIS (Make it So) group, was made up of five doctoral students and one OSU faculty advisor who met at least twice a month for the purpose of discussing and evaluating on-going research projects. During several of these meetings, the researcher presented the patterns and themes that were emerging from the data analysis. Ideas were solicited from the MIS cohort group for reporting the data findings on multiple occasions. Peer briefings were

also conducted with colleagues of the researchers who were also involved in delivering customized industry-specific training.

Presentation of the Findings

Analysis of qualitative data and presentation of the findings and conclusions can range from simply "organizing a narrative description of the phenomenon, to constructing categories or themes that cut across the data, to building theory. Each of these levels of analysis calls upon the investigator's intuitive as well as analytical powers" (Merriam, 1998, p. 196).

The findings for the major challenges, the vital few goals, leadership characteristics, and customers five years from today and beyond are presented in a comprehensive format. The patterns and themes that were gleaned through data analysis are presented in narrative form as well as in frequency distribution form. In addition, the findings led the researcher to a further review of literature that was incorporated in the reporting of the findings. As the Baldrige Model for Performance Excellence and the Academic Quality Improvement Project served as the theoretical framework for the study, the report of findings also provided a discussion of the linkages and alignment to these two models.

CHAPTER 4

MAJOR CHALLENGES: FIVE YEARS AND BEYOND

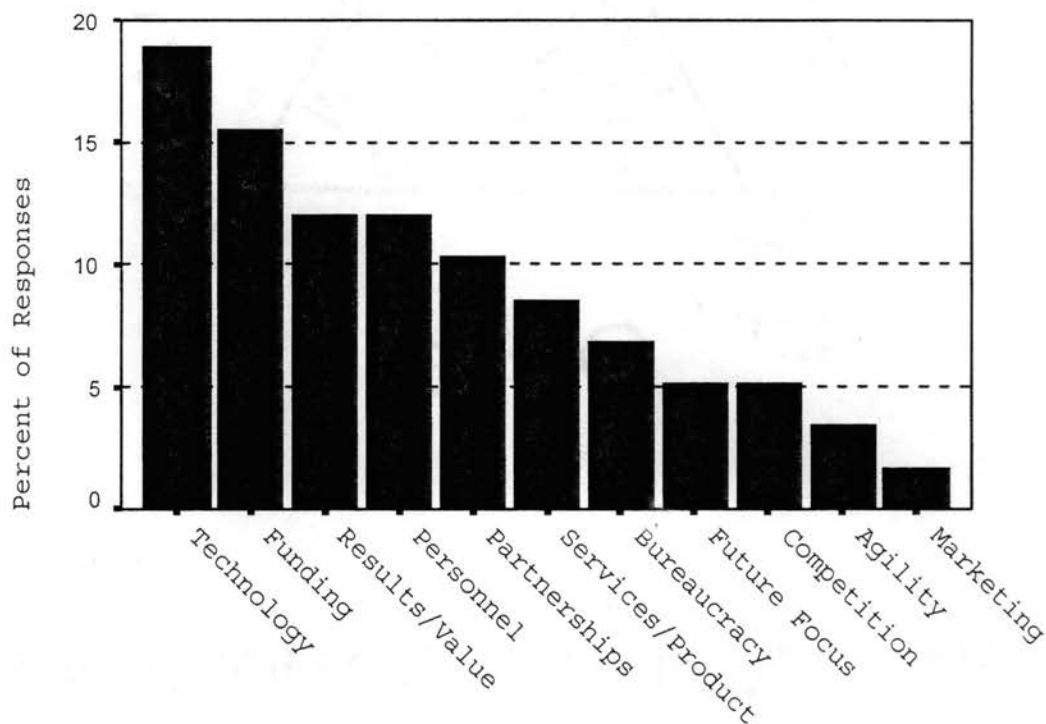
Research Question: What are the major challenges facing high-performing career and technical education institutions delivering customized industry-specific training five years from today and beyond?

Introduction

To investigate the greatest challenges facing high-performing career and technical education institutions that provide customized training for business and industry over the next five to ten years, the members of the panel of practitioners were asked to describe: (a) the major challenges, which could be either opportunities or problems, facing career and technical education providers of customized industry-specific training over the next five to ten years and (b) the two or three vital few goals that will allow their individual departments to address these challenges. The members of the panel, who represented leaders of high-performance career and technical education institutions across the nation that provide customized industry-specific training to business and industry, described 11 key areas of challenge facing the customized industry-specific arena in the next five to ten years. All

of the areas centered on meeting and exceeding customer needs and included challenges relating to: bureaucracy, competition, funding, focus on the future, marketing strategies, partnerships and alliances, personnel, agility and responsiveness, focus on results and creating value, services and products, and technology (see Figure 1).

Figure 1: Major Challenges: Five Years and Beyond



Regardless of the challenge or issue described, the fundamental theme centered around the phrase "keeping up." "Keeping up" appeared in responses by 38.89% of the participants. Whether in the context of technology, equipment, knowledge, competition, or funding, "keeping up" presents a major challenge to providers of customized industry-specific training. The rapidly increasing rate of

change impacts every facet of customized training; this is both in the internal environment as well as the external environment as evidenced by the reference to change in an additional 12.1% of the comments. Comments using either the term "keeping up" or "change" were 27.35% of the total responses to this question. Typical comments that included these two terms or phrases were:

One of the major challenges that our unit has is keeping up with the technology of the business community. This is not only with equipment but with personal knowledge that is ever changing.
(Director of a community college in the West North Central region)

Keeping up to date with new topics and technology.
(Director of a community college in the Middle Atlantic region)

In order to keep pace with the rapidly changing technology. (Director of a community college in the East North Central region)

A recent survey commissioned by the Center for Workforce Preparation, an affiliate of the U. S. Chamber of Commerce, also made reference to the challenge of "keeping up" as faced by business and industry. The study focused on the challenges faced by employers with regard to their desperate need for a skilled, quality workforce and was titled "Keeping Competitive: Hiring, Training, and Retaining Qualified Employees in 2001" (U.S. Chamber, 2001).

Keeping Up

What then is meant by the phrase "keeping up"? When used in conversational commentary, "keeping up" most often

refers to the increasingly rapid rate of change and the resulting implications. Perhaps one of the most graphic representations of the rapidly increasing rate of change is demonstrated through the cosmic calendar created by Carl Sagan (1977), physicist and astronomer. Sagan posed the following question: What would it look like if we took all of the significant events in the history of mankind and condensed them into a one-year time frame? Beginning with the dawning of the Stone Age and continuing through 1987, Sagan collected data, entered it into his computer, and generated the following results as interpreted by L. E. Presley (personal communication, July 10, 1996):

The Dawning of the Stone Age	January 1
Mankind discovers fire	November 19
Mankind communicates symbolically	December 10
Mankind begins production agriculture	December 30
	December 31
Greek civilization	11:30 a.m.
Roman Empire	1:30 p.m.
Printing Press	9:30 p.m.
Industrial revolution	11:05 p.m.
Automobile and airplane	11:45 p.m.
Automated systems	11:52 p.m.
The computer	11:55 p.m.
Heart transplants	11:58 p.m.
Man lands on the moon	11:59 p.m.
Information explosion	remaining seconds
Economic confusion	remaining seconds
Social malaise	remaining seconds
The "instant" society	remaining seconds

At the completion of the first half of the nineteenth century, the railroad and telegraph stood supreme as the two

inventions that transformed their era and ushered in a new age of modernity. So, too, has commercial jet travel and the digital electronic computer transformed our lives.

"Today's average junior high school math class filled with 20 used PCs costing about \$300 apiece contains more computational power than the Pentagon commanded in the days following Sputnik" (Young, 1998, p. xi).

In the New Economy, organizations are being transformed in the "blink of an eye and the click of a mouse" with new definitions of "what it takes to win in today's frenzied, everything-changing-at-once product development cycles" (Winkler, 1999, p. 1). An example of the meaning of "keeping up" comes from a statement made by the Director of Operations for a large corporation in Oklahoma.

Warp speed! Warp speed, a term used referring to super speed, requires that any initiative or new product must be operationalized or on the market within four to five months . . . or less . . . from the time of inception of the idea. If it takes any longer than that, we have lost the race and our competitors have taken the lead. In the past, we may have had a year or two lead time. (Donahue, 2001).

Change and the resulting necessity of "keeping up" is ever-present and will most likely continue to accelerate the need for business and industry to access customized industry-specific training for incumbent employees. As evidenced through the comments of the members of the panel, the resulting challenge for providers of this training is

and will continue to be that of "keeping up" with the requirements of their customers and stakeholders. Whether in reference to technology, knowledge, personnel, or other issues, the rate of change is anticipated to continue to increase, and the challenge of "keeping up" will accelerate as well.

Major Challenges: Five Years and Beyond

The challenges faced by career and technical education institutions providing customized training five years from today and beyond cover a broad spectrum ranging from technology issues to bureaucracy and funding. The members of the panel of experts were in agreement on 11 such challenges and were descriptive in their responses in that they addressed not only the challenge but also gave specific examples of the implications for the challenges. Several of the responses drove the researcher to review additional perspectives from the literature. These perspectives from the literature are included in the context of the findings.

Technology

As evidenced by the responses from the panel members, the unparalleled technological innovations of the past half century have dramatically redefined traditional concepts and practices for not only business and industry but also for the providers of customized industry-specific training. Almost one out of every five (19%) of the challenges

described by the participants as having a major impact on their ability to provide high-quality customized training to business and industry were related to technology issues.

With reference to technology, the respondents described not only the specific technology but also the challenges inherent in "keeping up" with rapidly changing technology. Technological challenges described by the participants as to their organization's ability to "keep up" with clients' needs for customized industry-specific training fell primarily into three areas: delivery methods, software and equipment, and knowledge.

The critical nature of "keeping up" with "developing training programs using alternative delivery methods" (Director of a state college in the West North Central region) and "successfully integrating new media and technologies into customized training" (Director of a Pacific region community college) is consistent with the recognized need for the application of new technologies to education.

Those who still question its appropriateness [of using new technologies in the delivery of training], however, should recall President Rutherford B. Hayes's comment on seeing a demonstration of the telephone in 1876: "That's an amazing invention, but who would ever want to use one of them?" (Katz, 1999, p. 54)

The changing demographics of the stakeholders, both the business organization as well as the worker, are seeking and

often requiring the use of alternative delivery methods for training options for the incumbent worker. The generation frequently referred to as Generation X has grown up with alternative avenues and media for learning; and, for many, the use of technology is an integral part of their learning preferences.

This is the age of the Information Revolution, and this new world of computer-based knowledge stretches from living rooms to corporate headquarters. It is changing the way people communicate among themselves personally and the way they conduct business. (Ghost Bear, 2001, p. 1)

There appears to be no relevant reason why the only appropriate delivery method for the teaching-learning transaction must continue to be that of rounding up students into one room for a requisite number of hours every week for training purposes in a world where individuals frequently have access to resources such as the Internet twenty-four hours a day for seven days a week, real-time webcasts, instant messaging, and personal digital appliances. Technology is truly "challenging medieval pedagogical methods" (Katz, 1999, p. 55).

"Warp speed" as used by an industry representative in the manufacturing sector is certainly appropriate to the technological challenges described by the members of the panel with reference to "replacement of software and keeping up with expensive technology" (Director of a Middle Atlantic

region community college) and "keeping up with new technologies and state-of-the-art equipment" (Vice president of a South Atlantic region technical college). Not only are the products of client organizations changing at warp speed, but also the software and equipment used by the clients appears to be changing at warp speed. "Keeping up" with the software requirements and equipment presents a tremendous challenge to providers of customized industry-specific training.

The challenges of "keeping up" with changing software and equipment are not only frequently beyond the budgetary constraints of the providers but also place a considerable burden on the provider's ability to "keep up" with the knowledge and skills required on the part of instructors to effectively use the new software and equipment. Evidence of these challenges are presented in the following sections regarding "funding" and "personnel."

Recognizing the importance of quick response, potential obstacles to an organization's ability to respond in a timely manner to clients' needs for incumbent training were reported as significant challenges by leaders of customized training organizations from every geographical region of the United States. "Keeping up with new topics as related to new technologies" (Director of a community college in the Middle Atlantic region) and "maintaining instructor pools

that have mastered the newest technologies" (Co-director of a community college in the Pacific region) were representative comments.

In sum, technology continues to change the face of training from multiple perspectives including software and equipment, delivery methods, and knowledge is indeed a major challenge impacting the ability of providers of customized industry-specific training to meet the needs of business and industry. If Sagan's cosmic calendar were to be projected out another 20 to 30 years, the rate of change would more than likely be reflected in fractions of seconds.

Funding

Exactly half (50%) of the respondents described funding issues as a major challenge facing their institution's ability to function as a high-performance provider of customized training to business and industry five years from today and beyond. Of the total number of challenges described by the participants in the study, funding issues represented 15.5%.

One participant described only one major challenge and used only one word in describing the issue. That one-word challenge was typed in all capital letters: "BUDGETS!" While there was no clarification given by this respondent as to the specific issue revolving around budget, the nature of the response clearly indicated that funding is indeed a

major challenge for this institution. Responses by this participant to other questions on the questionnaire were provided in full sentences with upper and lower case for all descriptions. Hence, in addition to the critical nature of funding as a challenge to this participant, the response represented a high degree of emotion tied to the issue of budgets, which may be in reference to lack of adequate monetary resources being allocated to customized training in this institution or to the institution as a whole.

Another respondent also used only one word, "funding", in describing issues related to major challenges. For this particular participant, however, the degree of emotion tied to the issue as not as apparent and did not infer the same degree of intensity as it did for the previous respondent.

Linking challenges with escalating expenses incurred by providers of customized industry-specific training to "keep up" with technology and other related costs to an institution's ability to provide affordable high-quality training, the participants voiced concern regarding the limited support provided through public subsidies. In addition to the issues related to limited and perhaps shrinking public subsidies, there is also a mindset in some institutions that the customized training department should generate revenue to support not only their own department but should contribute to the financial support of non-

revenue generating departments within the institutions as well. When this is the mindset of the institution, it is often difficult to provide the training services at a cost that is affordable thus limiting the opportunity to respond to the needs of business and industry that will keep them competitive. Close to half (44.44%) of the responses regarding funding challenges were related to this issue.

Public subsidies and support for this type of work needs to be improved in order to make the cost for the end product training reasonable for business and industry. (Director for a community college in the East North Central region)

Tighter funding from federal and state. (Director of a technical college in the South Atlantic region)

Having to be a major revenue stream for the college. Gaining resources from the college to expand programs and personnel. (Director from a community college in the West North Central region)

Also related to staying current . . . is continuing to evolve as the playing fields and funding streams change Remaining a player is a challenge. (Director of a community college in the Pacific region)

Finding and keeping quality employees is of critical importance to employers in all industry sectors including educational organizations for a wide variety of reasons, and "retaining employees is ranked as the second highest competitive factor" (Cheney, 2001, p. 9) according to companies participating in a recent study conducted by the U.S. Chamber's Center for Workforce Preparation. The same

study revealed that in 77% of the cases, "other job opportunities" and "better pay/compensation" were listed as the reason for employees leaving the job.

Responses to the question of "major challenges" indicated that career and technical education customized training departments are subject to the same hiring and retention dilemmas as are employers in the private sector. Limited funding support impacts the customized industry-specific training department's ability to hire and retain subject-matter experts to serve as instructors and consultants, especially in the "hard skills" areas such as information technology and manufacturing. Participants reported challenges to "hire good staff with our limited budget" (Director of a community college in the Middle Atlantic region) and "to be competitive with private sector wage scales" (Director of a technical institute in the East South Central region).

In sum, the participants voiced great concern for the increased demand and necessity for their services while facing decreasing funding support. Equally challenging is the pressure from institutional leaders on the customized industry-specific training department to support financially other departments within the institution. Providers of customized training have recognized the need to provide high-quality training at affordable costs to business and

industry, and the institutional constraints are increasingly challenging their ability to do so.

Focus on Results and Creating Value

Linked to issues related to personnel were issues related to the ability of providers of customized industry-specific training to focus on results that create value for the recipients of the services and products. While the terms "results" and "value" are used in a broad sense to describe the responses to the question relating to "major challenges", the core values and guiding principles of the Baldrige Criteria and the Academic Quality Improvement Project (AQIP) soundly reflect the necessity for performance excellence organizations to incorporate a "focus on results and create value" in everything they do. This focus is reflected in the responses of the participants which indicated that in an increasing number of instances business and industry must be insured that a "return on investment will be realized as a direct result from providing training to their incumbent workforce" (Director of a technology center in the West South Central region).

An increasingly common question is being asked by clients "at the beginning of most consulting projects: 'How do I know if this will pay off for me, and will this be a good return on my investment?'" (Phillips, 2000, p. 28). Training of an incumbent workforce often requires

considerable time and monetary investments as well as lost productivity for the time the workers are in training. The cost of training includes more than the obvious costs such as the salary of the instructor, program materials, participants' salaries (plus benefits), and facilities. When figuring return on investment, several other measures sometimes work their way into training evaluations such as increased productivity, increased revenues, and pay back period (Phillips, 1997, 2000). Lack of perceived value was identified as one reason why companies do not provide training or cut training during difficult times.

The major challenge in our service area is company participation in training. As stated previously, training is always considered the last alternative to solving any problem. Training is the first thing cut when a company has hard times financially; and often, training can actually increase workforce performance and productivity. (Director of a community college in the East South Central region)

Client representatives who must authorize training budgets, request assistance from the providers of customized industry-specific training, and live with the results of the interventions are being held increasingly accountable to their corporations, stockholders, and stakeholders for results from training. Demonstrating that "training pays" and "adds value" to business and industry's bottom line was described as a critical challenge for career and technical education institutions delivering customized training.

Perhaps the increased focus on accountability is a result of a growing interest in a variety of organizational improvement and change interventions over the past two decades in which many organizations have adopted programs and change interventions that have not created value for the company.

Organizations have embraced almost any trend that appears on the horizon. Unfortunately, many of these change efforts have not worked and have turned out to be nothing more than passing fads, however well intentioned. (Phillips, 2000, p. 33)

While the literal measure of Return on Investment is the comparison of the monetary value of the business impact with the costs for the intervention, more and more companies are most concerned with the actual transfer of training that results from the training intervention. Transfer of training is reflected in changes in behavior on the job with specific application of the skills and knowledge acquired as a result of the intervention and the subsequent increase in performance and productivity (Broad & Newstrom, 1992; Phillips, 1997, 2000; Robinson & Robinson, 1989). Responses from participants that reflect this notion included:

More than providing training for training sake, another challenge is to move training from an idea to changed behavior on the work floor is essential. (Dean of a university in the South Atlantic region)

Training must be results oriented. Results that change performance measures will have to be shown. (Director of a technology center in the West South Central region)

A second challenge identified by the participants in the study that emphasized a "focus on results and creating value" is that of expanding the ability and commitment of providers of customized industry-specific training to endorse and support skill standards, assessments, and certifications of incumbent workers. The importance of these types of credentialing for workers has also been identified as one of the top priorities of the National Center for Career and Technical Education (NCCTE) Professional Development Academy for the year 2001-2002.

Credentialing represents an alternative system for documenting knowledge and skills. Students [incumbent workers] who are able to document and demonstrate industry-standard skills have an undeniable edge in the labor market over those who don't have similar credentials. (p. 1)

Further evidence of the critical nature of credentialing for workers exists within the mission of the National Skills Standards Board (NSSB). The NSSB is a coalition of leaders from business, labor, employee, education, community, and civil rights organizations. This coalition was created in 1994 for the purpose of building a voluntary system of skills standards, assessments, and certifications.

The purpose of developing industry-driven standards is to enhance the ability of the United States to compete in a global economy . . . and will be based on high performance work and will be portable across industry sectors. (Building Bridges Project, 2001, p. 2)

During the past two years, professional associations such as the National Council for Continuing Education and Training (NCCET) have also recognized that the issue of credentialing, and certification has become a major item of discussion and challenge for America's career and technical education institutions.

At the heart of the issue is a rapidly growing phenomenon in which private sector companies have moved into areas previously viewed as the province of higher education—education and training, assessment of competencies, and the awarding of credentials that carry respect and value in the marketplace Community colleges have been slow to move into this arena Some observers have expressed the concern that industrial certification could eventually challenge traditional degree programs offered by accredited colleges and universities as the educational path of choice for discerning knowledge workers. (Flynn, 2001, p. 1)

The voices of the members of the panel of practitioners echoed the goals described by NCCTE, NSSB, and NCCET. Action in the pursuit of addressing the challenge of satisfying the needs of industry to "increase professional certification standards and portfolios for employees" (Director of a West North Central region college) and "creating credentialing systems that can precisely measure and certify skill acquisition using commonly understood language" (Director of a community college in the Pacific region) will strengthen the value of the services provided

by career and technical education institutions that provide customized training to business and industry.

In sum, two major themes surfaced as related to the major challenge of focusing on results and creating value for business and industry. One of the major challenges described by the participants is that of focusing on creating value as recognized by return on investment for business and industry. With increasing frequency, clients are asking, "What is the bottom line impact of training and organizational development interventions?" One of the core values for the Baldrige Criteria for Performance Excellence is stated as "Focus on Results and Creating Value" (Baldrige, 2001; Blazey et al., 2000), and the participants in the study recognized this as a major challenge. The second theme that emerged as a major challenge to the members of the panel focused on obtaining results and creating value as demonstrated by the ability of customized training organizations to provide enhanced skill standards, assessments, and certifications that will strengthen the ability of business and industry to compete effectively in a highly-competitive, global economy.

Personnel

The need for qualified and highly skilled workers is already a priority for American business and industry and will continue to grow over the coming years. Career and

technical education institutions providing customized industry-specific training to business and industry are facing the same challenges in the area of workforce, as are their client organizations. Closely linked to both the challenges of technology and funding are the challenges involving personnel-related issues. More than one-third of the participants (38.9%) described issues relating to personnel as a major challenge facing their ability to deliver the best possible training to their clients. Of the total number of challenges described by the participants, 12.1% were focused on personnel-related issues.

The members of the panel of practitioners described not only the difficulty of finding and hiring highly qualified personnel but also the challenge of retaining these individuals. If indeed the individuals delivering training to business and industry are true subject-matter experts, it is not uncommon for the companies for which they are training to "hire them away from us" (Director of a community college in the East South Central region). While trainers and staff consultants are not necessarily dissatisfied with their positions in career and technical education institutions, the ability for these institutions to match the salaries available to these individuals in the private sector is frequently not possible. These sentiments were reflected in statements such as:

Keeping good trained people in place to actually do the training as the private sector will hire these people away from us. (Director of a community college in the East South Central region)

Staying competitive with instructor salaries. (Director of a community college in an east coast state)

Hiring good staff with our limited budget. (Dean of a technical community college in the South Atlantic region)

Another key issue regarding personnel as described by the participants is directly linked to the challenge of "keeping up" with technology. The ability of high-performance career and technical education institutions to deliver high-quality customized training is contingent upon the ability to create and maintain the knowledge level of instructors and trainers who are on the leading edge rather than the lagging edge of technology. This challenge was reflected in a comment by one member of the panel who described the challenge of "maintaining instructor pools that have mastered the newest technology is one of our greatest challenges" (Co-director of a Pacific region community college). In many instances, those individuals who are masters of the newest technologies have the capability of earning a much higher salary in the private sector than is possible with the majority of career and technical education institutions participating in the study that provide customized training to business and industry.

In sum, the issues of hiring and retaining high-quality personnel as well as having the ability to stay knowledgeable of the current topics and technologies were major challenges as described by the members of the panel of practitioners. The instructor of the customized training is the front-line person who represents the institution and delivers the training; and without adequate resources in this area, it is not feasible to be considered a high-performance organization delivering the highest-quality training to business and industry. The responses of the panel members reinforced the belief that the most important variable in competitiveness is that of the skills and capabilities of the workforce (Atkinson, Court, & Ward, 1999; Gray & Herr, 1995, 1998, 2001; Herman, 1999a, 1999b). The skills and knowledge of instructors of customized training delivered to business and industry are critical to an institution's ability to meet the requirements for high-quality, customized industry-specific training.

Partnerships and Collaboration: Creating Synergies

Career and technical education institutions are very much a part of a larger world, and the need to collaborate with that world has never been more important than it is today. Whether in times of strong economic growth such as seen in the late 1990s and the first half of 2000 or economic downturn such as has escalated since the terrorist

attacks of September 11, 2001, no single entity can effectively tackle the challenges alone.

Our partners work with us to provide innovative solutions neither of us could provide alone for the benefit of our community. (Strategic plan for a technology center in the West South Central region)

At the beginning of the 21st century, collaboration continues to be an imperative for the survival of most organizations both in the private as well as in the public sector. "If we are to make further progress, we must find ways to foster greater responsibility and cooperation among all sectors of society" (Sagawa & Segal, 2000, p. vii). The creation of innovative and highly successful partnerships and strategic alliances are proving to be effective avenues for addressing today's issues and for strengthening economic development and workforce development initiatives (AQIP, 2000a; Baldrige, 2001; Blazey et al., 2000; Greenspan, 2000; Herman, 1999a, 1999b; Kaplan & Norton, 2001; Kouzes & Posner, 1995; NGA, 2000; Roueche et al., 1995; Sagawa & Segal, 2000).

Workforce education must be seen as a system of components that interact to equip students or adult workers with the knowledge, habits, and skills to perform jobs that are available and that are emerging. (Gray & Herr, 1998, p. 213)

The responses of the panel members concurred with this viewpoint. Challenges and issues focusing on partnerships represented 10.3% of the total responses made by the

participants. One-third (33.34%) of the responses that fell in the area of the partnerships and alliances category viewed partnerships not as a problem or issue but rather as an opportunity. The "opportunity" to partner more closely, or perhaps more strategically, with business and industry was viewed as a major challenge five years from today and beyond.

The opportunity to partner with the private sector to design the training programs that they want, need, and will support because they have ownership if they help put it together. (Director of a state community college in the East South Central region)

While each provider of customized industry-specific strives to be unique, developing partnerships and alliances with suppliers and competitors provides additional opportunities for synergy. Supporting the Baldrige Criteria for Performance Excellence, the notion of developing partnerships and strategic alliances with suppliers and competitors provides enhanced abilities for the customized industry-specific training provider for "rapid development of curriculum or assessments, rapid response to changing demands, or the ability to produce a wide range of customized services" (Blazey et al., 2000, p. 141). Recognizing the challenges inherent with the shrinking resources such as funding and the increased responsibility for accountability as described by the members of the panel

of practitioners would facilitate reductions in both cost and cycle time (AQIP, 2000b; Baldrige, 2000a, 2000b).

The opportunity to create strategic partnerships with equipment manufacturers, corporate universities, and CBT training developers will greatly enhance our ability to meet the needs of our customers in a cost-effective manner.

(Director of a technical institute in the East South Central region)

Criteria and core values in both the Baldrige Criteria for Performance Excellence and the Academic Quality Improvement Project (AQIP) encompass an emphasis on the critical nature of internal and external partnerships (AQIP, 2000b; Baldrige, 2000a, 2000b; Blazey et al., 2000). "Building Collaborative Relationships" is one of nine criteria presented by the Academic Quality Improvement Project and supports the Guiding Value of Collaboration. Of particular significance is that the AQIP not only encourages collaboration but also stresses the recognition and rewarding of effective collaborative efforts.

The quality-driven institution encourages active collaboration among and within different internal departments and operational areas, and, externally, between the institution and other institutions or organizations. . . . It rewards effective cooperation and celebrates model collaborative efforts with internal or external partners. (AQIP, 2000a, p. 2)

The Baldrige Criteria for Performance Excellence also emphasizes the importance of partnerships by incorporating "Valuing Partners" as one of its core values.

An organization's success depends increasingly on the knowledge, skills, innovative creativity and motivation of its . . . partners Partnerships should seek to develop longer-term objectives, thereby creating a basis for mutual investments and respect. Partners should address objectives of the partnership, key requirements for success, means of regular communication, approaches to evaluating progress, and means for adapting to changing conditions. (Baldrige, 2000b, p. 2)

One-third (33.34%) of the members of the panel of practitioners suggested that partnerships would be a major challenge for high-performance career and technical education institutions providing customized industry-specific training five years from today and beyond.

"Defining partnerships and collaboratives for win-win-win" (Dean of a community-technical college in the New England region) relationships supported the notion that effective partnerships between companies and career and technical education institutions must have a "common interest in working together and much to learn from one another" (Sagawa & Segal, 2000, p. 25).

While the development of new partnerships and strategic alliances is critical, the challenge of retaining and nurturing existing partnerships must remain in the forefront of high-performance organizations. The cost of developing new clients and partnerships is much higher than that of retaining existing clients (Zemke & Schaaf, 1989).

Nurturing the ongoing, existing relationships that make doing business with business, non-profits,

and government possible must not be overlooked.
(Director of a community college in the Pacific
region)

The notion that seeking ways to develop and sustain partnerships and relationships is critical to high-performance career and technical education institutions that provide customized industry-specific training to business and industry in the future. While building new partnerships with suppliers, vendors, competitors, agencies, and other institutions is an opportunity, it is essential that relationships with existing partners be nurtured at the same time. A primary indicator of an organization's success is repeat business from existing partners and clients (Kaplan & Norton, 2001; Phillips, 2000). Repeat business is perceived as an indicator that the customer or partner sees value in the services and products provided through customized industry-specific training.

In sum, there are remarkable and ever-increasing opportunities for alliances, partnerships, and collaborations. Members of the panel of practitioners validated the belief that "institutions will enter the new century less than what they are capable of being if they do not pursue vigorously the incredible mosaic of opportunities that now exists for involvement" (Roueche et al., 1995, p. 45). While the opportunities for partnerships and alliances are limitless, the high-performance organization will do

well to target those relationships that support the mission of both organizations. How then does an institution know which partnerships to pursue? Referring to a democratic society characterized by interaction and sharing, Dewey (1916) indicated that:

One way of determining these relationships is to ask two questions: "How many and varied are the interests which are consciously shared? How full and free is the interplay with other forms of association?" (Dewey, 1916, p. 83, as cited in Roueche et al., 1995, p. 44)

Institutions would be well served to keep the questions posed by Dewey in mind as well as to keep its "vision and mission in the forefront when determining partnerships and collaborative efforts" (Director of a technical institute in the West North Central region).

Services and Products

Twenty years ago companies in the United States spent \$2.95 million on training products and services from outside providers; today, the amount has "increased by an incredible 555 percent, reaching \$19.3 billion" (Galvin, 2001, p. 40). While the spending has increased 555%, the size of the workforce during that same time period has grown only 35% (p. 40). The conclusion from these statistics is that businesses are investing billions of dollars in the hopes of capitalizing on the one true competitive advantage: human capital (Atkinson et al., 1999; Cheney, 2001; Galvin, 2001; Gray & Herr, 1992, 1998; Herman 1999a, 199b; Porter &

Opstal, 2001). The \$19.3 billion will be spent on books, training materials, video production, computer software, consultants, and sponsors of public seminars and conferences.

In order for career and technical education institutions providing customized industry-specific training to be the recipient of a portion of these anticipated expenditures by business and industry, the scope of services and products provided must continually be improved and broadened. While the percentages fluctuate with each industry sector, approximately "40 percent of all training is designed by outside sources The figure for delivery by outside providers is lower, at 28 percent" (p. 58). Another study of 300 employers from across the United States revealed that 35% of the companies used external sources to provide training to their incumbent workforce during the "past 6 months" (Cheney, 2001, p. 8). Of those using external sources, approximately 14% used the services of "vocational/technical institutions (6%), four-year colleges/universities (5%), and community colleges (3%)" (p. 8).

Expanding and enhancing the services and products required by business and industry for customized industry-specific training was described by the members of the panel as a major challenge five years from today and beyond.

Approximately one of every four (24%) of the panel members depicted challenges with the services and products offered to their clients. Challenges in "keeping up" with ever changing needs for products and services focused on broadening the scope of services and products to address a broad range of topics, an increasingly diverse workforce, and new instructional media and methods.

Specific areas for enhancing services and products as described by the members of the panel of practitioners included: (a) enhancing the abilities of staff to facilitate "organizational assessment services" (Dean of a community-technical college in the New England region) and (b) "integrating new media and technologies into customized training products and services" (Co-director of a community college in the Pacific region). In a pre-questionnaire telephone interview between the researcher and a panel member, the Dean of a community-technical college in the New England region described increased efforts to incorporate front-end services such as job profiling and culture assessments to support a consultative approach to providing services to business and industry clients. This institution believes that an extensive front-end analysis including job profiles and culture assessments increases the probability of a return on investment for the client. A review of this institution's web site revealed a wide range of services

such as the ones described in the telephone interaction. Efforts by this institution to provide these services confirmed a substantial commitment to offer comprehensive services and products to clients in the community served. This consultative approach to providing customized industry-specific training describes a relationship between the provider of the service and the client that is much more than simply providing training based on perceived need. According to the Dean, this approach is designed to engage the institution in participating as a partner with the company in the identification of training needs that will truly result in a significant return on investment.

This is further evidence that each of the categories identified has linkage to other categories. The case described here supports a consultative approach to customized training and links the category of "services and products" with "partnerships" as well as "focus on results and creating value." The role of an effective consultant as described by this participant in the study is based upon a set of higher-level goals that is more sophisticated than merely delivering training. There are three principal goals representative of the consultative-approach to customized training.

1. To establish a collaborative relationship.
2. To solve problems so they stay solved.

3. To ensure attention is given to both the technical/business problem and the relationship. (Block, 1999, pp. 15-16)

While only one member of the panel of practitioners described a major challenge in the form of "serving the companies that employ a significant portion of their workforce who are immigrants" (Director of a community college in the West North Central region), the implications of the changing demographics of the workforce are significant for career and technical education institutions providing customized industry-specific training to business and industry. Not only is the immigrant workforce changing but so are the overall demographics of the workforce.

On top of existing shortages of qualified workers in industry after industry, the United States will begin to experience an actual decline in the real numbers of workers in 2011 as the baby-boom generation starts to retire. As the nation's birth rate remains low, the number of working-age adults who are incarcerated grows, and immigration becomes an increasingly important source of workers, it is clear why workforce development and education issues are paramount. (Cheney, 2001, p. 1)

In order to accommodate the changing demographics of the workforce, designing training in multiple languages and understanding cultural diversity is becoming increasingly important, especially in the manufacturing sector (Director of a community college in the West North Central region).

Clearly, delivering the same type of training in the same manner as has been successful in the past will not

always meet the needs of business and industry in the future. A recent industry survey of 1,652 companies representing all sizes and industry sectors indicated that traditional, instructor-led training programs represented approximately 77% of the delivery methodology in the year 2000 (Galvin, 2001, p. 56). While non-traditional delivery methods such as virtual reality programs, video-conferencing on individual desktops, satellite/broadcast TV, and experiential programs have not been as widely utilized as anticipated, these instructional delivery media and methods are growing each year (p. 56). Developing the ability to provide training via non-traditional avenues was described as a major challenge for the participants in the study as well.

Develop training programs using alternative delivery methods such as on-line and CBT [computer based training] as well as to identify business and industry best practices techniques to assist them in survival in today's Global Shrinking. (Director of a state technical institute in the West North Central region)

Integrating new media and technologies into customized training products and services is a major challenge for us. (Co-director of a community college in the Pacific region)

Small- and medium-sized companies are often underserved by career and technical institutions providing customized industry-specific training (Presley, 1995). According to the U.S. Small Business Administration (2000), 53% of the private, non-farm workforce is employed by small

businesses (fewer than 500 employees). These small businesses contribute 47% of all sales in the country and are responsible for 51% of the private gross domestic product.

Industries dominated by small firms contributed a major share of the 3.1 million new jobs created in 1998. Over the 1990-1995 period, small firms with fewer than 500 employees created 76% of net new jobs. (U.S. Small Business Administration, 2000, p. 1)

Moreover, in times of low unemployment, it is especially difficult for small businesses to attract and retain qualified employees. "Small firms provide most initial on-the-job training" (p. 1).

If small businesses drive the economy, and it is also true that employees energize these small firms (Gray & Herr, 1992, 1998; Hermann, 1999a, 1999b; U.S. Small Business Administration, 2000), then training the workforce in small- and medium-sized companies is more critical today than ever before. Members of the panel of practitioners agreed placing more emphasis on the needs of small- and medium-sized businesses and seeking innovative and creative ways to meet those is indeed a major challenge five years from today and beyond.

Promoting a training consortia so small business can more easily access customized training services is a major challenge for my institution. (Director of a community college in the Pacific region)

In sum, it is indeed a major challenge for providers of customized training to seek new and innovative ways of providing appropriate customized training and organizational development services and products for their business and industry clients. Members of the panel of practitioners agreed that the high-performance provider of customized industry-specific training of the future must have the ability and resources necessary to quickly adjust products and services in a dynamic and fluid environment.

Bureaucracy

From an external stakeholder's perspective, business executives described American postsecondary educational institutions, which include career and technical education institutions as the best in the world. At the same time, however, they are also concerned about the manner in which these institutions are managed.

Business executives . . . tend to view these institutions as inflexible, bureaucratic, and largely unresponsive to students and stakeholders. (Blazey et al., 2000, p. 5)

The need for credentialing is a prime example of how bureaucratic barriers and hurdles have gotten in the way of meeting the needs of business and industry. As described by the members of the panel of practitioners, a high-profile challenge for institutions providing training to meet the needs of business and industry is to satisfy the increasing demand for credentialed education and training, and this

type of training "falls outside the traditional college calendar and model for measuring completion" (Flynn, 2001, p. 1). Furthermore, "the process of satisfying these new demands for training can put a college in conflict with state and/or federal regulations as well as the criteria of regional accrediting bodies" (p. 1).

Members of the panel agreed, and responses focused on challenges linked to bureaucratic issues represented 6.9% of the total responses to the question regarding the major challenges. As career and technical education institutions attempt to respond to the challenges of serving a constantly-changing society and a profoundly-changed world, the ability to eliminate or function successfully within the confines of a bureaucratic framework will be fundamental to serving the needs of business and industry in the arena of customized training.

The new millennium represents a period of time in which significant transformation within academic institutions is critical. Clearly, sustaining the status quo or relying on minor adjustments will not enable educational institutions to meet the needs of business and industry.

Perhaps the most critical challenges facing most institutions will be to develop the capacity for change; to remove the constraints that prevent institutions from responding to the needs of rapidly changing societies; to remove unnecessary processes and administrative structures; to question existing premises and arrangements; and to challenge, excite, and embolden all members of

the campus community to embark on what I believe will be a great adventure. (Duderstadt, 1999, p. 1)

In the face of rapidly expanding needs of business and industry for workforce development through customized training services, 11.76% of the participants in the study voiced concern regarding the bureaucratic barriers impeding their ability to provide effective, high-quality services.

Resolving a myriad of issues associated with the delivery of credit versus non-credit customized contract training (internal issues, marketing issues, organizational assessment issues). (Dean of a New England region community-technical college)

The director of a community college in the Pacific region described customized industry-specific training as the "entrepreneurial arm" of the organization. The term "entrepreneurial" is used by this leader to describe the area of the community college that is outside the traditional academic focus of the institution. Perhaps the plight of the champion as described by Machiavelli in The Prince is similar to that felt by some of the customized industry-specific training departments represented in the study.

It ought to be remembered that there is nothing more difficult to take in hand, more perilous to conduct, or more uncertain in its success, than to take the lead in the introduction of a new order of things. Because the innovator has for enemies all those who have done well under the old conditions, and lukewarm defenders among those who may do well under the new. (Machiavelli as cited in Peters, 1987, p. 298)

The clash between the "entrepreneurial arm" and the deep-seated bureaucracy in the traditional academic side of some institutions is reflected in the major challenge described by one participant.

Ensuring that community colleges as a whole stay relevant and that the entrepreneurial arm specifically can continue to meet industry needs. The former is less sure than the latter.

Negotiating with the academic side of community colleges to allow more autonomy. Customized training departments are asked to run like a business but are not given latitude to do so under academic structure. (Director of a community college in the Pacific region)

In summary, the participants' description of bureaucracy as a major challenge five years from today and beyond is also recognized in the Guiding Values of the North Central Accreditation's Academic Quality Improvement Project (AQIP). Incorporated in the Guiding Values for AQIP is a statement that emphasized the necessity of removing "barriers to collaboration, such as the constraints individuals often experience within a hierarchical chain of command" (AQIP, 2000a). Micro-managing, "either from within, by faculty politics or governing boards, or from without, by government or public opinion, stand little chance of flourishing during a time of great change" (Duderstadt, 1999, p. 1). The ivory tower of academia is under siege and the challenge to break away from the status quo of tradition is indeed a major challenge today as well

as for the next five years and beyond (Alstete, 1995; Bailey, 1995; Baldrige, 2000; Bonstingl, 1992; Bonstingl, 2001; Blazey et al., 2000; Davis, 1994; Drucker, 1999; Duderstadt, 1999; NGA, 2000).

Future Focus

The notion that high-performance, quality-driven institutions must think into the future is supported in the Core Values of the Baldrige Criteria for Performance Excellence and in the Guiding Values of the Academic Quality Improvement Project (Alstete, Allaire et al., 1995; AQIP, 2000a; Baldrige 2000; Bonstingl, 2001). Pursuit of educational improvement in a dynamic and fluid world requires a strong future orientation along with a willingness to anticipate and plan for meaningful changes to improve services and processes that create new and additional value for its students and stakeholders. The high-performance organization must anticipate many types of changes in the long-term, strategic planning process, including changes in "education requirement, instructional approaches, resource availability, technology, and demographics" (Blazey et al., 2000, p. 20).

Focusing on the future and forward thinking were described as major challenges by 17.65% of the participants in the study. Recognizing that the idea of stable solutions and constant ways of doing business no longer exist, 5.2% of

all the responses to the question regarding major challenges described the necessity of focusing on the long-range rather than solely on the short-term. Change is a constant in today's world, and "built to last now means built to change" (Davis, 2001, p. 45).

The ability "to develop long-range plans for training as the needs almost change daily" was expressed as a major challenge five years from today and beyond by the Director of a community college in the East North Central region. The strength of this response is measured in the fact that this individual described only two major challenges: (a) funding and (b) future thinking. How do challenges with funding impact an organization's ability to focus on long-range planning? Do challenges with funding create an even more critical reason for creating long-range plans? The comments presented by this panel member prompt these questions but do not provide the answers. While the responses provided by the participant stimulate the thinking of the investigator to link the implications of "funding" and "future thinking" together, the only clear inference that can be made is that both funding and long-range planning are high-priority challenges for this institution.

Another participant proposed that the challenge of keeping pace with rapidly changing technology has heightened the need for "greater review of needs to be provided to keep

abreast of the changes" and to be "proactive" in anticipating changes rather than "reacting to changes when they occur" (Director of a community college in the East South Central region). This participant also described major challenges with funding issues as well as challenges and opportunities in the areas of technology, personnel, and partnerships.

In sum, the members of the panel of practitioners agreed that the idea of stable solutions and constant ways of doing business no longer exist. As such, the importance of developing long-term strategies in a rapidly changing world is not only a challenge but also a necessity. While "keeping up" and "leading the pack" may sound like a dichotomy, the views of the members of the panel lead to the notion that a long-range view and futuristic thinking are critical to the institution's ability to "lead the pack" and "keep up".

Competition

"The basic model for your sector of the economy is changing as we speak: will you be the first or the last to know what it is becoming?" (Davis, 2001, p. 81). Education is one of the three largest sectors in the United States economy, and employee learning represents an appealing opportunity for the private-sector entrepreneur.

Employee learning is the growth segment
The value creation shift is for the private sector

to see value and, thus, wealth in assuming the educator's mantle. That is beginning to happen and entrepreneurial leaders are seeing how to make money in this newly embraced role. (p. 85)

Data collected and analyzed by the U. S. Small Business Administration (2000) revealed that among the fastest growing small-business-dominated industries over the past several years, two of the nine industries are direct competitors of educational institutions providing customized training to business and industry. The two industries are management consulting services and job training services, and the job-training services sector is expected to increase by 43% from 1994 to 2005 (p. 3).

Once again, the linkage between categories emerged. While some panel members viewed the increase of private sector, job-training services as competitors and therefore as "problems", other members of the panel saw "opportunity" to address new and different dynamics through collaboration and partnerships with this emerging sector. The latter view reflected opportunity to enhance and expand the customized industry-specific training possibilities necessary to sustain the competitiveness of business and industry through a well-trained, quality workforce.

Members of the panel of practitioners described issues related to competition as a major challenge in 5.2% of the responses. "Keeping a good contract market" (Director of a community college in the West North Central region) and

competition from "private software training developers and training providers" ((Director of another West North Central region community college) summarized the thinking of participants as related to the major challenges focused on issues of competition. One participant used only the word "competition" and did not elaborate.

In sum, education and training are among the fastest growing industries in the United States today. As the growth of this industry sector accelerates, so does the number of private-sector suppliers of customized industry-specific training. On the one hand, some of the members of the panel viewed this increased competition as a threat. On the other hand, members of the panel also viewed the expansion of suppliers of customized industry-specific training as an opportunity for partnerships. From "keeping up" to "setting the pace" to "raising the bar", the high-performance institutions five years from today and beyond are constantly chasing excellence.

Agility and Responsiveness

The institutions that have the capacity and ability to respond quickly and effectively to the needs of business and industry will thrive. When asked the question, "What is the most critical need your organization has in accessing and using services for customized industry-specific training?", Tom Pipal, Corporate Training Director for WorldCom-MCI,

responded with one word, "Flexibility!" (Pipal, 2001). A recent poll of national site consultants in which they were asked for their opinions on the states with the best work force training programs for expanding or relocating companies supported Pipal's response.

For starters, states that offer customized [training] programs are big hits with companies. The best work force training programs respond to the needs of the expanding or relocating company, and not the other way around. (Yoder & Hedgcoth, 2000, p. 36)

"Those that bury their heads in the sand, that rigidly defend the status quo . . . are at very great risk" (Duderstadt, 1999, p. 1). Acting instantaneously and adjusting quickly to changing circumstances and environments is a must. Members of the panel of practitioners validated Pipal's response, and 3.4% of the responses reflected the necessity of being flexible and agile. The same panel member who described a challenge with bureaucracy also described the challenge of "achieving shorter turn-around time for training" (Co-director of a community college in the Pacific region). Recognizing the need for "just-in-time" training, the director of another community college in the Pacific region described "assuring responsiveness quickly enough to be of use to business."

Members of the panel concurred with the AQIP guiding principles in that the ability to develop the flexibility to "respond quickly to opportunities, threats, and changing

needs and practices, focusing its attention on the allocation of resources, when needed is critical" (AQIP, 2000, p. 3). Developing mechanisms by which career and technical education providers of customized industry-specific training will be agile, flexible, and responsive is indeed a major challenge as described by the panel of practitioners, especially for those organizations that face a high degree of bureaucracy. The notion that agility is a major challenge for all organizations as well as for high-performance institutions delivering customized training to business and industry is captured throughout the literature, and the question of "How will we know and adjust" to rapidly changing needs and requirements is a difficult one; and, like the thermos, the most astute and focused institutions will know and will adjust.

A thermos keeps hot coffee hot and iced tea cold. How does it know? Products and services will increasingly be expected to know and to adjust automatically. They will also be able to filter information and then make and act on recommendations. (Davis, 2001, p. 25)

In sum, the members of the panel agreed that agility is no longer an option. Because the ability to act instantaneously and adjust quickly to changing circumstances and environments is a must, career and technical education institutions must break down the constraints presented by bureaucratic structures. Developing mechanisms and mind sets that provide an infrastructure that is agile, flexible,

and responsive to the workforce development needs of business and industry is critical to the role that career and technical education plays in economic development.

Marketing

In today's world of business, there is a kind of "brand" mania taking place. The belief is that a strong brand will enable an organization to outsell its competitors and to convince consumers that the product or service is better than any other on the market. By definition, "'brand' is whatever the consumer thinks of when he or she hears your company's name" (D'Alessandro & Owens, 2001, p. xiv). Corporations and private-sector training organizations are thinking "brand". Public-sector educational organizations, for the most part, have not been thinking in terms of concepts such as "brands". Unfortunately, it is not uncommon to hear statements such as "that's the best kept secret" in reference to the availability of high-quality, affordable customized industry-specific training options through career and technical education institutions. The challenge, therefore, as described by the members of the panel, is to be the preferred choice of workforce development options for business and industry.

While only one participant in the study described "marketing issues" as a major challenge, it is clear that as

private-sector organizations specializing in job training continues to increase in market share (U.S. Small Business Administration, 2001, p. 3), the opportunity to create a "brand" for career and technical education customized industry-specific training should be seized. A "brand" for career and technical education would mean that whenever a company thinks about training for employees, career and technical education providers of customized industry-specific training is the first resource that comes to mind.

Even though the participant did not elaborate on specific issues related to marketing, conversations with several of the members of the panel prior to implementation of the electronic questionnaire revealed that challenges exist with the perception by business and industry that customized training provided by educational institutions does not exist or that it is inferior to training provided by private-sector organizations. An example is a survey of 300 businesses conducted by a state agency for career and technical education in which 70.7% of the businesses surveyed believed having career and technical education institutions in the state is "very valuable" to businesses. In response to the question "Has your company ever used a career and technical education institution for employee training?" only 31.3% responded in the affirmative and a resounding 100% of those companies would use the training

services again (ODCTE, 2000a). Perhaps many of the 68.6% of the businesses that have not used the career and technical institutions for training employees are unaware of the high-quality, affordable services and products available through the customized industry-specific training departments in these institutions.

Participants indicated verbally that little attention has been paid to marketing their services and products. One participant said, "We are stretched so thin right now, that I don't know how we would handle the additional business that marketing might stir up." Is this comment directly linked to other challenges such as funding, personnel, technology, or bureaucracy? Perhaps.

Summary

The challenges faced by career and technical education institutions five years from today and beyond are numerous and varied. While the members of the panel described challenges ranging from technological issues to personnel issues to bureaucratic issues to marketing issues, all the challenges were focused on the needs and expectations of the customers—business and industry. Underlying the responses was the message that is heard loud and clear throughout the world of business today, and that is the necessity of "doing more with less". While the landscape is somewhat different than that of business and industry, career and technical

education institutions are facing very similar challenges. Based on the major challenges, the next question asked of the members of the panel of practitioners was to describe those vital few goals that would assist them in broadly defining strategic positions or conditions which would move their organization forward in accomplishing its mission. Goals are those actions that link actions to an organization's preferred future and are consistent with the organization's mission (Pfeiffer, 1991; Quigley, 1993).

CHAPTER 5

VITAL FEW GOALS: FIVE YEARS AND BEYOND

Research Question: What are the "vital few goals" that will allow these institutions to address the major challenges described by the members of the panel of practitioners who participated in the study?

Introduction

Strategic planning is the process by which an organization envisions and develops the necessary procedures and operations to achieve that future . . . is a reiterative process . . . and produces future-driven decision-making tools and processes for sustaining that future focus. (Pfeiffer, 1991, p xi).

An overwhelming majority (88.89%) of the members of the panel of practitioners follow an annual strategic planning process within their customized training department. When asked to describe the process used and who is involved in that process, the majority indicated that the departmental strategic plan was aligned with that of the institution and that all departmental employees were involved in setting the goals and objectives. Four of the members of the panel indicated that the subsequent step in the strategic plan involved individual members of the department setting personal goals and objectives that aligned with the institution and department.

The process begins with a review of the results from the prior year's goals and objectives developed by each department and employee, and the college's and department's mission statement is reviewed for clarity and updating (if required). . . . These goals and objectives are reviewed and approved by supervisors and are included in requests for budget justification. (Executive Director of a community college in the East South Central region)

A vision is an organization's preferred future and together with the mission statement provides an organization's constitution. As such, the vision and mission form the foundation for all decision-making within the organization as well as "the criterion by which you measure everything" (Covey, 1990, p. 98) and must be clearly stated and understood before the strategic planning process begins. Only then will the goals for the organization move the organization toward its desired future.

The mission of the career technical education system, as described by the National Association of State Directors of Vocational Technical Education (NASDVTE, 2001), encompasses two primary components: (a) is an essential component of the total educational system, offering career-oriented benefits for all students; and (b) is a critical and integral component of the workforce development system, providing the essential foundations for a thriving economy. "The context for career technical education, situated in the worlds of educational improvement, workforce development,

and economic development, is complex, global, and changing at an exponential rate" (Kister, 2001, p. 1).

Consistent with the mission as described by NASDVTE, the most frequently used terms in the mission statements of the customized industry-specific training departments represented by members of the panel of practitioners were: lifelong learning, economic development, workforce development, and personal enrichment and growth. If indeed, "we become what we think about" (quote by Emerson), and the elements described in the mission statements of the career and technical education institutions represented by the members of the panel are those by which high-performance providers of customized industry-specific training measures themselves, then what are the "vital few" or high-impact goals that will move the organization to a future of performance excellence in achieving the mission?

Goals answer the question, "What is our organization committed to achieve?", set the long-term direction for the organization, transform the vision and mission of the organization into action, make possible the concentration of resources and efforts, and are necessary for survival. Too many goals can make the efforts of an organization overly fragmented (Baldrige, 2000b; Goodstein et al., 1993; Quigley, 1993). Therefore, it is critical to identify and focus in on those "vital few" (Shaw, 1997), "Big Hairy

Audacious Goals (BHAG)—goals that engage people . . . are tangible, energizing, and highly focused” (Collins & Porras, 1997, p. 94). Ongoing attention to a “vital few” priorities is essential and becomes the mantra of senior leaders along with everyone else in the organization.

Vital Few Goals: Five Years and Beyond

If career and technical education institutions are to be successful in the business of assisting companies to ensure a workforce with top skills and competencies, then sustaining the status quo or relying on numerous minor adjustments to the current systems will not enable organizations to achieve performance excellence. In order to research the goals that will drive career and technical education institutions delivering customized industry-specific training to performance excellence in the future, the members of the panel of practitioners were asked to briefly describe the two or three “vital few” goals that will point the way to the “road to performance excellence” for their institutions and address the major challenges described in the previous section.

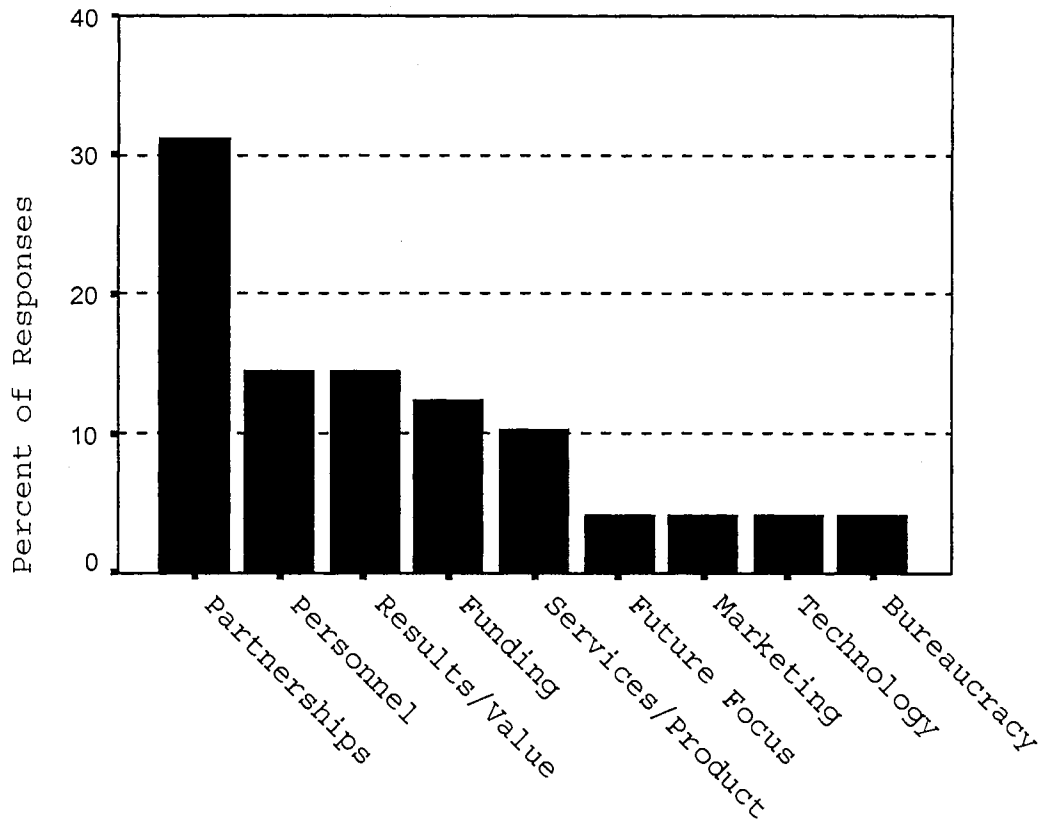
Similar patterns and categories emerged as were described by the members of the panel for the major challenges with the exception of Agility and Competition. While agility and competition were not stated in an overt, straight-forward manner as vital few goals, the implications

for both of these areas were addressed within the context of the nine categories (see Figure 2). An example of this cross-over between the category labeled as "bureaucracy" and the category labeled "agility" in the major challenges section was described by the director of a community college in the Pacific region.

Focus on mission, adopt and run the best possible organizational structure that will assure flexibility and responsiveness (no easy feat in the midst of an incredible bureaucracy) - this means running a lean organization within a state bureaucracy.

Although competition frequently denotes a sense of opposition, the participants in the study refocused the concept of "competition" as a major challenge and described opportunities to develop "partnerships" with other training providers as a "vital few" goal.

Figure 2: Vital Few Goals: Five Years and Beyond



Although the categories were fundamentally the same for both the major challenges and the "vital few" goals, it is noteworthy that the differences in the percent of total responses garnered by each of the categories in the vital few goals is almost inverse to that of the categories for the major challenges. When asked to describe the major challenges faced by the participants' organizations five years and beyond, technology accounted for almost one out of every five (19%) of the responses. In describing the "vital few" goals to address the major challenges, goals related to technology accounted for fewer than one out of every twenty

(4.1%) responses. Conversely, major challenges and issues related to partnerships accounted for one out of every ten (10.3%) of the total responses. Responses related to describing partnerships as a "vital few" goals resulted in one out of every three (30.6%) of the total responses.

Partnerships

Goals focused on developing partnerships and collaborative efforts dominated the responses describing the two or three "vital few" goals that would assist providers of customized industry-specific training to address the major challenges facing them five years from today and beyond. Approximately one-third (31.3%) of the goals were directly linked to partnerships and collaboration that would provide career and technical education institutions with avenues to guide them to high performance in the future. Partnerships were described in a variety of forms and included external as well as internal partners, such as: associations, clients, business and industry, vendors, competitors, associations, and other departments and individuals within their organization.

The use of advisory committees comprised of stakeholders in the external environment was described by 16.67% of the participants as a source for developing key partnerships.

We will continue to build on the advisory groups from specific industries to keep us up to date on

changes in those industries. (Director of a community college in the West North Central region)

Actively seek input and guidance from our private sector partners. (Director of a East South Central region community college)

Maintain an advisory board for our division. (Director for a technical community college in the East South Central region)

Creating opportunities for partnerships that will enhance the organization's ability to provide an expanded range of products and services surfaced as another pathway to performance excellence.

We intend to become an ACT (American College Testing) Center for e-Learning and "high stakes" testing this year. (Director of a community college in the West North Central region)

Partner with vendors and other training providers when feasible. Also to partner with corporate universities and create corporate universities for those companies positioned to need the training but would rather contract with a training organization (such as ours). (Director of a technical community college in the East South Central region)

Vendors and suppliers were described by 22.22% of the participants as key partners in strengthening their ability to provide high-quality services and products to business and industry. Members of the panel believe that collaborative efforts with vendors and suppliers of equipment and technologies used in business and industry would increase the visibility and image of both partners,

the vendor as well as the career and technical education institution.

A second goal is creating industry partnerships to assist the college with equipment donations and technology expertise. (Director of a technical community college in the South Atlantic region)

Create strategic alliances with equipment manufacturers and training developers (e.g. Haas, Allen Bradley, Cisco, ACT Centers, other CBT vendors, etc.). (Director of a technical community college in the East South Central region)

Partnering with companies who have this technology and equipment. ((Director of a community college in the Middle Atlantic region)

Developing partnerships and seeking opportunities for collaborative efforts within the organization are stressed in both the Baldrige Model for Performance Excellence and the Academic Quality Improvement Project. One of every six (16.67%) participants in the study confirmed the essential nature of internal partnerships as a "vital few" goal for high-performance providers of customized industry-specific training. The members of the panel described a variety of opportunities for internal partnerships.

To increase the technical support from the college to meet market niches in distance learning. (Director of a community college in the West North Central region)

Increased integration of department training activities with the college's core educational programs. (Director of a community college in the East North Central region)

Additionally, 16.67% of the members on the panel described partnering with business and industry—their clients—as a critical goal in addressing the major issues and challenges five years from today and beyond. One panel member described partnering with clients “to develop a secure funding system” as a “vital few” goal. Another panel member, whose organization is currently working closely with area companies described the importance of sustaining and nurturing existing relationships. The inference was that, while the creation of new goals and developing new clients is important, a high-performance organization is well served by paying close attention to current relationships and partnerships. “We will continue to work closely with the area companies as they make changes in their organizations and attempt to budget for the future to meet these changes” (Director of a community college in the West North Central region).

Although only one member of the panel described “partnering with associations who can provide expertise,” this “vital few” goal reinforces the position taken by those in the business and industry sector that strategic alliances are critical to organizations in the rapidly changing, global marketplace (Greenspan, 2000; Gray & Herr, 1998; Hermann, 1999b; Knutson, 2000; NAB, 2000; NGA, 2000). In a similar vein, recognizing that communication is an important

aspect of organizational cohesiveness and effectiveness, another member of the panel described the need to "maintain an open line of communication with business and industry" as a "vital few" goal five years from today and beyond.

While the question posed to the members of the panel asked them to describe two to three "vital few" goals that would allow their department to address the major challenges described in the previous question five years from today and beyond, it is clear by the use of words and phrases in 40% of the responses that the notion of partnering is not new to these high-performance organizations. Effective partnering appeared to be one of the characteristics exemplified by the institutions nominated to participate in this study. Words and phrases used by the participants that lead the investigator to this conclusion included: "we will continue," "maintain," and "increase."

Personnel

Three primary variables account for one nation having strategic advantage over the firms of another nation in commerce: "natural resources, capital and technology, and the skills and ingenuity of its people—its human capital. In modern terms, human capital is the most important of the three" (Gray & Herr, 1998, p. 43; Gray & Herr, 1995). If human capital is the most important for business and industry, is human capital

the most important ingredient for career and technical education providers of customized industry-specific training? The belief posed by Gray & Herr (1995, 1998) was confirmed by almost two of every five (38.89%) of the members of the panel of practitioners. Responses focused on goals related to personnel issues accounted for 14.6% of the total responses to the "vital few" goals question.

Two distinct sub-categories emerged as goals related to personnel issues: (a) attracting and retaining "talented", staff and subject matter experts and (b) keeping staff trained and updated on current issues, trends, and technology. The participants described "vital few" goals related to attracting and retaining staff and trainers in the following manner:

One goal is to use fewer adjunct instructors by converting a few of the best adjuncts to full-time. This will allow the college to retain these high-quality instructors by offering full-time pay and benefits. (Dean of a technical community college in the South Atlantic region)

To expand and develop a network of subject matter experts available to use to meet client's needs. (Director of a technology center in the West South Central region)

To add talented staff. (Dean of a community-technical college in the New England region)

The "vital few" goals related to keeping staff trained and updated on current issues, trends, and technology were also described by the members of the panel of practitioners.

To ensure that staff is knowledgeable in CBT [computer-based training]. (Director of a state college in the West North Central region)

We will continue to provide training to the individuals that are providing the training. (Director of a community college in the West North Central region)

Ensure staff and adjuncts maintain training (certifications, etc.). (Director of a technical community college in the East South Central region)

Focus on Results and Creating Value

More than one in every five (22.22%) of the participants in the study described the notion of the need for a results-based approach to demonstrating return on investment and contribution to the client's bottom line of training and performance improvement interventions. Creating value means reviewing products and services to ensure they add value for the client company. Total quality management and continuous improvement efforts have created a renewed interest in accountability in the form of measurement and evaluation, including measuring the effectiveness of training and organizational development interventions (Allaire et al., 1995; AQIP, 2000a; AQIP, 2000b; Baldrige, 2000a, 2000b; Bonstingl, 2001; Phillips, 1997; Phillips, 2000; Seymour, 1994, 1995).

Three sub-themes emerged in the category of focusing on results and creating value: (a) collecting data related to satisfaction of training and organizational development

interventions, (b) understanding quality and continuous improvement concepts and processes, and (c) developing processes for determining return on investment. Responses describing the collection of data related to client satisfaction included the documentation of trainee satisfaction and employer satisfaction.

Documentation of trainee satisfaction; every trainee will be surveyed to determine the extent to which they feel they have learned the presented training topics. Documentation of employer satisfaction; every company will be surveyed to determine the extent to which they feel their employees have learned the presented training topics by demonstration on the job. (Director of a community college in the East South Central region)

Continuing to closely monitor and follow-up with clients. (Director of a community college in the Middle Atlantic region)

The members of the panel of practitioners validated the need for higher level evaluations on the impact of training hierarchy as described by Kirkpatrick (1987) (see Table 6). The four levels of evaluation include: trainee reactions, assessment of trainee learning at the end of the training, evaluations of the trainees' behavior and performance back on the job, and results on the company's bottom line also referred to as Return on Investment or ROI (Broad & Newstrom, 1992; Kirkpatrick, 1987; Robinson & Robinson, 1989).

Table 6: Levels of Evaluation

<i>If you want to know . . .</i>	<i>Then you must use . . .</i>
Did the participants like the program?	Level I (Reaction: Customer Satisfaction)
Did participants learn the objectives of the program?	Level II (Quality Assurance)
Are participants applying skills taught in the program	Level III (Application)
Are participants applying non-observable outcomes (behavior) to the job?	Level III (Application)
In the application of skills, has there been any impact on the business?	Level IV (Bottom-line Results/ROI)

(Robinson & Robinson, 1989, p. 168)

Efforts to focus on quality and continuous improvement were reflected in responses such as: "Going to more quality conferences will allow us to keep up with national trends" (Director of a community college in the Middle Atlantic region). Developing processes that contribute to the participant's ability to create value and demonstrate return on investment were summarized in the response given by the Director of a community college in the Pacific region.

Develop a cost-effective ROI [Return on Investment] model to measure the impact of customized training that can be used across all industries. Utilize a skills standard approach when consulting with clients to promote a longer-term perspective to training.

In sum, the participants in the study described "vital few" goals that link training and organizational development strategies to business needs so that the interventions

create value and yield measurable results to the client organization. As described by the members of the panel of practitioners, demonstrating the ability of high-performance providers of customized industry-specific training to contribute to the performance effectiveness within the client organization is essential five years from today and beyond.

Funding

The fourth ranked category, 12.2% of the total responses to the question regarding the vital few goals, focused on funding issues. In order to provide the highest quality customized training to meet the rapidly-changing workforce development needs of business and industry, more than one in every four (27.78%) of the participants described issues related to adequate budgets and funding as a "vital few" goal. The members of the panel represented career and technical education institutions that are funded through governmental sources, tuition, and grants. State legislated funding and local ad valorem are the primary source of funding for these institutions. The views of the panel members are validated by a statement made in a text co-authored by Carol D'Amico (1999), Assistant Secretary for Vocational and Adult Education (OVAE), United States Department of Education.

Although the institution attempts to meet the needs of local employers, its funding comes from

the state legislature, and the school's officials lack the flexibility to react quickly to the training needs of local employers. (Judy & D'Amico, 1999, p. 138)

This comment by D'Amico and the responses of the members of the panel point to the impact of funding mechanisms as a critical issue in inhibiting the agility and responsiveness on the part of providers of customized industry-specific to respond to the rapidly changing needs of business and industry.

"Vital few" goals described by the panel members addressing the major challenge of funding came from three different perspectives. One participant described the goal as that of seeking "greater governmental support of general workforce development to improve on productivity and quality" (Director of a community college in the East North Central region) while another participant described other options to reliance on governmental support.

Success breeds success. Hopefully our success will keep our funding and revenues coming in so that we can meet our customers' needs. We may have to get into more "grant writing" to keep our programs alive. (Vice President of a technical college in the South Atlantic region)

Yet another panel member described an effort to "work closely with the area companies as they make changes in their organization and attempt to budget for the future to meet these changes" (Director of a community college in the West North Central region). This proactive approach is also

linked to forward thinking or the category labeled "Future Focus".

Services and Products

More than one of every four of the participants in the study (27.78%) described a focus on services and products as a "vital few" goal that will assist in addressing the major challenges faced five years from today and beyond. The specific goals in this category also linked to the category described in the major challenges section as "Focus on Results and Creating Value". Of the total responses to the request to "briefly describe the two or three 'vital few' goals that will allow your department to address these challenges," one in ten (10.2%) related to enhancing the services and products provided to business and industry.

The Director of a community college in the West North Central region stated that his institution has recognized a desperate need by employers for assistance with "Occupational English Services".

We are currently a leader in Occupational English Services customized to specific industry occupational areas, i.e., manufacturing, health, service/retail. It is crucial to the economy of our community that we continue to not only provide these services but also enhance and expand this area.

Issues and challenges for employers resulting from an increasing workforce whose primary language is other than English are on the incline. English as a second language is

directly linked to the fact that immigration has been and will continue to comprise a large proportion of workforce growth. New immigrants were responsible for about one-fourth of the increase in the workforce in the 1980s; however, and this sector accounted for nearly half of the growth in the 1990s (BLS, 2000; Herman, 1999; Judy & D'Amico, 1999; SBA, 2000). Will this sector of the workforce population continue to grow at the same rate or perhaps accelerate even more five years from today and beyond?

According to one estimate, between 1990 and 2040 our current law could be expected to increase the American population by approximately 70 million—25 million immigrants and their 45 million children. That total would represent almost two-thirds of the net population growth expected to take place. (Judy & D'Amico, 1999, p. 91)

If this estimate is accurate, or even close to being accurate, then as suggested by this participant in the study, career and technical education providers of customized industry-specific training will be called upon by employers to assist with the challenges resulting from a workforce where English is not the primary language.

"The more services we offer, the more self-sufficient we can become" was the response given by the Coordinator of a West North Central technical institute. Other participants were more explicit in describing what some of those services and products would be that would enhance

their ability to be recognized as high-performance providers of customized training.

Adding new products and services that pin point a specific role and scope of activity (i.e., job profiling, performance improvement studies, return-on-investment analysis, etc.). (Dean of a community-technical college in the New England region)

Further develop needs analysis techniques. (Director of a state college in the West North Central region)

The response provided by the Director of a community college in the Pacific region to describe the "vital few" goal that would allow her department to address the major challenges five years from today and beyond also summarized the responses from other members of the panel that were included in the "Services and Products" category.

Focusing on providing the appropriate "service" quickly, efficiently and effectively, while at the same time delivering high quality products for reasonable prices.

Future Focus

Focusing on the future and forward thinking were described as major challenges by 17.65% of the members on the panel of practitioners. One panel member, the Director of a community college in the West North Central region, described a need to work closely with customers in order to anticipate their needs. Anticipating their needs would assist the institution in incorporating goals and objectives

related to specific customer requirements and needs in the department's strategic plan and budgeting process.

We will continue to work closely with the area companies as they make changes in their organization and attempt to budget for the future to meet these changes.

Another panel member, the Director of a community college in the Middle Atlantic region, described a "vital few" goal to conduct "focus groups to keep on the cutting edge." A focus on the future and forward thinking, however, appeared to be imbedded in the responses that fell in other categories such as "partnerships", "personnel", "results/value", and "technology".

Marketing

As "sales, marketing, branding, and positioning will be major challenges, it is imperative that we focus efforts on these efforts if we are to be considered as high-performance providers of training in the future" (Dean of a community-technical college in the New England region). This "vital few" goal substantiates one of the greatest challenges faced by career and technical education over the years, that of being recognized as providing high-quality services and products beyond that of providing services for only the non-college bound student (Gray, 2001; Gray & Herr, 1992; Gray & Herr, 1998; Judy & D'Amico, 1999; Schray & Sheets, 2001). Image has been a challenge for career and technical education for decades and is one of the major reasons for

the name change to career and technical education (Ries, 1997).

Also stated as a "vital few" goal that is directly linked to the challenges faced with funding was the need to "increase our marketing and advertising budgets to bring in more business to increase retained revenue" (Program Director for a community college in the West North Central region).

The "vital few" goals that reflect the importance of marketing are also supported by the National Governors' Association in their economic development strategies for the 21st century (2000) as well as by United States Department of Labor Secretary Herman (1999b) in his 1999 Labor Day speech "FutureWork". Many companies are not aware that high-quality, affordable, industry-specific customized training is available through career and technical education institutions are available to them. Participants at the 18th Annual National Association of Industry Specific Training Directors Conference 2001 reiterated the importance of creating awareness in the business community that collaboration with these training providers is a viable resource in developing a competent incumbent workforce.

Technology

While technology was identified as the number one major challenge for the members of the panel, only 4.2% of the

total responses were focused on this category. The responses addressing technology as a "vital few" goal were directed to "keeping up" with training and the latest technology to include hardware and software upgrades. While "vital few" goals directed toward technology specifically were not described by the majority of the participants, responses described that the challenges presented by rapidly-changing technology would be addressed through partnerships and personnel were abundant.

Bureaucracy

"Vital few" goals related to bureaucracy were described by the members of the panel in 4.2% of the responses and were directed toward increasing "institutional flexibility and responsiveness . . . to accommodate a diverse client/workforce" (Director of a community college in the East North Central region). Responses from the members of the panel to the major challenges as well as the "vital few" goals related to issues of lack of flexibility because of bureaucracy, concurred with the perspectives from the literature.

Perhaps the most critical challenge facing most institutions will be to develop the capacity for change; to remove the constraints that prevent institutions from responding to the needs of rapidly changing societies; to remove unnecessary processes and administrative structures. (Katz, 1999, p. 1)

While this statement is directed to the institution as a whole, the members of the panel of practitioners perceived that this overarching challenge is a barrier to their ability to be agile, flexible, and responsive to the workforce development and needs of business and industry and the economic development requirements of the community.

NAISTD Member Feedback

Members of NAISTD, those who submitted nominations for participants in the study, and other attendees at the 18th Annual National Association of Industry Specific Training Directors Conference were given an overview of the study and asked to review the responses that had been received by the researcher prior to the conference. The results submitted to the attendees of the conference represented the voices of 27.78% of the total members on the panel of practitioners. Following the presentation of the overview and context of the study, the conference attendees divided into small groups for reflection on responses to selected questions from the electronic questionnaire. One group was asked to review the combined responses to the two questions regarding the major challenges and "vital few" goals. Responses to the question "What does the data tell us?" included:

- Challenge to "keep good trained people in place" is a challenge that no vital goal listed appears to have addressed, & is very important!!
- Creating strategic alliances with equipment manufacturers & training developers appears to

be the most valuable strategy addressing the pace & complexity of changes in 5-10 years facing both employers and training institutions.

- Training is evaluated based on economics.
- Companies that are not progressive do not have the foresight to see the need for training in all economic climates.

When asked to respond to the question "So what does this mean?", the conferees had one response.

Only those companies with the insight to understand future training needs, regardless of economics will be successful.

Summary

Representing the economic development arm of education, "keeping up," "leading the pack," and "raising the bar" are the mantras of high-performance career and technical education institutions providing customized training to business and industry. Organizations that "learn from the past, embrace the present, and prepare for the future" (OG&E television commercial, March 12, 2002) are on the pathway to performance excellence. Essential elements found in organizations that are preparing for the future include: a shared vision; a clearly articulated mission, identification of the gaps between the current reality and the desired future, and pathways to move from today toward that desired future (Baldrige, 2000; Blazey et al., 2000; Pfeiffer, 1991; Quigley, 1993).

In an effort to identify the gaps between current reality and the desired future for customized training

initiatives provided by career and technical education institutions, members of the panel of practitioners were first asked to describe the major challenges facing them five years from today and beyond. The panel members then each described two or three vital few goals that would serve as pathways by which to address those major challenges and move their organizations toward the desired future. Those goals focused on nine areas: partnerships, personnel, results, funding, services and products, future focus, marketing, technology, and bureaucracy.

Goals related to partnerships represented almost one-third (31.3%) of the total responses to this question. Collaboration and partnerships, both internal and external to the institution, are clearly becoming increasingly critical to performance excellence and were described as providing the greatest leverage in addressing the major challenges five years from today and beyond.

Goals focusing on hiring, retaining, and developing capabilities among department personnel and instructors along with goals focusing on obtaining results and creating value were described in an additional 29.2% of the responses to this question. Panel members indicated that because of the challenges inherent in "keeping up" with rapidly-changing technologies coupled with bureaucratic and funding constraints, it is often difficult to hire, retain and stay

on the cutting edge of knowledge and skills for instructors, the subject matter experts, who deliver the training to business and industry. Members of the panel also described an increased need for accountability. Focusing on results means that career and technical education institutions must go beyond the traditional trainee reaction level of evaluation and create models for measuring return on investment for both their departments and their clients.

In sum, organizations that have a shared vision for the desired future, are clear about their mission, have articulated a set of goals and have identified the functions, priorities, and resources necessary to reach those goals have built the foundation for performance excellence.

CHAPTER 6

LEADING THE WAY TO THE FUTURE

Research Question: What will be the characteristics (skills and attributes) of effective leaders of the highest-performing customized training department in career and technical education institutions five years from today and beyond?

Introduction

Effective leadership can move organizations from the current to future states, create visions of potential opportunities for organizations, instill within employees commitment to change, and instill new cultures and strategies in organizations that mobilize and focus energy and resources. These leaders are not born. They emerge when organizations face new problems and complexities that cannot be solved by unguided evolution. . . The future is now. (Bennis & Nanus, 1985, pp. 17-18)

The importance of effective leadership cannot be underrated. "Leadership *does* matter" (Collins, 2001, p. 22). A recent research study suggested that effective leaders are highly skilled and knowledgeable, team oriented, effective and efficient in utilizing people and resources in the pursuit of predetermined objectives, lead the charge in pursuit of a clear and compelling vision, and stimulate higher performance standards (p. 20). While many "good" organizations have leaders who exemplify the aforementioned characteristics, empirical evidence exists to support the

notion that those companies that make the leap from "good to great" all had individuals at the helm of the organization who had the ability to "build enduring greatness through a paradoxical blend of personal humility and professional will" (p. 20). Research by the Gallup Organization has yielded many discoveries over the past three decades, but perhaps the most powerful was the finding that even the most "talented employees need great leaders" (Buckingham & Coffman, 1999).

The talented employee may join a company because of its charismatic leaders, its generous benefits, and its world-class training programs, but how long that employee stays and how productive he is while he is there is determined by his relationship with his immediate supervisor. (pp. 11-12)

What then will be the characteristics of the high-performance career and technical education leader of the customized industry-specific training arena in the 21st century? To answer this question, members of the panel of practitioners were asked to describe the characteristics (skills and attributes) of effective leaders five years from today and beyond. A follow-up question was then asked of the panel members about the characteristics (skills and attributes) of effective consultants in the highest performing customized training departments in career and technical education institutions five years from today and beyond. The term consultant/coordinator referred to those

individuals in the customized training department whose primary job was to be the primary contact with the clients to identify and deliver products and services.

Characteristics of Effective Leadership

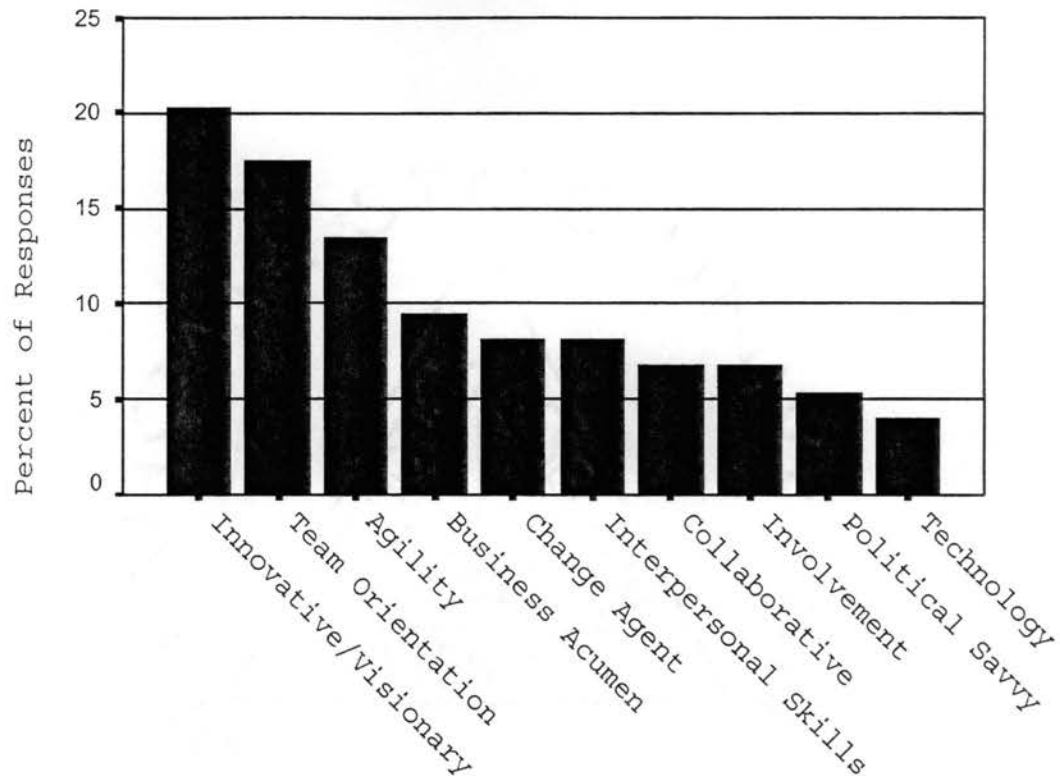
Much like the descriptions of the major challenges facing these institutions, themes such as "rapid change" and "keeping up" once again emerged. Responses from the members of the panel of practitioners clearly suggested that the rate of change is not anticipated to slow down anytime soon and will most likely accelerate over the next several years, and the implications for leadership are far reaching.

Driven by the highly-competitive nature of the globalization of the economy along with related societal and technological trends, the leaders of the future must have a different set of skills than previous generations of managers (Collins, 2001; Drucker, 1999; Heifetz, 1994; Pritchett & Round, 2001; Wheatley, 1999). Conventional wisdom says that experience makes the difference, brainpower makes the difference, and willpower makes the difference in high-performance managers. While these are notable characteristics, conventional wisdom, however, fails to take into account that there are many other kinds of attributes that differentiate effective leaders in today's fast-paced, rapidly-changing world as compared to the managers of years past (Buckingham & Coffman, 1999). The responses from the

members of the panel of practitioners supported this conjecture.

The majority of the participants in the study focused more on personal attributes, also referred to as "soft skills", than on specific skills or technical competencies. Of the total leadership characteristic categories described in the study, 82.6% were non-technical in nature. As confirmed by the literature (Collins, 2001; Collins & Porras, 1994; Goleman, 1998; Kouzes & Posner, 1995; Shaw, 1997), the members of the panel felt that while technical competence is important to successful leadership, the attributes that separate the effective leader from the ineffective leader or manager have more to do with qualities such as innovation (20.3%), team orientation (17.6%), agility (13.5%), business acumen (9.5%), initiator of change (8.1%), interpersonal skills (8.1%), collaboration (6.8%), civic and professional involvement (6.8%), political savvy (5.4%), and technological competence (4.1%) (see Figure 3). The members of the panel of practitioners supported the premise that the new yardstick for excellence is that "human abilities make up the greater part of the ingredients for excellence at work—most especially for leadership" (Goleman, 1998, p. 4).

Figure 3: Leadership Qualities for Five Years & Beyond



The members of the panel described characteristics that fell in 10 distinct, yet interdependent, categories. The top three categories encompassed more than one-half (51.4%) of all the responses related to the characteristics (skills and attributes) needed of effective leaders of the highest performing customized training departments in career and technical education institutions in the future. The three top categories reflecting the characteristics of effective leadership represented the "soft skill" attributes of leadership and included: (1) innovative and visionary, (2) team orientation, and (3) agility.

While specific categorical names were assigned to the data, it is important to note that none of the characteristics can effectively stand alone. Collectively, the characteristics and attributes of effective leadership as described by the members of the panel of practitioners support the effective leader's ability not only to adapt to change but also to have the insight to take advantage of the opportunities that change creates. Effective leaders, as described by the members of the panel, exhibit a set of characteristics that are interdependent: no single characteristic, in and of itself, will transform an individual into an effective leader.

Innovativeness

Using the definition that innovativeness is "the degree to which an individual or other unit of adoption is relatively earlier in adopting new ideas than other members of a social system" (Rogers, 1983, p. 245), innovators and early adopters seek out new ideas, products, and services before the rest of the market has adopted them. These individuals find it easy to imagine, understand, and appreciate the benefits of new ways of thinking and delivering their services to the marketplace and are willing to adopt an innovation earlier than 84% of the population in the system (Moore, 1999; Rogers, 1983).

Dedication to developing innovative concepts and practices that will benefit not only the institution and its customers but also the entire industry of customized training was a theme that prevailed throughout the responses of the members of the panel of practitioners. Two-thirds (66.67%) of the respondents described the effective leader of customized industry-specific training departments as one with exceptional capacity for innovation and vision. Of the total responses for this question, 20.3% of the comments described innovation, creativity, and forward-looking attributes. Words like "trend-setter", "resourcefulness", "innovative", and "creative" were used in the responses to the question regarding leadership characteristics and attributes.

Typical of the responses in this category were the descriptions given by the directors of community colleges in the South Atlantic, East North Central, and Middle Atlantic regions respectively.

Leaders should be open to new and innovative methods of training delivery. (South Atlantic region)

Effective leadership in this field will require continued creativity. (East North Central region)

Creativity, ability to seek new solutions. (Middle Atlantic region)

Innovative leaders have the ability to identify the trends and possible constraints inherent in the environment,

see the "big picture" in which training may be only one component, then craft innovative and creative solutions. In describing the leadership characteristics, two members of the panel provided examples of situations in which innovation and creativity would be necessary for the high-performance, future-oriented leader of customized industry-specific training.

Leaders will need to be able to identify future constraints to industry productivity and workforce development and to build innovative private-public partnerships to develop responses to these needs BEFORE they become acute. Training may well be only one component of an integrated response. For example, the basic skills gap in the U.S. is having large and growing impact on economic productivity. This is a constraint that can be addressed given sufficient lead time, a systemic approach, innovation and creativity. (Director of a community college in the Pacific region)

Effective leaders will be engaged in extensive market research and capacity building (i.e., new and creative staffing configurations, new products, new services, new fiscal models). (Director of a New England community-technical college)

"Change will happen—either by chance or by design"

(Drucker, 1999), and providers of customized industry-specific training do have a choice as to whether or not they are on the leading edge of change or on the lagging edge of change. As described by the panel members, innovative and visionary leadership is indeed an essential element in the ability of organizations to sustain performance excellence five years from today and beyond. Reflecting on Roger's

(1983) model of adopter classifications, leadership in high-performance organizations as described by the members of the panel would fall in the "venturesome innovator" and the "respectable early adopter" categories (p. 164).

The members of the panel validated the core values and guiding principles of the AQIP and Baldrige performance excellence models. Organizations should be structured in such a way that innovation and foresight becomes a part of the culture and daily work (Blazey et al., 2000; AQIP, 2000a), and it is effective leadership that "must lead by example" (Director of a community college in the East South Central region).

Visionary

"Change happens when people are able to see a concrete picture of the future" (Schwahn & Spady, 1998, p. 50). More than one-quarter (27.78%) of the members on the panel of practitioners described visionary leadership as an important characteristic for effective leadership of high-performance organizations. Embedded in the descriptions of this characteristic was the notion of "shared vision", the ability to bring excitement to the productive change process. While two participants simply stated "Visionary", other participants were more descriptive in their responses.

A visionary who is not afraid to "roll up his/her sleeves." (Director of a community college in the East North Central region)

A visionary, broad, almost global perspective on workforce and economic development. (Director of a community college in the Pacific region)

Once again, the members of the panel of practitioners confirmed the perspectives revealed in the review of literature.

Vision is the single most empowering and motivating factor in human organizations. . . . It is a target that beckons. It can bond diverse people together. (Bennis & Nanus, 1985, p. 28-89)

The greatest inhibitor to enlisting others in a common vision is a lack of conviction. . . . So there's a very fundamental question that a leader must ask before attempting to enlist others: "What do I believe in?" It's when you share what's in your soul that you can truly move others. (Kouzes & Posner, 1995, p. 139)

The responses provided by members of the panel also supported the Baldrige core values. Of the 11 core values stated in the Baldrige Criteria for Performance Excellence, Visionary Leadership is the first one listed and provides the framework upon which the other core values are focused. The Baldrige core value of Visionary Leadership reflects the thinking that "an organization's leaders need to set directions and create a customer-oriented climate, clear visible directions, and high expectations" (Blazey et al., 2000, p. 17).

Team Oriented

In a fast-moving world, teamwork is an essential component of an organization focused on performance excellence, and it is the leader who fosters and nurtures

the environment where teamwork thrives. Almost three-fourths (72.2%) of the participants felt strongly that team orientation is a critical characteristic for effective leadership five years from today and beyond. Of the 10 categories described, "team orientation" ranked second only to "innovative and visionary" and represented 17.6% of the total responses to the question regarding characteristics of effective leadership.

Effective teams "demand a merging of individual accountability with mutual accountability . . . and team members do depend on one another in pursuits of common performance" (Katzenbach & Smith, 1993, p. 25).

Interdependency requires a high degree of trust both among all the team members especially with the leadership. As trust and trustworthiness are key ingredients that characterize effective teams and leadership (Collins & Porras, 1997; Katzenbach & Smith, 1993; Kouzes & Posner, 1995; Pritchett & Pound, 2001; Wilson et al., 1994), these two characteristics can be combined under the label of "Team Oriented".

Clearly, the ability to both lead and to participate as a member in a team environment was described as an important characteristic of the effective leader five years from today and beyond. The voices of the panel members reflected common themes within this category. Common themes and

thoughts centered around phrases such as: "willing to share responsibility", "hands-on doer", "not afraid to ask for advice from staff and clients", "delegation", and "consensus". One panel member described the dimension of diversity as an important characteristic. While the need for diversity and inclusiveness is important to high-performing organizations and is acknowledged in the Baldrige Criteria, this dimension was not addressed by any of the other members on the panel.

The effective leader must have the ability to make conscious decisions to be inclusive of diverse experiences and cultures on the team. (Vice President of a technical college in the South Atlantic region)

The characteristic "team orientation" builds upon the top-rated characteristic of the leader's ability to be innovative and visionary, and it supports the premise that innovation without action is only a dream (Davis, 2001; Goodstein et al., 1993; Quigley, 1993). A high-performance team's ability to transform innovative thinking into reality is directly related to effective leadership. Gone are the days of succeeding as a "one-person show" (Prichett & Pound, 2001). Supporting the notion that leaders five years from today and beyond must have the ability to effectively engage teams in order to mobilize innovation, vision, and strategies that will carry the institution to performance excellence, the panel members also described the attributes

of "coaching" and "providing avenues for growth and development of team members" as important.

Responses from the members on the panel confirmed the perspectives from the literature that suggested effective leaders are not just cheerleaders and that they are part of the cheerleading squad as well and must join in the fun (Kouzes & Posner, 1995). "Fun isn't a luxury, even at work. . . . Empirical research has found a significant relationship between fun and productivity. Having fun sustains productivity" (p. 309). The response from the Director of a community college in the West North Central region summed up the category of team orientation.

The characteristics of this individual will be someone who can work in a team environment and be the person who will allow and encourage the team to grow to meet the needs of the community.

Trust and trustworthiness alone are not a panacea and provide no assurance of business success. When combined with team orientation, trust and trustworthiness are "enablers that allow other organizational structures, policies, and practices to work much more effectively" (Shaw, 1997, pp. 204-205). For teams to be successful, true leaders care about people and create an environment of trust and trust-worthiness (Buckingham & Coffman, 1999; Goleman, 1998; Hoyle, 1995; Katzenbach & Smith, 1997; Kotter, 1996; Kouzes & Posner, 1995; Shaw, 1997).

Agility: Flexible, Responsive, and Problem Solving

The members of the panel were succinct in their responses that related to agility in terms of leadership's flexibility, responsiveness, and problem-solving abilities. Even though there was little discussion surrounding the necessity for flexibility, responsiveness, and problem solving, this category represented close to one out of every seven (13.5%) responses to this question and was the third highest ranking characteristic of effective leaders five years from today and beyond. One member of the panel summarized the view of the other panel members.

Colleges and their personnel must be flexible to every need of area companies. (Director of a community college in the East South Central region)

Focusing on the ability of leaders to seek solutions through effective problem-solving skills, the director of a community college in the East South Central region described an example of effective problem solving as linked to interactions with business and industry.

Companies usually do not know what is wrong, only that something is wrong. Anyone working with these companies must be able to diagnose problems in areas of manufacturing, maintenance, human relationships and more. When visiting companies, we must always be on the alert for problems with which we can assist in training or consulting.

The ability of an effective leader to seek solutions to problems in a flexible and responsive manner is aligned with both the Baldrige core value and the AQIP guiding principle

of "Agility". As the pace of change escalates, an increasingly important measure of an organization's effectiveness is a faster and more flexible response to the needs of all stakeholders (AQIP, 2000a; Baldrige, 2000; Blazey et al., 2000). While providers of customized industry-specific training look to the future and anticipate the needs of stakeholders, the fast-paced, ever-changing world in which we live holds many surprises and unexpected opportunities for leaders who exhibit the characteristics of flexibility, responsiveness, and problem-solving as described by the members of the panel of practitioners.

Were we to become truly good scientists of our leadership craft, we would seek out surprises, relishing the unpredictable when it finally decided to reveal itself. Surprise is the only route to discovery, a moment that pulsates with new learning. The dance of this universe requires that we open ourselves to the unknown Knowing the steps ahead of time is not important; being willing to engage with the music and move freely onto the dance floor is what's essential. (Wheatley, 1999, p. 162)

Change Agent: Leading the Charge

"Change" and "keeping up" played heavily in the responses by the members of the panel related to the major challenges (either opportunities or problems) facing career and technical education providers of customized industry-specific training over the next five to ten years. It is significant, therefore, that one of the top four characteristics (8.0%) of effective leaders as described by

the panel members related to the effective leader's ability to serve as a change agent and to be a risk taker. The voices of the members of the panel of practitioners concur with the findings of recent research (Buckingham & Coffman, 1999; Collins, 2001; Collins & Porras, 1997; Drucker, 1999; Kouzes & Posner, 1995; Kotter, 1996).

In the twentieth century, the development of business professionals in the classroom and on the job focused on management—that is people were taught how to plan, budget, organize, staff, control, and problem solve. Only in the last decade or so has much thought gone into developing leaders—people who can create and communicate visions and strategies Because management deals mostly with the status quo and leadership deals mostly with change, in the next century we will have to become much more skilled at creating leaders. (Kotter, 1996, p. 165)

Individual respondents used words and phrases such as: "ability to deal with change in a moment's notice"; "be able to change and adaptable to change"; "ability to take risk"; and, "risk taker". One panel member described only one characteristic: "By not being afraid of change" (Director of a community college in the West North Central region). The voice of the Director of a community college in the West North Central region summarized the inferences made by each of the other participants.

They [effective leaders] will need to have the skills to guide people through the changes that will take place throughout the years. They will have to lead the charge for change.

More than thirty years ago and prior to Toffler's Future Shock (1971), the tendency was to view change as predictable and perhaps even dangerous. "Today, that view has flipped 180 degrees as people view change as a continuous journey" (Schwahn & Spady, 1998, p. 2). As confirmed by the members of the panel, leaders of high-performance customized industry-specific training departments have no option. If they are going to be effective leaders, they must "take the helm of changing organizations" (p. 2).

Leading the charge for change is indeed a key role of effective leadership: one that preserves the core of the organization while stimulating progress (Collins, 2001; Collins & Porras, 1997). The voice of the Superintendent/CEO of a technology center in the West South Central region captured the essence of this characteristic.

One of my greatest challenges is to create an environment where everyone in our organization is dissatisfied with the status quo. At the same time, we must continually maintain a focus on our mission, vision, and, of course, all of our stakeholders—both internal as well as external.

Interpersonal Skills

Communication is an important aspect of organizational cohesiveness and effectiveness and represented 8.0% of the total responses related to the question of leadership characteristics. One of every three participants (33.34%) described a need for "excellent" interpersonal skills as a

critical characteristic in the leadership of high-performance customized industry-specific training departments.

This person will need to have strong interpersonal skills. (Director of a West North Central region community college)

Not only is it important that the leadership be visionary, but just as important is the ability to communicate and share the vision. (Dean of a four-year university in the South Atlantic region)

Of the responses reflected in this category, 83.33% simply used the term "communication" with one panel member adding "excellent listening". Communication is much more than having the ability to deliver a message, and research supports the notion that listening is indeed one of the key characteristics of exemplary leaders.

To truly hear what your constituents want—what they desperately hope to make you understand, appreciate, and include within the vision—requires you to periodically suspend your regular activity and spend time listening to others. Note the number of your ears and your mouth, and make certain that you listen twice as often as you talk. (Kouzes & Posner, 1995, p. 146)

While the words used by the members of the panel of practitioners in this category were few, the specific skills and attributes that encompass the word "communication" are numerous. To focus on what "communication" means to the participants would require another research study. For the purpose of this study the term "communication" infers the

ability to interact effectively both verbally and non-verbally with others.

Collaboration, Involvement, and Political Savvy

Responses from the participants in the study in the combined categories of "collaboration", "involvement", and "political savvy" represented 17.4% of the total responses to the question regarding characteristics of effective leaders. The primary focus of "collaboration" was on the leader's ability to create and develop partnerships both internally and externally. The primary focus of "involvement" was on the leader's visibility and leadership within external environments both civic and professional. The primary focus of "political savvy" was positioned in the sense of the internal environment as well as in the external environment. Each of these characteristics is interdependent upon the others for effective leaders to be successful in establishing creditability in the community in which the customized industry-specific training services are provided as well as within the educational institution itself.

When operating interdependently these three characteristics will strengthen an institution's ability to achieve performance excellence. Today's workplace demands that a leader must "do more with less, and do it better than before" (Pritchett & Pound, 2001, p. 2). Just as team

orientation is critical within the customized training department, the ability of a leader to be collaborative, involved, and politically savvy is critical both within and beyond the walls of the institution. Making change happen requires "political savvy and the willingness to take risks in a bureaucracy" (Kister, 2001, p. 42). The response provided by the Director of a community college in the Pacific region summarized this category.

Excellent ability to work politics both inside and outside the organization in order to move issues and needs forward and to implement institutional evolution.

The voice of another panel member summarized the thinking of members of the panel of practitioners with respect to relationships external to the institution.

Effective leaders will be active leaders in their community. They will be involved in economic development activities at all levels (local, regional, state). They will be leaders in local regional, and state educational associations. They will be very active in chambers, charities, and other community organizations. They must be very visible and respected by the business community they are serving. (Director of a technical community college in the East South Central region)

Responses that reflected the notion of "collaboration" reinforced the concept of partnerships as described by the members of the panel in responding to the questions focused on both the major challenges and the "vital few" goals. The exemplary leader of a high-performance customized industry-specific training department must have the ability to create

and develop mutually beneficial, strategic partnerships and alliances.

Build partnerships and be aware of community resources. (Director of a state college in the West North Central region)

Partnering with business and industry; network and partner with other training providers. (Director of a community college in the East North Central region)

"There are remarkable and ever-increasing opportunities for alliances, partnerships, and collaborations" (Roueche et al., 1995, p. 45) that must continually be pursued and developed in order to create solutions that most likely would not be created by a single entity.

As stated previously, the categories that describe the characteristics of effective leaders are interdependent. This is evidenced by the benefits that may be reaped by high-performance institutions as a result of the interplay among the characteristics of collaboration, involvement, political savvy, team orientation, innovation, and interpersonal skills.

Innovation is fostered by information gathered from new connections; from active, collegial networks and fluid, open boundaries. Knowledge grows inside relationships, from ongoing circles of exchange where information is not just accumulated by individuals, but is willingly shared. Information-rich, ambiguous environments are the source of surprising births. (Wheatley, 1999, p. 104)

While collaboration is also critical within one's work unit, the term "collaboration" is used in this category to

describe relationships outside the immediate work unit. Collaboration within the work unit or department fell within the "team orientation" category. Even the most enthusiastic and dynamic people cannot get extraordinary things done unless they, as leaders and constituents, work together. Exemplary leaders foster collaboration and create unity of effort focused on a common, mutually beneficial purpose in both the internal as well as external environments.

Business Acumen and Technological Competence

On the business side of the characteristics of effective leaders five years from today and beyond, more than one out of every eight (13%) of the responses from the participants focused on expertise in business practices and technological competence. The message that effective leaders of customized industry-specific training must have experience and knowledge of sound "budgeting and financial management skills", be "good performance managers", and "develop marketing strategies" was clearly expressed by the members of the panel. One panel member used the term "entrepreneurial skills" (Co-Director of a community college in the Pacific region) to describe the need for business-oriented attributes. Perspectives from the literature supported this thinking as well.

People who are responsible for program planning and implementation need to recognize that budget management and other behind-the-scenes tasks are

integral components to the planning process.
(Cafarella, 1994, p. 163)

The responses from one panel member reflected a conviction that effective leaders of customized industry-specific training departments in career and technical education institutions should "be from industry and be provided enough education system skills to manage effectively" (Director of a technology center in the West south Central region). The inference here is that the principal characteristic is experience in the business and industry sector and that acculturation into the academic side of the position can be learned.

In a world where the shelf life of any technology is becoming increasingly shorter and shorter (Davis, 2001; Judy & D'Amico, 1999), members of the panel of practitioners emphasized the necessity for effective leaders to "keep up" with the rapidly changing technology. With reference to technological competency, one participant summarized the comments from the members of the panel.

Leaders should recognize that technology is dynamic and rapidly changing; therefore, leaders should be dynamic and constantly learning and researching the new technology. (Dean of a technical community college in the South Atlantic region)

NAISTD Member Feedback

A sub-group of the attendees at the 2001 conference for National Association of Industry-Specific Training Directors

(NAISTD) members was asked to review the responses of the participants in the study that focused on what will be the characteristics (skills and attributes) of effective leaders of the highest performing customized industry-specific training departments in career and technical education institutions five years from today and beyond. The NAISTD members concurred with the responses from the panel of practitioners and voiced the opinion that there is a difference between management skills and leadership skills. Management skills represent those skills that lead to doing things efficiently, while leadership skills are those necessary to accomplish things effectively (Bennis & Nanus, 1987; Drucker, 1999). Other perspectives found in the literature abound to support this opinion as well (Buckingham & Coffman, 1999; Collins, 2001; Collins & Porras, 1997; Heifetz, 1994; Kouzes & Posner, 1995; Wheatley, 1999). Evidence of agreement between the NAISTD members and the members of the panel of practitioners that effective leaders must be flexible, forward thinking, and adaptable to change is reflected in the following statement.

Leaders must be flexible! But that's really because managers deal with details; leaders deal with change and must constantly keep an eye focused on the future. (NAISTD members, 2001)

Characteristics of Effective Consultants/Coordinators

Much like the characteristics described by the members of the panel of practitioners for the effective leader, the

effective consultant or coordinator of customized-industry specific training must be "innovative and visionary", "a team player", "flexible and responsive", a "risk taker" and "change agent", possess "excellent interpersonal skills", "collaborative", "involved" in civic and professional arenas, and "technologically competent". While the panel members did not use the term "political savvy" as was referred to in the characteristics for effective leadership, inference to this characteristic was made by some of the panel members.

The consultant must have the ability to cajole and persuade change from faculty and other college personnel; ability to work effectively on the margin, spanning barriers to both the inside and the outside. (Director of a community college in the Pacific region)

As the consultant's primary role is to understand the business issues of current and potential clients for the purpose of developing and implementing appropriate interventions which address performance and productivity for the client organization, the characteristics described for consultants and coordinators in high-performing organizations elaborated on the categories of technological competence, collaboration, business acumen, and interpersonal skills. While customer focus was imbedded within the characteristics for the effective leader, customer focus was a primary descriptor for effective consultants in one out of every three panel members (34.2%).

Customer Focus

Consistent with the belief that quality and performance are judged by an organization's customers and stakeholders (Baldrige, 2000; AQIP, 2000), the theme of customer focus resounded clearly through the voices of the panel members. Customer-driven excellence is a strategic concept with value and satisfaction influenced by many factors. "These factors include your organization's relationship with customers that helps build trust, confidence, and loyalty" (Baldrige, 2000b, p. 1). The comments of the panel members were emphatic when describing customer focus as a critical characteristic for consultants and coordinators!

Customer service, customer service, and customer service!!!! (Vice President of a technical college in the South Atlantic region)

Realize that customer satisfaction is number one, be a good listener to determine customer's real needs, and don't be afraid to take a chance! (Director of a community college in the East South Central region)

They also will have to continue to work with customer teams to help guide the companies to the changes they need to make. They must have a mindset of continuous improvement in their relationship with our customers. (Director of a community college in the West North Central region)

They must keep in constant contact with existing customers as well as development of new customers. (Executive Director of a technical community college in the East South Central region)

Consultative Approach

The consultative approach to working with customers infers collaboration and team orientation. Working with the client in a consultative manner is "more like a marriage than a date" (Robinson & Robinson, 1989, p. 49) and infers a long-term relationship utilizing both "the consultant's specialized knowledge (for example, of human resource development) and the client's knowledge of the operation and the process. It brings to life the formula of $1 + 1 = 3$ " (Robinson & Robinson, 1996, p. 20). This approach is consistent with the Baldrige and AQIP core values and criteria as well as the recognition by the panel of practitioners that collaboration and partnerships are a fundamental characteristic for performance excellence organizations.

Traditional providers of industry-specific training have been viewed as primarily selling products, and the members of the panel are of the opinion that there should be a "greater emphasis upon the consultative approach" (Co-Director of a community college in the Pacific region). The approach described by the panel represents the "consultative" side of training, bringing an added dimension to the products and services provided, and presumes the development of a relationship that focuses on appropriate interventions that include customized training as well as

additional services as described in the "vital few goals" section of the findings for this study.

While sales skills were also identified as a characteristic, the focus of the panel members was that of "consultative sales skills". What then is a consultant? "A consultant is a person in a position to have some influence over an individual, a group, or an organization, but who has no direct power to make changes or implement programs" (Block, 1999, p. 1). The likelihood of building customer trust, confidence, and loyalty is enhanced by the effective use of the consultative approach by focusing on long-term relationships by which to assist clients in achieving "strategic organization results" (McClernon & Swanson, 1997, p. 1).

Technological Competence

While the members of the panel described technological competence as an important characteristic for effective leaders, there was more explicitness behind the comments as focused on the characteristics for effective consultants and coordinators. The need for technological competence was targeted primarily toward personal knowledge and skill as well as alternative delivery methods.

This person must recognize that the knowledge they have today could be obsolete tomorrow, especially in the area of technology. They must, therefore, prepare themselves for continually acquiring the knowledge they need to keep us competitive.

(Director of a community college in the West North Central region)

In a world of twenty-four hour financial markets, real-time global video games, telecommuting, and instant images from Mars, there is no reason why replicating the traditional educational model that schools use that depends on rounding up students into one room for fifty minutes, three times a week should be the only delivery model for training (Katz, 1999; Schank, 1997). Addressing the needs of the "changing face of the workforce" (Dean of a technical community college in the South Atlantic region) requires not only a sensitivity to "cultural needs" but also a sensitivity to learning styles and preferences. "Consumers of education have new motivations and expectations, and technology is challenging medieval pedagogical methods" (p. 55).

Consultants and coordinators must have greater comfort with a wide variety of media by which to deliver training to clients. (Co-Director of a community college in the Pacific region)

Coordinators' roles will be driven by the needs of specific market niches and will require higher-level skills essential to creating integrated learning systems. These systems will mesh technology-based and human-interaction based activities that effectively advance applied knowledge and skills. (Dean of a community-technical college in the New England region)

Strategic Partnerships and Alliances

Models of performance excellence such as the Baldrige and AQIP recognize and encourage building "internal and

external partnerships to better accomplish overall goals”
(Baldrige, 2001, p. 2)of the institution.

Successful internal and external partnerships develop longer-term objectives, thereby creating a basis for mutual investments and respect. Partners should address the key requirements for success, means for regular communication, approaches to evaluating progress, and means for adapting to changing conditions. (p. 2)

The primary goal in seeking strategic partnerships and alliances is “impact, the continuous creation of value for both partners” (Sagawa & Segal, 2000, p. 25). Certain conditions have been recognized that distinguish high-performing, effective partnerships and alliance.

They involve communication between decision makers and relationship managers, as well as others. They involve opportunities for joint action that meet the needs of the parties, and they involve mutual benefits, resources, responsibilities, power, and accountability. Interaction occurs at multiple levels of the organizations, and the relationship is open-ended, with potential for continual renewal. Finally, the relationships generate new value for both partners; results that often exceed what either originally imagined. (pp. 25-26)

Members of the panel agreed wholeheartedly with the premise contained in the Baldrige and AQIP criteria that partnerships and alliances, both internal and external, are critical ingredients in organizations pursuing performance excellence and continuous improvement. Responding to the question regarding the vital few goals, 30.6% of the responses indicated that partnerships were the key to addressing the majority of the major challenges faced by

career and technical education institutions delivering customized training. The term "partnership" appeared 50 times within the responses made by the members of the panel of practitioners, and the term "collaboration" appeared an additional 10 times. A prominent theme for the future of high-performing career and technical education organizations delivering customized industry-specific training focused on partnerships and alliances.

This theme emerged as a primary characteristic for both effective leadership as well as for effective consultants and coordinators. The key difference between the two roles as described by the members of the panel was primarily the focus of the partnerships and alliances. For the effective leader, the members of the panel of experts focused on partnerships with economic development organizations, chambers of commerce, other educational institutions and agencies, state agencies, business and industry, Workforce Investment Boards, and other training vendors. While the effective consultant or coordinator would develop relationships with many of the same partners as the effective leader, these relationships as described by the members of the panel were more closely related to the field of expertise for the consultant and included professional and trade organizations.

External Partnerships

Members of the panel of practitioners were asked to identify and briefly describe the types of external relationships that will be key to accomplishing the mission of each of their respective departments five years from today and beyond. The Director of a technical community college in the East South Central region summarized the need for external partnerships and alliances, described current partnerships, and emphasized the importance of seeking new partnerships.

This is an area of critical importance to our division. We are always looking at ways to partner with organizations to strengthen our programs. These partnerships and collaborations will take many shapes and forms In five years these relations will be expanded to include more partners as our unit continues to evolve.

Five themes emerged in the descriptions of key external collaborative relationships which the "successful department should develop, nurture, and maintain" (Director of a community college in the Pacific region). Those themes included strategic partnerships and alliances with (a) business and industry, (b) agencies (local, state, and federal), (c) other educational entities, (d) suppliers, and (e) competitors.

Business and industry partnerships. A variety of possibilities for partnerships with business and industry emerged through the responses of the members of the panel.

The Director of a technology center in the West South Central region focused on the partnerships developed with business and industry clients.

Building partnerships with our clients will take our services to a higher level. Mutual trust will be achieved such that clients can share process data with confidence that confidentiality will be observed. They will have confidence that our recommendations as a service provider are made with their best interests in mind.

Another panel member, the Co-Director of a community college in the Pacific region, focused on assisting small- and medium-sized companies to develop partnerships in the form of training consortia "that will allow companies within an industrial sector to share customized training costs that they could not otherwise afford."

Collaboration and partnerships with organizations that would have expertise that would assist clients beyond the scope and mission of the career and technical education institutions were described by several of the practitioners on the panel. These organizations included: "accounting and law firms", "trade associations (such as technology groups", "power plant companies"; and "professional associations".

Consultants and coordinators will need a greater ability to build partnerships. They will need to access and mobilize experts with a wide variety of skills that lay outside of the traditional training purview—much of which can be accomplished through partnerships. (Co-Director of a community college in the Pacific region)

Partnerships with trade associations and professional associations will assist in creating skills standards for specific industries and credentialing systems based upon those skills standards. (Co-Director of a community college in the Pacific region)

An example of a dynamic, mutually beneficial partnership of this nature was provided by the Executive Director of a technical community college in the East South Central region.

We have developed a strong contractual relationship with a laboratory in our area. They assist in providing technical expertise to companies we work with as needed. We have been able to obtain several pieces of equipment that we are able to utilize to assist in our training efforts. We, in turn, provide the lab with instructional designers to assist in development of educational needs they have.

Another possibility for partnerships that would be beneficial was described as "public/private partnerships" that would support community needs within business and industry that represent grassroots needs of companies and employees.

Public/private partnerships that would promote or help defray costs for: Basic Skills training for incumbent workers. (Co-Director of a community college in the Pacific region)

Partnerships with agencies. Maximizing and leveraging local, county, state, and federal resources provides significant opportunities for partnerships according to the members of the panel. Specific agencies described in the responses included: state departments of economic and

community development, local Workforce Investment Boards, local and state economic development authorities, local and state chambers of commerce, and One-Stop Career Centers. Close relationships and partnerships with chambers of commerce and local economic development offices "are vital in assisting with recruiting new industry and for quickly addressing needs of existing industry" (Dean of a technical community college in the South Atlantic region).

These organizations [regional Chambers of Commerce] have been and will continue to play a big role in our training efforts. We have staff offices in the Chamber to house our Small Business Development Center and utilize the networking with the Chamber to identify potential customers. Members of the chamber also see this relationship as a benefit of their membership. (Executive Director of a technical community college in the East South Central region)

Partnerships with educational entities. Almost half (44.4%) of the members of the panel of practitioners described other educational institutions as key partners in fulfilling the mission of their departments, such as "pursuing partnerships with educational groups which have similar goals", "area school systems", "elementary, high school, and other colleges are necessary for future growth", "community colleges, four year colleges", "other community and technical colleges in state as well as outside the state", and "peer groups".

Partnerships with suppliers and competitors. Some of the members of the panel of practitioners recognized the

value of developing partnerships with contract trainers. Participants reported an average of 22.6 contract trainers per every full-time trainer employed by the institutions represented in the study. Half (50%) of the institutions represented in the study employ only contract or adjunct faculty to deliver the training to the business and industry clients.

Having excellent relationships with our contract trainers is critical to our ability to deliver quality products and services to our business and industry clients. These trainers represent our institution to the employees who receive the training. The quality of the training is the most frequent measure of customer satisfaction.
(Director of a community college in the West North Central region)

As described in the "Major Challenges" section of the findings, members of the panel once again described developing partnerships with suppliers and competitors as providing additional opportunities for synergy. Supporting the Baldrige Criteria for Performance Excellence, the notion of developing partnerships and strategic alliances with suppliers and competitors provides enhanced abilities for the customized industry-specific training provider for "rapid development of curriculum or assessments, rapid response to changing demands, or the ability to produce a wide range of customized services" (Blazey et al., 2000, p. 141). Recognizing the challenges inherent with the shrinking resources such as funding and the increased

responsibility for accountability, enhanced partnerships, and alliances with suppliers and competitors would facilitate reductions in both cost and cycle time (AQIP, 2000b; Baldrige, 2000a, 2000b).

The opportunity to create strategic partnerships with equipment manufacturers, corporate universities, and CBT training developers will greatly enhance our ability to meet the needs of our customers in a cost-effective manner.
(Director of a technical institute in the East South Central region)

Internal Partnerships

Those institutions that are truly committed to performance excellence encourage active collaboration among and within different internal departments and "remove internal barriers to collaboration, such as the constraints individuals often experience within a hierarchical chain of command" (AQIP, 2000, p. 3). Bureaucratic barriers were identified as a major challenge, and the members of the panel identified forging internal partnerships and collaborations as a vital few goal.

Several members of the panel described strong current relationships and partnerships within their institutions. The foundation for the strength of these relationships is the mutual benefit to both entities as a result of the partnerships. The participants in the study described examples of benefits to both the customized training department and the institution.

The business services center maintains close relationships with all areas of the college. We utilize, when possible, faculty from the various disciplines. In five years and beyond, I see faculty given release time to work in industry in helping develop customized training programs. We also maintain membership in the advisory group of each academic unit within the college. This membership needs to be maintained and fostered. (Executive Director of a technical community college in the East South Central region)

The business and industry services of the institution have value to all in the organization. When clients are helped to build strong companies, our whole organization potentially benefits. (Director of a technology center in the West South Central region)

Members of the panel also expressed challenges as well as opportunities resulting from the development of internal partnerships. Some of the challenges and opportunities described included: "top administrative support and commitment to workforce development", "faculty commitment", "faculty union support of training/classroom work", and "overall institutional support of how training classes are scheduled and offered to meet business and industry needs". The members of the panel of practitioners described specific examples of challenges facing these departments.

College leadership will be challenged by limited resources and incompatible or conflicting demands. Maneuvering in a highly politicized environment will continue to be difficult. (Dean of a community-technical college in the New England region)

First, community colleges must give entrepreneurial departments the latitude to act as the college's consulting arm. As such: personnel policies (including pay-for-performance and

commission); accounting systems (accrual), etc. must change. In addition, freedom from non-value added administrative duties must be granted. Second, our department looks upon itself as the R & D "incubator" for the college. We have successfully started cutting edge training with businesses that we eventually turned over to academic departments to run. This process needs to be recognized by upper-level college management and acknowledged as part of the college's "scorecard". (Co-Director of a community college in the Pacific region)

One panel member recognized the need for internal marketing and described a plan of action to address information sharing within the institution.

We will need to keep the activities that are taking place in our unit in front of internal personnel and to help them see how it all fits together in meeting the needs of the student (employee) and the employer. We will do this by having a presence at as many meetings as is possible. (Director of a community college in the West North Central region)

Summary

Dialogue with the Oklahoma State University cohort group, MIS, revealed three poignant themes surrounding the responses provided by the members of the panel of practitioners to the questions regarding characteristics of effective leaders and consultants. The cohort group summarized the characteristics of effective leaders and consultants involved in career and technical education's role in customized industry-specific training in three words: People, Passion, and Partnerships. An observation by this group was that not only were the members of the

panel responding to the questions asked by the researcher but also that the members of the panel, themselves, exemplified the characteristics of effective leaders. This observation validated the assumption that the NAISTD members would have "the ability, without personal bias, to nominate two career and technical education institutions as high performing in delivering customized training to business and industry" (p. 21).

People

Leaders of customized industry-specific training departments in career and technical education institutions play a vital role in shaping and implementing the resources necessary to support the workforce development needs of business and industry as well as to enhance the economic development needs of the community. Understanding the characteristics (skills and attributes) necessary for providing effective leadership for career and technical education's role in economic development and workforce development for the 21st century was the thrust of this segment of the study. The members of the panel of practitioners and members of NAISTD identified several interdependent characteristics for effective leadership in high-performance organizations. Leaders exhibiting these characteristics can "make all kinds of great things happen" (Kister, 2001).

More than three-fourths (82.6%) of the responses focused on non-technical attributes frequently referred to as "soft skills." Effective leaders five years from today and beyond need to be innovative, visionary, team oriented, a risk taker, a change agent, flexible, responsive, and have the ability to both express themselves as well as to listen and learn. In addition to these attributes, the members of the panel of practitioners believed that an effective leader of customized industry-specific departments should have experience in business and industry with a solid set of business-oriented skills such as financial, project management, and marketing. One participant expressed the view that acculturation to the academic setting could be learned.

Other business-oriented skills described by the participants included the ability to form partnerships and strategic alliances that would be mutually beneficial both within the institution as well as with other organizations such as training organizations, business and industry, local chambers and economic development organizations, and trade associations. While the specific competencies were not described, members of the panel agreed that technical competence was also essential for effective leaders of customized industry-specific training departments five years from today and beyond.

Passion

Resounding through the voices of the members of the panel of practitioners was a sense of pride and tremendous passion for workforce development and the resulting economic development. These individuals clearly enjoy what they do and believe in the contribution that is being made to sustaining the viability of the communities they serve and the competitiveness of their client companies. While some of the participants in the study described frustration with challenges such as bureaucratic barriers, funding issues, and occasional lack of commitment and support from administration, it was clear that each participant held a true passion for doing what they do. Consistent usage of terminology such as "keeping up" and "change" were indicative of the participants' desire to "lead the pack" in the arena of customized industry-specific training.

Recent research of great companies supports the notion that one does not "have to be passionate about the mechanics of the business per se (although you might be). The passion circle can be focused equally on *what the company stands for*" (Collins, 2001, p. 110). In the case of customized industry-specific training, the members of the panel are deeply passionate and motivated by the whole idea of the benefits to both the companies as well as for the incumbent employees who are the recipients of the workforce

development initiatives provided by career and technical education institutions. The societal implications are tremendous.

You can't manufacture passion or "motivate" people to feel passionate. You can only discover what ignites your passion and the passions of those around you. (p. 109)

Partnerships

"Developing, nurturing, and maintaining" strategic partnerships and alliances is critical for the high performance organization. Leaders as well as consultants and coordinators will be called upon to increasingly identify and pursue these relationships and ensure that they are mutually beneficial to both parties. Successful partnerships and alliances both within the institution as well as external partnerships are the key to delivering products and services that are central to customer satisfaction. A significant challenge for some of the institutions participating in the study was that of being acknowledged for the benefits that are returned to the institution as a result of customized industry-specific initiatives. One of the guiding principles of the Academic Quality Improvement Project (2000) is to "reward effective cooperation and celebrate model collaborative efforts with internal and external partners" (p. 3).

CHAPTER 7

CUSTOMERS: TRANSFORMING INDUSTRIES

Research Question: What will be the characteristics for future customers and major stakeholders for customized training?

Introduction

A lot of people think that the New Economy is all about the Internet. I think it's being fueled by the Internet—as well as by cell phones, digital assistants, and the like—but that it's really about customers. Customers are transforming entire industries. That's what jazzes me. (Seybold, 2000, p. 107)

Customers are at the core of any business or organization, and it is the organization's mission that defines the customers and the products and services. Within the context of career and technical education, the mission is two-fold: (a) is an essential component of the total educational system, offering career-oriented benefits for all students; and (b) is a critical and integral component of the workforce development system, providing the essential foundations for a thriving economy (National Association of State Directors of Vocational Technical Education, 2001). The mission, therefore, of the customized industry-specific training arm of career and technical education focuses primarily on the workforce development system within the

economic development arena. This segment of the findings will focus on describing the characteristics of the customers and stakeholders for customized industry-specific training and the measures of effectiveness for the products and services provided by career and technical education.

In rapidly-changing, competitive environments as seen in today's business world, the organizations that model performance excellence are those that have an intense customer focus with a clear definition of customer groups and market segments, both current and potential. The ability of high-performance excellence organizations to listen and learn from their customers on a continuous basis is a fundamental ingredient not only surviving but also to thriving (Baldrige, 2000a, 2000b; AQIP, 2000). Differing relationships require distinctly different listening and learning strategies.

Knowledge of customer groups and market segments allows your organization to tailor listening and learning strategies and marketplace offerings, to support and tailor your marketing strategies, and to develop new business. (Baldrige, 2001a, p. 35)

The ultimate aim of performance-excellence focused organizations is to build relationships, to acquire and satisfy customers, to nurture repeat business, and to have positive referrals (p. 35). If this is indeed the aim, then it is crucial that organizations have a clear definition of their customer groups and market segments. In the world of

career and technical education institutions that provide customized industry-specific training to business and industry, the customer base goes beyond the scope of the traditional academic boundaries. While the role of customized training in career and technical education serves as an extension of the academic arena of the institution, the role is also expanded to that of the "entrepreneurial arm" as well. As such, it is imperative that the customer be perceived as both the individual worker and the employer.

Educators are urged by Knowles to encourage adults to continue learning in order to avoid obsolescence, a probable consequence of life in a rapidly changing world. Assessment of individual and organizational needs which lead to educational goals comprise a primary purpose for Knowles: competent people who can apply knowledge effectively in the midst of change. To keep current is the necessary response to societal change, and this provides a key rationale for lifelong learning—in order not to be left behind. (Fisher & Podeschi, 1989, pp. 347-348)

The phrase "in order not to be left behind" is applicable to both the employer as well as the individual employee. This phrase also reflects the theme of "keeping up" that emerged through the voices of the members of the panel of practitioners with regard to the major challenges faced by their institutions.

The assumption that proper adult education can synthesize organizational and individual needs is basic to Knowles' philosophy (Knowles, 1988; Knowles, Holton, & Swanson, 1998) and is relevant for understanding who the

customers and stakeholders are for customized industry-specific training. Knowles (1988) divided the aims of any organization, including business and industry, between (a) its work agenda, getting things done (effectiveness), and (b) its human agenda, achieving human goals (self-actualization). A growing number of institutions including industry have come to recognize that workforce development is critical to their ability to be competitive.

One of the most efficient means for increasing the effectiveness of their operation is the continuing education of their employees . . . that adult-education processes are basic tools of organizational growth and development Institutions are their [providers of employee training] clients as well as individuals, and part of their art is helping various target populations within institutions—governing boards, supervisors, departmental personnel, members, and the like—to learn new behaviors that will produce stronger institutions. (p. 34)

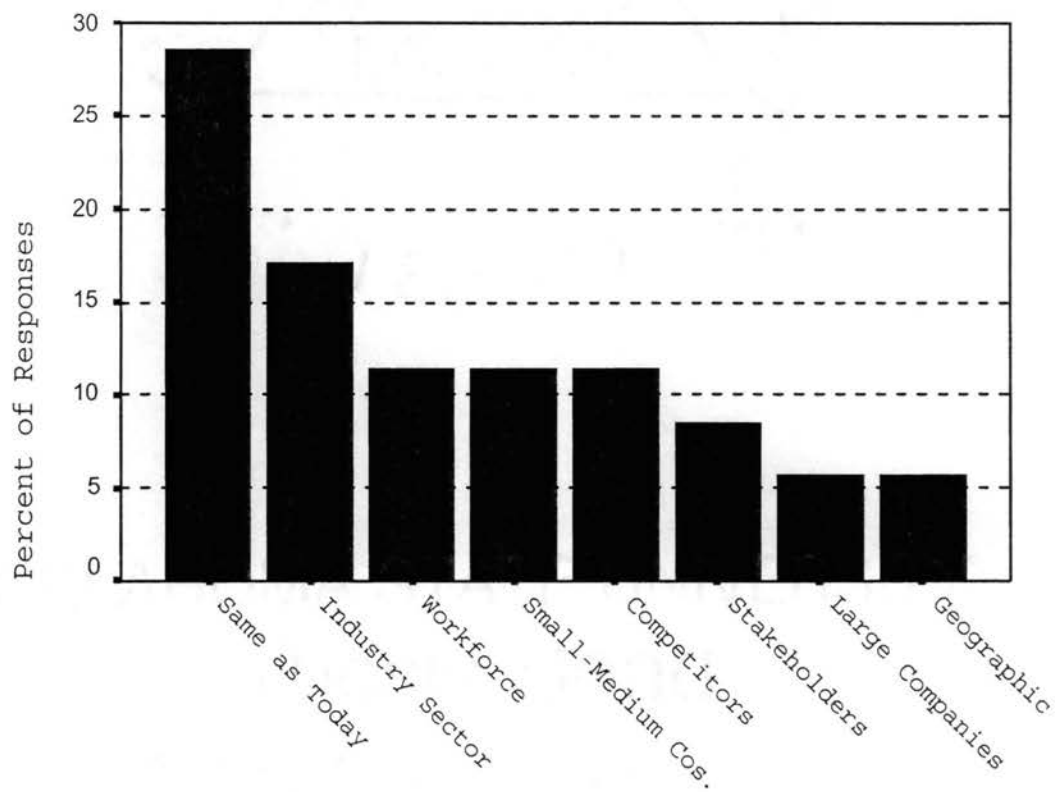
As described by Knowles, a focus on perceiving both the institution, business and industry, and the individual members within the institution as clients supports the criteria for performance excellence as stated in the Baldrige Criteria for Performance Excellence (2000a, 2000b) and the Academic Quality Improvement Project (2000).

Characteristics of Customers

When asked about who will be the customers and major stakeholders for customized industry-specific training five years from today and beyond, the members of the panel of practitioners described eight areas: same customers and

stakeholders as today, new and expanded industry sectors, the workforce itself, small- to medium-size companies, today's competitors, stakeholders, large companies, and customers in expanded geographical areas (see Figure 4). While each of the categories were distinct in nature, they were also interrelated in some instances. For example, serving new customers in areas outside the current geographic service area may very well be the result of changes in workforce demographics.

Figure 4: Customers in the Future



Same as Today: Geographic and Funding Issues

More than half (58.82%) of the members of the panel responded that the customers and stakeholders of tomorrow

will be the "same as today." While there was agreement from the panel members that the major customers will remain business and industry, a variety of dynamics were at play within the comments stating that the customers and stakeholders of the future will be the "same as today". Among these dynamics were issues of geographic service areas, funding, bureaucratic constraints, and competitors.

Since inception, career and technical education institutions have been supported by public funding: federal, state, and local. While the majority of these institutions are ultimately accountable to a state board and state agency, career and technical education institutions are predominately locally funded and locally governed (Peters, 1987; Presley, 1995). Because of the local and state support, the question arises as to the best use of available funding and the appropriateness of serving clients outside the geographical boundaries which define the service delivery area for each institution. With reference to funding and perhaps bureaucratic constraints, an intriguing comment from one panel member described the "landscape" in five years as "messy".

I can only begin to imagine what the landscape will look like 5 years from now. It will be very messy! More so than it is today. This will be a function of increased available dollars and poor leadership in creating systems that efficiently and effectively use those dollars on behalf of companies. (Dean of a community-technical college in the New England region)

Of the total responses to this question, almost one of every three (28.6%) was linked to defining customers and stakeholders of the future as the "same as today". Describing the geographic service areas as a potential limitation in expanding market segments represented an additional 5.7% of the responses. One of the members of the panel of practitioners explained that their service areas will continue to be defined by district boundaries.

Because of state set service areas, our customers will remain basically the same other than new companies within our boundaries. (Director of an East South Central region community college)

This same participant, however, went on to make clear that while the primary customer will remain those companies within their "state-set service areas", they plan to provide services outside those boundaries in the future.

Being located near state boundaries, we do plan to expand our services across state lines when not serving in-state companies.

Another panel member responded to the opportunity of expanding beyond their current geographically-defined boundaries through online services.

I don't think our perception of customers and stakeholders will be very changed except possibly in the geographic reach that will be possible through on-line engagement. (Director of a West South Central technology center)

The responses from both of these panel members indicated that while there are "state-set service areas" for each of the institutions participating in the study, the

possibilities for providing services to business and industry outside their geographic district and home state presents an opportunity for expansion of the customer base. In one case, the opportunity for growth is seen as serving companies beyond their state borders in utilizing the same delivery modes as in the past. In the other case, the potential for a new customer or market segment is through the use of new delivery methods such as electronic, web-based delivery.

In reference to the comment describing the opportunity for "on-line delivery of training" (Director of a West South Central technology center) as an avenue for increasing market segments beyond traditional "service delivery areas" in the future, competition from the private sector for customers and market segment in the delivery of training using new technologies will conceivably increase five years from today and beyond. Because of the governance models frequently in place in public-sector institutions, the propensity for the early adopters to be from the private sector is heightened.

The application of new technologies to postsecondary education creates a significant likelihood that new players—those without fixed investments in physical plants or tenured professors—will obtain accreditation and will compete with traditional colleges and universities in a number of markets. In particular technology firms will likely attempt to leverage their networks and technology bases to produce highly sophisticated courses at lower costs This

possibility has the potential to change U.S. higher education [including career and technical education] in profound ways. (Katz, 1999, p. 48)

Industry Sectors

Keeping in mind that the questionnaire for this study was administered prior to the terrorist attacks of September 11, 2001, the perceptions of the participants may or may not be the same today. Responses describing specific industry sectors represented 17.1% of the total responses to the question of "who will be the customers and major stakeholders for customized industry-specific training" five years from today and beyond. Four primary industry sectors were described as future market niches: (a) services, (b) information technology, (c) biotechnology, and (d) manufacturing. While the industry sectors served in fiscal year 2000 by institutions represented by the members of the panel of practitioners vary, 100% of the institutions provide customized training to manufacturing, and 94.44% of the institutions served health services. Only 16.67% provide customized industry-specific training services to companies in the mining industry sector (see Table 7).

Table 7: Industry Sectors Served in Fiscal Year 2000

Industry Sector	% of Participating Institutions Serving Industry Sector
Mining	16.67%
Agriculture, Forestry, & Fishing	33.33%
Wholesale Trade	61.11%
Hospitality	66.67%
Retail Trade	77.78%
Construction	83.33%
Transportation & Communication	83.33%
Electric, Gas, & Sanitary Services	83.33%
Finance, Insurance, & Real Estate (FIRE)	83.33%
Business Services	83.33%
Government	88.89%
Health Care	94.44%
Manufacturing	100.00%

Note: Industry Sectors listed are those used by the Bureau of Labor Statistics (2001a, 2000c).

One institution provided training services to every industry sector designated by the Bureau of Labor Statistics, while another institution reported only five industry sectors. The majority (61.11%) of the participants reported working with at least nine of the thirteen industry sectors listed.

Repercussions from the September 11th attacks quickly rippled through the economy, propelling new claims for unemployment benefits to a nine-year high. September 2001 employment reports from the Bureau of Labor Statistics (2001c) reflected significant declines in jobs in both the information technology and the manufacturing industry

sectors. More than 900,000 manufacturing jobs had been eliminated so far in the year 2001. While employment growth in the services sector, which includes both business services and health services, increased significantly over the past few years, virtually no net job gains were reported in the service sector between March and September 2001. These statistics may have implications for customized industry-specific training that were not factored in the responses provided by the members of the panel.

While the health services industry sector continued to add jobs in September of 2001, employment in business services was down again over the preceding month. Will the "training-is-the-first-to-go" mentality of the past resurface for companies facing economic downturns? How these trends will impact career and technical education institutions providing customized industry-specific training to business and industry remains to be seen.

Throughout the study, members of the panel have referred to rapid change and keeping up as tremendous challenges in positioning themselves to quickly respond to the needs and requirements of their customers. Only a few short months ago, the members of the panel of practitioners projected an opportunity to serve a larger segment of the smaller high-tech companies. Since that time company closures and downsizing are rampant in that sector of the

economy. This trend may impact the need for customized training with potential shifts in their customer base. Attempts to "keep up" with the training needs in different industry sectors are truly a challenge. The best attempts at predicting can quickly be impacted by unexpected events such as the September terrorists attack. The ripple effect of events such as this will continue to be felt for a very long time.

We will continue to see the shift to and growth in smaller high-tech companies. (Co-Director of a community college in the Pacific region)

The service sector will continue to grow at a rapid pace, giving us many new opportunities for customized training. (Executive Director of a technical college in the East South Central region)

Information technology based companies and biotechnology companies will dominate the customized training market in our service area in the next five years. (Dean of a technical community college in the South Atlantic region)

Workforce Demographics

The relationship between education and training and job requirements is likely to be complicated by changing workforce demographics. Increasing access to education and training has become the "new threshold requirement for competitiveness of national workforces as well as for career success among individuals within nations" (Carnevale & Fry, 2001, p. 1). As 60% of future jobs will require skills that only 20% of present workers possess (National Alliance of

Business, 2000), changing demographics will have significant implications for workforce training initiatives of the future. Factors such as the large number of individuals from the Baby-Boom Generation entering retirement age, a declining birth rate, and an increase in immigration (BLS, 2000c; Carnavale & Fry, 2001; Herman, 1999a, 1999b) will hamper companies' abilities to hire adequate number of skilled employees essential to meet the market demands.

The panel members stated changing demographics and expectations of the emerging workforce as an impetus for new customer and market niches five years from today and beyond. Members of the panel projected that companies impacted by these statistics as well as the individual worker will represent potential new customers and market segments.

With a huge percentage of the people who will be working in the next 10 to 20 years being currently in the workforce, there will be a need for worker training and the community college system will need to be on its toes in order to respond to both companies and individual workers and be the workforce development trainers of choice.
(Director of a community college in the Pacific region)

The individual will be seeking training on their own, and we will have to be flexible enough to customize training to fill this need. (Director of a community college in the East South Central region)

The response of another panel member concurred with Knowles' (1988) basic assumption that proper adult education programming can, and should, synthesize both institutional

and individual needs. "Knowles is optimistic that adult education can lead to organizational change that will harmonize the work purpose and the human purpose towards reciprocal fulfillment of each" (Fisher & Podeschi, 1989, p. 349).

Organizations operating will be the customers and so will the employees of those organizations.
(Director of a community college in the Pacific region)

Creating Synergy with Competitors

Rather than view increased competition as a threat (Katz, 1999), 11.4% of the responses included descriptions of opportunities to partner with competitors as viable for growing customers, market segments, and stakeholders. The concept of synergy is commonly used to describe cooperative, collaborative efforts in which the interaction of discrete organizations or entities is such that the effect is greater than the sum of the individual effects (Scholtes, 1988; Wilson, George, Wellins, & Byham, 1994).

The image of creating consortiums as an avenue by which to retain current customers and to expand the client base five years from today and beyond was described by the Director of a community college in the Middle Atlantic region.

Since we are in a relatively small county, we anticipate that the general mix of customers will be the same as today. The one variable will be new organizations and private, single product

companies that will emerge to fill voids. We will network with them to service our clients.

Does the growth of corporate universities decrease the demand for customized industry-specific training provided by resources such as career and technical education institutions? The answer to this question is, "Not necessarily". An increasing number of organizational leaders are realizing that "of any other aspect of business, the active force is 'people'" (Senge, 1990, p. 140). These leaders in business and industry are "recognizing the radical rethinking of corporate philosophy which a commitment to individual learning requires" (p. 140), and that tapping the potential of the individuals within the organization requires a substantial commitment from the company. One way companies have responded to this need is through the development of a formalized approach to creating a learning organization referred to as corporate universities. Rather than view the corporate university as a competitor, the Director of a technical community college in the East South Central region described partnerships with corporate universities as a new market niche for career and technical education institutions providing customized industry-specific training to business and industry.

We see ourselves as a strategic partner to companies needing to develop a corporate university. Our division would essentially run and operate their corporate university.

Small- and Medium-Size Businesses

Training programs funded through state initiatives are "often criticized for not reaching out to smaller firms" (Bosworth, 1999, p. ix). While the U. S. Small Business Administration (2000) defines small business as 499 or fewer employees, practitioners in the field of customized training more often consider fewer than 50 employees as small firms. Firms with 50 or fewer employees comprise about 38% of total U.S. non-retail employment (BLS, 2000a, 2000c; Bosworth, 1999). In recognition of the need to increase services to small- and medium-size companies, 63.83% of the states responding to a survey by the National Governors' Association "indicated that they are making multi-firm training projects a 'high priority'" (p. ix). The increased focus on multi-firm projects have several benefits including economies of scale and addressing the "training needs of smaller employers through cooperative projects" (p. ix) designed to pool common training activities in support of similar needs faced by small- and medium-sized companies.

Increasing services to customers in small- to medium-sized companies was described by 23.51% of the members of the panel as an opportunity for growth five years from today and beyond. Small- to medium-sized business "will increase their demand" (Co-Director of a community college in the Pacific region) and "will begin to recognize the importance

of customized training" (Director of a state college in the West North Central region). Demographic information supplied by the members of the panel showed that of the 2,121 clients served by the participant institutions in the study in fiscal year 2000, 86.33% were companies with 499 or fewer employees and almost half (42.67%) had fewer than 49 employees (see Table 8).

Table 8: Clients Served by Company Size

Company Size by Number of Employees	Percent of Total Clients Served by CTE in Fiscal Year 2000
Fewer than 49 employees	42.67%
50 - 99 employees	21.17%
100 - 499 employees	22.49%
500 - 999 employees	8.86%
1,000 - 2,999 employees	3.21%
More than 3,000 employees	1.60%

Of the 166,276 U.S. companies listed in the Dunn and Bradstreet Database, small organizations significantly outnumber large ones: 78% employ fewer than 499; 10% employ 500-999; 7% employ 1,000 to 2,499; and 5% employ more than 2,500 (Galvin, 2001, p. 40). The 86.33% of companies with fewer than 499 employees served by the institutions represented by the members of the panel of practitioners closely compares to the Dunn and Bradstreet percentage of 78% for the companies of the same size.

There did not appear to be a direct association between the size of the population of the area served and the number of clients and the size of the companies served (see Table 9). For example, the career and technical education institution in the largest community served the fewest number of clients (27) in FY 2000.

Table 9: Number of Clients Served in Participating Institutions by Community Size and Company Size

Population of Community Served	Number of Clients Served by Size of Company (# of employees)						Total Clients Served
	<49	50 to 99	100 to 499	500 to 999	1,000 to 2,999	>3,000	
500,000 to 999,999	2	10	6	4	3	2	27
150,000 to 499,999	10	20	10	3	3	0	46
150,000 to 499,999	6	4	25	9	3	7	54
150,000 to 499,999	10	24	22	3	1	0	60
150,000 to 499,999	40	35	3	3	0	0	81
150,000 to 499,999	37	9	34	5	3	1	89
150,000 to 499,999	35	30	30	15	5	2	117
150,000 to 499,999	40	30	20	20	5	5	120
150,000 to 499,999	35	35	55	5	4	0	134
150,000 to 499,999	112	38	38	4	1	0	193
150,000 to 499,999	167	22	45	2	2	0	238
150,000 to 499,999	300	30	15	5	2	0	352
75,000 to 149,999	10	20	10	5	2	0	47
75,000 to 149,999	16	16	28	3	1	0	64
75,000 to 149,999	45	82	34	5	1	0	167
25,000 to 74,999	25	3	4	2	0	0	34
< 25,000	5	8	22	45	7	9	96
< 25,000	10	33	76	50	25	8	202
Total Clients	905	449	477	188	68	34	2,121

Large Companies

On the other end of the continuum, 11.76% of the participants indicated that increasing a customer base with large companies would be their focus five years from now and beyond. Whether in the form of a corporate university or as a traditional training department structure, the need for resources to train the incumbent workforce is on the incline. While companies with 1,000-9,999 or 50,000 or more employees reported "double-digit drops in both overall training budgets and salaries [for training personnel]" (Galvin, 2001, p. 42), all other companies participating in the 20th Annual Industry Report "posted double-digit gains" (p. 42). Clearly, those companies with fewer than 1,000 employees are making substantial investments in employee training and development, and the members of the panel in the study voiced the potential for market growth. Of the total responses to the question focused on customers and stakeholders five years from today and beyond, 5.7% described training support for large companies as potential for customer and market segment growth. If the trends in the Annual Industry Report continue, large companies may or may not be an area of growth.

As companies begin to locate portions of their organizations to international locations, there is an

interest in replicating the training received in the United States through career and technical education institutions.

More training will be conducted for our customers internationally to meet the demand from multinational corporations. (Co-director of a community college in the Pacific region)

Expanding the customer and market niches through creative approaches such as becoming "their training department" was described by one of the panel members. This approach aligns with Knowles' philosophy of adult education that emphasized the "synthesizing organizational and individual needs" (Knowles, 1988, p. 34).

We are aggressively working with large companies in an effort and plan to be their training department. We have assembled diploma and degree programs that qualify for scholarship under grants that lead to four-year degrees in certain universities. Everyone wins. Courses are free to the students who qualify, they're convenient to the work schedules, and the companies are upgrading the knowledge and skills of their workforce. (Vice President of a technical college in the South Atlantic region)

Stakeholders

Typically there are several other groups who are not formally members of the organization but who have an investment in the organization. These groups are called stakeholders, and the "only requirement for being a stakeholder is a sense of involvement—a very fluid criteria" (Goodstein et al., 1993, p. 207). The Baldrige Criteria for Performance Excellence defined stakeholders as "all groups that are or might be affected by an organization's actions

and success" (Baldrige, 2000a, p. 31). It is important to pay careful attention to all stakeholder groups and seek feedback whenever possible. Examples of key stakeholders often include customers, employees, partners, and local and professional communities.

Describing stakeholders as a much broader group than customers, two of the members of the panel simply described their stakeholders as "the entire community" (Director of a community college in the East South Central region and the Director of a community college in the Pacific region). Another member of the panel described stakeholders from a different perspective with them including: Economic Development entities, Chambers of Commerce, and State Legislators (Director of a state college in the West North Central region).

Summary

In summary, customers are truly transforming entire industries, and that should be "what jazzes" (Seybold, 2000, p. 107) career and technical education institutions providing industry-specific training to business and industry in the 21st century. Customer focus working hand-in-hand with quality service is the ultimate differentiation between "good" and "the best" organizations. Never before has it been more important to effectively listen and learn from not only current customers and stakeholders but also to

potential customers (AQIP, 2000; Baldrige, 2000a, 2000b). Review of the web-site of one of the nominees who did not ultimately serve on the panel of practitioners revealed a statement that demonstrated that customized industry-specific training department's commitment to listening to and learning from their customers in "business, industry, and labor".

We are customer focused. The business goals and aims of our clients guide us. We exist to help them achieve those goals and aims through the deployment of human, process, and system enhancing technologies. (Director of a West North Central community college)

As the global need and demand for greater learning and training grows, it will be incumbent upon career and technical education institutions to assess their current vision and mission to determine if indeed their customers will be "the same" five years from today and beyond. Does this mean moving into new geographical markets?

Does it mean new delivery mechanisms (for example, Web-based virtual education) that threaten to supplant traditional pedagogical techniques? Does it refer to the development of corporate universities? Or does it refer to the fact that for-profit educational institutions are now a \$3.5-billion-a-year business and growing at more than 10 percent a year? The short answer is yes. (Katz, 1999, p. 51)

In order to sustain the vigor and excellence of career and technical education institutions providing customized industry-specific training, weak-hearted attempts to "test the waters will not hold back the tide of nontraditional

competition" (Katz, 1999, p. 51) and nontraditional market segments. "A complex array of forces such as new delivery technologies, changing demographics, the emergence of corporate universities, and a complex global economy" (p. 51) are creating an entirely new environment for industry-specific training. Are what have previously been perceived as competitors possibly the door to opportunity for serving a new sphere of customers and stakeholders? This is certainly a possibility worthy of further exploration. Now is the time to anticipate, identify, and prepare for changing customers, market segments, and stakeholders.

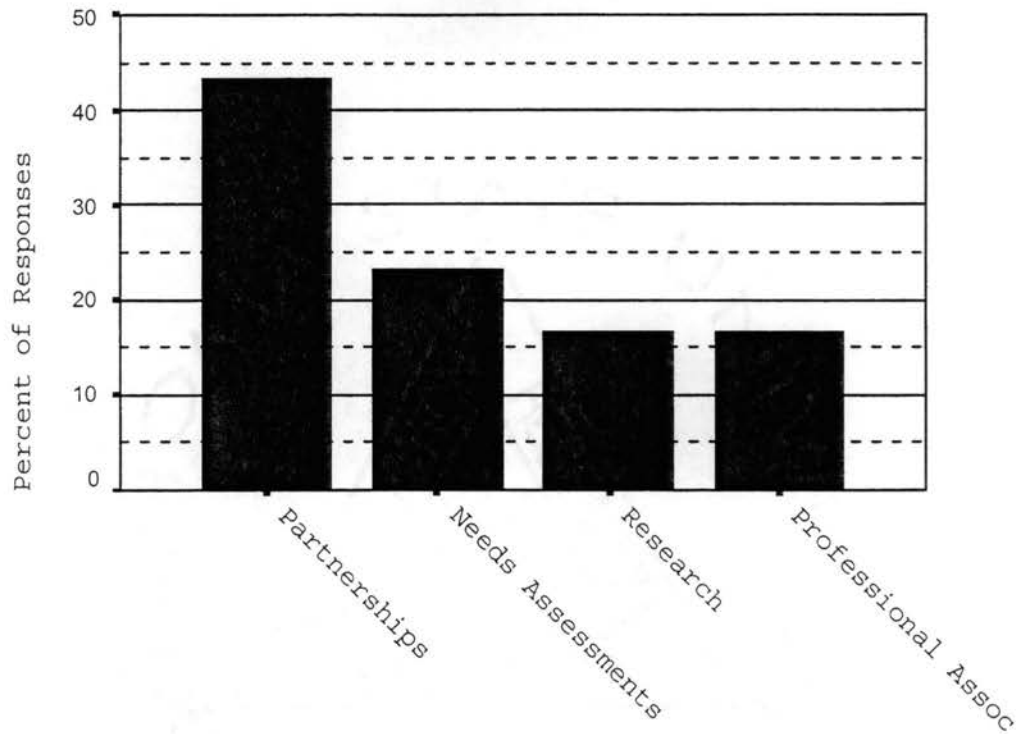
Customer Needs, Expectations & Requirements:
Five Years & Beyond

Articulating a clear definition of who is included in the customer groups and market segments is only the first step for organizations that are customer focused. As quality and performance are judged by an organization's customer, the manner in which the organization determines customer and market requirements, enhances relationships with customers, and determines their satisfaction is essential (AQIP, 2000; Baldrige, 2000a, 2000b; Blazey et al., 2000). Determining customer and market requirements, expectations, and preferences is essential to ensuring that the relevance of products and services is continued and new opportunities are seized (Baldrige, 2000a, p. 16).

Because every member on the panel was recognized as a high-performance provider of customized industry-specific training by the NAISTD members, it was presupposed that these institutions were adept at determining customer needs, expectations, and requirements. Referencing current methods of determining customer needs, expectations, and requirements, two out of every three (66.67%) of the participants used terminology and phrases such as "we will still", "we will play a much bigger", "by continuing", "we will continue", "based upon the same practices", and "in addition to our current practices".

Reflecting a conscious effort for continuous improvement, every panel member provided responses to indicate that a focus on the future presents mechanisms for augmenting this already characteristic trait. When asked about how their department will determine the needs, expectations, and requirements for customers and stakeholders in the future, four themes emerged: (a) partnerships, (b) needs assessments, (c) professional associations, and (d) research (see Figure 5).

Figure 5: Determining Customer Expectations



Partnerships

Consistent with responses to the questions focused on "major challenges", "vital few goals", and "characteristics of effective leaders and consultants", descriptions of partnerships again emerged as a high priority for the members of the panel of practitioners. Partnerships and relationship building as a means for determining customer and stakeholder needs, expectations, and requirements were foremost in the minds of six out of every ten (61.1%) panel members. Through the voices of the members of the panel of practitioners, partnerships and relationships were described, both internal as well as external, and covered a broad range of customers and stakeholders. Of the total

responses to this question, 43.3% focused on partnerships and relationships.

Relationships, like friendships, are "most likely to arise when both parties are open to it Share interests and possess common values" (Sagawa & Segal, 2000, p. 25). What then is meant by "relationships" in the context of customers and stakeholders? Perhaps the most poignant response that addresses the meaning of "relationships" came from the Dean of a community-technical college in the New England region.

The same way we do today. We develop and manage relationships. Every organization is different and unique and needs to be understood in relation to the economy, their stage of development, and any other factors that come to bear on identifying and responding to their needs at that point in time.

The Baldrige Criteria for Performance Excellence (2000a, 2000b) described the value of listening and learning as a principal method for staying current with business needs and direction. Notes in the Baldrige Criteria suggested that listening and learning might include gathering and integrating web-based data and information that bear upon customers' purchasing power. Responses from the members of the panel indicated that their thinking with regard to communication, specifically listening, is aligned with the Baldrige criteria for Customer and Market Focus.

We stay close to our customers and listen to them well. They will tell us their needs, etc. (Vice

President of a technical college in the South Atlantic region)

I feel that we will have more opportunities in the use of the computer to communicate with our customers, through web pages and e-mail.

(Director of a community college in the West North Central region)

By working very closely with Business and Industry, listening to them, and reacting to their needs. (Director of a community college in the West North Central region)

As the "only requirement for being a stakeholder is a sense of involvement—a very fluid criteria" (Goodstein et al., 1993, p. 207,) it seemed appropriate that one panel member described enhancing current relationships with instructors and colleagues involved in providing customized industry-specific training departments from other institutions within their home state as a way of staying abreast of customer and stakeholder needs and expectations. These relationships reflect the value of internal partnerships within the framework of the career and technical education as a system.

In addition to our current strategies, we will encourage and develop opportunities to network with current instructors . . . and regular meetings with colleagues in entrepreneurial departments in our state's other community colleges. (Co-Director of a community college in the Pacific region)

"In any effective long-term relationship, there must be a sense of mutuality . . . a norm of reciprocity" (Kuzas & Posner, 1995, p. 155). In such relationships, shared goals

bind people together in collaborative pursuits (Sagawa & Segal, 2000). The relationships described by the members of the panel described a variety of types of collaboration that included providing the customer or client with tools by which to measure the effectiveness of the training interventions.

We will need to be teaching customers how to measure the effectiveness of their employees and how that is changed by training and improving processes. (Director of a technology center in the West South Central region)

The opinion that the "core transaction of any consulting contract is the transfer of expertise from the consultant to the client" (Block, 1981, p. 23) was supported by the panel members. Client involvement throughout the process from assessment through implementation and evaluation will lead to enhancing the ability of the client organization to replicate the process and "own" the expertise. The stronger the relationship and collaboration between the career and technical education consultant and the client, "the better the odds for on-going implementation after the consultant has left" (Block, 1981, p. 23).

Five years and beyond would be determined based upon the same practices currently conducted by the department, which includes client involvement in training program development and implementation. (Director of a community college in the East North Central region)

Focusing on the big picture of economic development and working with entities in addition to internal partnerships

and client companies, 27.78% of the members of the panel described external relationships and identified stakeholders who could assist in determining current as well as future customer expectations, needs, and requirements.

Relationships with external partners such as workforce councils, chambers of commerce, economic development professionals, state employment agencies, and industry-sector training associations were described as key partners in determining customers needs and expectations. Several of these external partners represented both customer as well as stakeholder groups.

We will still use the customer as the primary source by using the Workforce Council. (Director from a community college in the East South Central region)

We will continue to partner with area economic developers to help companies in the initial stages of development for their long-range training needs. These partnerships will keep us active with companies. (Director from a technical-community college in the East South Central region)

The chambers of commerce and economic development groups work with us to make sure we know the needs of area companies. These organizations regularly poll companies on all types of needs, including training needs. We also participate in area manufacturers' trade associations in order to know and respond to immediate training needs. (Director of another community college in the East South Central region)

Needs Assessments

Nearly one out of every four (23.3%) of the responses to the question of how to effectively determine customer

needs, expectations, and requirements focused on front-end needs assessments or needs analysis. All too often training interventions are a response to a client calling to say, "I've got a training problem", or "My people need some team building and motivation". Unfortunately, a combination of "seat-of-the-pants intuitions, the blind application of past success formulas to new problems, and the ability to skate quickly across the thin ice of what we didn't know about gathering and analyzing information on human performance problems" (Zemke & Kramlinger, 1984, p.3) is the response to the client's request for assistance. A high-performing provider of customized industry-specific training will realize that "(a) the real problem wasn't the one mentioned [by the client] and (b) the solution to the problem might be something entirely different once the problem had been properly analyzed" (p. 3). The value of strategic thinking in delivering customized industry-specific training as evidenced through the use of an effective needs assessment or needs analysis is found in four potential results: new information, prioritized needs, recommendations for appropriate interventions to solve problems and issues, and management buy-in (Sleezer, 1992, as cited in Holton, 1995, p. 9).

Practitioners need to be proactive leaders in performance and organizational enhancement, not mere analysts. Leadership requires assessors not only to collect and sort data, but also to

interpret data to determine solutions and obtain buy-in from management to implement the solutions.
(p. 9)

The fact that the members of the panel of practitioners recognized the critical need to "play a much bigger role in the development of formal assessment and analysis of needs . . . working very closely with upper management" (Director of a technical community college in the East South Central region) and are seeking better ways to effectively accomplish this task validates the notion that the members of the panel are indeed high-performing practitioners. Professionals in training and development, which includes customized training for business and industry, recognized the value of thorough needs assessment in determining valid customer requirements.

One of the basic elements of the human resource development (HRD) process is needs assessment or needs analysis. Before any HRD program can, or should, be developed and implemented, there must be some type of needs assessment. Unfortunately, this step is often overlooked or does not receive proper attention. (Phillips & Holton, 1995, p. iii)

During the 1990s, a shift from the traditional training role focused primarily on skill and knowledge development to that of a performance consulting perspective has been seen in the customized industry-specific training arena.

"Performance consulting is the process by which we can work with management and others to identify and achieve performance excellence linked to business goals" (Robinson &

Robinson, 1996, p. 6). Recognizing that training alone may not always be the appropriate intervention, the performance consulting approach facilitates needs assessments and analysis with people in and out of management in the client organizations to determine all the interventions required if high performance is to be achieved. Members of the panel described the desire for "greater utilization of performance-based consulting" (Director of a community college in the West North Central region) five years from today and beyond.

In order to stay in touch with local companies and to proactively assess training needs for both individual companies as well as current and future trends in the community, one panel member described the goal of adding "a full-time needs assessor" (Dean of a community college in the South Atlantic region). The panel member also described the main task of this position.

The main task of this position will be to meet with several companies each week and survey the key leaders within the companies concerning their training needs and on what new technology is being employed.

As an organization or company is made up of many individuals, it is also important to focus on the needs of the individual as well as those of the institution. The argument that adult learning, in this case customized industry-specific training, "can synthesize institutional

and individual needs" (Knowles, 1988, p. 31) is also reflected in the responses of the members of the panel of practitioners.

As we do now, much of our work will be in the area of individual needs as uncovered at individual companies and on a case-by-case basis. Additionally, we will continue to look for individuals with good skills but also those with skills gaps and attempt to provide them with meaningful training that leads to specifically identified quality jobs in the community. We will do this in order to keep our workforce here with us. (Director of a community college in the Pacific region)

Research

One out of every six of the responses (16.7%) described the role of research in determining customer and stakeholder needs, expectations, and requirements five years from today and beyond. Knowing who the clients, customers, and stakeholders are today is only one piece of the puzzle. Who should they be five years from today and beyond? "It is important to focus on who your clients and customers should be. You may not have a strong partnership now with these individuals" (Robinson & Robinson, 1996, p. 306). A focus on research was described by 22.22% of the panel members as important to anticipating what the needs, expectations, and requirements will be.

Specific ways to conduct research were provided in the responses to how will the customized training department determine the needs, expectations, and requirements for your

customers and stakeholders in the future. Data collection and research tools and techniques should include reviewing historical data to identify customer requirements as well as current surveys and projected trends. Tools and techniques described by the panel members were varied.

Through in-take assessment and customer surveys; data available through our Institutional Research Department; and data from our department's customer training records. (Director of a community college in the West North Central region)

We will do individual industry surveys and focus groups to get specific needs. (Director of a community college in the East South Central region)

"The art of needs assessment is knowing which tools to draw from a large tool kit" (Holton, 1995, p. 10). In addition to the traditional quantitative-focused techniques used by needs assessors, qualitative methods such as focus groups, interviews, questionnaires and surveys "add richness to the data . . . and are essential for dealing with future or unknown conditions" (p. 11). Traditionally used by marketing and advertising agencies, focus groups, while less formal than questionnaires and surveys, are increasingly being used by other organizations to "provide an important source of information for making business decisions" (Edmunds, 1999, p. 2).

A focus group generally brings together "eight to ten qualified people for a face-to-face discussion and

exploration of a particular topic" (p. 1). With the increasing use of electronic communication tools, variations in the format of focus groups now includes the "virtual" focus group conducted on-line over the Internet (p. 23). The Director of a community college in the Middle Atlantic region specifically described "focus groups, interviews, surveys, and networking" as tools and techniques by which to determine the needs, expectations, and requirements of customers and stakeholders five years from today and beyond.

Professional Associations

Opportunities for professional and leadership development, access to trends and research data, networking, and a myriad of other benefits can be garnered from active membership in professional organizations. An additional 16.7% of the responses to the question of how to determine the needs, expectations, and requirements of customers and stakeholders five years from today and beyond were linked to professional associations.

While the term "professional associations" was used in the generic sense in some instances, five specific organizations were also described. Those organizations included: American Society for Training and Development (ASTD), Association for Career and Technical Education (ACTE), International Society for Performance Improvement (ISPI), League for Innovation in the Community College, and

National Council for Continuing Education and Training (NCCET). Two of the five professional associations, ACTE and NCCTE, monitor legislative activity and advocate national public policy to enhance the mission of workforce development. A review of the websites for each of these professional organizations revealed a common purpose and mission: to provide leadership and resources to those individuals and organizations involved in developing a competitive workforce.

The high-performance leaders of customized industry-specific training from across the United States serving on the panel of practitioners recognized the value of not only staying abreast of workforce trends and demographics but also of the need to stay informed about legislative activity and policy via participation in key professional associations. Membership in these organizations was stressed at both the national level as well as the state and local levels.

We will continue our current strategies . . . networking with NCCET and League for Innovation and stay on top of legislative activity. (Co-Director of a community college in the Pacific region)

Through feedback from national and local professional organizations, such as ASTD and ISPI. (Director of a community college in the West North Central region)

NAISTD Member Feedback

National Association of Industry Specific Training Directors members were asked to react to the responses from the members of the panel of practitioners regarding who will be their customers and major stakeholders for customized industry-specific training and how they will determine the needs, expectations, and requirements for customers and stakeholders five years from today and beyond. Comments from NAISTD members reviewing the data collected from the members of the panel of practitioners indicated the belief that some of the current trends will cease to exist in the future. Examples of these beliefs included:

1. Customers will be small, high-tech, service companies looking for training providers with quick turn-a-round, short-term classes.
2. Manufacturing will decrease while high-tech and service will increase.

When asked, "So what does this data mean?", the NAISTD members responded from a variety of perspectives.

1. Training institutions will have to be ready: well ahead of industry.
2. We must spend time in industry and know what they need.
3. We must provide the service the customer needs.
4. How will we assist the customer in measuring the effectiveness of the interventions? Productivity? Changing behaviors?
5. The colleges need to develop and maintain an "on-going" dialogue that will provide needed offerings to clients in a "real time" period.

In other words, be able to respond in less than 12 weeks to client needs for specialized training.

6. The institutions providing the training have a "warm, fuzzy" feeling that is not going to last very long.

Keeping in mind that these comments were solicited prior to the tragic events of September 11, 2001, the prediction that the "warm, fuzzy" feeling would not last very long was truer than ever imagined.

Measuring Effectiveness

Not everything that counts can be counted, and not everything that's counted, counts. (Quote attributed to Albert Einstein)

Why is measuring effectiveness important? Measuring effectiveness invites an institution to analyze and improve how it operates. It "examines the information system the institution employs to collect and use data to responsibly manage itself and to drive performance improvement" (AQIP, 2000, p. 12). If "quality and performance are judged by an organization's customers" (Baldrige, 2000a, p. 1) and stakeholders, then what are the metrics for evaluating the quality and effectiveness of customized industry-specific training? The members of the panel of practitioners were asked to describe the metrics that should be used by high-performance career and technical education institutions providing customized training to measure effectiveness and performance excellence in the future.

Linked to the responses to the question regarding effective measures were the responses to the question of the "vital few" goals. With regard to the "vital few" goals, the members of the panel of practitioners described three sub-themes which emerged through the category of focusing on results and creating value: collecting data related to satisfaction of training and organizational development interventions, understanding quality and continuous improvement concepts and processes, and developing processes for determining return on investment. The responses were clearly delineated between two themes: (a) traditional metrics for both academic and training environments; and (b) higher-level, non-traditional metrics. One panel member's response to the question described the differences between the two themes.

Internally or externally? Unless we see a sea of change on the academic side, most community colleges will continue to use process measures such as FTE and profit statements. The entrepreneurial departments [customized training departments] will be using ROI studies that measure productivity gains and skills gains. (Co-Director of a community college in the Pacific region)

Traditional Metrics

For customized industry-specific training departments, the traditional metrics fell into two sub-categories: (a) academic and (b) client services. The traditional academic measures are those measures that are typically performance

compliance measures and included primarily "the number of training hours, types of training, number of workers served, and the number of repeat customers (retention)" (Director of a community college in the East North Central region). These are the types of metrics that are commonly used in funding formulas. In addition to the common measures utilized by academic institutions, revenue-generating functions or departments such as customized training may also be evaluated by their organization based on degree to which they can financially support other areas of the institution: "the college uses number of trainees and revenue generated to evaluate our department" (Director of a community college in the East South Central region).

Higher-Level Metrics

Measuring effectiveness "beyond mere compliance" (Baldrige, 2000a, 2000b) dominated the responses of the members of the panel. Nearly every panel member (94.44%) elaborated on the higher-level metrics that are becoming the norm for the customers in business and industry. In addition to the traditional measures which also included the typical trainee reaction or satisfaction measures (see Table 6), the members of the panel described metrics that address the "Levels 2, 3, and 4 evaluation" (Director of a community college in the West North Central region) in reference to Kirkpatrick's Levels of Evaluation (Robinson & Robinson,

1989) as becoming increasingly critical to their operations.

Terms and phrases used by the panel members included:

Return on Investment (ROI), economic impact, bottom line, comprehensive learning assessments, and sustainability.

While calculating and "measuring the productive capacities (skill, training, or educational abilities) that employees acquire from a specific performance-improvement program"

(Gordon, 2000, p. 76) is challenging, business and industry is demanding that it be done. Responses given by the members of the panel provided insight as to what ROI means in the realm of customized industry-specific training.

As always, return on investment will be the key: what does the bottom line look like. There are goals in every training effort such as reducing scrap, reducing turnover, improving productivity, and these can be measured and are measured.
(Director of a community college in the East South Central region)

We are currently working with a company today in developing a model for determining the economic impact of our customized training program. In five years it will be extremely important for the companies we train to be able to translate the training we provide to profits for the company. We must be in the position to give up-front estimates of the potential savings and follow the estimates with actual measurements on profitability. (Executive Director of a technical community college in the East South Central region)

I imagine that similar metrics will be used, and they will measure the cost of the investment [for training] and the value of the training, cost per trainee, and the cost of the problems created if the training is not successful. (Vice president of a technical college in the South Atlantic region)

The members of the panel of practitioners described with clarity that those measures of effectiveness for the "entrepreneurial arm" of career and technical education, customized training, must go beyond the traditional metrics of performance and focus on those measures that go beyond and truly represent success for the customer. Those measures recognize that what happens back on the job is more important than what happens in the classroom. "We measure our success by the success of our customers" (Director of a technology center in the West South Central region).

CHAPTER 8

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Change, not only in the areas that are obvious accelerants, like technology, is clipping along at a faster rate than ever before. The Internet is not just the initiator of change, but a distributor of it. The rapid recalibration of our demographics is shocking us into a new notion of what America is, and will be. Language is our most obvious (and meaningful) monitor of this cultural and technological flux, a way to help us "approach the Future as a friend." (Popcorn & Hanft, 2001, p. xvii)

Summary of Background and Design

Background

A mere two years ago the United States was experiencing a robust economy that held both great opportunity for phenomenal success as well as challenges for business and industry; the primary challenge was attracting and retaining a well-trained, quality workforce. Globalization, intense competition, galloping technology, perpetual change, and record-setting low unemployment described a world in which human potential was the primary source of competitive advantage in almost every industry. At the same time, the disparity in earnings between the skilled worker and the unskilled worker continued to widen.

Today, "a recession is no longer in doubt, experts say, and job losses surged to the highest level in more than two decades as the full brunt of the terrorist attacks hit a weak economy" (Strope, 2001, p. 2-C). The economy is sagging, and millions of American workers were told during the year 2001 that the new economy no longer needed their services.

While the pendulum of the economy swung from robustness to that of once-thriving corporations ceasing to exist and hundreds of thousands of individuals looking for work, human potential remains the primary source of competitive advantage for companies in every industry sector. The link between workforce development and economic growth is as important, perhaps more so, in a sluggish economy as it is in a thriving economy. "The lack of adequately skilled workers makes it difficult for companies to maintain the production levels necessary to meet demand; and, as a result, many companies indicate that they cannot implement new productivity improvements" (Schmit & Roberts, 2001). Effective workforce development is indeed a top priority for supporting economic growth.

The ability of companies to attract, retain, and sustain a workforce with up-to-date skills and high productivity remains the key to the competitiveness of today's companies. Clearly, locating resources to provide

high-quality, affordable, customized industry-specific training will continue to be a necessity for many businesses. "Global forces and U.S. demographics realities are increasing the demand for workers in general and for high-skilled workers in particular" (Carnevale & Fry, 2001, p. 1). The jobs of the 21st. century will increasingly require postsecondary education and training.

The way in which we produce and distribute education and training increasingly determines both our economic competitiveness as a nation and the apportionment of economic opportunity among individuals (p. 1)

Unless we increase the quantity and quality of education and training, we may face a deficit of some 12 million workers by 2020. (p. 9)

If American companies are to survive and be competitive in the new economy, closing the skills gap is essential. "Continuing education is one way to stay up to date when the change rate is fast, the competition keen, and the risks high" (Warren, 2000, p. 668). Industry-sector trade associations concur with this reality and have recommended specific actions to fulfill both short-term needs and address longer-term issues. A clear "call to action" has been sent to public-sector educational institutions and providers of workforce development initiatives such as customized industry-specific training.

A leading player in delivering customized industry-specific training is the system of career and technical

education institutions across the nation. If human potential is truly the primary source of competitive advantage, and if companies are seeking resources to deliver high-quality, affordable training, then it is crucial that career and technical education institutions identify and incorporate models of performance excellence in order to effectively meet the short-term needs and address the longer-term issues of business and industry as related to workforce and economic development. Therefore, the purpose of this study was to describe the characteristics of high-performing career and technical education institutions delivering customized industry-specific training to business and industry in the United States five years from today and beyond.

Design

A descriptive design using the logic of the Delphi Technique enhanced by the data gathering advantages of the Internet was used to collect data regarding a future of possibilities for high-performance career and technical education providers of customized industry-specific training. The study involved a purposive sample of 18 practitioners representing high-performing career and technical education institutions providing customized industry-specific training to business and industry from 17 states across the nation. Each of the members of the panel

of practitioners was nominated for participation in the study because they and their institutions were recognized by members of the National Association of Industry-Specific Training Directors (NAISTD) as the best-of-the-best in the field of customized industry-specific training in career and technical education.

Theoretical Framework

The context and theoretical framework for the design of the study was framed around two highly-regarded models of performance excellence: (a) the internationally-recognized Baldrige Criteria for Performance Excellence and (b) the North Central Accreditation Commission on Institutions of Higher Education Academic Quality Improvement Project (AQIP). Both models consist of a set of criteria and core values, "embedded beliefs and behaviors found in high-performing organizations" (Baldrige, 2000a, p. 1). As the North Central Accreditation Commission used the Baldrige as a template when designing the AQIP, the criteria and values are comparable for the two models (see Table 5).

Since 1987, the Baldrige criteria has been used by thousands of U.S. organizations in a variety of private and public sectors which include: manufacturing, service, healthcare, and education. The criteria have proven to provide a valuable model by which organizations can assess performance based on a set of key indicators and core

values, identify strengths and opportunities for improvement, as well as assist in aligning resources; improve communication, productivity, and effectiveness; and achieve strategic goals. Educational institutions that subscribe to performance excellence and continuous improvement have confirmed that models such as the Baldrige Criteria for Performance Excellence truly make a difference in an institution's ability to effectively serve its customers and stakeholders (Alstete, 1995; Baldrige, 2000; Blazey et al., 2000; Bonstingl, 1992, 2001; Dew, 2000, 2001; Seymour, 1993, 1004, 1995).

Summary of Findings

The findings of this futuristic study, five years and beyond, were arranged into four main areas: (a) Major Challenges, (b) Vital Few Goals, (c) Leadership Characteristics, and (d) Customer Characteristics. In each of the four areas, a discussion of the responses provided by a panel of high-performing practitioners along with supporting information and perspectives from the literature were presented. A detailed account of the frequencies of responses for each of the categories or themes that emerged from the responses to each question was also presented in the findings for each area.

The members of the panel of high-performing practitioners were first asked to describe the major

challenges facing career and technical education providers of customized industry-specific training five years from today and beyond. After describing the major challenges, the panel members were asked then to describe the "vital few" goals that would allow each of their departments to address and prepare for those major challenges. A summary of the results of the responses to these two questions is shown in Table 10. The themes that evolved from the responses to each question are listed in descending priority.

Table 10: Summary of the Findings for Challenges and Goals

<u>Major Challenges</u>	<u>"Vital Few" Goals</u>
1. Technology	1. Partnerships
2. Funding	2. Focus on Results and Creating Value
3. Focus on Results and Creating Value	3. Funding
4. Personnel	4. Services and Products
5. Partnerships	5. Focus on the Future
6. Services and Products	6. Marketing
7. Bureaucracy	7. Technology
8. Focus on the Future	8. Bureaucracy
9. Competition	
10. Agility	
11. Marketing	

Note: Categories are listed in descending order based on the percentage of responses to each question.

Major Challenges

Major challenges for high-performance career and technical education institutions delivering customized

industry-specific training five years from today and beyond centered around 11 primary areas: technology, funding, focusing on results and value, personnel, partnerships, services and products, bureaucracy, focusing on the future, competition, agility, and marketing. Embedded within each of the areas was the overarching theme of "keeping up". Regardless of the area, "keeping up" with rampant "change" reverberated throughout the responses to this question. In the area of technology, participants in the study described rapidly-changing, unparalleled technological innovations as having an impact on their ability to continue high-performance operations in principally four arenas: (a) delivery media and methods, (b) software and hardware, (c) equipment, and (d) knowledge.

Funding issues, while addressed by the majority of the participants, were especially poignant with one participant whose only response to this question was a single word. This word was spelled out in all capital letters for emphasis: "BUDGETS". Noting that career and technical education institutions are funded through public sources, some of the members of the panel of practitioners described institutions where customized industry-specific training departments are viewed as profit centers and are expected to generate revenues to not only cover their expenses but also to provide financial support for the non-revenue generating

areas of the institution. In these instances, the focus on revenue generation was perceived as a barrier to providing high-quality, affordable services to business and industry.

Two sub-themes emerged as related to the challenge of continually and consistently focusing on results and creating value for the client. One challenge was described as that of developing the ability to demonstrate empirically that a return on investment is realized by the company as a result of providing training for the incumbent workforce. The second challenge was to provide training that would be value-added to both the company as well as to the individual worker by qualifying the incumbent workforce for industry-recognized credentials and certifications in addition to the traditional degrees granted by the academic community.

Attracting and retaining high-quality, knowledgeable personnel is as much of a challenge for high-performing career and technical education institutions as it is for the private sector, and it is anticipated by the members of the panel of practitioners that this challenge may become even more profound five years from today and beyond. The members of the panel described the challenge of attracting and retaining high-quality, skilled employees as frequently linked to the issues of funding and bureaucracy issues. The ability of these institutions to pay the "market rate" for individuals with the high-level skills and knowledge needed

to provide the appropriate training for business and industry is often not feasible because of budget constraints. Other times, even where an institution is adequately funded, the salary needs do not fit within the traditional pay scale adhered to in the institution's policies and procedures.

The notion that seeking ways to develop and sustain mutually-beneficial partnerships and relationships will be a major challenge for high-performing career and technical education institutions delivering customized industry-specific training five years from today and beyond. This challenge, also referred to by the members of the panel of practitioners as the "opportunity" to develop partnerships with all major stakeholders as well as with current competitors, was perceived as a high priority by all of the members of the panel.

Seeking new and innovative ways of expanding products and services to support the requirements of business and industry clients and potential clients will be a "must" according to the members of the panel. Traditional ways of doing business will not adequately support business and industry workforce development requirements for the future.

Factors involving bureaucratic barriers were perceived as potentially inhibiting practitioners from achieving performance excellence and were woven throughout the

responses in other categories as well. Bureaucracy was described by the members of the panel in both formal and informal ways: formal in the sense of policy and procedures; informal in the sense of tradition and mindset.

Projecting challenges five years from today and beyond, the members of the panel of practitioners also described major challenges in the form of rapidly-changing forms of competition, ability to respond quickly and effectively, and marketing services. As training and education are one of the fastest growing industry sectors, the members of the panel suggested that the private sector is increasingly providing services traditionally reserved for educational institutions. This perception was substantiated in the literature (Davis, 2001; Drucker, 1999; Katz, 1999; U.S. Small Business Administration, 2000).

Linked to the challenges inherent in bureaucratic settings, the ability of institutions to provide high-quality, effective products and services to clients in a "just-in-time" manner is currently a challenge and will become even more so five years from today and beyond. Some of the panel members described traditional academic processes and bureaucratic thinking along with funding issues as creating barriers to their ability to be timely and flexible in responding to the needs of business and industry.

Members of the panel of practitioners described challenges with image and perception in two ways: first, companies are often not aware that customized industry-training services and products are available through career and technical education institutions; and second, those companies that are aware that the services are available often hold a perception that the customized training services provided through public-sector career and technical education institutions are of lesser quality than those provided by private-sector companies and consultants. While these challenges are not new and have existed for decades, the panel members described "perception and image" of career and technical education as a major challenge five years from today and beyond as well thus creating a need for enhanced marketing strategies.

"Vital Few" Goals

When asked to describe two or three "vital few" goals that would allow career and technical education customized industry-specific training departments to prepare for and address the major challenges, the members of the panel described goals that were focused on meeting and exceeding the needs, expectations, and requirements of the customers and stakeholders. The responses of the members of the panel of practitioners' centered around nine themes: partnerships, personnel, focusing on results and creating value, funding,

services and products, marketing, technology, and bureaucracy. The "vital few" goals as described by the members of the panel aligned with the beliefs and behaviors found in high-performing organizations as articulated in the framework of both the Baldrige and the Academic Quality Improvement Project (Baldrige, 2000a, 2000b; AQIP, 2000).

When comparing the responses to the first question regarding major challenges and the second question regarding "vital few" goals, the themes were fundamentally similar but with an inverse degree of priority (see Table 11). While "keeping up" with technology received the highest percentage (19%) of the total responses to the question regarding major challenges, "vital few" goals linked to technological challenges represented only 4.2% of the total responses.

Almost one-third (31.3%) of the responses indicated that establishing mutually-beneficial partnerships with entities sharing a common mission would be critical to addressing the challenges faced by high-performing providers of customized training. Both internal and external partnerships were described as avenues to meeting and exceeding the needs, expectations and requirements of the customer both today and in the future. Examples of internal partnerships included working cross-functionally with other departments to create innovative solutions for both traditional career and technical education programs as well

as for customized industry-specific training. Panel members also described a variety of key external partnerships such as trade and professional associations, economic development organizations, chambers of commerce, government agencies, clients, instructors, business and industry, vendors, and competitors.

The message from the members of the panel was loud and clear that the heart of any high-performance customized training initiative resides within the personnel who are intimately involved in the process. Attracting and retaining personnel involved in the process who are highly knowledgeable and skilled in the subject matter as well as in the facilitation of learning are just as much of a challenge for the career and technical education providers of customized training as it is for those companies they serve. Keeping staff trained and updated on current issues, trends, and technology were described as important goals five years from today and beyond

Ensuring that products and services provided to customers create value was described as a "vital few" goal for providers of customized training pursuing standards of performance excellence. In support of value creation, a results-based approach to demonstrating return on investment and contribution to the client's bottom line from training interventions is a priority goal for the high-performance

career and technical education providers of customized training. The perception that services provided through career and technical education may be perceived as being of lesser quality than through the private sector has created an awareness and need to focus on enhanced marketing of the products and services provided for customized training. In all-too-many instances, the business and industry community is not aware that these services exist.

Focusing on goals related to funding issues was perceived as a "vital few" goal for members of the panel of practitioners. Recognizing that the trend for decreased funding will most likely continue, setting goals that relate to innovative funding and revenue generating alternatives is a must for the future.

Creatively thinking beyond the scope of products and services currently provided to business and industry in the arena of workforce development is essential if providers of customized training are going to be competitive with the rapidly growing competition from the private sector. Products and services aligned to meet rapidly changing technological requirements of industry along with changes in the workforce demographics present opportunities for the future, and panel members described this innovative thinking as a high-priority goal. As with the major challenges, bureaucracy was addressed directly in a small number (4.2%)

of the responses but was woven throughout responses representing "vital few" goals in other areas such as the goal of developing partnerships with internal personnel and departments.

Embedded in all the "vital few" goals described by the members of the panel was the notion of forward thinking, innovation, responsiveness, and flexibility. Those institutions that are not preparing for the future in innovative ways will be unable to be responsive and flexible and soon left behind.

Leadership Characteristics

Effective leadership is essential in moving today's high-performance organizations from "good to great" (Collins, 2001), and career and technical education institutions providing customized industry-specific training are no exception. Members of the panel of practitioners described the leaders of the future as having a different set of skills than the managers of the past. The leaders of the customized training departments in career and technical education institutions five years from today and beyond as described by the panel members will be innovative, visionary, team oriented, collaborative, politically astute and savvy, change agents, involved in the community and economic development organizations and will possess

excellent interpersonal skills, business acumen, and technological competence.

Customer Characteristics

While the customers five years from today and beyond will remain typically the same as they are today, new industry sectors, small- and medium-sized companies, different kinds of workers, companies outside the traditional service area, and even competitors were described as the customers of the future. Members of the panel described new delivery media and methods such as the Internet as providing opportunities for developing new customers and market segments that have not been considered viable in the past.

Currently, the manufacturing sector is the most widely served industry sector by the institutions represented by the members of the panel of practitioners (100%). Other industry sectors served by the majority of the panel members included: health care (94.44%), government (88.89%), business services (83.33%), construction (83.33%), financial and real estate (83.33%), and transportation and communication (83.33%) (see Table 7). Members of the panel predicted that an increasing focus on small- to medium-sized businesses, especially in the information technology, biotechnology, and high-tech arenas, will be opportunities for growth of customer and market segments. Creating

synergistic relationships with competitors was also described as an opportunity for market growth.

As quality is judged through the eyes of the customer, providing quality services means knowing what the customers both current and potential need, expect, and require. Strong partnerships, needs assessments, research, professional associations, and commitment to the customer were described by the members of the panel as the most effective ways for determining customer expectations five years from today and beyond.

Continuous improvement can only be accomplished when effective measures of performance are in place and utilized, and measuring effectiveness invites an institution to analyze and improve how it operates (AQIP, 2000). Members of the panel of practitioners described those measures five years and beyond through two themes: traditional metrics for both the academic and the training environments; and higher-level, non-traditional metrics. The traditional metrics were described as primarily those performance measures that are expected for compliance with organizational requirements and those measures that are used "because we have always done it that way". The higher-level metrics were described as those that measure an actual change in performance or productivity and focus on return on

investment (ROI), economic impact, transfer of training to the workplace, as well as personal growth for the trainee.

Conclusions

Those who embrace the present while preparing for the future will be a quantum leap ahead of those who cling to the successes of the past. Twenty years ago, futurists suggested that "the most formidable challenge will be to train people to work in the information society. Jobs will become available, but who will possess the high-tech skills to fill them?" (Naisbett, 1982, p. 250). What was once a look into the future is now, and the predictions have become reality. It is, therefore, incumbent upon career and technical education institutions to focus energy and resources directed toward the relatively new role of providing high-quality, affordable customized industry-specific training. Clearly, change will continue to occur at an accelerated pace, and the career and technical education institutions involved in customized industry-specific training do have a choice about whether to "lead the pack" and be the innovators and early adopters or to step aside and be the late adopters and laggards.

The findings revealed through the research for this study along with perspectives from the literature revealed the following conclusions which, if paid attention to, will guide progressive institutions toward the innovator and

early adopter end of the spectrum. The conclusions for the study fall into the following areas: economic development, partnerships, societal implications, customer focus, leadership, keeping up, adding value, bureaucracy and funding, technology, and models for performance excellence.

Economic Development

Workforce development is directly linked to economic development.

Career and technical education institutions providing customized training play a key role in economic development.

Human potential is one of the greatest competitive assets; and business and industry, along with local and state economic development entities, look to career and technical education for workforce development. Recognition of the impact of workforce development on economic development means that strategies and activities that support economic growth must be a high priority for career and technical education institutions. For the past six years, site locators have ranked the availability of a quality, trained workforce as one the top three factors in the decision-making process for determining a relocation or expansion of the companies they represent (Gamble, 1999, 2000; Yoder & Hedgcoth, 2000). In addition to the availability of a trained workforce, companies making decisions pertaining to relocation or expansions are also concerned about the availability of ongoing workforce

development options such as customized industry-specific training.

Career technical education is a critical and integral component of the workforce development system, providing the essential foundation for a thriving economy. (Kister, 2001, p. 23)

Recognizing that "the context for career technical education, situated in the worlds of educational improvement, workforce development, and economic development is complex, global, and changing at an exponential rate" (Kister, 2001, p.1), customized industry-specific training is truly positioned to take the lead in charting the course in all of these areas. The results of the effective strategies and endeavors of providers of customized training will be realized in the economic growth of the companies and the communities in which these companies are located as well as increased skill levels and the possibility of self-actualization for the employees who receive the training (Knowles, 1988).

An organization's mission statement serves as its "constitution and becomes the criterion by which you measure everything else" (Covey, 1990, p. 129). The most frequently used terms in the mission statements of the high-performance customized industry-specific training departments represented by members of the panel of practitioners were lifelong learning, economic development, workforce development, and personal enrichment and growth. If indeed,

high-performance customized industry-specific training entities measure themselves by the degree to which lifelong learning, economic development, workforce development, and personal enrichment and growth are facilitated and measured, then the contribution to the community served and its stakeholders is most assuredly meaningful and the economic growth is enhanced.

Partnerships

Collaboration through strategic partnerships and alliances builds synergy.

Strategic partnerships and alliances provide the greatest leverage for addressing the major challenges faced by career and technical education providers of customized training five years from today and beyond.

Competitors are potential strategic partners and allies.

The concept of synergy is frequently used to describe cooperative and collaborative efforts in which the interaction of distinct organizations or entities is greater than the sum of the individual effects (Scholtes, 1988; Wilson, George, Wellins, & Byham, 1994). Seeking, developing and nurturing key partnerships and alliances will provide innovative solutions to customers' and stakeholders' needs, expectations, and requirements that is beyond the capacity of either party functioning alone. Success of any one part of the relationship whether it is the organization, the employee, or the partner should not be at the sacrifice

of the other and should result in success for all parties. Embracing this core value provides each party with a meaningful experience that results in being part of "something larger than themselves, of being connected, of being generative" (Senge, 1990, p. 13).

Building mutually-beneficial partnerships was an overarching theme and pattern throughout all segments of the study. The power and vision of what building and nurturing mutually-beneficial strategic partnerships, relationships, and alliances can accomplish was captured in the strategic plan for one institution represented by a practitioner on the panel in the West South Central region: "Our partners work with us to provide innovative solutions neither of us could provide alone". Leveraging effective partnerships and alliances will clearly enhance the ability of career and technical institution providers of customized training to address the challenges faced both today and in the future.

Organizations with a clear vision of its desired future and mission are those that will become the "masters of their own fate". Only after an organization is clear about its desired future and mission along with those "vital few" goals which will move it toward achieving that desired future will it be able to identify the appropriate strategic partners and alliances. Partnerships are essential in achieving an organization's mission and must be developed

with partners external to the organization as well as partners within the organization. First, the potential dividends from developing relationships and partnerships within the organization, internal partnerships, are all too often overlooked as fundamental to achieving an organization's mission and vision. Collaboration, breaking down the silos, and teamwork are essential ingredients in achieving strategic goals. Many of the "vital few" goals described by the members of the panel of practitioners will require the creation of cross-functional teams and the bringing together of administration, faculty and staff in order to achieve the strategic goals and objectives of customized training.

Second, from the external perspective, the ability to identify stakeholder groups representing diverse dimensions of the workforce development community whose needs and interests may occasionally be at odds with one another is essential. Developing relationships and partnerships with each of the groups should be a top priority for the high-performance career and technical education institutions providing customized industry-specific training five years from today and beyond. These groups include those with similar missions such as economic development practitioners, chambers of commerce, government agencies from the local to the national levels, professional organizations, trade

associations, peer career and technical education institutions, and other educational institutions including K-12 as well as higher education. Surprising as it may have once seemed, in order to meet the needs and wants of customers, it may be prudent to establish partnerships with competitors who also provide training including private-sector consultants and vendors.

While the literature does not reveal discussions regarding the concept of competitors as partners, the members of the panel of practitioners did. Innovation and forward thinking were woven throughout the responses made by the members on the panel of practitioners, and the notion of establishing partnerships with competitors is most likely a unique notion. In order to not only survive but also to thrive, is it time to re-examine the time-honored boundaries of previous eras? Today's high-performance career and technical education institutions think so. The consideration of viewing competitors as potential partners and allies is yet another example of the type of thinking that exists among high-performers: thinking outside the paradigm or mental model that would never permit an organization to consider partnerships with competitors.

The power of partnerships and alliances is truly synergistic. Bringing together the resources, energy, and best thinking of partners for the benefit of customers and

stakeholders has the potential to result in innovative solutions of higher quality than either of the parties could produce individually. "Clearly, we are well advised to know ourselves better and reach out to know others" (Roueche, 1995, p. ix). Performance excellence organizations of the future must constantly think in terms such as partnerships, collaborations, collaborative initiatives, and alliances. Those who resist thinking in terms of reaching out to others and working collaboratively to achieve a common mission may "die a lonely death" in the marketplace.

Societal Implications

Career and technical education makes a contribution to society by training and retraining the incumbent worker for the skills required in the workplace.

Education is a leveling force for decreasing the disparity in earnings and quality of life between the skilled and the unskilled workers.

"The history of vocational education is essentially a history of man's efforts to improve his technical competence in order to upgrade his economic position in society" (Thompson, 1973, p. 29), and the focus "has always been toward some concept of the world of work" (p. 30). Customized industry-specific training initiatives serve to benefit not only business and industry but also the individuals within the organization. In light of an increasingly skills-driven workplace, improving the skills and knowledge of Americans already in the workforce holds

greater promise for alleviating wage stagnation and economic inequality than most alternatives (Van Horn, 1996, p. vi). Even in a robust economy as seen in the late 1990s, earning disparities continued to widen. Educational attainment and ongoing training are directly linked to an individual's earning capabilities, and embracing lifelong learning and on-going training are indeed key to bridging the inequalities that exist between the "haves" and the "have nots" for America's workforce.

The U.S. unemployment rate of 5.8% in December 2001 measured only those actively seeking jobs. What it did not take into account were those who had given up looking for jobs. High school graduates with no additional training or education have fared the worst of any group in relative terms. "Of that group, young black workers fared the worst, losing in 2001 nearly a decade's worth of gains in their overall employment level. They had gained 9 points in the previous eight years and in 2001 lost 7 points" (Pope, 2002, p. 1). Educational attainment and postsecondary education, including customized industry-specific training, do make a difference in the earning capacity and career opportunities for individuals.

Within this philosophical context, Dewey (1916) and Lindeman (1961) envisioned adult education, such as customized training, as simultaneously serving both the

individual and the collective needs of social reform and education for democracy. "Adult education will become an agency of progress if its short-time goal of self-improvement can be made compatible with a long-time, experimental but resolute policy of changing the social order" (Lindeman, 1961, p. 105). Knowles' (1988) philosophical approach to adult education and learning built upon the work of Dewey and Lindeman (Fisher & Podeschi, 1989). However, Knowles was more individually and less socially oriented than Dewey and Lindeman and viewed the role of adult learning as that of "preparing individuals to adapt to technological change" (p. 347). The new mission of adult learning is "to develop a total environment conducive to human growth and self-actualization; to create an educative society" (Knowles, 1988, p. 38) in which adults are encouraged to continue learning "in order to avoid obsolescence, a probable consequence of life in a rapidly changing world" (p. 39). The consequences of the application of these philosophies through customized industry-specific training initiatives contribute immensely to closing the gap between the "haves and the have nots".

Customer Focus

Customers are transforming industries.

Those organizations that strategically focus on customer-driven excellence will be the high-performance leaders of tomorrow.

Like industry, education must focus on the needs of the customer.

The individual employee receiving customized training is indeed a customer as well as is the company that contracts for the service.

The simple fact is that organizations without customers cease to exist. It is indeed the customers who are transforming industries, and organizations cannot meet or exceed their expectations until the customers, both current and potential, have been clearly identified and the expectations are crystal-clear. Implied throughout the responses was a continuous focus on the customer and the stakeholder. Research conducted by the Gallup Organization over the past twenty-five years validated the requirement that everyone in the organization must be focused on the needs, expectations, and requirements of the customer.

The most critical driver of sustainable growth is an expanding base of loyal customers. In some industries it is also critical to have a growing base of loyal customers who are willing to pay a premium price. It is even better if these loyal customers become advocates, thereby creating a large, vocal, and unpaid sales force True customer loyalty can be created by treating customers to a superior product and a superior service. At Gallup, we refer to sales and marketing communications as the "brand promise", and the quality of the products and service as the "brand experience". A company will be able to create a growing number of loyal customers only if its brand experience matches or exceeds its brand promise. (Buckingham & Coffman, 1999, pp. 246-247)

Leadership

Leadership matters and is an essential element in the journey to performance excellence.

Effective leaders have more than charisma. Leaders must be advocates for change, willing to take risk, and possess the characteristics of innovators and early adopters.

Leaders must be politically savvy, effective at networking, and building collaborative relationships both in the external as well as in the internal environments.

Leaders must have a working knowledge of best business practices while also understanding the intricacies of the career and technical education system.

Leaders are a critical ingredient to attracting and retaining "talented staff".

Leaders must communicate and share a clear and challenging vision.

In a world of rapid-fire change with a shrinking workforce, dynamic leadership is a major factor contributing to an organization's ability to keep pace with leading-edge companies and trends toward high-performance (Blazey et al., 2000; Collins, 2001; Collins & Posner, 1999; Drucker, 1999; P. Foy, Intel Corporation, personal communication, July 11, 1997; Wheatley, 1999). Leadership does matter and is indeed a driving factor in organizations that embrace a culture of performance excellence.

In describing the high-performance career and technical education provider of customized industry-specific training five years from today and beyond, a discussion of the

attributes of effective leadership cannot be avoided. The key is not necessarily found in the high profile, charismatic leader (Collins, 2001). Rather, the key is that the leaders of performance excellence organizations create and facilitate an environment in which all the other elements and characteristics of high-performance organizations are able to thrive.

The characteristics of the most effective leader of the future will reflect the characteristics exhibited by the leaders who served as members of the panel for the study. Through the voices of the panel members, it was clear that these leaders themselves exemplify characteristics of caring about people, are passionate about what they do, and view partnerships as essential to performance excellence. The effective leaders of the future will have a passion for workforce development and its role in economic development; (2) are focused on the success of the people who work with and for them; and (3) are adept at establishing and building new and unique partnerships while nurturing existing partnerships.

Leaders who have the ability to sustain great results are those who can "get the right people on the bus, the wrong people off the bus, and the right people in the right seats" (Collins, 2001, p. 13) and "do not mind who gets the credit" (McCullough, 1992, p. 564). Effective leaders have

more than charisma (Collins, 2001). They have the ability to share a compelling vision, one that empowers others. The vision becomes a guide in uncertain times or times of change and should be aimed at empowering people. The most powerful sign of effective leadership is seen in those instances where the competencies and leadership abilities of every individual within the organization are developed, nurtured, and encouraged to emerge. Everyone must be clear about the vision and mission, and resources and energy must be focused synergistically toward achieving the desired future of the organization. Clearly, great employees are attracted to charismatic leaders; however, the level of productivity and longevity of these great employees is linked to the effectiveness of the leader, not the charisma exuded by the leader (Buckingham & Coffman, 1999; Collins, 2001).

A new type of leader is needed, one who can work successfully in both the academic as well as the business and industry arenas. As such, a whole new set of characteristics are necessary for effective leadership for those working within the academic setting while serving the workforce development needs of business and industry. These leaders must be the innovators and early adopters (Rogers, 1983), while understanding the environment and the potential constraints that may be inherent within that of a public-sector institution. The ability to lead the charge for

change, effectively communicate and collaborate along with the strengths of business acumen and political savvy characterize the effective leader of customized industry-specific training in the career and technical education institution of the future. The traditional centralized, command-and-control management style is no longer sufficient for today's high-performance leaders.

As with managers of earlier decades, today's leaders of customized-training departments still must be highly skilled in the traditional roles: managing people, budgets, and resources; planning, implementing, and evaluating programs; and using data and technology. However, in today's complex and rapidly changing environment, leadership in the 21st century must constantly focus on collaboration, communication, and change. Managers are people who do things right; leaders are people who do the right thing (Bennis & Nanus, 1985; Drucker, 1999). The very difference is the difference between efficiency and effectiveness. Effectiveness, doing the right thing, includes breaking down silos and nurturing partnerships with all stakeholders both external and internal. These efforts will position career and technical education institutions for performance excellence and meet the most important goal: serving customers for life.

Keeping Up

"Keeping up" means "raising the bar" and keeping pace with leading-edge companies and trends towards high performance.

Career and technical education providers of customized industry-specific training must be the innovators and the early adopters.

Innovation does not happen by chance and is hard work.

In today's turbulent, rapidly changing world, making innovation a way of life for everyone in the organization is a driving force for "keeping up".

The common thread that was woven throughout the responses of the panel of practitioners from high-performance career and technical education institutions delivering customized industry-specific training was that of striving to "keep up". The phrase "keeping up" typically invokes an image of a reactionary mode rather than a proactive mode. However, "keeping up" as used with regard to this study intimates the necessity of "raising the bar" and "leading the pack" in order to serve the needs and expectations of the customers and stakeholders.

The fact that each of the participants who served on the panel of practitioners was nominated for the study because of their institution's high-performance inferred a message of striving for continuous improvement in search of performance excellence rather than attempting to catch up. Indeed, phrases such as "business as usual" and "keeping up"

actually refer to looking beyond being "good enough" or being satisfied with the status quo. This terminology when used by high-performance organizations means anticipating and preparing for the challenges related to an ever-increasing rate of change and the resulting implications for workforce development and economic development. In today's fast-paced, rapidly changing, complex environment, "change" seems to be the only constant. With the rapid pace of emerging technologies and changing needs of business and industry, "keeping up" means staying ahead of the curve so as to be flexible, responsive, and timely, providing the right products and services at the right time in the right place to the right customer.

"Good is not good enough", and "great" is the vision for organizations focused on performance excellence. The "great" organizations are those that are frequently classified as the innovators and early adopters (Rogers, 1983). Environments in which innovation is a way of life for everyone are characteristic of performance excellence. Innovation is hard work, and high-performance organizations view change as an opportunity rather than a problem or threat. These are the organizations that the late adopters and laggards watch and then attempt to emulate.

Adding Value

Customized training adds value.

Training is an investment not an expense.

The customized training services provided by career and technical education institutions must be high quality, flexible, and timely.

Career and technical education providers of customized training must never be satisfied with the status quo as related to products and services.

Products and services need to be on the innovative side.

Customized training must incorporate new delivery methodologies grounded in adult learning principles.

The measures of effectiveness are changing, and customers are demanding requirements that training interventions must add value in business and industry. One of the most common characteristics of outstanding service providers is their dedication to measuring results and using the results to guide their operations. They measure more than "smile ratings", they measure formally, and they measure often. In high-performance organizations those "measurements typically become the agenda for subsequent internal dialogue and problem-solving efforts" (Zemke & Schaff, 1989, p. 51).

Those companies that view training as an investment see the big picture and long term value in investing in their greatest asset, that of human potential. The view of

training as an expense looks at the training from the balance sheet perspective in the short term. Companies are increasingly focused on talking about training in terms of return on investment (ROI) models. Career and technical education institutions are talking in terms of the economic impact on the communities they serve. Those interested in the societal results of services provided through career and technical education are talking about closing the gap between the "haves" and "have nots". There are truly different measures, needs, and expectations from different customer and stakeholder groups. Career and technical education providers of customized training must be prepared to be accountable to all these groups. Organizations that exemplify performance excellence "strive to get better and get faster at getting better" (Blazey et al., 2000, p. 18) and have the ability to measure both facets.

The bottom line is that "our customers' success is the key to our success" (Director of a technology center in the West South Central region). If indeed quality and performance are judged through the eyes of an organization's customers and stakeholders, then the measures of effectiveness an organization embraces must reflect the needs, expectations, and requirements that have been determined by the customer.

Our customers must trust us to give them what they want, when and where they want it, at home or

around the world. Working together, we establish customers for life. We add value and create a competitive advantage for customers in the global market. We know that our customers' success is the key to our success. (Director of a technology center in the West South Central region)

Rather than focus on the "happiness quotient" that participants report at the end of the training session, career and technical education providers of customized training must use measures that focus on the degree to which the training is actually transferred to the workplace and results in enhancements for both the organization as well as for the individual employee (Knowles, 1988) such as improved productivity, reduced scrap, and reduced turnover for the organization and greater job satisfaction, better jobs, and higher wages for trained, skilled employees. These are the metrics that will determine the "cost of the investment" for training compared to the "value of the training" as demonstrated by impact on the bottom line for the company as well as benefits for the employee. These measures are the ones that have the potential to transform workforce development into economic development for the community and quality of life for the employees.

Bureaucracy and Funding

Governance structures and funding mechanisms for career and technical education institutions present barriers to meeting customer needs, expectations, and requirements.

Career and technical education institutions are public entities and as such must meet legislated requirements and rely on funding through local, state, and federal funds. In some cases, the customized industry-specific training department is viewed as a source of generating revenues to support the rest of the institution. As the level of funding is being reduced, these institutions are increasingly being told to "do more with less". At the same time, demands and expectations have grown exponentially. "The ability to prioritize and leverage limited resources for the career and technical education enterprise is essential" (Kister, 2001, p. 29).

Creating innovative solutions to bureaucratic structures, which are both real and perceived, is indeed a major challenge facing career and technical education providers of customized training five years from today and beyond. Those institutions that address this challenge by breaking down the "silos" and through strategic objectives will be those who succeed as high-performance organizations in the future.

Technology

Technology is a driver for change.

A technological infrastructure is essential to effectively meet the customized training needs and wants of business and industry.

The consequences of technology are creating transformational changes in the way organizations think, operate, and provide services to their customers. "We are bombarded everyday with new technological developments, some so advanced that they challenge our ability to comprehend them" (Davis, 1996, p. 24) and the "key to the puzzle lies in your ability to redefine the context in which you see" (p. 24) the applications of the technology. Technology has truly change the way organizations function and communicate as well as the ways products and services are delivered to customers.

Technology has an influence on such things as delivery methods for courses, curriculum planning, instructional and facilitation methodologies, infrastructure, students and learning, and expectations of clients. From the perspective of the provider of customized industry-specific training, many questions and challenges surface with regard to rapidly changing technologies. To what degree will the institution support educational delivery via sources such as the Internet and satellite broadcasts? Is the institution committed to supporting the technical infrastructure required for these types of ventures? How large is the potential market? Are the expenses involved in creating the infrastructure worthy of the potential return? How do instructors stay abreast of the rapidly changing

technological requirements of business and industry? The list of questions goes on and on.

Moreover, the frequently overlooked consequence of new technology involves the knowledge and skills necessary to effectively implement the technology. This is where the human factor becomes part of the equation. For career and technical education providers of customized industry-specific training the challenges are two-fold: (1) the needs and implications of the institution and (2) the needs and implications of the customers and stakeholders.

Models for Performance Excellence

Models for performance excellence such as the Baldrige and AQIP lead to results.

Current high performers are linked to the theoretical framework of the Baldrige and AQIP models for performance excellence.

Models for performance excellence such as the ones used in this study can effectively be used as the building blocks for high-performance programs.

Organizations across industry sectors including business, health care, service, and education are using models such as the Baldrige and the AQIP because they know that the model works. When the systematic approach to performance excellence is implemented, the results have the potential to be astounding. Organizations that synthesize and align the elements of the concepts and theoretical framework embedded in performance excellence models such as the Baldrige realize the power of adopting these structures.

This "systems perspective means managing your whole organization, as well as its components, to 'achieve success'" (Baldrige, 2000b, p. 4). Whether consciously or unconsciously implemented, the high-performance career and technical education institutions represented in the study have incorporated the language and concepts of performance excellence embedded in the Baldrige criteria and core values into their current and future directions.

The core values and criteria of the Baldrige served as the common language used in the "rich theoretical framework for designing the study" (Yin, 1994, p. 28) and were also "used as a template with which to compare the results of the study" (p. 31). As such, the opportunity for "analytic generalization" (p. 31) existed, and the theoretical framework of the Baldrige became "the main vehicle for generalizing the results" (p. 32) to the population. The theoretical framework of the Baldrige and the AQIP are models that high-performers look to and use. These are not solely academic models. These models work in real life, both in industry and in education. Evidence of what the institutions represented by the members of the panel of practitioners do and believe overwhelmingly support the core values embedded in the theoretical framework of the Baldrige and AQIP.

The language of performance excellence is common to high-performing organizations, and the responses from the members of the panel of practitioners consistently mirrored the language and theoretical concepts of the Baldrige. All 18 members of the panel echoed the same vocabulary as found in the core values and criteria of the Baldrige and the AQIP models. The members of the panel of practitioners were truly examples of high performance organizations that "talk the talk" and "walk the talk" of the language of performance excellence as found in the Baldrige and the AQIP models.

For a couple of decades excellence in education has been talked about, and it has remained somewhat theoretical. What was found in this study was that across the country, in diverse locations and environments, 18 different programs applying these concepts were identified as the best-of-the-best. The concepts support the new wave of leadership styles. It works! Each institution was unique in areas such as the clientele and geographical area served, services provided, and culture and all have tailored their programs to accommodate these performance excellence factors. The commonality was that each was recognized for high-performance in delivering customized industry-specific training in their state.

Data Collection and Analysis

The Internet is a useful media for gathering data for research studies.

Data collection techniques need a combination of both high-tech and high-touch.

Data analysis was synergistic because of a combination of software and the latest technology.

Whenever a new technology is used, "there must be a counterbalancing human response—that is, *high touch*. The more high tech, the more high touch" (Naisbitt, 1982, p. 39) is needed. In order to address the issue of lack of personal interaction as one of the disadvantages to electronic research, the researcher personally contacted each of the nominees for the panel by telephone. To further personalize the interaction with the potential participants, each telephone call was followed by an e-mail containing information about the study and a thank you for their interest. The combination of "high touch and high tech" enhanced the results of the study.

A relatively new tool for research, the Internet provides a unique opportunity for data collection (GhostBear, 2001; O'Brien, 2001; Spencer, 2000). Traditionally, surveys and questionnaires have been disseminated either through the mail or in face-to-face interactions. A major disadvantage to both of these methods is the time and expense involved in collecting the data. The findings of this study support the advantages of using the Internet and resulted in both quantity and quality responses from the members of the panel of practitioners.

The use of a combination of software and technology such as word processing, spreadsheet, database, and statistical software presented an opportunity for a synergistic approach to data analysis. This research modeled the kinds of techniques used by high-performance providers, and that involved effectively using the latest technology in order to maximize the results. Advantages to the electronic form of data collection and analysis were numerous. Participants had the ability to respond to the questionnaire at their convenience. The necessity for transcription was minimized because of the use of a combination of software. The potential of researcher bias and error, which is possible in transcription, was minimized because the researcher cut and pasted blocks of data rather than transcribing from a tape recorder. Participants freely responded to the open-ended questions. Because one of the potential disadvantages to electronic data collection and analysis is the possibility for technical problems, all steps must first be tested and piloted before being incorporated in the process.

Recommendations for Practice

Input from the members of the panel of practitioners, perspectives from the literature, and interviews with candidates for participation on the panel not only provided insight as to possibilities for the future of career and technical education customized industry-specific training

but also has posed many questions for further consideration. The following recommendations are proposed for the practitioners of career and technical education providers of customized industry-specific training.

Benchmarking

The concept of benchmarking is a process for identifying the very best practices in a field, studying the processes, and adopting those that will move the organization to high-leverage improvements for customers and stakeholders. While benchmarking may include the best practices of other career and technical education institutions, high-performance organizations should also consider looking outside their own industry sector. Career and technical education providers of customized training would be well served to first identify those processes that would "raise the bar" in support of their mission if they were improved. After the process or processes have been ascertained, the next step would be to identify those organizations in both the public- and private sectors that are recognized as the best-of-the-best in that process. For example, if the process of managing online enrollments was identified as an area for high-leverage improvement, then the organization might benchmark those processes used in an organization such as Amazon.com.

Customer Focus

Be obsessed with listening to and learning from customers and stakeholders. Those organizations that excel at listening and learning are those organizations that are poised for transformation based on customer needs, expectations, and requirements. If career and technical education institutions that provide customized industry-specific training are truly on the road to performance excellence, identifying ways to more effectively listen and learn from customers and stakeholders will pave the way. If providers of customized training will listen hard enough, it is the customers who will tell them how they can differentiate themselves from other providers and become the "provider of choice". Potential avenues for continually "listening and learning" from customers and stakeholders might include establishing advisory councils made up of both customers and stakeholders, focus groups, surveys, and market research. The concept of "listening and learning" is not new and links to both the Baldrige criteria and core values as well as to AQIP.

Are what have previously been perceived as competitors possibly a door to opportunity for serving a new sphere of customers and stakeholders? This, too, is certainly a possibility worthy of further exploration.

Developing customers for life should be the goal of career and technical education institutions providing customized industry-specific training. As customers and stakeholders are transforming all industries including education, practitioners of customized training would be well served by developing processes for listening to and learning from key stakeholder groups. Career and technical education institutions serve a diverse set of stakeholder groups, and the complexities of making decisions regarding services provided to each of these groups is enormous.

A well conceived and shared mission and vision at both the institutional and departmental levels should serve as the focal point by which to make decisions regarding the needs and wants of stakeholders in the most effective manner possible. Identifying performance measures and developing processes for listening to stakeholders might include surveys and focus groups for all stakeholder groups. Collecting information is only one step, however. The data must be analyzed and used for making improvements within the organization in order to meet and exceed customer expectations.

The consideration of viewing both the company as well as the employee as the customer should be in the forefront of any customized industry-specific training intervention. The focus of adding value through training and development

to both the organization and the individual is truly aligned with the aim of adult learning as reflected in the precepts held by Malcolm Knowles (Knowles, 1988; Knowles et al., 1998).

Knowles basic assumption is that proper adult education programming can synthesize institutional and individual needs Knowles is optimistic that adult education can lead to organizational change that will harmonize the work purpose and the human purpose towards reciprocal fulfillment of each. (Fisher & Podeschi, 1989, p. 349)

Credentialing

Providers of customized industry-specific training should address the notion of credentialing from two perspectives: (1) train incumbent workers for industry credentials and certifications and (2) seek recognized credentials and certifications for the personnel within the career and technical education institution. Increasingly credentials that attest to the attainment of skills specified by national or state trade associations play an important role in assessing an applicant's readiness for employment (American Electronics Association, 1996; National Alliance of Business, 2000; National Skills Standards Board, 2002; "Report to Stakeholders", 2002). Trade associations and organizations within industry sectors are developing coalitions for the purpose of identifying what knowledge and skills are required of employees to be successful in key occupations. The certification or credentialing processes

are based on high-performance work, and specific skills standards and certifications or credentials' are developed that affirm the competency levels of individuals. The skills standards are then used for better hiring practices, training programs, career paths and employee assessment systems.

Focusing on the requirements of the industries they serve, practitioners in the field of customized training would be well served by developing effective curricula and programs for trainees around the skills standards that lead to certification and credentials. Because the standards are developed by those within the industry who know what it takes for employees to be successful, those employees with the industry certifications will not only help companies be more productive and competitive, but those individuals will also be more competitive within the job market.

Coordinators and trainers employed by career and technical education institutions should be encouraged to seek relevant credentials and certifications that would assist them in providing the highest quality service to their customers and stakeholders. States such as Oklahoma and Georgia require certification through their state agencies for those individuals employed by career and technical education institutions that deliver customized training. States that do not provide such credentials may

desire to benchmark this type of credentialing.

Professional organizations such as local ASTD chapters also provide training and development certification opportunities that are designed to enhance skills for trainers, managers, and organizational development consultants.

Performance Feedback Tools

Practitioners should depend heavily upon the measurement and analysis of performance as a basis for decision-making. Such measurements and metrics must be derived from the organization's mission and strategy and provide critical data and information to address all key requirements and activities (Baldrige, 2000a, 2000b; Blazey et al., 2000; Koalaty Kid, 1998). Organizations that ask, "What does excellence look like?" and then link performance measures to that picture are able to track their progress toward achieving their mission through strategic objectives.

These types of evaluation go beyond collecting data on the typical Level 1 Trainee Reaction Evaluation (Kirkpatrick (1987)). The four levels of evaluation include trainee reactions, assessment of trainee learning at the end of the training, evaluations of the trainees' behavior and performance back on the job, and results on the company's bottom line—Return on Investment (Broad & Newstrom, 1992; Kirkpatrick, 1987; Robinson & Robinson, 1989).

While most career and technical education institutions are "rich in data, many have not encountered the idea of a management system that is driven by data. . .establishing operational and strategic performance indicators that provide a structured approach to using data" (Dew, 2000, p. 53). Possible formats might include models for measuring economic impact and developing a report card that graphically shows trends for the measures that are most significant for demonstrating excellence in customized training. Measuring and reporting effectiveness will benefit the institution as well as enhance communication to the client and community. This data should assist the department with identification of strengths and opportunities for improvement and fold back into the department planning process.

Self-Assessment

If organizations such as career and technical education providers of customized training want to be among the best-of-the-best, they will be well served to use proven models of performance excellence such as the Baldrige and the AQIP as a template or self-assessment tool. Self-assessment using the concepts and framework found in proven models will allow career and technical education institutions providing customized industry-specific training "to identify strengths and to target opportunities for improving processes and

results affecting all key stakeholders including customers, employees, suppliers, partners, and the public" (Baldrige, 2000a, p. 1). Self-assessment is the first step in turning the corner toward performance excellence. Regardless of an organization's past performance, utilizing either the Baldrige criteria or the Academic Quality Improvement Project Criteria as tools for self-assessment provide excellent opportunities for a systematic approach to self-assessment and set the stage for considerable improvement opportunities.

Leadership

Paying attention to leadership and the new set of characteristics will assist organizations in their pursuit of performance excellence. Effective leadership is more than charisma (Collins, 2001) or intelligence and technical competence (Goleman, 1998).

We're being judged by a new yardstick; not just by how smart we are, or by our training and expertise, but also how well we handle ourselves and others The new measure takes for granted having enough intellectual ability and technical know-how to do our jobs; it focuses on personal qualities how you handle yourself, get along with people, work in teams, leadership. (Goleman, 1998, pp. 1-2)

The characteristics of effective leaders as described by the members of the panel of practitioners can be learned, and leadership development initiatives should focus on these elements. In addition to development for current leaders,

opportunities to develop the leader in every employee will enhance the ability to begin developing leaders for informal leadership roles as well as succession planning.

Recommendations for Research

Models of Performance Excellence

This study asked for the best-of-the-best and found that everything they were doing supported the core values and criteria of these two models. Research using the case study methodology of high-performance organizations using performance excellence models would possibly reveal a framework that could be utilized by other career and technical education institutions.

Models for Measuring Return on Investment

Companies are increasingly demanding a way to measure return on investment (ROI) for training and interventions. Research that would result in the development of utilitarian models for measuring ROI would greatly assist providers of customized training in meeting the customers' requirements. Moreover, answering the question "What does the bottom line look like?" will assist the transformation in perception from that of training as an "expense" to that of viewing training as an "investment".

Collaboration Across the Institution

A major challenge for providers of customized industry-specific training centers around those issues that require

collaboration across the organization. These are also the issues that when effectively addressed will reflect a huge payoff for both the institution as well as for the stakeholder groups. Identifying effective models for intra-institutional partnerships would enhance the effectiveness of the entire institution. An example of such a collaboration might be a relationship in which institutional instructors are given time from daily instruction to provide training for an industry customer. The fee the company normally pays for training could be used to pay a substitute instructor in the classroom.

Learning and Teaching Styles

Career and technical education institutions "need to recognize that the training must be customized to fit both the corporation's and the nontraditional learners' needs" (Warren, 2000, p. 678). Addressing the needs of the "changing face of the workforce" (Dean of a technical community college in the South Atlantic region) requires not only a sensitivity to "cultural needs" but also a sensitivity to learning styles and preferences as well as teaching styles that would enhance student success.

"As adult educators strive to improve learning, common sense tells them that the efficiency of learning can be increased by learning more about each of the human elements in the teaching-learning transactions" (Conti & Welborn,

1986, p. 20). As alternative delivery methods emerge, research focused on understanding the learning styles of trainees and the teaching styles of instructors involved in these environments would enhance the effectiveness of both the instruction and the learning that occurs.

Electronic Format

The benefits of electronic forms of data collection and analysis are tremendous! Graduate courses for researchers, both quantitative and qualitative, that incorporate a contextualized learning, hands-on format for understanding and learning the concepts of conducting research via the Internet as well as using specific software (word processing, spreadsheet, database, and SPSS) would expand the options available to researchers for selecting the appropriate methodology for research studies.

Five Years and Beyond

Alice: Which way should I go?

Cat: That depends on where you are going.

Alice: I don't know where I'm going!

Cat: Then it doesn't matter which way you go!

(Carroll, 1872, as cited in Goodstein et al., 1993, p. 1)

To be successful in the journey to performance excellence, organizations must provide "criteria for making day-to-day decisions and should provide a template against which all decisions can be evaluated" (Goodstein et al., 1993, p. 1). If career and technical education institutions are to be successful in the business of assisting companies

to ensure a workforce with competitive skills and competencies, then sustaining the status quo or relying on numerous minor adjustments to the current systems will not enable organizations to achieve performance excellence.

Much like the conversation between Alice and Cat, everyone in the organization must know where they are going and which road will take them there. A clearly articulated and shared vision, mission, and goals by which to achieve the desired future must be in place. So that everyone in the organization knows which "road to take" on the journey to performance excellence, those "vital few" goals or "roads" must be clearly identified and shared, the leadership must possess more than charisma and possess the new set of skills identified in the research, and everything the organizations says and does must be customer focused.

Change will happen, and organizations do have a choice about whether to be the pioneer that takes the road leading the charge or to take the road of least resistance and become a victim of the change that will eventually be imposed upon them. Innovation does not just happen. It is arduous work, and everyone in the organization must have innovation focused on the strategic realities of the organization as a mindset. "A policy of systematic innovation produces the mindset for an organization to be a

change leader. It makes the entire organization see *change as an opportunity*" (Drucker, 1999, p. 85).

Good is the enemy of great. And that is one of the key reasons why we have so little that becomes great. We don't have great schools, principally because we have good schools. Few people attain great lives, in large part because it is just so easy to settle for a good life. The vast majority of companies never become great, precisely because the vast majority become quite good—and that is their main problem What about the vast majority of companies that wake up part way through life and realize that they're good but not great? (Collins, 2001, p. 1)

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APPENDIXES

APPENDIX A

FORMS AND REGIONS

Forms

One of the attributes of quality research is rigor with replicability being one of the primary characteristics (Guba & Lincoln, 1981). The following forms and information may be used to replicate this study:

- E-mail letter soliciting nomination to the panel of practitioners
- Online nomination form
- E-mail letter to nominees requesting participation in the study
- Online research questionnaire
- Bureau of Labor Statistic Regions (Census Division)

E-mail Request for Nominations to Panel of Practitioners

To: [name of NAISTD member]

From: [name of President Elect of NAISTD]

Subject: NAISTD STUDY RESPONSE REQUESTED

We would like to ask for your assistance with a study entitled "A Future of Possibilities for Workforce Development: Customized Training for Business and Industry" by Peggy Geib. We agreed last year at our National Association of Industry Specific Training Directors (NAISTD) to participate in this doctoral dissertation study and to share in the benefits it will provide.

Peggy has made it easy to respond to her study by asking us to identify the two highest-performing postsecondary institutions providing customized business and industry training in our respective states. We also ask that you identify a key contact person at each institution and respond to her by clicking on the URL address given below by 5:00 p.m. [date]. This will allow her to initiate the contact with those institutions and have a preliminary report for us in May at our Oklahoma City meeting.

To access information regarding the study and the online nomination form, please click on:

<http://members.aol.com/inquiryosu/nom.htm>

Please take a few moments today to respond to Peggy and to fulfill the need for our role in this study. The results of the study will prove beneficial to each of us!

If you need to contact Peggy, her e-mail address is [e-mail address].

We look forward to seeing you in Oklahoma in May!

Sincerely

Bob Parson, President
Larry Keen, President Elect

Customized Industry-Specific Training Study

Nomination Form: Panel of Experts

Purpose of Study: The purpose of this study is to identify and describe the characteristics of post-secondary educational institutions perceived as high-performing in the delivery of customized workplace training to business and industry in the United States three to five years from today. Understanding these characteristics plays an important role in planning for the future.

Instructions: Please nominate two post-secondary institutions in your state that you perceive to excel in their ability to effectively provide customized industry-specific training in today's challenging workforce development environment. *Factors to consider may include, but are not limited to: leadership, customer focus, innovation, partnerships, responsiveness to industry needs, agility, focus on the future, focus on results and creating value.*

If the first institution you list declines the opportunity to serve on the panel of experts for this study, the second nominee will be invited to participate. Only one representative from each state will be included in the study.

To increase the likelihood that your state is represented in the study, please identify the individual within each institution who is *most likely* to be receptive to this opportunity.

Note: To move easily from one field to the next, just press the Tab key. If you accidentally exit this form before you have completed it, using the "Back" arrow on your browser will allow you to return to the form which contains your entered responses.

Nominee #1:

Name of Institution: _____

Department: _____

Contact Person: _____

Title: _____

Mailing Address: _____

City: _____

State: _____

Zip: _____

Contact Person's e-mail address: _____

Phone: _____

Fax: _____

Nominee #2:

Name of Institution: _____

Department: _____

Contact Person: _____ Title: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

Contact Person's e-mail address: _____

Phone: _____ Fax: _____

NAISTD Member:

Member's Name : _____ Title: _____

Name of Organization: _____

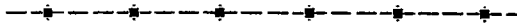
Department: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

E-mail address: _____

Phone: _____ Fax: _____



May we use your name when contacting the nominee? Yes No

Your willingness to participate in the study by assisting in the nomination of the panel of experts is greatly appreciated. Thank you for your support!

To send your responses, please press the Submit button.

Submit

E-mail request to nominees for participation on the panel of practitioners: This sample e-mail was designed to follow the telephone contact made by the researcher with each nominee.

To: [name of nominee]

From: Peggy Geib

Subject: Customized Training Study

Congratulations! [name of nominee's institution] has been recognized as an exemplary institution providing customized training to business and industry in [state]. You are one of a select group of career and technical education institutions across the United States to be nominated by members of the National Association of Industry-Specific Training Directors to serve on a panel of experts for a national study focused on customized industry-specific training.

As one of the nation's highest performing institutions, you are invited to serve on a panel of experts in a study that will benefit you and others in our profession as we prepare for the future. Only with the help of individuals like you will the study be meaningful!

The purpose of this study is to describe those characteristics that will exemplify the highest performing career and technical education institutions that deliver customized training to business and industry in the United States five years from today and beyond.

For ease in completing the questionnaires, the study will be conducted via the World Wide Web. Listed below is a website that contains the questionnaire. Your responses will help us have a better understanding of high-performance organizations delivering customized training, and all responses will remain confidential. To accept this invitation to participate in the study, please click on the website address:

<http://members.aol.com/inquiryosu/round1.htm>

By clicking on this hypertext, going to the associated webpage, and completing the questionnaire, you are volunteering to participate in the study. If you have any questions regarding your participation or regarding this study you may contact: Sharon Bacher, Oklahoma State University Institutional Review Board, 405.744.5700.

Thank you for your willingness to participate in this study. Your expertise is vital to the success of this study, and I trust we will all benefit from the results!

Please return your completed questionnaire prior to [date].

Sincerely yours
Peggy Geib
Director, Strategic Partnering
[researcher's e-mail address]

Customized Industry-Specific Training Study

Round One: Panel of Experts Questionnaire

You have been selected to participate in this national study because your institution is recognized as one of the highest performing postsecondary institutions in your state for delivering customized industry-specific training. Thank you for agreeing to share your expertise and insights in this important study! Purpose of the Study: The purpose of this national study is to describe the characteristics of postsecondary educational institutions who will be the high performance leaders in the delivery of customized training for business and industry in the United States five years from today and beyond. Your responses will be anonymous.

There are two sections for you complete:

Section 1: 9 demographic questions

Section 2: 15 open-ended questions

Please follow these instructions:

1. For multiple-choice questions, use your mouse to click the button next to your selection.
2. For the open-comment questions, use your computer keyboard to type in your comments in the open rectangle box.
3. To move easily from one field to the next, just press the TAB key.
4. If you accidentally exit this form before you have completed it, using the "BACK" arrow on your browser will allow you to return to the form which contains your entered responses.
5. After completing this questionnaire, click on the "Submit" button to submit your anonymous responses.

If you have questions or difficulties with the questionnaire, please contact me at

ib@aol.com.

Depending on how comprehensive you wish to make your answers, completion of the round one questionnaire will take approximately 20 to 40 minutes.

Demographic Questionnaire

Note: The term "**institution**" refers to the entire organization. The term "**department**" refers to the customized industry-specific training department. If your department includes additional functions, please respond to these questions using data for customized industry-specific training only.

For the purposes of this study, **customized training** is defined as: the training implemented for the purpose of improving the job skills and academic skills of current or prospective employees. Customized training is provided under contract to employers or to government agencies.

1. What type of postsecondary institution best describes your institution?

vocational-technical education

community or junior college

technical college

poly-technical college

4-year college or university

Other: _____

2. What is the population of the community for which your department provides customized industry-specific training services?

less than 25,000

25,000 - 74,999

75,000 - 149,999

150,000 - 499,999 500,000 - 999,999

1 million +

3. How many full-time employees are employed by your **institution**? _____

4. How many full-time employees are employed by your customized industry-specific training **department**? (Do not include employees whose primary responsibilities are to support other functions such as continuing education and non-credit open-enrollment programs.) _____

5. Of the full-time employees in your **department**, approximately how many are employed in each of the following categories? a. Number of full-time professional consulting staff: _____

b. Number of curriculum development staff: _____

c. Number of full-time trainers: _____

d. Number of full-time support staff: _____

e. Other (Please list the title or function and number of staff.) _____

6. Do you employ adjunct faculty or contract trainers to deliver customized training to your clients?

Yes

No

If yes, approximately how many did you contract with during FY 2000? _____

7. Approximately how many business clients were served by your **department** in FY 2000 for each of the categories listed below? (If a business client has other locations outside your service area, count only the locations for which you provide services.)

a. Number of clients with fewer than 49 employees: _____

b. Number of clients with 50 - 99 employees: _____

c. Number of clients with 100 - 499 employees: _____

d. Number of clients with 500 - 999 employees: _____

e. Number of clients with 1,000 - 2,999 employees: _____

f. Number of clients with over 3,000 employees: _____

8. What are the industry sectors served by your customized industry-specific **department** during FY 2000? (Check all that apply.)

Agriculture, Forestry, & Fishing

Mining

Construction

Manufacturing

Transportation & Communication

Electric, Gas, & Sanitary Services

Wholesale Trade

Retail Trade

Finance, Insurance, & Real Estate

Government

Business Services

Hospitality

Health Care

Other (please specify): _____

9. In what state is your institution located?

Customized Industry-Specific Training Questionnaire

The following open-ended questions were designed using the categories from the Malcolm Baldrige Award Criteria for Performance Excellence. In considering your responses to these questions, project what the characteristics of the high performance institutions in postsecondary institutions that deliver customized training for business and industry will be *five years from today and beyond*.

Your responses and those of the other members of the panel of experts will provide a benchmark to assist institutions that deliver customized training to plan for and move toward a future of high performance.

Strategic Planning

1. Does your **institution** have a formal vision statement?

Yes

No

If yes, what is the vision statement?

2. Does your **institution** have a mission statement?

Yes

No

If yes, what is the mission statement for your institution?

3. Does your **department** have a mission statement?

Yes

No

If yes, what is the mission statement for your department?

4. Do you anticipate any changes in the mission of your **department** five years from today and beyond?

Yes

No

If yes, describe the anticipated changes to your mission.

--

5. Does your **department** have a strategic plan?

Yes

No

If yes, briefly describe the process used and who participates in the development of your **department's** strategic plan.

--

6. Competitors . . .

a. Who are your competitors in providing customized industry-specific training?

--

b. Do you anticipate that your competitors will be different five years from today?

Yes

No

If yes, briefly describe who you anticipate these competitors will be.

--

7. "Vital few" goals . . .

a. What are the major challenges (either opportunities or problems) facing postsecondary providers of customized industry-specific training over the next 5-10 years?

--

b. Briefly describe the two or three "vital few" goals that will allow your **department** to address these challenges.

--

Customer Focus

8. *Five years from today and beyond*, who will be the customers and major stakeholders for customized industry-specific training?

--

9. *Five years from today and beyond*, how will your **department** determine the needs, expectations and requirements for your customers and stakeholders?

--

Measuring Effectiveness

10. *Five years from today and beyond*, what metrics will be used by high-performance postsecondary institutions providing customized training to measure effectiveness and performance excellence?

--

Leadership

11. *Five years from today and beyond*, what will be the characteristics (skills and attributes) of effective leaders of the highest performing customized training **departments** in postsecondary institutions?

--

Human Resources

12. *Five years from today and beyond*, what will be the characteristics (skills and attributes) of effective consultants/coordinators in the highest performing customized training departments in postsecondary institutions? (The term consultant/coordinator refers to the individuals in your **department** whose primary job is to have direct contact with the clients.)

Building Collaborative Relationships

13. Five years from today and beyond, identify and briefly describe the types of external collaborative relationships (e.g., agencies, consortia partners) that will be key to accomplishing the mission of your **department**.

14. Five years from today and beyond, identify and briefly describe the types of internal collaborative relationships that will be key to accomplishing the mission of your **department**.

Other

15. Five years from today and beyond, please describe or list any additional characteristics of the highest performing postsecondary customized industry-specific training organizations that have not been identified in other areas of this questionnaire.

Thank you for your time and candid responses!

Please click on the Submit button to send your responses.

To send your responses, please press the Submit button.

Submit

Regions: Bureau of Labor Statistics
(Census Divisions)

New England:

- Connecticut
- Maine
- Massachusetts
- New Hampshire
- Rhode Island
- Vermont

Middle Atlantic:

- New Jersey
- New York
- Pennsylvania

East North Central:

- Illinois
- Indiana
- Michigan
- Ohio
- Wisconsin

West North Central:

- Iowa
- Kansas
- Minnesota
- Missouri
- Nebraska
- North Dakota
- South Dakota

East South Central:

- Alabama
- Kentucky
- Mississippi
- Tennessee

South Atlantic:

- Delaware
- District of Columbia
- Florida
- Georgia
- Maryland
- North Carolina
- South Carolina
- Virginia
- West Virginia

West South Central:

- Arkansas
- Louisiana
- Oklahoma
- Texas

Mountain:

- Arizona
- Colorado
- Idaho
- Montana
- Nevada
- New Mexico
- Utah
- Wyoming

Pacific:

- Alaska
- California
- Hawaii
- Oregon
- Washington

APPENDIX B

BALDRIGE CORE VALUES AND CONCEPTS

Baldrige Core Values and Concepts

The Baldrige Criteria for Performance Excellence are built upon a set of interrelated Core Values and Concepts. These values and concepts, given below, are embedded beliefs and behaviors found in high-performing organizations. They are the foundation for integrating key business requirements within a results-oriented framework that creates a basis for action and feedback. (Extracted from the 2001 Baldrige Criteria for Performance Excellence, pp. 1-4)

Visionary Leadership

An organization's senior leaders should set directions and create a customer focus, clear and visible values, and high expectations. The directions, values, and expectations should balance the needs of all your stakeholders. Your leaders should ensure the creation of strategies, systems, and methods for achieving excellence, stimulating innovation, and building knowledge and capabilities. The values and strategies should help guide all activities and decisions of your organization. Senior leaders should inspire and motivate your entire workforce and should encourage all employees to contribute, to develop and learn, to be innovative, and to be creative.

Customer-Driven Excellence

Quality and performance are judged by an organization's customers. Thus, your organization must take into account all product and service features and characteristics and all modes of customer access that contribute value to your customers and lead to customer acquisition, satisfaction, preference, referral, and loyalty and to business expansion. Customer-driven excellence has both current and future components: understanding today's customer desires and anticipating future customer desires and marketplace offerings.

Organizational and Personal Learning

Achieving the highest levels of business performance requires a well-executed approach to organizational and personal learning. Organizational learning includes both continuous improvement of existing approaches and adaptation to change, leading to new goals and/or approaches. Learning needs to be embedded in the way your organization operates. This means that learning (1) is a regular part of daily work; (2) is practiced at personal, work unit, and organizational levels; (3) results in solving problems at

their source ("root cause"); (4) is focused on sharing knowledge throughout your organization; and (5) is driven by opportunities to effect significant change and to do better. Sources for learning include employee's ideas, research and development (R&D), customers' input, best practice sharing, and benchmarking.

Valuing Employees and Partners

An organization's success depends increasingly on the knowledge, skills, creativity, and motivation of its employees and partners. Valuing employees means committing to their satisfaction, development, and well-being. Increasingly, this involves more flexible, high-performance work practices tailored to employees with diverse workplace and home life needs.

Organizations need to build internal and external partnerships to better accomplish overall goals. Successful internal and external partnerships develop longer-term objectives, thereby creating a basis for mutual investments and respect. Partners should address the key requirements for success, means for regular communication, approaches to evaluating progress, and means for adapting to changing conditions.

Agility

Success in globally competitive markets demands agility—a capacity for rapid change and flexibility. All aspects of e-commerce require and enable more rapid, flexible, and customized responses. Businesses face ever-shorter cycles for the introduction of new/improved products and services, as well as for faster and more flexible response to customers. Major improvements in response time often require simplification of work units and processes and/or the ability for rapid changeover from one process to another. Cross-trained and empowered employees are vital assets in such a demanding environment.

Focus on the Future

In today's competitive environment, a focus on the future requires understanding the short- and longer-term factors that affect your business and marketplace. Pursuit of sustainable growth and market leadership requires a strong future orientation and a willingness to make long-term commitments to key stakeholder—your customers, employees, suppliers and partners, the public, and your community.

Managing for Innovation

Innovation mean making meaningful change to improve an organization's products, services, and processes and to create new value for the organization's stakeholders. Innovation should lead your organization to new dimensions of performance. Innovation is no longer strictly the purview of research and development departments; innovation is important for all aspects of your business and all processes. Organizations should be led and managed so that innovation becomes part of the culture and is integrated into daily work.

Management by Fact

Organizations depend on the measurement and analysis of performance. Such measurements should derive from business needs and strategy, and they should provide critical data and information about key processes, outputs, and results. Many types of data and information are needed for performance management. Performance measurement should include customer, product, and service performances; comparisons of operational, market, and competitive performance; and supplier, employee, and cost and financial performance. Analysis refers to extracting larger meaning from data and information to support evaluation, decision making, and operational improvement. The measures or indicators you select should best represent the factors that lead to improved customer, operational, and financial performance. A comprehensive set of measures or indicators tied to customer and/or organizational performance requirements represents a clear basis for aligning all activities with your organization's goals.

Public Responsibility and Citizenship

An organization's leaders should stress its responsibilities to the public and the need to practice good citizenship. Organizations should not only meet all local, state, and federal laws and regulatory requirements, but they should treat these and related requirements as opportunities for improvement "beyond mere compliance."

Focus on Results and Creating Value

An organization's performance measurements need to focus on key results. Results should be used to create and balance value for your key stakeholders—customers, employees, suppliers and partners, the public, and the community. By creating value for your key stakeholders, your organization

builds loyalty and contributes to a growing economy. The use of a balanced composite of leading and lagging performance measures offers an effective means to communicate short- and longer-term priorities, monitor actual performance, and provide a clear basis for improving results.

Systems Perspective

The Baldrige Criteria provide a systems perspective for managing your organization to achieve performance excellence. The Core Values and the seven Baldrige Criteria form the building blocks and the integrating mechanism for the system. However, successful management of overall performance requires organization-specific synthesis and alignment. Synthesis means looking at your organization as a whole and builds upon key business requirements, including your strategic objectives and action plans. Alignment means using the key linkages among requirements given in the Baldrige Categories, including key measures/indicators.

APPENDIX C

INSTITUTIONAL REVIEW BOARD

APPROVAL FORM

Oklahoma State University
Institutional Review Board

Protocol Expires: 5/14/02

Date: Tuesday, May 15, 2001

IRB Application No ED01108

Proposal Title: DELIVERING CUSTOMIZED TRAINING TO BUSINESS AND INDUSTRY: A DELPHI
INQUIRY OF THE CHARACTERISTICS OF HIGH-PERFORMING POST-SECONDARY
EDUCATIONAL INSTITUTIONS-FIVE YEARS AND BEYOND

Principal
Investigator(s):

Margaret Geib
1608 Hazelhurst
Edmond, OK 73013

James Gregson
204 Willard
Stillwater, OK 74078

Reviewed and
Processed as: Exempt

Approval Status Recommended by Reviewer(s): Approved

Dear PI :

Your IRB application referenced above has been approved for one calendar year. Please make note of the expiration date indicated above. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved projects are subject to monitoring by the IRB. If you have questions about the IRB procedures or need any assistance from the Board, please contact Sharon Bacher, the Executive Secretary to the IRB, in 203 Whitehurst (phone: 405-744-5700, sbacher@okstate.edu).

Sincerely,



Carol Olson, Chair
Institutional Review Board

VITA

Margaret L. Geib

Candidate for the Degree of

Doctor of Education

Thesis: A FUTURE OF POSSIBILITIES FOR WORKFORCE DEVELOPMENT:
CUSTOMIZED TRAINING FOR BUSINESS AND INDUSTRY

Major Field: Occupational and Adult Education

Biographical:

Personal Data: Born in Wayne, Nebraska, the daughter of Emil M. and Elizabeth F. Siefken.

Education: Graduated from Golden High School, Golden, Colorado, 1964; received Bachelor of Science degree in Business Administration from Colorado State University, Ft. Collins, Colorado, 1969; received Master of Education degree in Adult Education from the University of Central Oklahoma, Edmond, Oklahoma, 1987. Completed the requirements for the Doctor of Education in Occupational and Adult Education from Oklahoma State University, Stillwater, May 2002.

Professional Experience: Business and Office Education Instructor, Northglenn High School, Northglenn, Colorado; Interim Director and Training Specialist, Continuing Education Department, OU Medical Center; Business Development Coordinator, Metro Technology Center, Oklahoma City, Oklahoma; Economic Development Liaison, Oklahoma Department of Career and Technology Education, Stillwater, Oklahoma; Business Development Specialist, Francis Tuttle Technology Center, Oklahoma City, Oklahoma; Director of Strategic Partnering, Francis Tuttle Technology Center.

Professional Memberships: Phi Kappa Phi; Scholar, National Leadership Institute (National Dissemination Center for Career & Technical Education); Kappa Delta Pi; Association of Career and Technical Education; Oklahoma Association for Career and Technical Education; American Society for Training and Development; Oklahoma Economic Development Council..