Predictors of Employer Satisfaction with Workplace-Based Contract Training Programs at Community and Technical Colleges in West Virginia

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PREDICTORS OF EMPLOYER SATISFACTION WITH WORKPLACE-BASED CONTRACT TRAINING PROGRAMS AT COMMUNITY AND TECHNICAL COLLEGES IN WEST VIRGINIA

by

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Approved by

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ABSTRACT

Workplace-based contract training for employers is a growing area of the mission of community and technical colleges across the nation, and determining what factors predict satisfaction for sponsoring organizations may help ensure the success of such programs. This is especially important in West Virginia, where higher education legislation in 1995 and 2000 mandated such programming as essential. State institutions that fail in this area may lose their status as independent colleges. Community and technical colleges, therefore, that use data from this study may be able to design and deliver workplace-based contract education and training programs, using limited existing resources, efficiently and cost effectively.

Prior to this research, only three other statewide studies had been conducted to determine employer satisfaction with such programs offered by community and technical colleges. Existing data from the most recent study and current literature suggested that seven variables help determine employer satisfaction: (1) employer participation in program design; (2) customization of program content and mode of delivery; (3) flexibility of course and program scheduling; (4) contract pricing; (5) use of adjunct instructors with business and industry experience; (6) access to institutional resources; and (7) employee-student persistence.

This research showed that all variables were good predictors of employer satisfaction, but statistical significance existed only between satisfaction and flexibility of course and program scheduling. Qualitative data suggested for future study the correlation between the use of adjunct faculty with business and industry experience and employer satisfaction. It is recommended that this study be repeated at the end of West Virginia’s current higher education legislation, Senate Bill 653, in 2006.
DEDICATION

I dedicate this research to my son, Jonathan, whose smile and laughter brings joy to my heart, and to my father, Carl Edward Davis, who has held on to the dream of my becoming a doctor for 45 years.
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# TABLE OF CONTENTS

| ABSTRACT .................................................................................................................. ii |
| DEDICATION ............................................................................................................. iii |
| ACKNOWLEDGEMENT ............................................................................................... iv |
| LIST OF TABLES ........................................................................................................ vii |
| CHAPTER I .............................................................................................................. 1 |
| INTRODUCTION ....................................................................................................... 1 |
| Problem Statement ................................................................................................. 1 |
| Purpose/Objectives ................................................................................................. 3 |
| Research Questions ............................................................................................... 7 |
| Theoretical and Operational Definitions ............................................................... 8 |
| Significance of the Study ....................................................................................... 10 |
| Limitations ............................................................................................................ 17 |
| Summary ............................................................................................................... 19 |
| CHAPTER II ........................................................................................................... 21 |
| REVIEW OF LITERATURE ...................................................................................... 21 |
| Background .......................................................................................................... 21 |
| Workplace-Based Contract Training Defined ...................................................... 26 |
| History of Workplace-Based Credit and Noncredit Training ............................... 30 |
| Benefits of Workplace-Based Contact Training Programs .................................. 36 |
| Predictors of Employer Satisfaction .................................................................... 39 |
| Employer Participation in Program Design ........................................................... 41 |
| Customization of Program Content and Mode of Delivery .................................... 42 |
| Flexibility of Course and Program Scheduling .................................................... 45 |
| Contract Pricing .................................................................................................. 46 |
| Instructors with Business Experience ................................................................ 47 |
| Availability of Institutional Resources ................................................................. 49 |
| Employee-Student Persistence ............................................................................. 50 |
| CHAPTER III ....................................................................................................... 52 |
| METHODS ............................................................................................................. 52 |
| Population and Sample ......................................................................................... 53 |
| Instrumentation .................................................................................................... 56 |
| Data Collection .................................................................................................... 60 |
| Data Analysis ....................................................................................................... 61 |
| Conclusion .......................................................................................................... 63 |
LIST OF TABLES

Table A: Defining Features of Contract Training
Table 1: Frequency by Length of Conducting Business at Employer’s Present Location
Table 2: Frequency by Organizational Type
Table 3: Frequency by Number of Employees Participating in Workplace-based Training
Table 4: Frequency by Organizational Goals for Training
Table 5: Frequency by Importance of Employer Participation in Program Design
Table 6: Frequency by Importance of Customization of Program Content & Method of Delivery
Table 7: Frequency by Importance of Flexibility of Contract Course and Program Scheduling
Table 8: Frequency by Importance of Contract Pricing
Table 9: Frequency by Importance of Using Adjunct Faculty with Business/Industry Experience
Table 10: Frequency by Importance of Availability of Institutional Resources
Table 11: Frequency by Importance of Employee-Student Persistence in Training Programs
Table 12a: Frequency by Rank Order of Importance of Employer Participation in Program Design
Table 12b: Frequency by Rank Order of Customization of Program Content and Mode of Delivery
Table 12c: Frequency by Rank Order of Importance of Flexibility of Course & Program Schedule
Table 12d: Frequency by Rank Order of Importance of Contract Pricing
Table 12e: Frequency by Rank Order of Importance of Adjunct Faculty with Business and Industry Experience
Table 12f: Frequency by Rank Order of Importance of Availability of Institutional Resources
Table 12g: Frequency by Rank Order of Importance of Employee-Student Persistence
Table 13: Frequency by General Level of Employer Satisfaction with Contract Training
Table 14: Frequency by Probability to Recommend the Community and Technical College as a Provider of training
Table 15: Frequency by Likelihood of Employer to Contract with a Community and Technical College to Meet Future Training Needs
Table 16: Frequency by Total Responses (total number of data points) to All Survey Questions
Table 17a: Correlation between Independent Variables and Question 1, Choice 1—Length of Time Conducting Business at Employer’s Present Location—Less than Two Years
Table 17b: Correlation between Independent Variables and Question 1, Choice 2—Length of Time Conducting Business at Employer’s Present Location—Two to Three Years
Table 17c: Correlation between Independent Variables and Question 1, Choice 2—Length of Time Conducting Business at Employer’s Present Location—Two to Three Years
Table 18: Correlation between Employer Satisfaction and Organizational Type
Table 19: Correlation between Number of Employees Participating in Workplace-based Contract Training and Employer Satisfaction
Table 20: Correlation between Employer Satisfaction and Goals for Training
Table 21: Correlation between Independent Variables and Question 13—The General Level of Employer Satisfaction with the Quality of Training Provided by a Community and Technical College
Table 22: Correlation between Independent Variables and Question 14—The Likelihood of an Employer to Recommend to other Organizations a Community and Technical College as a
Provider of Training

Table 23: Correlation between Independent Variables and Question 15—The Probability of an Employer to Contract with a Community and Technical College to Meet Future Training Needs

Table 24: Correlation of Employer Participation in Training Program Design and Employer Satisfaction with Training

Table 25: Correlation of Customization of Program Content and Mode of Delivery and Employer Satisfaction with Training

Table 26: Correlation of Flexibility of Course and Program Scheduling and Employer Satisfaction with Training

Table 27: Correlation of Use of Contract Pricing and Employer Satisfaction with Training

Table 28: Correlation of Use of Adjunct Instructors with Business and Industry Experience and Employer Satisfaction with Training

Table 29: Correlation of the Availability of Institutional Resources and Employer Satisfaction with Training

Table 30: Correlation of Employee-Student Persistence and Employer Satisfaction with Training
CHAPTER I

Introduction

Problem Statement

Employers in the 21st century must address the contemporary issues of workforce training and development as rapid changes in technology occur, as incumbent workers require skills upgrading, and as younger, new, or first-time employees—some with few, if any, marketable skills—enter the workforce. Van Buren and Erskine (2002) contended that “U.S. firms are training larger shares of employees than ever before, increasing their spending in the face of tight financial times, and adding new tools and approaches to their arsenals” (p. 29). The percentage of employers that reported using community and junior colleges as outside training providers, however, actually experienced the greatest drop, from 69.2% to 58.9%, during the period 1998 to 2000 (Van Buren & Erskine, p. 13). Van Buren and Erskine found that one demographic segment of the 367 survey respondents, “The Benchmarking Forum companies,” which most closely resemble Fortune 500 companies and public sector agencies, were more likely to contract with every type of training provider except community and junior colleges, product suppliers, and government organizations for employee training (pp. 13-14, 37).

To help meet the workforce training and development demands of employers and employees that represent a variety of business, industrial, organizational, agency, and other employer groups, and to garner a larger share of the employer-provided outsourced training market, community and technical colleges must design and coordinate, more efficiently and more effectively, the delivery of employer-sponsored, workplace-based contract education programs, which include academic credit courses, collegiate certificate and degree programs, skill set certificates, and customized noncredit training delivered at an employer work site.
rather than on a traditional college campus. The term *workplace-based* includes any and all training, as defined in the preceding sentence, delivered at an off-campus site designated by an employer sponsor.

Employer satisfaction with such programs is a key component to program success and to future growth because employers primarily expend workforce training and development dollars, which are often limited. Van Buren and Erskine (2002) reported that while some employers decreased training expenditures in 2000 and 2001, total expenditures for training, across the nation, increased and companies expect training expenditures to increase in 2002 (p. 2). In West Virginia, specifically, the West Virginia Development Office (WVDO), through the Governor’s Guaranteed Work Force Program (GGWFP), subsidized employer-provided training in 2001 for 16,411 workers at 81 employers in the state, for a total training expenditure investment of nearly $4.5 million (WVDO, 2002, p. 20). The report revealed, however, that only 14 percent of the employer-provided and state-subsidized training delivered in 2001 was designed and delivered by community and technical colleges or higher education (p. 4). And because the report revealed that some training provided by community and technical colleges and higher education was not workplace-based—that is, a portion of the training was offered on campus and according to more traditional, and less customized, modes of delivery—this percentage is further reduced.

Current literature, addressed in the literature review chapter, suggests that seven independent variables, individually and collectively, help determine employer satisfaction (dependent variable) with workplace-based contract training programs designed and delivered by community and technical colleges. The relationship, if any, between employer satisfaction and the following seven components of successful workplace-based contract training programs, defined in the literature review section, may be established and
may serve as a model to design and implement effective and efficient workforce training and development programs at community and technical colleges in West Virginia: (1) employer participation in program design; (2) customization of program content and mode of delivery; (3) flexibility of course and program scheduling; (4) contract pricing; (5) use of adjunct instructors with business and industry experience; (6) access to institutional resources; and (7) employee-student persistence.

**Purpose/Objectives**

The purpose of this study is to determine whether seven variables, as defined in the literature, help determine employer satisfaction with workplace-based contract training. Additionally, this study seeks to determine which variables are the most significant predictors, to establish a relationship between the independent variables and employer satisfaction, and to suggest a model for the effective and efficient delivery of contracted training for business and industry by community and technical colleges.

The challenge for community and technical colleges to design and deliver successful employer-sponsored, workplace-based contract training programs is especially important in West Virginia. Despite progress made during the period 1995-2001, West Virginia continues to lag behind neighboring states and the nation—ranking fiftieth among the states—in the competitiveness of its workforce for the new economy (WVSB 653, 2000, p. 104). The most current legislation, West Virginia Senate Bill 653 (WVSB 653), effective July 1, 2000, through June 30, 2006, requires community and technical colleges to assume a more active role in workforce and economic development. Powers, Powers, Betz, and Aslanian (1988) suggested that colleges and universities promote economic development by providing training, retraining, professional development, and technical management assistance programs to business and industry groups.
Workforce training and contract education together comprise one of WVSB 653’s eleven *essential conditions*, which term literally refers to “essential conditions which must be met by each community and technical college in West Virginia in order to address the needs of the people of the state” (WVSB 653, p. 107). The bill, section 18B-3C-3 “Essential conditions for community and technical college programs and services,” states that “The Legislature hereby establishes the following essential conditions for community and technical college programs and services: . . . (b) A full range of community and technical college services offered as specified in section six of this article” (p. 109). Under “Community and technical college programs,” section 18B-3C-6(a), the bill reads, “The mission of each community and technical college includes the following programs which may be offered on or off campus, at the work site, in the public schools and at other locations and at times that are convenient for the intended population” (p. 113). The bill lists, as one such program, “Workforce training and retraining and contract education with business and industry to train or retrain employees” (§18B-3C-6(a)(4). Although it is only one of seven programs listed as subcomponents of one of eleven essential conditions, employer-sponsored, workplace-based contract training is a vital and growing part of community and technical college programming.

Until the implementation of West Virginia Senate Bill 653 (WVSB 653), July 1, 2000, a two-board college and university system referred to as the State College and University Systems of West Virginia governed higher education in West Virginia. Colleges, including the state’s 12 community and technical colleges, comprised the State College System of West Virginia structure and were governed by a board of directors; the state’s two universities were governed by a board of trustees under the name University System of West Virginia. Each of the 12 community and technical colleges in West Virginia can be
categorized by one of three institutional governance structures: a freestanding, two-year institution that offers collegiate certificates and associate of applied science degrees as the highest degree; a four-year college component with administrative, programmatic, and budgetary authority vested in the host baccalaureate institution; or a university component governed the same as a four-year college component. West Virginia Senate Bill 653 (2000), which merged the two boards into a single Higher Education Policy Commission (HEPC) and which can, before the end of the bill’s six-year term in 2006, remove the component structure of community and technical colleges, requires that presidents and provosts elevate workforce training and development programs as a primary mission of the state’s public two-year institutions (WVSB 653, 2000).

Requiring community and technical colleges to design and deliver workforce training, by contract, for employer groups is not a novel legislative idea in West Virginia or across the nation. Even before the passage of WVSB 653, workforce training had been at the fore of the mission statement of the state’s community and technical colleges since the passage of West Virginia Senate Bill 547 in March 1995:

The community and technical colleges of West Virginia work with business, industry, labor, and government to develop and deliver customized education and training. The colleges can provide short-term courses on such topics as teamwork, problem solving, visioning, and process controls; skills training such as computer applications, basic electrical troubleshooting, etc.; and longer-term programs that lead to a certificate or an associate degree in an occupational or technical program (State College and University Systems of West Virginia, 1995, p. 2).

The problem, however, is that little new or additional state funding accompanied the passage of either WVSB 547 in 1995 or WVSB 653 in 2000. College staff, some in classified
positions and others in nonclassified-exempt positions, who are directly responsible for the
design and coordination of delivery of contract training and workforce development
programs are most often funded by “soft” money; that is, such positions are not funded from
the institution’s general revenue but by short-term grant funds or by nonbudgeted revenue
generated from sales of contract credit and noncredit programs. Operating budgets,
therefore, for continuing education and workforce development units remain largely self-
supporting. Simply put, neither legislators nor college administrators set aside additional,
long-term funding for these staff positions, and contract training and workforce development
programs can operate only as long as such programs “pay for themselves.” Lawmakers,
nonetheless, mandated in 1995 and again in 2000 that community and technical colleges in
West Virginia meet the increasing and varied workforce development and training needs of
the state’s multifaceted business, industrial, professional, governmental, educational, and
labor employer population. Community and technical colleges that determine which
independent variables contribute to and predict employer-sponsor satisfaction can design and
deliver workplace-based contract education and training programs using limited existing
resources in an efficient and cost-effective manner.

Wismer (1995) reported that few studies have been conducted by community and
technical colleges that serve business and industry customers to determine customer
satisfaction with contract training programs. The proposed study will examine existing data
and responses to a survey instrument completed by a representative of the population
of West Virginia employers that contracted with a community and technical college for the
delivery of one or more workplace-based credit or noncredit contract training programs
during the period July 1, 2000, through June 30, 2002. A self-developed survey instrument,
inspired by the literature and by previous similar surveys, one specifically adapted from the
“1995 Maryland Community College Workforce Training and Evaluation Needs Assessment Survey” (Appendix A), was used to examine employer satisfaction with employer-sponsored workplace-based contract training programs. In addition to the Maryland study, a statewide study conducted by the Iowa Department of Education (1991) and a 1993 study of workforce training provided by community and technical colleges in Michigan demonstrated that this research was feasible, and patterns, which may be confirmed by this study, have important policy implications for higher educational institutions that seek to serve the employer and employee-student market. Wismer, prior to the 1995 Maryland study, recommended that state associations of continuing education conduct surveys similar to the 1993 Michigan study to identify customer satisfaction and training needs.

In this study, particular attention was given to determine the extent of the relationship, if any, between employer satisfaction and the following seven (7) components of contract training: employer participation in program design; customization of program content and mode of delivery; flexibility of course and program scheduling; contract pricing; use of adjunct instructors with business and industry experience; availability of institutional resources; employee-student persistence.

Research Questions

The study sought to answer the following one (1) general research question and seven (7) specific relational questions:

1. Do employers that sponsor workplace-based, contract training at community and technical colleges in West Virginia have satisfaction predictors that are similar to employers in general?

2. What is the relationship, if any, between employer-sponsor participation in program design and employer satisfaction with workplace-based, contract training programs?
3. What is the relationship, if any, between customization of program content and mode of delivery and employer satisfaction with workplace-based contract training programs?

4. What is the relationship, if any, between flexibility of course and program scheduling and employer satisfaction with workplace-based contract training programs?

5. What is the relationship, if any, between the use of contract pricing and employer satisfaction with workplace-based contract training programs?

6. What is the relationship, if any, between the use of adjunct instructors with business and industry experience and employer satisfaction with workplace-based contract training programs?

7. What is the relationship, if any, between availability of institutional resources—consisting of at least on-site admission, registration, textbook sales, and academic advising—and employer satisfaction with workplace-based contract training programs?

8. What is the relationship, if any, between employee-student persistence and employer satisfaction with workplace-based contract training programs?

Theoretical and Operational Definitions

Elements of this study refer solely to workplace-based contract courses for academic credit, contract certificate and degree programs, and noncredit contract training offered to employers by the 12 institutions in West Virginia designated by the Higher Education Policy Commission (HEPC) as either a community college (WVU-Parkersburg and WVU-Potomac State), a freestanding community and technical college (Eastern West Virginia Community and Technical College, Southern West Virginia Community and Technical College, and West Virginia Northern Community College), or a four-year institution community and
technical college component (Bluefield State, Fairmont State, Glenville State, Marshall, Shepherd, West Virginia State, and WVU-Institute of Technology. All theoretical definitions were operationally defined on “The 2000-2002 West Virginia Community and Technical College Contract Training Evaluation Survey” (WVCTCCTES) instrument as follows:

- **Employer** was defined as a business, industrial, agency, or other organizational employer that sponsored, through contract arrangement and as a third-party, workplace-based academic credit or noncredit courses or certificate and degree programs for employees as indicated by an employer or employer representative as a response to a question on the survey instrument.

- **Employee-student** was defined as an employee that participated in an employer-sponsored, workplace-based academic credit or noncredit course or certificate or degree program as indicated as a response to a demographic question on the survey instrument.

- **Contract Training** was defined as a workplace-based academic credit or noncredit course, seminar, workshop, special training, certificate, or degree program, delivered by contract arrangement with a sponsoring employer, as indicated as a response to a question on the survey instrument.

- **Workplace-based** was defined as the use of an employer’s real property or other physical classroom space used as the facility to conduct credit and noncredit contract training, as indicated as a response on the survey instrument.

- **Program Content and Mode of Delivery Customization** was defined as customization of workplace-based academic credit or noncredit course or program curricula, which customization reflects specific employer training needs and is a modification of traditional or on-campus content or mode of delivery, as indicated as a response on
the survey instrument.

- **Flexible Course and Program Schedule** was defined as the day, time, and duration of a workplace-based contract course or program, which differs to any degree from a traditional, 15-week semester course schedule, as indicated as a response to a question on the survey instrument.

- **Contract Pricing** was defined as the agreed-upon monetary cost charged to an employer for design and delivery of a workplace-based credit or noncredit course or certificate or degree program course as indicated as a response to a question on the survey instrument.

- **Adjunct Instructor** was defined as the use of adjunct and full-time instructors with business and industry experience, which includes teachers who worked in the private sector prior to employment with a college, to teach workplace-based credit and noncredit programs, as indicated as a response to a question on the survey instrument.

- **Institutional Resources** was defined as the workplace-based availability of college support services, which includes admissions, registration, financial assistance, textbook sales, and academic advising, as indicated as a response to a question on the survey instrument.

- **Employee-student Persistence** was defined as the degree of persistence of employee-students participating in a workplace-based credit or noncredit course, certificate, or degree program as indicated as a response to a question on the survey instrument.

**Significance of the Study**

Changes in enrollment patterns in traditional degree programs at many colleges and universities, as well as reductions in state and federal funding, require institutions to identify more fully and pursue more effectively nontraditional student markets to meet the higher
education needs of all constituents and to remain fiscally sound. Such markets include business and industry employers who sponsor and financially underwrite credit and noncredit customized contract training programs for employees. Targeting these existing and new markets is significant and has implications for community and technical college administrators involved in one or more of the seven classical functions of leadership advanced early on by Urwick (1936), which include planning, organizing, staffing, directing, coordinating, reporting, and budgeting. The design, promotion, and delivery of customized contract training and education for business and industry has implications for most administrative areas in colleges (Kopecek, 1984).

A broad array of college administrators, staff, and faculty are needed to make employer-sponsored, workplace-based contract training programs successful. Powers et al. (1988) suggested that all members of the university community—including presidents, vice presidents, deans, department chairpersons and faculty team leaders, trustees, foundation officials, government leaders, and consultants—should be familiar with the subject of business-higher education partnerships. The development of a single workplace-based contract training program for an employer must involve college staff besides the director or dean of continuing education, workforce development, or training: faculty and academic administrators, a lay advisory committee, institutional committees, the offices of admission and registration, the bookstore, the president or provost, college trustees, and a state agency in some instances (Clarke, 1984). Data obtained from this study can be significant in the formation of academic and fiscal policy for higher educational institutions that serve the business and industry employer and adult employee-student markets.

Full-time and part-time college faculty members who are partially responsible for contract course instruction are additional stakeholders who can use data from a study about
the predictors of employer satisfaction with workplace-based credit and noncredit training programs. Faculty members may be able to use data obtained from this study in course curriculum design and development, textbook and resource material adoption, syllabi design, course objectives, grading policies, and method of course content delivery.

Chief administrators (including presidents, provosts, the vice presidents or deans of academic affairs, administrative affairs, continuing education, and planning and advancement) who may be accustomed to addressing the academic needs of traditional students, need to work cooperatively to provide workplace-based contract education and training to employers and employees. Deans and directors of continuing education and workforce development, in particular, are increasingly asked to help design, promote, and deliver academic credit courses and certificate and degree programs to employers according to modular format and according to nontraditional modes (Warford & Flynn, 2000). These administrators can use the data from this study to help determine the correlation between individual components of workplace-based credit and noncredit contract training and employer satisfaction with such training; data helped determine which variables predict the greatest level of satisfaction, thereby allowing administrators to market and coordinate programs effectively. Data from this study will help deans and directors of continuing education and workforce development programs make decisions about workplace-based contract program design, budgeting, and staffing.

Community and technical college presidents and provosts, who are required to incorporate workforce and economic development as components of the mission of their respective institutions, can use data from this study to include in their respective institutional annual strategic plans information about the design, development, and delivery of customized contract training. Strategic plans and quarterly reports were required under WVSB 547, from
1995-2000, and are required under WVSB 653, July 1, 2000, through June 30, 2006. For example, section IV, part C, of the quarterly strategic plan report submitted by each community and technical college under the provisions of WVSB 653 requires data that document that West Virginia community and technical colleges collaborate with government agencies, employers, and public schools to create a better prepared workforce. Presidents and provosts can use these data to justify increased budget allocation requests, competitive salary levels, and fully funded positions for staff and faculty involved in workplace-based contract training. (Section III, part F of the quarterly strategic plan report requires data that document that West Virginia community and technical colleges improve productivity and compensation of faculty, staff, and administrators.) Powers, et al. (1988) contended that some college and university presidents see opportunities for exerting leadership through business-higher education partnerships.

Administrators in administrative affairs and fiscal affairs offices can use the data from this study to identify a nontraditional and additional source of external funding, particularly as institutional budgets are adversely affected by decreasing student enrollments and reductions in state and federal allocations. This is particularly important in West Virginia because a 2002 executive order from the governor’s office mandated a 10% decrease in higher education expenditures for the 2003-2004 academic year. For example, the reduction in state allocations to West Virginia University alone would equal nearly $20 million and just over $2 million at Fairmont State College (“Higher Ed,” 2002). Identifying which variables predict employer satisfaction of workplace-based credit and noncredit contract training, and which variables predict satisfaction to a greater or lesser degree, will enable college administrators to design, promote, and deliver academically and financially successful workplace-based programs that will help offset reductions in state funding for higher
education. Data from this study may help heads of administrative affairs departments design, budget, plan, and coordinate professional staff development activities for college personnel involved in workplace-based contract training.

Continuing education and workforce development deans and directors can use data from this study to determine what level of employer participation in program design is required, what contract price is cost effective to both the employer and to the college, what types and degrees of flexible scheduling are needed to ensure employer satisfaction, which faculty (either full-time or part-time) to employ to teach a particular course, and what workplace-based institutional support services produce the highest levels of employer satisfaction with workplace-based contract training programs at community and technical colleges.

Business- and industry-sponsored contract training programs are primarily delivered off-campus (i.e., workplace-based), use sponsoring employer classroom space, computer laboratories, parking space, audio-visual equipment and copiers, and, therefore, account for a significantly smaller institutional expense than for the delivery of traditional, on-campus programs. This arrangement can help physical facilities managers, who are responsible for classroom space and equipment maintenance, recognize savings through increased revenue from workplace-based training that has little to no effect on the cost of physical plant operation. Workplace-based contract training requires the use of textbooks and other instructional materials, which can provide an additional source of revenue for institutional auxiliary services such as a college bookstore. The use of on-campus computer and technical laboratories by students enrolled in workplace-based programs, which laboratory rental costs can be included in contract program agreements, can have both positive and negative implications for academic and administrative affairs department heads who must balance the
potential of additional revenue with on-campus student laboratory needs.

Findings from a 1987 study of contract courses delivered by State University of New York (SUNY) community colleges led to an $8 million increase in funding by the Legislature. Since 1981, New York state community colleges have received state resources, based on full-time equivalent (FTE) enrollment, for contract training (Winter & Fadale, 1987). State lawmakers who allocate funds used directly or indirectly for contract course and program design, promotion, and delivery can use data obtained from this study to consider the fiscal impact of new and alternate sources of funding for higher education relative to traditional resource allocation processes. Legislators can use the study data to encourage or require colleges and universities to design, promote, and deliver workplace-based credit and noncredit contract training programs that are successful and that provide an additional source of external funding for individual institutions. With new federal mandates and increasing interest at the national level in workforce training and development (e.g., the 1998 Workforce Investment Act), policymakers at the state level can use data from this study to help determine whether enrollment in employer-sponsored, workplace-based contract training programs should be considered in the allocation of resources for higher education.

Besides customized training and technical curricula, business and industry sponsors of workplace-based contract training programs for employees should support the delivery of basic skills education and core curricula offerings such as developmental and freshman-level math and English courses, which can affect the role and function of academic affairs administrators and developmental education program directors. Increased enrollments of adult students in developmental courses can increase the institution’s total full-time student equivalent (FTE) headcount, which can result in increased state allocations and federal Pell
grants and Perkins funds to the college. At the same time, however, increased enrollment in developmental courses will require additional full-time and part-time instructors, additional classroom space, and additional computer laboratory space. Data from this study may help academic affairs and developmental education administrators design remedial programs for employee-students enrolled in workplace-based contract courses and to mitigate conflict with space and staffing requirements already needed for on-campus programs.

Including business, industry, and agency representatives of employer-sponsored, workplace-based contract training programs on institutional consortia, task groups, and other special purpose committees may have implications for vice presidents of student affairs, vice presidents of planning and advancement, and alumni association administrators whose programs may benefit from increased corporate philanthropy from an expanded potential donor base. Data from this study may allow these administrators access to a new student market and, subsequently, additional sources of revenue and student-alumnus activity.

Partnerships with employer sponsors of workplace-based contract training programs may provide an additional pool of qualified part-time instructors who may also be available to teach in the college’s on-campus program, which may have positive implications for vice presidents for academic affairs, division deans, and department chairs and program directors who are responsible for adjunct faculty staffing. Data from this study can help college administrators make better staffing decisions based on faculty characteristics and teaching methodology that collectively produce employer satisfaction in workplace-based contract training programs.

Employer-sponsored, workplace-based contract training programs may create and enhance collaboration with business and industry employers, chambers of commerce, and local public school systems, which—individually and collectively—may have implications
for the vice presidents of institutional planning and advancement and alumni affairs to serve recent high school graduates, must accommodate older students who are part of work-based delivered contract training programs (Warford and Flynn, 2000).

This study offered an opportunity to show differences in satisfaction levels of employers that participate in one of three different community and technical college organizational structures—freestanding, college component, university component—in West Virginia. Data analysis, findings, and recommendations from this study may be a significant addition to research in the field because no known study has examined levels of employer satisfaction with workplace-based contract training at community and technical colleges in West Virginia or among the different types of community and technical college governance structures as exists in the state.

Limitations

Workforce development, workforce training, and workforce education are terms common to the general population of community and technical college educators and used—sometimes interchangeably—in the literature, but the activities placed under the “umbrella” of one or more of these terms constitute a broad array of educational products. The term contract training is no less ambiguous and constitutes an almost infinite number of possible arrangements in course content, scheduling, and mode of delivery. A particular employer that sponsors workplace-based programs may report a high level of satisfaction with a program that was delivered exactly as promised, contained relevant content, was cost effective, and resulted in observable and measurable employee-student participant outcomes. A second employer, however, may report a moderate to low level of satisfaction with the same program simply because employer-student participants’ outcomes were less observable and less measurable or because expenditure reductions in the organization’s training budget
were mandated before the contract training program was complete. Measuring satisfaction levels is problematic (Kerlinger, 1986). Limitations in the control of the perceived quality of workplace-based contract training programs delivered by community and technical colleges as evidenced by employer-student participant outcomes observed through on-the-job behaviors may affect responses to questions on a survey instrument.

Viewing all workplace-based, contract training and education programs as “customized” may be problematic and may suggest that a particular course was created literally “from scratch.” To other employers and college staff, however, the term customized suggests that an existing course was modified or tailored to some degree to fit the particular needs of an employer at a particular point in that employer’s workforce training and development program.

No national or state standards exist that govern the delivery of college-level, workplace-based credit and noncredit contract training at community and technical colleges. Community and technical colleges in states with strong comprehensive community college systems, with a long history of outreach and engagement with the business and industry community, and that enjoy adequate resource allocation for contract training may enjoy higher levels of employer satisfaction than community and technical colleges in states with weak or no comprehensive community college systems, a shorter history of outreach and engagement with the business and industrial community, and that allocate little or no governmental or institutional funding for contract training. Differences in institutional structure, governance, and funding at the institutions named in this study should be noted as a limitation.

Data were obtained from survey results incorporated into existing research findings and from a purposive sampling of employers that sponsored credit and noncredit contract
training programs during the period July 1, 2001, through June 30, 2002, at each community and technical college in West Virginia, which includes three freestanding institutions, three university components, and six baccalaureate institution components. Although the population size is adequate, generalization of the findings of this study may be problematic because the population is limited to employers working with community and technical colleges in West Virginia only. Generalization will be limited to peer institutions that are similar to the twelve community and technical colleges listed in this study.

Summary

The trend toward providing workplace-based credit and noncredit contract training is growing exponentially at community and technical colleges in the United States, regardless of a particular institution’s governance structure or relationship with a baccalaureate college or a university. The changing demographics of the American workforce, the increasing demand for job skills upgrading, and the growing need for highly competent and technological literate incumbent workers require that colleges and universities, particularly community and technical colleges, meet the workforce development and continuing educational needs of employers and employees. Retooling current programs and responding to requests for new programs to elicit high levels of employer satisfaction may allow community and technical colleges to capture a substantial segment of the workforce development market. Institutions that fail to accommodate growth in this area and to make appropriate and timely organizational changes may experience the negative effects of dwindling enrollments in both credit and noncredit programs and, as a result, reduced financial resources.

Research cited in this study demonstrated that several key components are necessary
for successful workplace-based contract training programs: employer-industry input into course and curriculum design, flexibility of program scheduling, contract pricing, the use of instructors with industry-specific experience, the availability of on-site support services, and employee-participant retention. Community and technical colleges that give particular attention to the evolving trend toward increased workplace-based contract training, that invest the necessary financial and human resources into workplace-based programs, and that are willing to re-examine and modify traditional organizational structures and delivery systems should be able to capture a share of the growing contract training market.
CHAPTER II

Review of Literature

Background

In the United States, nearly 1,300 postsecondary institutions operate as two-year institutions of higher learning and are referred to as community colleges, technical colleges, two-year branch or component colleges, tribal colleges, and independent junior colleges (American Association of Community Colleges [AACC], 2000; Phillipe and Patton, 2000; Vaughan, 2000). The AACC (2001, p. 7) defined a community college as follows:

[A]n institution that is accredited (or undergoing accreditation) by one of the six regional accrediting bodies and offers the associate degree as the highest degree.

A community college may also be a campus that offers the associate degree as the highest award but is part of a regionally accredited, baccalaureate degree-granting institution.

Bailey and Averianova (2000) asserted that community colleges developed first as junior colleges that emphasized academics, but that two-year institutions today are complex and involve diverse educational, economic, and social functions. According to Cohen and Brawer (1996, p. 1), three social forces gave rise to the community college: the shortage of trained workers with new industrial and technological skills, the “lengthened period of adolescence” that required a longer period of custodial care, and the “drive for social equality.” Vaughan suggested that early twentieth-century calls for reform in American education, the GI bill, the baby boom, the 1960s civil rights movement, and federal student assistance also contributed to the growth of two-year institutions.

The number of community and technical colleges grew from only eight institutions in 1900 because an increasing number of demands were being placed on educational entities at
every level (Cohen and Brawer, 1996). The greatest growth in community and technical colleges occurred in the 1960s and 1970s when 457 new institutions opened as a result of federal funding from the Higher Education Act of 1963 and 1965; a trend toward increased state allocations, beginning with California’s 1978 Proposition 13 and similar higher education funding legislation in several other states, also contributed to the growth of community and technical colleges (AACC, 2000; Cohen and Brawer, 1996).

Community colleges historically have strived to be accessible to all students. For example, community college systems in North Carolina and Vermont guarantee that community college services are no more than a 30-minute commute of all citizens of each respective state (AACC, 2000). In 1993, the American Association of Community Colleges reported that a community college was located within driving distance of more than 90% of the nation’s total residential and business population, at least one institution within each congressional district.

Community and technical college education in West Virginia began in the 1970s with the concept of the “branch campus” of a public university or college, but the increased expansion of the state’s higher education institutions was not accompanied by new or increased state funding. Twelve institutions in West Virginia are classified as community and technical colleges (AACC, 2000; Higher Education Policy Commission, 2002; West Virginia Senate Bill 653, 2000). With the exception of state Budget Digest allocations of $2 million in each of the first two years of operation (1999 and 2000) at Eastern West Virginia Community and Technical College, however, no actual increases in general budget funding have been realized by the universities and colleges required to establish community college “divisions” (currently referred to as “components”) on their campuses.

Approximately one half of all first-time college freshmen take courses at community
colleges, and at least 100 million people have attended community colleges since 1901 (AACS, 2000). More adults learn in order to make career transitions than for all other reasons combined (Powers et al., 1988). Aslanian and Brickell (cited in Powers et al., 1988) report the following:

A nationwide study of 2,000 Americans demonstrated that more than half of those twenty-five years old and older had studied [either inside or outside academia] in the past year, and that 83% of that group said they had learned [via a training or educational activity] in order to cope with particular changes in their lives (p. 246).

In West Virginia, community and technical college education is offered at institutions operating according to one of three organizational structures: university division, baccalaureate-granting college component, or freestanding institution. Changes in community and technical college governance structure in West Virginia, as a result of West Virginia Senate Bill 653 (WVSB 653), and in other states during the closing decade of the 20th century (particularly the move toward freestanding rather than component or division community and technical colleges), and an increased demand by employers and employees for workplace-based basic skills education and technical training at the postsecondary level, may result in increasing enrollments and in an increased number of two-year institutions. Community and technical colleges historically have accommodated growth and operated effectively and efficiently, however, without additional physical facilities.

Wilson (2000) argued that since the 1950’s General Education Movement, higher education in America has undergone a search for a common core of knowledge and skills that is the hallmark of an educated person. Vaughan (2000) asserted that President Thomas Jefferson believed that education should be practical as well as liberal and should serve the public good as well as individual needs. The traditional idea that a liberal arts education
alone contributes to the well roundedness of the college graduate must adapt to the growing phenomenon that technical and occupational education, which includes some core liberal arts component, has a place in higher education and should be neither excluded nor viewed as a secondary or adjunct academic pursuit.

Cohen and Brawer (1996, p. 2) suggested that because the public viewed education as the vehicle of upward mobility and as a benefactor to the material value of a community, community college education answered the pragmatic questions of the early twentieth century: “What knowledge is of most worth?” and “What knowledge yields the greatest tangible benefit to individuals or to society?” Community colleges help students reach personal goals through education, accommodating a wide range of student aspirations (AACC, 2000, p. 52).

Expansion of workforce development programs at community colleges occurred in the 1980s because of changing economic conditions (Bailey & Averianova, 2000). Administrators at Rio Salado College, Maricopa Community College District in Arizona, for example, argued that a college education, no matter what the discipline, should prepare people for work (Healy, 1998). According to a study of 10,000 students in 21 states, 62% of all students, both traditional and nontraditional, cite that their main goal for attending college was an immediate career objective (Evelyn, 1999).

Career, occupational, and technical certificate and degree programs and noncredit customized training programs delivered at the community and technical college level carry both individual and societal benefits as to labor force productivity, economic development, and job opportunities for graduates (AACC, 2000; Clagett & Alexander, 1995; Cohen, 1996). Bragg and Jacobs (1993) suggested that customized training can play an important role in economic development.
Community colleges train the future workforce, instruct current workers in new technology, and provide work skills upgrade opportunities (AACS, 2000; Clagett & Alexander, 1995; Luther, 1984). Vaughan (2000) contended that occupational-technical education programs have been an integral part of public community college curriculum since the 1920s, and that such programs remain essential for the United States to compete in a global economy and for American workers to keep pace with the changing skills needed in the workplace. Changes in federal legislation regarding job training and workforce development, specifically the federal Workforce Education Act of 1997, gave community colleges an even greater opportunity to play a role in enhancing the American economy and the work life of Americans (AACC, 1997). The 1998 federal Workforce Investment Act also mandated changes in workforce development activities by states that received federal money.

The Commission on Workforce and Community Development (1997) found that 96% of the community colleges surveyed in a study reported a direct involvement in providing training and education services to business and industry. Providing customized workforce and contract training is a significant role of American community colleges in serving the business community (Wismer, 1995, p. 16). Dougherty and Bakia (2000, p. 207) reported that according to a national survey, “72% of contract training was provided for private companies or firms, 20% for government agencies (local, state, and federal), and 8% for nonprofit organizations (Lynch et al., 1991, p. 31).” Dougherty and Bakia (p. 200) also reported that three nationwide surveys of community colleges (in 1989, 1992, and 1994, respectively) found that more than 90% of community colleges offered contract training to firms, nonprofit organizations, and government agencies (Doucete, 1993, p. 4; Johnson, 1995, pp. 88, 90; Lynch et al., 1991, pp. 13, 19).
Dougherty and Bakia (2000) contended that academic course skills are an important component of workforce development and worker education programs because employers find that workers’ ability to acquire more advanced job skills depends on their level of skill in basic reading, writing, and arithmetic. According to Incus (1985), research showed that employers need employees with broad liberal arts backgrounds; therefore, workplace-based credit courses and certificate and degree programs are as important as short-term, noncredit workshops designed primarily to meet job and employer-specific training needs. The Commission on Workforce and Community Development (CWCD) suggested that economists and labor analysts generally agree that the preparation of the remaining 80% of the population in reading, writing, computational information processing, and business, technical, and learning skills, remains the critical training objective (AACC, 1997).

**Workplace-Based Contract Training Defined**

In a 1993 policy paper, the American Association of Community Colleges, drawing from a 1992 State of Michigan (Jacobs, 1992) study, defines workforce training, the general “umbrella” under which contract training falls, as follows:

Those activities designed to improve the competencies and skills of current or new employees of business, industry, labor, and government. Such training is typically provided on a *contract basis* [italics added] with the employer who defines the objectives of the employee training, the schedule and duration of the training, the location at or the delivery mechanism by which the training is provided, and, often, the competencies of the trainer (AACC, 1993, p. 1).

Workforce training provided by community and technical colleges should be viewed as more specific in scope, such as training for incumbent workers, than the general higher education
function of workforce preparation provided by colleges and universities to individuals aspiring to enter or re-enter the job market (AACC, 1997).

*Contract training* refers to an arrangement in which a business, industry, or other employer contracts directly with a college to provide instruction to employees, clients, or members, when such training is different from other educational services provided by community colleges (Bragg & Jacobs; 1993; Powers, et al., 1988; Sackers, 1987). Dougherty and Bakia (2000) further defined contract training as training under contract to employers designed to improve both job-related and general academic skills of incumbent and future employees. Dougherty and Bakia also report that employees enrolled in contract courses, however, may be learning general academic or technical skills applicable outside a sponsoring employer’s business or beyond a particular industry (Bakum, 1991, p. 224; Brown, 1997). Customized contract training meets specific skill or task needs of a particular business, industry, or organization and usually centers on the needs of employers (Bragg & Jacobs, 1993; Dougherty & Bakia, 2000; 1993 Kopecks, 1984). Kopeck and Clarke (1984) stated that the development of customized education and training follows the strong community college tradition of meeting local and regional needs with uniquely local solutions.

Contract training is different from traditional two-year occupational education in that the employer is the client rather than the employee-student (Daugherty & Bakia, 2000). Customized contract training offered by community and technical college ranges from traditional credit-bearing, collegiate-level courses to noncredit technical, managerial, and industry-specific short courses and workshops (Bragg & Jacobs, 1993). According to the Commission on Workforce and Community Development (1997), types of contract training provided by community colleges for business and industry sponsors have included workplace
literacy, supervision and management skills, computer-related technology training, communication skills, interpersonal relations, and technical training skill courses.

Ramirez (1989) found that workplace-based, employer-sponsored contract training is generally contracted in one of six ways: (1) employer-funded closed-credit courses not open to the public; (2) average daily attendance (ADA) funded credit courses open to the public; (3) certificate and degree programs offered as either closed-credit or ADA; (4) noncredit customized training funded by the employer; (5) special topic or “umbrella” courses; and (6) noncredit courses funded at a reduced ADA rate. Dougherty and Bakia (2000, p. 199-200) contended that contract training includes seven key features listed in Table A.

Table A. Defining features of contract training

- An outside group (such as a firm, industry association, or government agency) contracts for specific programs or courses.
- The contractor is conceived of as the main client for the training. Students are secondary clients.
- Community colleges receive payments from the contractor and/or public agencies providing third-party payments.
- The contractor largely, if not entirely, determines who will receive the contracted training.
- The contractor has a significant or even determinative voice in framing the content of the training.
- The contractor has a significant or even determinative voice in defining measures of success.
- The contracted programs are usually—but not always—customized to the contractor’s requirements in some fashion.

During the 1980s and 1990s, the economic development role of community and technical colleges expanded to include customized contract training (Bragg & Jacobs, 1993; Dougherty & Bakia, 2000). Bailey and Averianova (2000) stated that community colleges responded rapidly to the growing workforce development needs of business, industry, and government by customizing the content of courses offered, by delivering courses in nontraditional ways, by providing creative financing, and by developing alternative staffing.
McGuire (1984) explained that the New York State Education Law of 1984, in allowing employee-student enrollment in third-party contract courses to be included in the state’s resource allocation formulary, defined costs associated with contract courses to include courses offered for the purposes of providing occupational training and assistance to business for the creation, improvement, and retention of job opportunities, through contract arrangements between a community college and a business, labor organization, or not-for-profit corporation. The community and technical college systems in North Carolina and South Carolina were both created to address workforce and economic development in those states (Bragg & Jacobs, 1993). The American Association of Community College, in a 1993 policy paper, emphasized the following:

The most effective role for government to play [in helping forge a partnership of private and public concerns for workforce and economic development] is to provide incentives for private investment in workforce training and assistance to public providers of such training, specifically to community colleges that stand ready to deliver high-quality training at reasonable costs (preface).

West Virginia does not allow full-time equivalent (FTE) enrollment in third-party contract courses (primarily workplace-based and employer-sponsored programs) to be included in the state’s resource allocation formulary. West Virginia’s higher education legislation of 2000, Senate Bill 653, however, mandates an expansion of workforce and economic development programs at community and technical colleges in the state. Such programs were also mandated under WVSB 547 in 1995, but the mandate was not funded. Workplace-based, employer-sponsored contract credit and noncredit training programs at community and technical colleges in West Virginia are supported fiscally on a self-sustaining basis and with revenue generated by the sale of such programming.
History of Workplace-Based Credit and Noncredit Contract Training

Gold (1981) contended that partnerships between higher education and business and industry for the purpose of offering workplace-based training can be traced to the creation of the land-grant institutions of the 1860s and 1890s. According to Gold, Johns Hopkins and Cornell universities, in the 1880s, were among the first post-secondary institutions to collaborate with employer groups to offer applied and practical education for new and incumbent workers. Dougherty and Bakia (2000) suggested that modern-day contract training, or “customized training,” originated specifically in the southern United States and migrated across the country during the decades of the 1980s and 1990s.

Hodgkinson (1981), in the late 1970s, argued that colleges and universities address the benefits of business and industry alliances to produce a second system of postsecondary education housed in industry. Powers et al. (1988) contended that, although business and higher education partnerships have theoretically existed since the Morrill Act of 1862, substantial growth did not occur until the late 1970s and early 1980s. One of the most significant developments in higher education during the decade of the 1980s was increased linkage between colleges and business and industry for purposes of workforce and economic development (Bragg & Jacobs, 1993; Powers, et al. 1988, Suchorski, 1987). According to the American Association of Community Colleges (1993, p. 2), “Given current resource constraints at all levels of government, innovative public-private partnerships are the most realistic and promising method of supporting critically needed workforce training.

Dougherty and Bakia (2000), in offering a theoretical basis to the origins of contract training, argued the following:

Drawing on structuralist theory in political sociology and on resource dependency in organizational sociology (Aldrich & Pfeffer, 1976; Alford & Friedland, 1975; Block,
the most convincing explanation for the rise of contract training is one that—while acknowledging the powerful role of business pressure—also stresses the key role of community colleges and government bodies pursuing interests and values of their own. Community colleges and government bodies need to extract resources from their environment and this leads them to be active, modifying their environment as much as being modified by it (pp. 207-208).

Evelyn (1999) reported that Dr. George Baker of the National Initiative for Leadership and Institutional Effectiveness at North Carolina State University asserted that colleges would do well to invest heavily in business partnerships and workforce development. A partnership of public and private concerns, necessary for the United States to remain competitive in the global economic race, appears to be needed but has not yet been forged.

An informal training system, largely housed in community and technical colleges, and one designed to meet the need for skilled workers and largely employer-supplied and employer-supported, exists and is estimated to serve more individuals than the entire system of higher education (AACC, 1993). The American Society of Training and Development (ASTD) estimated in 1991 that as recent as 1981, companies conducted approximately 90% of their training in house; in 1991, however, ASTD reported that nearly 50% of all employers contracted with an outside provider, including community colleges, for employee training (ASTD, 1993). According to a 2001 study on trends in employer-provided training, companies identified eight (8) categories of outside training providers: four-year colleges and universities; community and junior colleges; technical and vocational institutions; product suppliers; private training and consulting firms; independent training consultants and contractors; unions, trade, or professional organizations; and government organizations (Van Buren & Erskine, 2002).
Averil (1983) contended that business and industrial customized training delivered by contract arrangement with public institutions is viewed as more advantageous than expanding in-house training by business and industry. Powers et al. (1988, p. 247) reported that approximately 60% of all adult learning has taken place outside institutions of higher education (Aslanian and Brickell, 1980, p. 155). In a 1988 study, Doggone found that only 57% of all employee training programs are provided in house. Doucette (1993) found that community colleges were delivering training for small and medium-sized companies and that most of the training centered on workplace skills and technical areas.

Van Buren and Erskine (2002) reported that after three straight years of decline in outsourcing training in industry overall, between 1999 and 2000, the first sign of an upward trend was recognized. The Commission on Workforce and Community Development (1997) reported findings from a study that determined 8 out of 10 area businesses, industries, and manufacturing centers were familiar with and were using the training services of their local community college. According to Van Buren & Erskine, however, the percentage of companies that used community and technical colleges as training providers decreased from 69.2% to 58.9% during the period 1998 to 2000.

Expenditures for employer-provided workforce training and development have varied over the years. During the late 1970s and early 1980s, employers spent an estimated $30 billion to $50 billion on continuing education, technical training, and for-credit instruction for employees as part of employer-sponsored workforce education (Hodgkinson, 1981; Lynton, 1984). Employers annually invest $30 billion to $100 billion in employee training and education (Hodgkinson, 1981; Kopecek, 1984; Luther, 1984). For example, Powers et al. (1988) reported that Eurich confirmed that in 1977, American Telephone and Telegraph spent $700 million on training compared to Massachusetts Institute of Technology’s budget
of $222 million. According to Gold (1981), the Bell System, in 1980, expended $1.7 billion on employee education and training. Hodgkinson (1981) suggested that the size and value of employer-provided training was nearly equal to the net worth of the 3,500 colleges and universities, whose total investment in the early 1980s was about $55 billion. Powers et al. (1988) also reported that, according to Eurich (1985), estimates of corporate expenditure on education range from a relatively conservative low of $40 billion spent annually by private sector employers only to an apparently extravagant high of $100 billion spent by both public and private sector employers.

A 1991 survey by the American Society of Training and Development (ASTD) found that employers spent nearly $45 billion in formal training in 1991 (AACC, 1993). In West Virginia, specifically, a total of nearly $4.5 million was expended (a combination of state grants and participating company contributions) on 81 training projects sponsored by the Governor’s Guaranteed Work Force Program in 2001. Van Buren and Erskine (2002) found that although training expenditures dropped slightly from 1998 to 1999, total employer-provided training expenditures increased during the period 1999-2000; actual spending on training during the period 2000-2001 increased about 10%, and more companies expect training expenditures to increase than to decrease in 2002.

Enrollment in and revenues from contract training programs is growing. Results of a 1989 national survey show that 93% of the colleges surveyed offered at least one contract training course to employer sponsors (AACC, 1991). According to a 1991 study, Optic reported that the 16 community colleges surveyed generated more than $42 million through contract training in 1989-90. According to a 1993 League for Innovation in the Community College study, 96% of community colleges that responded provided training for employees of business, industry, labor, and government (AACC, 1993). Some estimates indicate that
approximately 75% of the existing workforce will require significant job retraining in the next decade and that 80% of new jobs created will require a minimum of two years of education or training at the college level (AACC, 1997).

Bailey and Averianova (1999) asserted that a growing number of policy makers and business leaders look to occupational education at the community college as a key site for building the workforce for the next century. Dougherty & Bakia (2000) reported that more than 90% of community and technical colleges offer credit and noncredit contract education, and employee-students enrolled in contract courses (both credit and noncredit) account for 17% of the total enrollments in the median community and technical college.

Since its inception in 1991, the Governor’s Guaranteed Work Force Program has trained more than 116,000 West Virginia employees at manufacturing assistance centers and at community colleges across the state (WVDO, 2002). Besides offering individual courses and certificate and degree programs on campus, community and technical colleges deliver off-campus, for-credit courses and certificate and degree programs under the sponsorship of employers and as part of employer workforce training, education, and development programs. Demand for contract training by organizations far exceeds the supply (Powers et al., 1988). Powers et al. (1988) suggested that because demands for retraining can be expected to increase, contractual arrangements with employers will provide a growth area of development for colleges.

Powers et al. (1988) reported that according to a 1982 study by the Office of Adult Learning Services of the College Board, every type of college has the capacity to teach and has been involved in contract training, and every category of business organization has the capacity to learn and has been involved in contract training. The American Association of Community Colleges (1997) contended that business and industry are faced with enormous
challenges, and the development of a skilled work force is central to future competitiveness. Luther (1984) suggested that to help achieve overall organizational quality, business and industry must recognize that employee training is the cornerstone and that industry will turn to community colleges to help provide employee training.

Contracted instruction is one mechanism by which community colleges lend their expertise to area businesses and industries (Palmer, Colby, & Zwemer, 1984). Powers et al. (1988) reported that, according to Brickell (1985), recent market research has shown that employers did want to purchase contract training from local community colleges. Brickell’s research, although dated, studied 30 colleges and surveyed 300 companies to determine training needs for credit and noncredit programming, degrees, and certificates on a broad range of topics. Updike (1991) indicated that, according to a 1989 survey of 106 community colleges in California, 78% of the 89 responding colleges reported that contract educational services were being provided to business and industry. Dougherty and Bakia (2000) also found that 90% of community colleges deliver contract training.

Business and industry depend on community colleges to provide on-demand skills training for workers in the college’s service area, and contract training is a growing aspect of the community services (or continuing education) function at community colleges (Vaughan, 2000). Van Buren & Erskine (2002) found, however that the use of community and junior colleges as training providers underwent the most significant drop (of the eight training provider types listed), from 69.2% to 58.9% from 1998 to 2000.

Benefits of Workplace-Based Contract Training Programs

Community and technical colleges benefit by partnerships with business and industry to deliver workplace-based credit education by gaining access to a nontraditional student market, enhanced faculty and curriculum development, and increased income (Gold, 1981;
Grubb, 1989; Kopecek, 1984; Lynton, 1984; Ramirez, 1989). Powers et al. (1988) suggested that potential benefits, including an improved financial situation for colleges and improved productivity and competitiveness for business and industry, can result from business-higher education partnerships. Jacobs & Teahan (1997) found that some community college personnel suggest that contract training with business and industry employers enhances traditional credit programs. Powers et al. further asserted that colleges can strengthen curricula, in terms of programs and quality, by serving business and industry clients.

Relationships between community and technical colleges and employers for the purpose of contract training delivery can be politically expedient for the institution by increasing business and industrial support for other institutional activities in addition to training (Bailey & Averianova, 1999; Gold, 1981). Representatives from business, industry, labor, and government served by community college workforce training programs often are represented on institutional committees and boards (AACC, 1993).

The Commission on Workforce and Community Development (1997) suggested that community colleges perceive their role for business and industry as partner rather than workforce training provider, and, accordingly, include the latter in board representation in all areas of institutional planning. Cohen (1987) argued that some gap exists between an institution’s noncredit and credit offerings, and that increasing a college’s interaction with businesses in sponsoring workplace-based credit courses can serve as a bridge. Powers et al. (1988) reported that, according to a 1982 study by the Office of Adult Learning Services of the College Board, academic credit, most commonly, has been awarded for contract training programs. In 2000, however, the AACC reports that more than 5 million students annually participate in some noncredit activity at a community and technical college, but that no accurate national data exist about noncredit offerings although some state data are available.
For example, North Carolina reported about 70% of its 1996-1997 community college enrollment as noncredit while Florida reported only 11% of its 1995-96 enrollment as noncredit.

Wismer (1995) noted that customized training for business and industry is increasingly more important for local business to develop a productive workforce and to be competitive in a changing, global economy. Business and industry groups that have entered into partnerships with community colleges (or that intend to do so) can benefit by learning about how their respective college partners view workforce development and contract training, which are two nontraditional areas for many higher education personnel (Powers et al. 1988). Evelyn (1999) confirmed that, according to a 1997 survey conducted by Tony Zeiss, 47% of 2,243 responding employers indicated that more than half their current workforce needed additional training.

Benefits to sponsoring employers include cost-effective and convenient quality education and training. Powers et al. (1988, p. 248) suggested that organizations benefit from college-provided training programs because use of campus facilities and instructors is more cost effective than company-provided facilities and instruction, and that top managers frequently prefer to use the expertise of colleges from which they have graduated. Bragg and Jacobs (1993) asserted that companies use customized training as an incentive to attract and retain employees. Ramirez (1989) argued that community and technical colleges are accepting the challenge of their vital role in economic development through contract education or the process of entering into partnerships with business, government, and industry at the work site to help with employer training. Communities benefit economically when customized training is used to attract business and industry (Bragg & Jacobs, 1993). The American Association of Community and Junior Colleges (1991) reported that according
to a 1989 national survey, 31% of the contracted courses offered by the community colleges included in the sample allowed employee-students to earn college credit.

Because many nontraditional students who are adults and work full-time at a particular job have little incentive to experience the campus as a student, community colleges direct their marketing to employers who can benefit from providing customized, college-level workplace-based education for their employees. Meighan (1995) proposed that the organizational structure of colleges that offer workplace-based contract training revise marketing representatives’ roles to focus completely on business development and client company contact, create content specialists to concentrate on consultations with employer sponsors, on-site program development, and part-time faculty recruitment. The AACC (1993) suggested that community college leaders develop organizational structures that bring workforce training programs into the mainstream of their institutions; college leaders should also guarantee that information about institutional workforce training programs and services are made available to local business leaders. Meighan further advocated that new administrative positions should be created at institutions to hire individuals to coordinate and execute entrepreneurial research and development.

Healy (1998) predicted that colleges will soon treat students like customers and education as a commodity that can be adapted to what the market demands. Powers et al. (1988) concluded that colleges will find an expanding market for their services if they choose to provide learning where learning is most critically needed. Effective design, marketing, and delivery of workplace-based credit and noncredit programs, however, depend on accurately determining what components predict employer and employee-student satisfaction and to what degree each component is a predictor.
Predictors of Employer Satisfaction

Wismer (1995) reported that few studies have been conducted by community colleges to determine customer satisfaction of business and industry clients with workforce training programs delivered by two-year institutions. Community and technical colleges that provide workplace-based contract training should be committed to performance evaluation, and such assessment should include continuing education, noncredit, and degree-credit programs (Clagett & Alexander, 1995; Winter & Fadale, 1987). Powers et al. (1988) indicated that, according to a 1982 study by the Office of Adult Learning Services of the College Board, evaluations have been as varied as programs and the most common method of evaluation is the questionnaire, completed by students, during and after the training. Business and industry sponsors of customized contract training are generally satisfied with workplace-based credit and noncredit education delivered by community and technical colleges (Bragg & Jacobs, 1993; Clagett & Alexander, 1995; Winter & Fadale, 1987). Powers et al. (1988) argued that the continued increase in the numbers of business-higher education partnerships indicates that all partners’ expectations are being met. Small and medium-sized businesses, in particular, find community colleges completely accessible and capable of meeting their training needs (AACC, 1993). The Commission on Workforce and Community Development (1997) asserted that community colleges have a significant track record of success and customer satisfaction and have demonstrated exceptional fiscal and program performance outcomes. Because business and industry training and education needs have expanded in recent years, however, general satisfaction should not be taken for granted.

In a 1995 study, Clagett and Alexander reported that 60% of employer-sponsor respondents were very satisfied with contract training provided by community colleges, and 96% would recommend the community college provider to others. Zeiss (1997) found that
95% of employers surveyed recommended community colleges to provide workforce training. Van Buren and Erskine’s (2002) finding that the use of community and junior colleges as outside training providers for employer-provided training experienced the greatest drop among eight categories of providers during the period 1998 to 2000 does not indicate, however, that a reason for the reduced usage was employer dissatisfaction.

Seven variables are identified in the literature as predictors of employer satisfaction with workplace-based contract training. Kaplan (1984) contended that employer satisfaction of workplace-based credit and noncredit contract training depends on employee-students’ attitudes and perceptions and on the content, amount, and quality of learning and subsequent workplace performance. Flory (1986) suggested that low costs, convenient locations, and access to institutional resources contributed to employer satisfaction of credit contract training. Facilities, methods, materials, instructors, and participants are all variables that should be selected to serve the needs or convenience of the organization that sponsors contract training (Powers et al., 1988). According to the Commission on Workforce and Community Development (1997), four principal reasons are cited by business and industry that contribute to deciding to contract with community colleges for training: cost-effectiveness of training dollars expended; quality of instruction; customized training design; and, availability of both campus and workplace-based locations.

Workforce training is customer driven, involves payment by the customer to the training entity, and is usually linked to some economic development strategy of the employer (AACC, 1993). Healy (1998) noted that Rio Salado (Maricopa Community College District in Arizona) College’s success, for example, is a result of determining what training and collegiate programs workers need, then tailoring the educational product for them. Healy also argued that being market driven, focusing on convenience and accessibility and
relevancy, and running classes, for example, according to modular rather than traditional
semester schedules, are design features that satisfy the training needs of employer sponsors
of on-site, college-level workforce education.

Employer Participation in Program Design

Literature suggests that a relationship exists between employer participation in
designing contract training programs and employer satisfaction. Bragg and Jacobs (1993)
concluded that the goals of customized contract training usually concentrate on the needs of
employers; therefore, employer participation in program design is vital to program success.
The AACC (1993) contended that directors of community college workforce training
programs should work with business and industry representatives to develop and share
models for delivering effective workforce training, including alternative instructional
delivery systems, model curricula in areas of high need, and flexible administrative and
payment procedures. Three course development approaches are used in the design of
workplace-delivered programs: (1) college personnel learn about specific training needs
during visits to a company and custom design programs in response to needs; (2) colleges
develop “canned” programs to meet the most-often-requested training needs; and (3) colleges
use a combination of pre-developed programs and customization (Bragg & Jacobs, 1993;

Warford (1989) viewed the development of contract training programs as ideally a
cooperative effort by the college and the employer. Lynch (1990) found that in a 1989-90
national survey, 246 randomly selected community colleges reported that 61% of job-specific
courses were developed cooperatively by the college and the employer sponsoring the
training. Bailey and Averianova (1999) asserted that some community and technical colleges
develop customized certificate and degree programs in response to requests from employers,
and these programs become part of the institution’s core activities. Dougherty & Bakia (2000) suggested that contract education and training needs of employers are expressed to community and technical colleges by the direct involvement of business representatives, as subject matter specialists, in the development of college curricula content. ACT’s WorkKeys Job and Occupational Profiling program, which uses industry representatives as subject-matter experts to profile specific jobs at companies or general occupations across companies, can serve as a springboard to determine training needs and to help design customized or tailored contract training programs (ACT, 1999). ACT’s KeyTrain program includes more than 7,000 pages of computer-based curricula, covering eight skill areas, which was designed with input from business and industry (ACT, 2001).

Gold (1981) reported, for example, that a credit management program designed for off-campus delivery at the workplace and using materials, instructors, and instructional equipment from both the college and the business was developed by Miami-Dade Community and Technical College and a regional banking corporation. Powers et al. (1988) argued, however, that colleges cannot always adapt their curriculum [in response to requests from sponsoring organizations for relevance] accordingly because to do so may contradict their mission, violate their standards, or strain their resources. Hodgkinson (1981) suggested that the range of instruction in the second system of postsecondary education housed in business and industry is as broad as traditional liberal arts instruction in colleges and universities.

Customization of Program Content and Mode of Delivery

Workforce training programs should co-exist with traditional academic credit programming, but remain free from traditional constraints such as academic schedules, credit-hour requirements, curriculum review processes, and trainer/instructor credential
requirements (AACC, 1993). Bailey and Averianova (2000) argued that traditional institutional practices that involve lengthy curriculum approval and uniform fee structures impede the ability of community colleges to meet the demands of workforce training for business and industry. Dougherty and Bakia (2000) asserted that, although contract course content is often adapted to the concerns of a particular contractor, it is often the case that the course content is not adapted but simply extracted from the regular college academic curriculum or retrieved from previously developed contract courses.

Basic academic skills curriculum, offered according to contract arrangement and which is not firm specific, is rarely customized in content (Bakum, 1991; Lynch, et al., 1991; Palmer, 1990). The AACC (1993) reported that a 1993 League for Innovation in the Community College study found that 98.4% of community colleges that provide workforce training customized such training to meet specific workforce needs, rather than relying only on existing college credit course offerings. Kantor (cited in Decklebaum, 1994, pp. 101-102), in a 1991 study titled *Direct Services to Businesses Delivered by Colorado Community Colleges*, found that Colorado community colleges customized their direct services to businesses more than 50% of the time, compared to national figures indicating that more than 50% of business services by community colleges were modified or “off-the-shelf” versions of regular course offerings. The Commission on Workforce and Community Development (1997) asserted that community colleges have knowledge about program customization for targeted business and industry audiences. [While *customized* refers more specifically to new or nonexistent training designed for a unique need and *tailored* refers more generally to training, perhaps a credit course or an existing noncredit program, modified to one degree or another, the terms are used somewhat interchangeably in this study because no definitive
standardization of usage exists in the literature.] Contract courses may be customized in content and in delivery mode, often do not run the length of a regular semester, are offered on weekends, are delivered at the employer’s place of business, and use persons with business and industry experience as instructors (Bailey & Averianova, 2000; Bragg & Jacobs, 1991, 1993; CWCD, 1997; Dougherty & Bakia, 2000; Eisen, 1997; Grubb et al., 1997; Kaplan, 1984; Kopecek, 1984; Lynch et al., 1991; Palmer, 1990; Powers et al., 1988).

Literature suggested that a relationship exists between contract training course and program customization and employer satisfaction with workplace-based contract training. Luther (1984) demonstrated the following:

Offering an off-the-shelf version of “Business Administration 101” that has been acceptable for years in the classroom has failed miserably when it has not been what the customer wanted or needed. Customized training programs that respond to exact industry needs must become the operating mode of the education community (p. 79).

The American Association of Community and Junior Colleges (1991) reported that 90% of the colleges surveyed offered job-specific skills courses, while 60% provided basic academic skills courses as part of contract education. Dougherty and Bakia (2000) asserted that companies sponsor contract training that teach firm-specific skills, industry-wide skills, and basic academic skills such as reading, writing, and arithmetic. Lynch et al. (1991) found that basic academic skills courses account for approximately 12% of all contract courses. Powers et al. (1988) reported that, according to a 1982 study of contract training by the Office of Adult Learning Services of the College Board, every area of subject matter has been taught, from peptic ulcer therapy to financial management, computer training for managers, conversational French, letter writing, economics, and other standard or specially designed courses. A 1991 AACC report showed that results from a national survey indicate that 67%
of the job-related courses offered were customized, while only 29% of the apprenticeship, 
basic skills, and other courses were tailored to meet employer needs. The Commission on 
Workforce and Community Development (1997) suggested that business and industry 
employer groups contract with community and technical colleges for training because of the 
ability of the latter to customize training design.

_Flexibility of Course and Program Scheduling_

Conway (1997) indicated that many employees who are hesitant about participating 
in college-level course work are thought to be more likely to be more comfortable in, and 
subsequently to enroll in, a workplace-based program. Organizations often demand that 
contract training programs be conducted at the worksite and be offered during evenings and 
on weekends (Powers et al., 1988). Dougherty and Bakia (2000) contended that even if a 
program is not customized in content, it may be customized in other ways, such as course 
schedule and structure, location (the training is delivered at the contractor’s premises), or 
student composition.

Professional educators must treat business and industry as customers and provide 
good customer service in flexibility of workplace-based contract training in course 
scheduling, faculty assignment, program time, length, and location, and delivery system 
mode (Bailey & Averianova, 2000; Eisen, 1997; AACC, 1993; Kalan, 1984; Luther, 1984). 
According to a 1982 study by the Office of Adult Learning Services of the College Board, 
duration of contract training program courses varied from one day to one week, to six 
months, to three years, and course length was determined by employer training needs rather 
than by the amount of content that could be delivered in a traditional semester course 
technical colleges have increased the flexibility and convenience of core credit programs to
meet employers’ contract training needs and to respond to competition in the educational marketplace. Dougherty and Bakia (2000) suggested that a major factor that leads employers to contract with community and technical colleges to provide education and training for employees is the willingness of community and technical colleges to satisfy employers’ requests for specific course content, schedule of course delivery, and location of course delivery. For example, a particular workforce training activity may require all-day sessions rather than the more traditional “50-minute-three-times-per-week” classes (Bailey & Averianova, 2000).

**Contract Pricing**

Powers et al. (1988) reported that, according to a 1982 study by the Office of Adult Learning Services of the College Board, every organization that has contracted with a college has been large enough to supply a class and pay for its tuition and that contract charges vary according to training program content and design. Many employers that sponsor contract education and customized training for employees use community and technical colleges because the latter offer competitive prices, are more cost effective than other outside vendors of training, and have lower tuition rates than four-year colleges (AACC, 2000; Bragg and Jacobs, 1993; Commission on Workforce and Community Development, 1997; Dougherty & Bakia, 2000; Kopecek, 1984; Winter & Fadale, 1987). The American Association of Community Colleges (1993) contended the following:

Community colleges have a long history of successful experience in providing effective occupational education and vocational and technical training at a reasonable cost. Expansion of community college missions to explicitly include providing training for those already in the workforce . . . can be accomplished with minimal delay and only minor investment in new infrastructure (p. 2).
According to a 1993 League for Innovation in the Community College study, Doucete (1993) found that directors of college workforce training programs reported that many of their business and industry clients, especially the small- and medium-sized businesses in their service areas, could not afford the cost of providing needed employee training. In a 1995 study of workforce training assessment, Clagett and Alexander determined that 69% of 561 responding employer sponsors of contract training delivered by community and technical colleges in the state of Maryland cited cost effectiveness as the reason for choosing a community and technical college as the service provider. Winter and Fadale (1987) determined that 82% of employers who sponsored contract training delivered by State University of New York community colleges during the period 1986-87 experienced a cost savings, which led to satisfaction.

According to Powers et al. (1988), employers cannot afford to rely on colleges to develop training and educational programs unless colleges are able to move quickly to provide cost-effective programs. The logistics of training and educational activities is also a factor that affects contract pricing, and to reduce costs employers are encouraged to provide workplace-based accommodations. Powers et al. also reported study findings that indicate an organizational site is typically chosen over an on-campus setting for contract training programs.

Instructors with Business Experience

According to a 1982 study by the Office of Adult Learning Services of the College Board, all kinds of instructors have been employed to teach contract courses, from college faculty or adjunct faculty to instructors from the organization themselves to outside consultants (Powers et al.). The study also found that methods of instruction varied from lectures and discussion groups to video presentations, to role playing and case study, to
computer-assisted teaching. Employers contract with community colleges to provide contract training because of the quality of instruction (Commission on Workforce and Community Development, 1997; Kopecek, 1984). Community colleges employ part-time instructors with occupational and vocational expertise, whose technical skills and knowledge benefit students and whose expertise and workplace experience helps keep curricula current (AACC, 2000). Warford and Flynn (2000) argued that community college faculty and staff members with business and management experience should be used in the delivery of workplace-based contract training. Kopecek (1984) suggested that for workplace-based contract instruction to be successful, instructors must be highly competent in their fields and familiar with specific industry techniques. Powers et al. (1988) noted that for colleges to be successful in contract training, they will need to find those instructors who are best qualified to teach, not drawn necessarily from the faculty or with the usual academic credentials.

Kaplan (1984) contended that part-time instructors used in business and industry training must be enthusiastic, personable, energetic, and have practical work experience in the field. The practice of “last-minute” hiring, however, which is characteristic of community colleges struggling with a paucity of qualified adjunct faculty, coupled with limited or no training as educators and little to no mentoring by full-time faculty, may create challenges for using instructors that are not full-time faculty or regular adjuncts (AACC, 2000). Brookfield (1986) asserted that personality factors of college staff and faculty involved in the planning and delivery of workplace education and training programs affect the success of such programs. Brookfield also writes that “an unsympathetic . . . personnel manager, support staff with whom the programmer has had previous conflict . . . or academic colleagues whose shortcomings have given the institution a poor reputation can all nullify the
most carefully developed of programs” (p. 227). Conway (1997) concluded that faculty who
teach in workplace-based programs must be sensitive to adult learners’ needs.

Cohen (1986) suggested that teaching styles of college faculty assigned to a
workplace-based credit course will require adjustment, beginning with the skills orientation
of the course titles, the passing policy of grading in the courses, and the prior research
required to adapt each course to its audience. According to AACC (1993, 2000), community
college leaders need to conduct ongoing staff development programs to educate their faculty
about the needs and learning styles of adult workers, to learn about new delivery mechanisms
and instructional methodologies for providing effective training for adults, and to update
faculty skills continually so that they can be effective trainers for skills currently needed in
the workplace. Bailey and Averianova (2000) noted that faculty members must also learn to
use alternate delivery and teaching formats. Conflict in a contract training arrangement can
arise because organizations typically want the power to choose the faculty assigned by
colleges to training programs and to select instructors for particular courses (Powers et al.,

Availability of Institutional Resources

Kopecek (1984) stated that employers contract with community colleges to provide
contract training and workplace-based education because of the excellent support services.
Flory (1986) argued that the success of contract credit education offered at the workplace is
partially due to institutions offering on-site services to employee-students such as external
testing, assessment, academic advising, college study skills seminars, and credit for prior
college and work experience. According to a 1982 study by the Office of Adult Learning
Services of the College Board, services provided by colleges have varied enormously, from
teaching to academic counseling, tutoring, course design, and career-development seminars,
access to classrooms and libraries, and supplies, and that colleges provide organizations with the same services they provide traditional students (Powers et al., 1988).

According to a national study, 33% of the colleges included in the sample provided special services to small businesses, 18% helped businesses obtain loans or financing, and 13% provided assistance in obtaining contracts (AACC, 1991). The Commission for Workforce and Community Development (1997, p. 6) noted that community colleges have invested heavily in establishing support services for students, especially in basic skills and student assessment, as well as counseling, advising, remediation, childcare, career development, and job placement services that are critically important for both students and employees. Kopecek (1984) suggested that the successfulness of contract training clearly reinforces how the college helped the student-employees, their fellow workers, their company, and their community.

Employee-Student Persistence

Dougherty and Bakia (2000) argued that while the breadth of contract training is extensive, the depth is uneven. Dougherty and Bakia also reported that 1989 (Lynch, et al., 1991) and 1994 (Johnson, 1995) surveys found that median student enrollment in contract training was 919 and 1125, respectively (with ranges from 3 to 10 students at the least involved institutions and from 27,000 to 55,000 at the most involved colleges), and that contract training students accounted for 17-18% of total headcount enrollment in 1993. No data, however, on employee-student persistence in contract programming were reported in either study. Powers et al. (1988) suggest that the answers to employees’ questions of “Why cooperate?” with business-higher education partnerships are important and crucial to the success of employer-sponsored and community college-provided training programs. “The [1980] Aslanian and Brickell study showed that 83% of adult learners wanted to see some
reward for their learning” (Powers et al. 1988, p. 247). According to Powers et al., failure of the trainees may imply that the college has failed.

A paucity of literature exists that suggests a positive correlation between employee-student persistence rates and employer satisfaction with workplace-based contract training programs at community and technical colleges. Conway (1997) stated that the existence of an on-site, workplace-based degree program, according to findings from a 1988-1990 study, seemed to affect the academic persistence rates of employee-student participants. Conway further contended that many employee-students who exhibit anxiety about enrolling in college are believed to be more likely to participate in a workplace-based program because of an increased level of comfort from familiar surroundings. Fusch (1997) asserted that educational opportunities at the workplace, provided by the employer, may diminish workers’ perceived barriers for participation. Gordus, Kuo, and Yamakawa (1991) found that workplace-based courses in one business training program eliminated the barrier of travel time. According to Powers, et al. (1988) a 1992 College Board Study concluded that whether courses are credit or noncredit, arranged for a business, a government agency, or a voluntary organization, faculty-taught or videotaped, contract training requires determining the need for training and tailoring a program to fit those specific needs. The 1992 study also suggested that every variable should be selected to serve the needs or convenience of the organization, including facilities, methods, materials, instructors, and participants (Powers et al., 1988).
CHAPTER III

Methods

The purpose of this study was to measure employer satisfaction with workplace-based credit and noncredit training programming delivered under contract arrangement with community and technical colleges in West Virginia during the period July 1, 2000, through June 30, 2002. The study examined, by using a two-page employer evaluation survey form, satisfaction with contract training programs delivered at employer workplaces or at off-campus sites selected and approved by sponsoring employers. The study also sought to determine which of seven independent variables was the most significant predictor of employer satisfaction and whether a statistically significant relationship existed among variables and employer satisfaction. The seven independent variables included the following: employer participation in program design; customization of program content and mode of delivery; flexibility of course and program scheduling; contract pricing; use of adjunct instructors with business and industry experience; availability of institutional resources; employee-student persistence.

The study was patterned after a 1995 (Clagett & Alexander) study conducted by the Maryland Association of Deans and Directors of Continuing Education and Community Services. The survey instrument used in that study was titled “Maryland Community College Workforce Training Evaluation and Needs Assessment Survey.” The Clagett & Alexander study examined all Maryland state businesses, industries, agencies, and other organizations that received workforce training by contract arrangement with a community and technical college during the period 1993-1994. In addition to determining employer satisfaction, the Maryland study sought to develop a profile of employers served and to identify future workforce training needs. The current study was concerned with predictors of employer
satisfaction, and sought to determine employer satisfaction with training among West Virginia state businesses, industries, agencies, and other organizations that contracted with a community and technical college in West Virginia during the period July 1, 2000—June 30, 2002; a limited employer profile was established, for demographic purposes, through data compiled from the survey instrument. All fifteen (15) questions were closed-end questions, and three questions included a “Comments” section. The survey instrument was an amended version of the Clagett & Alexander instrument, which amendments were based on the variables defined in the current literature. The closed-end questions were designed to yield data necessary to the study, and qualitative information gathered from the “Comments” sections served to qualify the data and provided information for emergent categories and suggestions for future research.

Hymen (as cited in Suchman, 1967, p. 76) distinguished three types of research studies: (1) the theoretical or experimental, (2) the evaluative or programmatic, and (3) the diagnostic. Whereas the theoretical study emphasizes the testing of specific hypotheses relevant to some larger body of theory, the evaluative study is designed to test the practical value of some action program—such as contract training for business and industry. The study at hand was evaluative research, as defined by Suchman (1967, p. 75), which primary goal was not the discovery of knowledge, which is consistent with traditional scientific research, but a testing of the application of knowledge. Suchman also argued that assumptions of validity can be made without full research proof.

Population

The population was all employer organizations, including business, industrial, governmental, educational, professional, labor, agency, and other organizations, that received customized credit or noncredit training by contract arrangement with a community and
technical college in West Virginia during the period July 1, 2000, through June 30, 2002. Information about the population was obtained from workforce development activity data submitted to researcher, by request from the West Virginia Higher Education Policy Commission, office of the Vice Chancellor for Community and Technical College Education/Workforce Development, and from directors or deans of workforce development and administrators responsible for contract training programs at the 11 of the 12 community and technical colleges in West Virginia. (One institution’s representative indicated that contract training had been delivered to six businesses, but did not provide contract information to the researcher in time for those data to be included in the population to be surveyed.)

All 55 counties in the state are included in one of twelve (12) legislatively mandated service or responsibility districts as defined by (West Virginia Senate Bill 547 (1995) and West Virginia Senate Bill 653 (2000). A whole population survey was employed, which was N=128. The population was categorized by one of 10 employer organizational types, and a minimum of five respondents per category was originally required.

“The 2000-2002 West Virginia Community and Technical College Contract Training Evaluation Survey” form (Appendix B) was mailed to the population, with a cover letter of explanation (Appendix C) and a self-addressed, stamped envelope enclosed. To increase the response rate, the author followed-up with telephone calls, two weeks after the date of the mailing, which allowed nonrespondents to complete the survey instrument via an interview schedule format. The survey form was available as an attachment to electronic mail, which some respondents preferred as a format. Mailed survey instruments were individually coded, beginning with “001,” and no data base was maintained to match code numbers with business names and addresses. The entire population was selected as the survey group, which allows
the results of this study to be generalizable to community and technical colleges in the state of West Virginia. The study is, however, limited in its generalizability to community and technical colleges outside West Virginia, but the study is important to higher education and workforce and economic development in the state because of the implications of employer satisfaction with contract credit and noncredit training to the workforce development mandate contained in WV S.B. 653. Community and technical colleges that do not meet legislatively mandated goals during the period July 1, 2000, through June 30, 2006, particularly in the area of contract training and meeting the workforce development needs of business and industry, may be merged with other institutions, lose state funding, or substantially reorganized.

All workplace-based credit and noncredit training programs delivered under contract arrangement by community and technical colleges in West Virginia to employer-sponsors during the period July 1, 2000, through June 30, 2002, were included. Employers that listed activities provided for business and industry other than credit courses or noncredit customized training (such as conferences, information sessions, trade shows) were purposely excluded to increase the predictability of the data. Because of the broad range and wide variety in content and duration of programming falling under the general heading “credit and noncredit training,” no attempt will be made to determine the relationship, if any, between employer satisfaction and type (credit, noncredit), content area (general education, soft skills, technical training, etc.), or length (full semester course, multiple-week module, multiple-day workshop, or single-day seminar, etc.) of contract training. The relationship between the dependent variable “employer satisfaction” and the independent variables “type of contract training,” “training program content area,” and “training program duration” may be a subject for future study. The current study sought to
determine the relationship, if any, between employer satisfaction of credit and noncredit training in general and seven independent variables as predictors of satisfaction.

Usable results were defined as “The 2000-2002 West Virginia Community and Technical College Contract Training Evaluation Survey” forms returned in the 15-day period (specified in the cover letter that accompanied the mailed form), completed via a telephone interview schedule, or submitted electronically. The entire population (N=128) was selected to increase the generalizability of the data gathered from this study.

A limitation of this approach was that the researcher recognizes that the return rate will be less than 100% for “The 2000-2002 West Virginia Community and Technical College Contract Training Evaluation Survey” form because no requirement or other incentive exists for employer-sponsors to complete and return the survey form. No attempt was made to capture data from employers that are not listed as doing business in West Virginia during the period July 1, 2000, through June 30, 2002.

Instrumentation

The primary technique for data collection was a one-page duplex mail survey instrument that consisted of 15 closed-end questions completed by a training or human resources representative, agent, or designee of each employer included in the population that used community and technical college credit or noncredit contract courses for employee training during the period July 1, 2000, through June 30, 2002. “The 2000-2002 West Virginia Community and Technical College Contract Training Evaluation Survey” form was a single section, 15-question instrument.

The instrument was a reformatted and slightly modified version of a four-page survey form used in a 1995 (Clagett & Alexander) study conducted in Maryland. (The Maryland study instrument is included in Appendix A.) The instrument used in the 1995
Maryland study was based largely on a survey instrument used in a 1993 study of workforce training provided by community and technical colleges in Michigan (Wismer and Zappala) and on a 1988 instrument used by a Maryland community college to survey businesses in Prince George’s County, Maryland (Clagett and Huntington). The 1993 Michigan instrument and study were based on a 1991 instrument and study conducted by the Iowa Department of Education to assess the effectiveness of continuing education programs at community and technical colleges. The 1991 Iowa instrument and study were based on a similar study in 1988 conducted by the Maryland State Board for Community Colleges.

The survey instrument used in the present study was based on evaluative research design. Suchman (1967, pp. 1-2) argued that traditional behavioral science research concepts and methods may not be appropriate for evaluative research topics (such as the current study), and that reviews of programs in a variety of fields, including adult education, “revealed the paucity of both conceptualization and scientific research on the effectiveness of most activities in these fields.” Suchman contended that while much has been written about the basic methodological concepts of reliability and validity, the concepts are subject to frequent misunderstanding in relation to evaluative research. Suchman also suggested that “such fundamental concepts in pure research as reliability and validity are basically evaluative by nature” and that “[t]he determination of the reliability and validity of a research instrument asks the question ‘Does it work?’ He also asserted that the use of the evaluative instrument to conduct research becomes applied or programmatic (p. 80). Suchman concluded that the reliability and validity of a survey instrument can be established by the validity of the survey questions in addressing study objectives and by the subject-matter expertise of the person who designed the instrument.

The survey instrument used in the present study was reviewed by a panel of experts to
establish the content and construct validity of the instrument. The instrument was modified further upon the recommendation of the researcher’s dissertation committee chairperson and a professor emeritus with expertise in research methodology and data analysis. The instrument was also read by a second panel of adult learners to further determine the instrument’s readability and to determine the range of time required for a respondent to complete the form. The instrument was a modified version of previously validated instruments, each of which was slightly modified from a former instrument.

The first four (4) questions of “The 2000-2002 West Virginia Community and Technical College Contract Training Evaluation Survey” form were designed to gather general demographic information, including the length of time an employer has conducted business in West Virginia (to verify that the respondent meets the survey period criterion), the nature of the employer’s business (to ensure that a minimum of five respondents were listed for each of 10 strata), the approximate number of employees that participated in a training program during the survey period, and organizational training goals that led the employer to select a community and technical college as the training provider.

Question 5 through Question 11 were designed to determine the level of employer satisfaction with each of the seven independent variables listed in the study and which variables correspond to seven research questions listed in Chapter 1. Closed-end responses for Question 5 through Question 11 were traditional Likert scale-type questions in which the subject was presented with a statement about an independent variable and asked to indicate agreement or disagreement with the statement in a choice of five degrees. To avoid biasing the responses, the same number of positive choices (2) and negative choices (2) were provided. A fifth neutral position choice was included for each question.
The final four questions, Question 12 through Question 15, sought to rank order the independent variables as predictors of satisfaction, to determine the employer’s general level of satisfaction with contract credit and noncredit training delivered by community and technical colleges in West Virginia, to determine whether an employer would recommend to other employers the community and technical college as a training provider, and how likely the employer was to contract with a community and technical college in the state to meet future training needs. Question 13 through Question 15 each included a two-line “Comment” section used to collect qualitative data.

Modification of the 1995 Maryland instrument was necessary to conform to independent variables identified in the current literature that varied slightly from the independent variables used in the 1995 study. The Maryland study survey form included six “reasons for selecting a community college for training”: cost effective/good value; customized to meet specific need; quality of instruction; good results in past with college; training provided on-site; and referred to college by others. The seven independent variables identified by and included in the current study included four of the six variables used in the Maryland study. To examine more specifically predictors of employer satisfaction and to conform more closely to empirical evidence found in the literature, responses were modified to fit the independent variables identified in the current study. To determine which variables are the most significant predictors of employer satisfaction, one question was also modified to include a seven-level employer rating—from Most important to Least important—for each of the seven possible responses.

Question 13 asked employers to rate their general satisfaction with the overall quality of workplace-based contract training, with five possible forced-choice responses ranging from Very satisfied to Very unsatisfied. To determine specific reasons for the level of
satisfaction identified, employers were asked to share specific comments about their general satisfaction level. (The Maryland study also included open-end questions, sought to include qualitative data, and reported the responses, verbatim, in the study results.) Question 14 asked employers whether they would recommend the community and technical college to other businesses or organizations that want to achieve similar training goals. Because an increase in the market for outsourcing training is expected (Van Buren & Erskine, 2002; Winter & Fadale, 1990), Question 15 asked employers to choose from five possible responses to determine how likely each was to use community and technical college workplace-based contract courses to meet future training needs.

Data Collection

The study received an exemption from the Marshall University Institutional Review Board (see Appendix D). Coded copies of “The 2000-2002 West Virginia Community and Technical College Contract Training Evaluation Survey” form were mailed to 128 employers that comprised the entire population and were included in the survey. The survey instrument (Appendix B) included a cover letter from the author of this study (Appendix C) that explained the purpose of and time frame for this study. Because multi-county responsibility districts (and, therefore, business and industrial clients located in the responsibility districts) are legislatively defined, and because competition for the available pool of employer-sponsors of contract training exists, no attempt was made to specifically identify survey subjects.

No database with specific employer identification information was created; only the demographic, ordinal, and nominal data collected and analyzed were kept on file. The total number of survey forms that were distributed was documented.

The survey instrument was a two-page, duplex form, and was accompanied by a
cover letter of explanation and a return envelope with return postage and the return address included. Suggested response time was 15 days from the receipt of the form. It is estimated that completion of the survey form required 5-10 minutes. Completed surveys were returned to the author of this study for data entry and analysis.

Data Analysis

Nominal and ordinal data obtained from “The 2000-2002 West Virginia Community and Technical College Contract Training Evaluation Survey” forms that were completed and returned were coded and entered on the Statistical Analysis System (SAS) computer software program for multivariate analysis. Nominal data were sorted and reported as frequency percentages. Ordinal data were ranked and enumerated. Demographic data were reported. Comments included in responses to Question 12 through Question 15 were transcribed verbatim as qualitative data, which was done in the 1995 Maryland study, and included in the presentation and analysis of data chapter and in Appendix E.

The employer satisfaction surveys were analyzed using Pearson Correlation Coefficients design to determine what relationship, if any, existed between employer satisfaction and one or more independent variables and which variables were the greatest predictors of employer satisfaction. The study also used post-hoc analysis to determine collinearity and which of a combination of seven independent variables is the most significant predictor of employer satisfaction and whether any statistically significant relationship existed among variables. All quantitative analysis was clarified by accompanying narrative explanation using illustrative tables. Included in the data analysis is information about the number of participants that did not complete a survey form and the number of unusable survey forms.

The research questions, one (1) general research question and seven (7) specific
relational questions are as follows:

1. Do employers that sponsor workplace-based, contract training at community and technical colleges in West Virginia have satisfaction predictors that are similar to employers in general?

2. What is the relationship, if any, between employer-sponsor participation in program design and employer-sponsor satisfaction with workplace-based, contract training programs?

3. What is the relationship, if any, between customization of program content and mode of delivery and employer-sponsor satisfaction with workplace-based contract training programs?

4. What is the relationship, if any, between flexibility of course and program scheduling and employer-sponsor satisfaction with workplace-based contract training programs?

5. What is the relationship, if any, between the use of contract pricing and employer-sponsor satisfaction with workplace-based contract training programs?

6. What is the relationship, if any, between the use of adjunct instructors with business and industry experience and employer-sponsor satisfaction with workplace-based contract training programs?

7. What is the relationship, if any, between availability of institutional resources—consisting of at least on-site admission, registration, textbook sales, and academic advising—and employer-sponsor satisfaction with workplace-based contract training programs?

8. What is the relationship, if any, between employee-student persistence and employer-sponsor satisfaction with workplace-based contract training programs?
Conclusion

Employer satisfaction as measured by employer-sponsor responses to “The West Virginia Community and Technical College Contract Training Evaluation Survey” form was used to analyze workplace-based credit and noncredit contract training provided by community and technical colleges in West Virginia from July 1, 2000, through June 30, 2002. Simple statistics and Pearson Correlation Coefficients tests were performed on data collected from completed survey forms, using the Statistical Analysis System (SAS). Post hoc analyses were conducted as appropriate.
CHAPTER IV

Results

This chapter presents a description and analyses of the data collected in the study of predictors of employer satisfaction with workplace-based contract training at community and technical colleges in West Virginia during the period July 1, 2000, through June 30, 2002. The purpose of this study was to determine whether seven independent variables, as defined in the literature, help determine satisfaction, and to determine the relationship, if any, between employer satisfaction and the independent variables. This chapter presents the survey response rates, demographic data, and the research findings.

The data are organized and presented according to the order of the questions listed on the survey instrument. The data were examined to determine whether any statistically significant relationship existed between employer satisfaction and the independent variables, as stated in the seven research questions. The survey results were also evaluated to determine whether any statistically significant relationship existed between employer satisfaction and the following demographic variables: (1) length of time conducting business, (2) organizational type, (3) number of employees trained, and (4) training goals. Analyses were conducted to determine whether a statistically significant relationship existed between the seven measures and (1) an employer’s general level of satisfaction with the quality of training, (2) an employer’s probability to recommend to other employers the use of the community and technical college as a provider of training, and (3) an employer’s likelihood to contract again with a community and technical college in West Virginia to meet future training needs.

All data were analyzed using the Statistical Analysis System (SAS) after the individual responses to the survey instrument were recorded into an ANSI text file. The
remainder of the chapter is divided into the following sections: (1) population and return, (2) respondent demographic data, (3) descriptive data, (4) statistical analyses of the data, (5) major findings, and (6) summary of the chapter.

Population and Return

The population for this study consisted of all employers (N = 128) that contracted with a community and technical college in West Virginia to provide workplace-based contract training during the two-year period July 1, 2000, through June 30, 2002. Data about the population were obtained from chief administrative staff responsible for workforce development, continuing education, and contract training at 11 of the state’s 12 community and technical colleges. (The only community and technical college that failed to report data indicated that population data existed and would have increased the population by six.) It is interesting to note that seven (7) employers included in the population were located outside the state of West Virginia (five in Virginia, two in Ohio, and one in Pennsylvania) but contracted with one or more community and technical colleges in West Virginia for workplace-based contract training.

The entire population of 128 employers that contracted with a community and technical college during the study period was used. Fifty-six (56) employers responded, which is approximately a 44% return rate; of this number, 54 (97%) were usable returns. One return was rejected because the respondent indicated that workplace-based training with a community and technical college in West Virginia had occurred in 1999, which was outside the chronological parameters of this study; a second return was rejected because the respondent indicated that no workplace-based training was conducted by the college. Responses were received from respondents representing each of the ten organizational employer types listed in the second demographic question (question 2 on the instrument).
Descriptive Data

Demographic data collected from employers included the following: (1) length of time conducting business at the employer’s present location; (2) nature of the employer’s business; (3) approximate number of employees participating in workplace-based contract training during the study period; and (4) organizational goals for training. These demographics were collected to obtain a profile of the respondents and to verify the employer groups studied, and to examine whether a relationship existed between satisfaction and employer demographic characteristics.

The first demographic item on the survey instrument (question 1) asked for the respondent’s length of time conducting business at the employer’s present location. Three forced-answer choices were provided. Of the respondents, 48 (89%) indicated they had conducted business at the present location for more than three years. Four respondents (7.5%) reported they had conducted business for two to three years. Two (4%) indicated that they had conducted business less than two years. These demographic data are presented in Table 1.

Table 1

<table>
<thead>
<tr>
<th>Title</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Frequency</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than two years</td>
<td>2</td>
<td>3.70</td>
<td>2</td>
<td>3.70</td>
</tr>
<tr>
<td>Two to three years</td>
<td>4</td>
<td>7.41</td>
<td>6</td>
<td>11.11</td>
</tr>
<tr>
<td>More than three years</td>
<td>48</td>
<td>88.89</td>
<td>54</td>
<td>100.00</td>
</tr>
</tbody>
</table>

The second demographic item on the survey asked the respondent to identify, from one of 10 organizational categories, the nature of the employer’s business. The 10 choices were as follows:

1. Mining

2. Business service/Data processing
3. Construction craft or trade
4. Education/Government
5. Wholesale/Trade/Distribution
6. Health care
7. Legal/Social Service
8. Manufacturing
9. Transportation/Communication/Utilities
10. Chemical

Of the survey instruments returned and usable, two respondents (3.85%) indicated they were involved in mining; two (3.85%) in business service or data processing; one (1.92%) in construction craft or trade; 16 (30.77%) in education or government; four (7.69%) in wholesale, trade, or distribution; two (3.85%) in health care; one (1.92%) in legal or social service; 15 (28.85%) in manufacturing, three (5.77%) in transportation, communication, or utilities; and eight respondents (15.38%) indicated the nature of their business as chemical. Two respondents included no data responses for this question, therefore the frequency missing equaled two (frequency missing = 2). These data are presented in Table 2.

Table 2

<table>
<thead>
<tr>
<th>Title</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining</td>
<td>2</td>
<td>3.85</td>
</tr>
<tr>
<td>Business service/data processing</td>
<td>2</td>
<td>3.85</td>
</tr>
<tr>
<td>Construction trade or craft</td>
<td>1</td>
<td>1.92</td>
</tr>
<tr>
<td>Education/Government</td>
<td>16</td>
<td>30.77</td>
</tr>
<tr>
<td>Wholesale/Trade/Distribution</td>
<td>4</td>
<td>7.69</td>
</tr>
<tr>
<td>Health care</td>
<td>2</td>
<td>3.85</td>
</tr>
<tr>
<td>Legal/social service</td>
<td>1</td>
<td>1.92</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>15</td>
<td>28.85</td>
</tr>
<tr>
<td>Transportation/Communication/Utilities</td>
<td>3</td>
<td>5.77</td>
</tr>
<tr>
<td>Chemical</td>
<td>8</td>
<td>15.38</td>
</tr>
</tbody>
</table>

Frequency missing = 2
The third item asked each respondent to indicate, from five forced-answer choices, the approximate number of employees that participated in workplace-based training with a community college in West Virginia during the study period. Fifty-one respondents (95%) of the 54 respondent surveys indicated a choice. Of the respondents, 18 (35.29%) had fewer than 10 participating employees, 14 (27.45%) had 11-49 participants, eight (15.69%) trained 50-99 employees, nine (17.65%) enrolled 100-499 participants, and two (3.92%) employers contracted for workplace-based training with a community and technical college in West Virginia for 500 or more employees. These data are presented in Table 3.

**Table 3**

**Frequency by Number of Employees Participating in Workplace-based Training**

<table>
<thead>
<tr>
<th>Title</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Frequency</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fewer than 10</td>
<td>18</td>
<td>35.29</td>
<td>18</td>
<td>35.29</td>
</tr>
<tr>
<td>11-49</td>
<td>14</td>
<td>27.45</td>
<td>32</td>
<td>62.75</td>
</tr>
<tr>
<td>50-99</td>
<td>8</td>
<td>15.69</td>
<td>40</td>
<td>78.43</td>
</tr>
<tr>
<td>100-499</td>
<td>9</td>
<td>17.65</td>
<td>49</td>
<td>96.08</td>
</tr>
<tr>
<td>500 or more</td>
<td>2</td>
<td>3.92</td>
<td>51</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Frequency missing = 3

The fourth demographic item asked each respondent to identify the organization’s goal(s) for training. Six forced-answer choices were provided, with the sixth choice being “Other (please specify).” Respondents were instructed to select each choice that applied. Fifty-four (100%) employers responded, and five respondents (5%) selected “Other (please specify)” as one choice or one of the choices. Specific data from this goal option “Other (please specify)” included the following open-ended responses:

1. “Dislocated worker training”
2. “Work-based learning”
3. “To upgrade professionalism of employees”
4. “Meet workforce needs, especially in areas where an identified shortage exists”
5. “Registered apprenticeship programs”

The frequency data from question 4 are arrayed in Table 4.

Table 4

**Frequency by Organizational Goals for Training**

<table>
<thead>
<tr>
<th>Title</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upgrade the quality of employee performance in current job</td>
<td>46</td>
<td>85.19</td>
</tr>
<tr>
<td>Prepare the employee for a new skill or job classification</td>
<td>32</td>
<td>59.26</td>
</tr>
<tr>
<td>Mandated by the profession of the employee</td>
<td>7</td>
<td>12.96</td>
</tr>
<tr>
<td>Mandated by law (state or federal)</td>
<td>11</td>
<td>20.37</td>
</tr>
<tr>
<td>Self-enrichment or personal development of the employee</td>
<td>26</td>
<td>48.15</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>5</td>
<td>9.26</td>
</tr>
</tbody>
</table>

*Percentage based on number of positive responses compared to “0” for the particular choice

Questions 5 through 11 on the instrument asked respondents to indicate whether each of the seven independent variables were important to them, thereby implying satisfaction. These seven measures are tied to the seven specific research questions. The responses to each of the seven questions were placed on a five-point Likert-type scale. The responses were scored with 1 indicating the lowest level of importance and 5 indicating the highest level of importance. A response of 4 or greater indicated that the variable was considered important to employer satisfaction. A response of 2 or less indicated that the variable was considered not important. The data corresponding to survey questions 5-11 are arrayed in Tables 5-11.

Table 5

**Frequency by Importance of Employer Participation in Program Design**

<table>
<thead>
<tr>
<th>Title</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2—Disagree</td>
<td>1</td>
<td>1.89</td>
</tr>
<tr>
<td>3—Undecided</td>
<td>23</td>
<td>43.40</td>
</tr>
<tr>
<td>5—Strongly Agree</td>
<td>29</td>
<td>54.72</td>
</tr>
</tbody>
</table>

*Frequency Missing = 1
Table 6

**Frequency by Importance of Customization of Program Content & Method of Delivery**

<table>
<thead>
<tr>
<th>Title</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>3—Undecided</td>
<td>1</td>
<td>1.89</td>
</tr>
<tr>
<td>4—Agree</td>
<td>20</td>
<td>37.74</td>
</tr>
<tr>
<td>5—Strongly Agree</td>
<td>32</td>
<td>60.38</td>
</tr>
</tbody>
</table>

*Frequency Missing = 1

Table 7

**Frequency by Importance of Flexibility of Contract Course and Program Scheduling**

<table>
<thead>
<tr>
<th>Title</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>3—Undecided</td>
<td>2</td>
<td>3.70</td>
</tr>
<tr>
<td>4—Agree</td>
<td>14</td>
<td>25.93</td>
</tr>
<tr>
<td>5—Strongly Agree</td>
<td>38</td>
<td>70.37</td>
</tr>
</tbody>
</table>

Table 8

**Frequency by Importance of Contract Pricing**

<table>
<thead>
<tr>
<th>Title</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>3—Undecided</td>
<td>2</td>
<td>3.70</td>
</tr>
<tr>
<td>4—Agree</td>
<td>17</td>
<td>31.48</td>
</tr>
<tr>
<td>5—Strongly Agree</td>
<td>35</td>
<td>64.81</td>
</tr>
</tbody>
</table>

Table 9

**Frequency by Importance of Using Adjunct Faculty with Business/Industry Experience**

<table>
<thead>
<tr>
<th>Title</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2—Disagree</td>
<td>1</td>
<td>1.85</td>
</tr>
<tr>
<td>3—Undecided</td>
<td>4</td>
<td>7.41</td>
</tr>
<tr>
<td>4—Agree</td>
<td>19</td>
<td>35.19</td>
</tr>
<tr>
<td>5—Strongly Agree</td>
<td>30</td>
<td>55.56</td>
</tr>
</tbody>
</table>
Table 10

Frequency by Importance of Availability of Institutional Resources

<table>
<thead>
<tr>
<th>Title</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2—Disagree</td>
<td>1</td>
<td>1.89</td>
</tr>
<tr>
<td>3—Undecided</td>
<td>10</td>
<td>18.87</td>
</tr>
<tr>
<td>4—Agree</td>
<td>22</td>
<td>41.51</td>
</tr>
<tr>
<td>5—Strongly Agree</td>
<td>20</td>
<td>37.74</td>
</tr>
</tbody>
</table>

*Frequency Missing = 1

Table 11

Frequency by Importance of Employee-Student Persistence in Training Program

<table>
<thead>
<tr>
<th>Title</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>3—Undecided</td>
<td>4</td>
<td>7.55</td>
</tr>
<tr>
<td>4—Agree</td>
<td>22</td>
<td>41.51</td>
</tr>
<tr>
<td>5—Strongly Agree</td>
<td>27</td>
<td>50.94</td>
</tr>
</tbody>
</table>

*Frequency Missing = 1

Question 12 asked respondents to rank order each of the seven independent variables, which are included in the research questions and which are included in Questions 5-11 on the survey instrument, with 1 designating the most important reason that the employer chose a community and technical college as the provider of workplace-based contract training and 7 designating the least level of importance. The data are presented in Table 12a-12g.

Table 12a

Frequency by Rank Order of Importance of Employer Participation in Program Design

<table>
<thead>
<tr>
<th>Rank Order</th>
<th>Frequency*</th>
<th>Percent</th>
<th>Cumulative Frequency</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1—Most Important</td>
<td>5</td>
<td>11.36</td>
<td>5</td>
<td>11.36</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>11.36</td>
<td>10</td>
<td>22.73</td>
</tr>
<tr>
<td>3</td>
<td>8</td>
<td>18.18</td>
<td>18</td>
<td>40.91</td>
</tr>
<tr>
<td>4</td>
<td>7</td>
<td>15.91</td>
<td>25</td>
<td>56.82</td>
</tr>
<tr>
<td>5</td>
<td>9</td>
<td>20.45</td>
<td>34</td>
<td>77.27</td>
</tr>
<tr>
<td>6</td>
<td>7</td>
<td>15.91</td>
<td>41</td>
<td>93.18</td>
</tr>
<tr>
<td>7—Least Important</td>
<td>3</td>
<td>6.82</td>
<td>44</td>
<td>100.00</td>
</tr>
</tbody>
</table>

*Frequency missing = 10
Table 12b

Frequency by Rank Order of Customization of Program Content & Mode of Delivery

<table>
<thead>
<tr>
<th>Rank Order</th>
<th>Frequency*</th>
<th>Percent</th>
<th>Cumulative Frequency</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1—Most Important</td>
<td>13</td>
<td>28.89</td>
<td>13</td>
<td>28.89</td>
</tr>
<tr>
<td>2</td>
<td>14</td>
<td>31.11</td>
<td>27</td>
<td>60.00</td>
</tr>
<tr>
<td>3</td>
<td>7</td>
<td>15.56</td>
<td>34</td>
<td>75.56</td>
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<tr>
<td>4</td>
<td>7</td>
<td>15.56</td>
<td>41</td>
<td>91.11</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>2.22</td>
<td>42</td>
<td>93.33</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>2.22</td>
<td>43</td>
<td>95.56</td>
</tr>
<tr>
<td>7—Least Important</td>
<td>2</td>
<td>4.44</td>
<td>45</td>
<td>100.00</td>
</tr>
</tbody>
</table>

*Frequency missing = 9

Table 12c

Frequency by Rank Order of Importance of Flexibility of Course & Program Schedule

<table>
<thead>
<tr>
<th>Rank Order</th>
<th>Frequency*</th>
<th>Percent</th>
<th>Cumulative Frequency</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1—Most Important</td>
<td>11</td>
<td>23.91</td>
<td>11</td>
<td>23.91</td>
</tr>
<tr>
<td>2</td>
<td>14</td>
<td>30.43</td>
<td>25</td>
<td>54.35</td>
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<tr>
<td>3</td>
<td>12</td>
<td>26.09</td>
<td>37</td>
<td>80.43</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>4.35</td>
<td>39</td>
<td>84.78</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>8.70</td>
<td>43</td>
<td>93.48</td>
</tr>
<tr>
<td>6</td>
<td>3</td>
<td>6.52</td>
<td>46</td>
<td>100.00</td>
</tr>
<tr>
<td>7—Least Important</td>
<td>0</td>
<td>0.00</td>
<td>00</td>
<td>00.00</td>
</tr>
</tbody>
</table>

*Frequency missing = 8

Table 12d

Frequency by Rank Order of Importance of Contract Pricing

<table>
<thead>
<tr>
<th>Rank Order</th>
<th>Frequency*</th>
<th>Percent</th>
<th>Cumulative Frequency</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1—Most Important</td>
<td>5</td>
<td>11.11</td>
<td>5</td>
<td>11.11</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>11.11</td>
<td>10</td>
<td>22.22</td>
</tr>
<tr>
<td>3</td>
<td>8</td>
<td>17.78</td>
<td>18</td>
<td>40.00</td>
</tr>
<tr>
<td>4</td>
<td>7</td>
<td>15.56</td>
<td>25</td>
<td>55.56</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>8.89</td>
<td>29</td>
<td>64.44</td>
</tr>
<tr>
<td>6</td>
<td>7</td>
<td>15.56</td>
<td>36</td>
<td>80.00</td>
</tr>
<tr>
<td>7—Least Important</td>
<td>8</td>
<td>17.78</td>
<td>44</td>
<td>100.00</td>
</tr>
</tbody>
</table>

*Frequency missing = 9
### Table 12e

**Frequency by Rank Order of Adjunct Faculty with Business & Industry Experience**

<table>
<thead>
<tr>
<th>Rank Order</th>
<th>Frequency*</th>
<th>Percent</th>
<th>Cumulative Frequency</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1—Most Important</td>
<td>4</td>
<td>9.09</td>
<td>4</td>
<td>9.09</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>6.82</td>
<td>7</td>
<td>15.91</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>11.36</td>
<td>12</td>
<td>27.27</td>
</tr>
<tr>
<td>4</td>
<td>8</td>
<td>18.18</td>
<td>20</td>
<td>45.45</td>
</tr>
<tr>
<td>5</td>
<td>10</td>
<td>22.73</td>
<td>30</td>
<td>68.18</td>
</tr>
<tr>
<td>6</td>
<td>5</td>
<td>11.36</td>
<td>35</td>
<td>79.55</td>
</tr>
<tr>
<td>7—Least Important</td>
<td>9</td>
<td>20.45</td>
<td>44</td>
<td>100.00</td>
</tr>
</tbody>
</table>

*Frequency missing = 10

### Table 12f

**Frequency by Rank Order of Importance of Availability of Institutional Resources**

<table>
<thead>
<tr>
<th>Rank Order</th>
<th>Frequency*</th>
<th>Percent</th>
<th>Cumulative Frequency</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1—Most Important</td>
<td>4</td>
<td>8.89</td>
<td>4</td>
<td>8.89</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>8.89</td>
<td>8</td>
<td>17.78</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>8.89</td>
<td>12</td>
<td>26.67</td>
</tr>
<tr>
<td>4</td>
<td>7</td>
<td>15.56</td>
<td>19</td>
<td>42.22</td>
</tr>
<tr>
<td>5</td>
<td>7</td>
<td>15.56</td>
<td>26</td>
<td>57.78</td>
</tr>
<tr>
<td>6</td>
<td>12</td>
<td>26.67</td>
<td>38</td>
<td>84.44</td>
</tr>
<tr>
<td>7—Least Important</td>
<td>7</td>
<td>15.56</td>
<td>45</td>
<td>100.00</td>
</tr>
</tbody>
</table>

*Frequency missing = 9

### Table 12g

**Frequency by Rank Order of Importance of Employee-Student Persistence**

<table>
<thead>
<tr>
<th>Rank Order</th>
<th>Frequency*</th>
<th>Percent</th>
<th>Cumulative Frequency</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1—Most Important</td>
<td>4</td>
<td>9.30</td>
<td>4</td>
<td>9.30</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>2.33</td>
<td>5</td>
<td>11.63</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>2.33</td>
<td>6</td>
<td>13.95</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>11.63</td>
<td>11</td>
<td>25.58</td>
</tr>
<tr>
<td>5</td>
<td>9</td>
<td>20.93</td>
<td>20</td>
<td>46.51</td>
</tr>
<tr>
<td>6</td>
<td>9</td>
<td>20.93</td>
<td>29</td>
<td>67.44</td>
</tr>
<tr>
<td>7—Least Important</td>
<td>14</td>
<td>32.56</td>
<td>43</td>
<td>100.00</td>
</tr>
</tbody>
</table>

*Frequency missing = 11
Question 13 on the instrument asked respondents to indicate their general level of satisfaction with the quality of training received from a community and technical college during the study period. The responses to the question were placed on a five-point Likert-type scale. The responses were scored with 1 indicating the lowest level of satisfaction and 5 indicating the highest level of satisfaction. A response of 4 or greater indicated a high level of satisfaction. A response of 2 or less indicated a low level of satisfaction. A section to include open-ended comments was included, and the qualitative data are listed after the quantitative data are presented in Table 13.

Table 13

Frequency by General Level of Employer Satisfaction with Contract Training

<table>
<thead>
<tr>
<th>Rank Order</th>
<th>Frequency*</th>
<th>Percent</th>
<th>Cumulative Frequency</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1—Very Dissatisfied</td>
<td>1</td>
<td>1.85</td>
<td>1</td>
<td>1.85</td>
</tr>
<tr>
<td>2—Dissatisfied</td>
<td>1</td>
<td>1.85</td>
<td>2</td>
<td>3.70</td>
</tr>
<tr>
<td>3—No opinion</td>
<td>7</td>
<td>12.96</td>
<td>9</td>
<td>16.67</td>
</tr>
<tr>
<td>4—Satisfied</td>
<td>26</td>
<td>48.15</td>
<td>35</td>
<td>64.81</td>
</tr>
<tr>
<td>5—Very Satisfied</td>
<td>19</td>
<td>35.19</td>
<td>54</td>
<td>100.00</td>
</tr>
</tbody>
</table>

*Frequency missing = 0

Qualitative data from “Comments” section of survey question 13, “Please indicate, by circling one response only, your general level of satisfaction with the quality of the training your organization received from a community and technical college during the period July 1, 2000, through June 30, 2002,” included the following verbatim statements:

1. “As always, [name of institution included but withheld here] efforts in higher education and economic development are beyond reproach.”

2. “Would have like to make [sic] the session more industry & company specific.”

3. “[Name of training coordinator withheld here] at [name of institution withheld here] is outstanding. She has assisted us in the coordination and scheduling of courses. [Name of instructor withheld] is also an excellent instructor.”
4. “Because of our specialized training equipment, we use the CTC [community and technical college] for generic PC and software training only.”

5. “Some instructors did not follow course objectives; other instructors were outstanding.”

6. “We have only done ½ day and 1 day seminars.”

7. “Excellent instructor for computer skills.”

8. “Need to be notified from institution courses available that relate to workforce.”

9. “We chose our own instructors and had the college process the payroll. The colleges don’t always spend the time and effort to ‘hire’ the right instructors.”

10. “The instructor was not [emphasis included by the respondent] versed in ‘what’ our jobs were. The overall course was ‘OK.’”

Question 14 on the instrument asked respondents to indicate whether they would recommend to other employers a community and technical college in West Virginia as a provider of workplace-based contract training. The responses to the question were placed on a three-point scale. The responses were scored with 1 indicating “Would recommend,” therefore, the highest level of recommendation, and 3 indicating “Would not recommend,” indicating the lowest level of recommendation. Response 2 indicated “Not sure” about recommending. A response of 1 indicated a high level of satisfaction. A response of 3 indicated a low level of satisfaction. A section to include open-ended comments was included, and the qualitative data are listed after the quantitative data are presented in Table 14.
Table 14

Frequency by Probability to Recommend the Community & Technical College as a Provider of Training

<table>
<thead>
<tr>
<th>Rank Order</th>
<th>Frequency*</th>
<th>Percent</th>
<th>Cumulative Frequency</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1—Would Recommend</td>
<td>45</td>
<td>83.33</td>
<td>45</td>
<td>83.33</td>
</tr>
<tr>
<td>2—Not Sure</td>
<td>8</td>
<td>14.81</td>
<td>53</td>
<td>98.15</td>
</tr>
<tr>
<td>3—Would Not Recommend</td>
<td>1</td>
<td>1.85</td>
<td>54</td>
<td>100.00</td>
</tr>
</tbody>
</table>

*Frequency missing = 0

Qualitative data from “Comments” section of survey question 14, “Please indicate, by circling the appropriate response, whether you would recommend to other organizations a community and technical college as a provider of workplace-based contract training,” included the following verbatim statements:

1. “[Name of institution omitted by researcher] instructors [sic] approach toward the adult education process was exemplary.”
2. “The overall value of the CTC training is excellent—[sic] cost and quality is very good.”
3. “If subject matter was compatible with college course offerings.”
4. “I would only recommend if I knew they [the CTC] were using real world [sic] instructors and not academically qualified personnel with no on the job [sic] history.”
5. “It would depend on the training needs of the organization. The local community college has a narrow scope of what it does well.”
6. “Assumes adjunct faculty with business and industry experience in adult education.”
7. “Would recommend with the qualifier that it would depend on the specific topic and individual institution and its strengths and programs I have knowledge [of]. I would not give a ‘blanket’ recommendation.”

Questions 15 on the instrument asked respondents to indicate how likely they would
be to contract with a community and technical college in West Virginia to meet future training needs. The responses to the question were placed on a five-point Likert-type scale. The responses were scored with 1 indicating “Would definitely use the community and technical college,” therefore, the highest level of likelihood, and 5 indicating “Would definitely not use the community and technical college,” indicating the lowest level of likelihood. Response 3 indicated “Undecided” about the likelihood of using the community and technical college to meet future training needs. A response of 1 indicated a high level of satisfaction. A response of 5 indicated a low level of satisfaction. A section to include open-ended comments was included, and the qualitative data are listed after the quantitative data are presented in Table 15.

Table 15

<table>
<thead>
<tr>
<th>Rank Order</th>
<th>Frequency*</th>
<th>Percent</th>
<th>Cumulative Frequency</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1—Would definitely use</td>
<td>26</td>
<td>48.15</td>
<td>26</td>
<td>48.15</td>
</tr>
<tr>
<td>2—Would probably use</td>
<td>16</td>
<td>29.63</td>
<td>42</td>
<td>77.78</td>
</tr>
<tr>
<td>3—Undecided about use</td>
<td>11</td>
<td>20.37</td>
<td>53</td>
<td>98.15</td>
</tr>
<tr>
<td>4—Probably not use</td>
<td>1</td>
<td>1.85</td>
<td>54</td>
<td>100.00</td>
</tr>
<tr>
<td>5—Definitely not use</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

*Frequency missing = 0

Qualitative data from “Comments” section of survey question 15, “How likely are you to contract with a community and technical college to meet future training needs,” included the following verbatim statements:

1. “Very near future—[sic] plan to downsize & cross-train maintenance mechanics to combine crafts—[sic] also train operators to maintenance.”

2. “I would like to have had more upfront input on course development before I would
commit capital $ [dollars] to a program.”

3. “We have had an outstanding relationship with CTC, [name of institution included but omitted by researcher to maintain anonymity], [name of second institution omitted by researcher], and [name of vocational center omitted by researcher].”


5. “Have good relationship with [name of institution included but omitted by researcher] for our training needs. Would use community college or [name of institution omitted by researcher] if [name omitted] couldn’t meet our needs.”

6. “We would only use a facility [community and technical college] that we work with to provide instructors.”

7. “Difficult to find instructors in tune with workforce needs. Also have had difficulty with timeliness of class preparation and pricing.”

8. “This depends on specific topic area or need.”

Statistical Analysis of Data

The data for this study were collected using a 15-question survey instrument that included four questions to obtain demographic data, seven questions designed to answer relational research questions 2-8, one question to rank order the importance of each individual independent variable to satisfaction, thereby determining which variable is most likely to predict satisfaction, and three questions to determine (1) satisfaction in general, (2) the probability of employers to recommend to others the use of the community and technical college as a provider of training, and (3) the likelihood of the respondent to contract with a community and technical college for future training needs.

The Statistical Analysis System (SAS) was used to analyze the data. Pearson Correlation Coefficients was also used to answer the study’s research questions. The highest
scale value in the instrument was 5.00. Using this value of 5.00 as a parameter, a second analysis was used to determine which of the seven measures may be statistically significant from the parameter 5.00 on the demographic variables of the institutions that responded. In order to determine this, an estimate of the standard deviation in the population was needed. This estimate of the standard deviation was 0.65, which was calculated from all the data points, N=374, in the seven scales. To arrive at a statistically significant difference at the 0.05 value, the standard deviation of 0.65 was multiplied by 1.96 which yielded a value 1.27. Subtracting the value of 1.27 from 5.00 yielded a value of 3.73, and any mean less than 3.73 suggested variance and was determined to be statistically significant.

One important caveat emerged during the data analysis: Because the data from the survey questions were predominantly scored on the high end, little variance between the independent variables was noted. Without significant variance in the data, the few correlations noted between variables are weak. A full 93.05% of responses to questions 5-11 were either Strongly agree or Agree, 56.42% and 36.63%, respectively, which suggested very little variance existed. All variables, therefore, are important as predictors of satisfaction. These data are shown in Table 16.

**Table 16**

**Frequency by Total Responses (total number of data points) to All Survey Questions**

<table>
<thead>
<tr>
<th>Title</th>
<th>Frequency</th>
<th>Percentage</th>
<th>Cumulative Frequency</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2—Disagree</td>
<td>3</td>
<td>0.80</td>
<td>3</td>
<td>0.80</td>
</tr>
<tr>
<td>3—Undecided</td>
<td>23</td>
<td>6.15</td>
<td>26</td>
<td>6.95</td>
</tr>
<tr>
<td>4—Agree</td>
<td>137</td>
<td>36.63</td>
<td>163</td>
<td>43.58</td>
</tr>
<tr>
<td>5—Strongly Agree</td>
<td>211</td>
<td>56.42</td>
<td>374</td>
<td>100.00</td>
</tr>
</tbody>
</table>

*Frequency Missing = 4*
The demographic variables of interest were length of time at the present location of the responding employer, organizational type, number of employees trained in workplace-based contract programs, and the goals of training. Mean scores for each level within the four demographic variables were calculated. Any mean score that fell below the value of 3.73 was considered to be statistically significantly lower than the parameter 5.00.

No statistical significance was noted between length of time at employer’s present location and satisfaction with any one or more of the seven independent variables, because no means fell outside the range of 3.73-5.00. A summary of data is shown in Table 17a-17c. The full array of data is included in Appendix F.

**Table 17a**

| Correlation between Independent Variables and Question 1, Choice 1—Length of Time Conducting Business at Employer’s Present Location—Less than Two Years |
|---------------------------------|-------|-----|
| Independent Variables           | Mean  | N   |
| Employer participation in program design | 4.50  | 2   |
| Customization of program content and method of delivery | 4.50  | 2   |
| Flexibility of contract course and program scheduling | 4.50  | 2   |
| Contract pricing                | 4.50  | 2   |
| Use of adjunct faculty with business and industry experience | 4.50  | 2   |
| Availability of institutional resources for contract training programs | 4.00  | 2   |
| Employee-student persistence in training programs | 4.00  | 2   |

*Number of observations
Table 17b

Correlation between Independent Variables and Question 1, Choice 2—Length of Time Conducting Business at Employer’s Present Location—Two to Three Years

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Mean</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employer participation in program design</td>
<td>4.00</td>
<td>4</td>
</tr>
<tr>
<td>Customization of program content and method of delivery</td>
<td>4.75</td>
<td>4</td>
</tr>
<tr>
<td>Flexibility of contract course and program scheduling</td>
<td>4.50</td>
<td>4</td>
</tr>
<tr>
<td>Contract pricing</td>
<td>4.75</td>
<td>4</td>
</tr>
<tr>
<td>Use of adjunct faculty with business and industry experience</td>
<td>4.50</td>
<td>4</td>
</tr>
<tr>
<td>Availability of institutional resources for contract training programs</td>
<td>4.33</td>
<td>3</td>
</tr>
<tr>
<td>Employee-student persistence in training programs</td>
<td>5.00</td>
<td>3</td>
</tr>
</tbody>
</table>

*Number of observations

Table 17c

Correlation between Independent Variables and Question 1, Choice 3—Length of Time Conducting Business at Employer’s Present Location—More Than Three Years

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Mean</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employer participation in program design</td>
<td>4.55</td>
<td>47</td>
</tr>
<tr>
<td>Customization of program content and method of delivery</td>
<td>4.57</td>
<td>47</td>
</tr>
<tr>
<td>Flexibility of contract course and program scheduling</td>
<td>4.69</td>
<td>48</td>
</tr>
<tr>
<td>Contract pricing</td>
<td>4.60</td>
<td>48</td>
</tr>
<tr>
<td>Use of adjunct faculty with business and industry experience</td>
<td>4.44</td>
<td>48</td>
</tr>
<tr>
<td>Availability of institutional resources for contract training programs</td>
<td>4.15</td>
<td>48</td>
</tr>
<tr>
<td>Employee-student persistence in training programs</td>
<td>5.42</td>
<td>48</td>
</tr>
</tbody>
</table>

*Number of observations
Using all seven measures, means and standard deviations for all 10 organizational types were calculated. Mean scores, therefore, which fell below 3.73 were considered statistically significant. Of all seven measures, only three measures were significantly below the mean value of 3.73 among four organizational types. The measure “Use of adjunct faculty with business and industry experience” was statistically significant at mean score of 2.00 for employers designating legal/social service as organizational type. The measure “The availability of institutional resources” was statistically significant at a mean of 3.00 for employers designating mining as organizational type, at a mean score of 3.50 for employers designating wholesale/trade/distribution as organizational type, and at a mean score of 3.00 for employers designating legal/social service as organizational type. “Employee-student persistence,” as a measure of satisfaction, was statistically significant at a mean score of 3.50 for business service/data processing employers.

Two frequencies were missing for question 2 on the survey instrument, and it is interesting to note that a statistical significance existed in three measures in the satisfaction levels of the two respondents that did not indicate organizational type. Significance was noted at the 3.50 mean score value for the third measure, flexibility of course and program scheduling; at the 3.50 mean score value for the fourth measure, contract pricing; and at the 3.00 value for the sixth measure, availability of institutional resources. The data are included in Table 18.
Table 18

Correlation between Employer Satisfaction and Organizational Type

<table>
<thead>
<tr>
<th>Organizational Type</th>
<th>Employer Participation</th>
<th>Program Customization</th>
<th>Flexible Scheduling</th>
<th>Contract Pricing</th>
<th>Experienced Instructors</th>
<th>Institutional Resources</th>
<th>Student Persistence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining</td>
<td>5.00</td>
<td>5.00</td>
<td>5.00</td>
<td>5.00</td>
<td>5.00</td>
<td>3.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Business service/ data processing</td>
<td>4.00</td>
<td>4.00</td>
<td>4.50</td>
<td>4.00</td>
<td>4.50</td>
<td>4.00</td>
<td>3.50</td>
</tr>
<tr>
<td>Construction Craft or trade</td>
<td>4.00</td>
<td>4.00</td>
<td>5.00</td>
<td>5.00</td>
<td>5.00</td>
<td>5.00</td>
<td>5.00</td>
</tr>
<tr>
<td>Education/ Government</td>
<td>4.47</td>
<td>4.80</td>
<td>4.80</td>
<td>4.87</td>
<td>4.60</td>
<td>4.73</td>
<td>4.80</td>
</tr>
<tr>
<td>Wholesale/Trade/ Distribution</td>
<td>4.50</td>
<td>4.25</td>
<td>4.50</td>
<td>4.25</td>
<td>4.25</td>
<td>3.50</td>
<td>3.75</td>
</tr>
<tr>
<td>Health care</td>
<td>4.50</td>
<td>4.50</td>
<td>5.00</td>
<td>5.00</td>
<td>4.00</td>
<td>4.50</td>
<td>4.50</td>
</tr>
<tr>
<td>Legal/social service</td>
<td>5.00</td>
<td>4.00</td>
<td>5.00</td>
<td>4.00</td>
<td>2.00</td>
<td>3.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>4.93</td>
<td>4.79</td>
<td>4.80</td>
<td>4.67</td>
<td>4.53</td>
<td>4.06</td>
<td>4.73</td>
</tr>
<tr>
<td>Transportation/ Comm/Utilities</td>
<td>4.00</td>
<td>4.67</td>
<td>4.33</td>
<td>4.00</td>
<td>4.00</td>
<td>4.33</td>
<td>4.33</td>
</tr>
<tr>
<td>Chemical</td>
<td>4.25</td>
<td>4.38</td>
<td>4.50</td>
<td>4.75</td>
<td>4.63</td>
<td>3.75</td>
<td>3.88</td>
</tr>
<tr>
<td>No designation indicated</td>
<td>4.00</td>
<td>4.00</td>
<td>3.50</td>
<td>3.50</td>
<td>4.00</td>
<td>3.00</td>
<td>4.00</td>
</tr>
</tbody>
</table>

*Frequency missing = 2

The number of employees participating in contract training was determined to be statistically significant to employer satisfaction with training with respect to the measure of contract pricing only, and that significance was noted in the responses of employers that did not indicate a response to question 3, the number of employees participating in workplace-based contract training. The relationship was statistically significant at a mean score of 3.67. It is interesting to note that employers that indicated 500 or more employees participating in training had the highest mean scores of the five subgroups. The data are displayed in Table 19.
Table 19

**Correlation between Number of Employees Participating in Workplace-based Contract Training and Employer Satisfaction**

<table>
<thead>
<tr>
<th>Number of Employees Participating</th>
<th>Employer Participation</th>
<th>Program Customization</th>
<th>Flexible Scheduling</th>
<th>Contract Pricing</th>
<th>Experienced Instructors</th>
<th>Institutional Resources</th>
<th>Student Persistence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Missing = 3</td>
<td>4.33</td>
<td>4.33</td>
<td>4.0</td>
<td><strong>3.67</strong></td>
<td>4.67</td>
<td>4.00</td>
<td>4.67</td>
</tr>
<tr>
<td>1-10</td>
<td>4.29</td>
<td>4.53</td>
<td>4.50</td>
<td>4.33</td>
<td>4.17</td>
<td>3.94</td>
<td>4.28</td>
</tr>
<tr>
<td>11-49</td>
<td>4.57</td>
<td>4.57</td>
<td>4.57</td>
<td>4.71</td>
<td>4.36</td>
<td>4.31</td>
<td>4.38</td>
</tr>
<tr>
<td>50-99</td>
<td>4.63</td>
<td>4.63</td>
<td>5.00</td>
<td>4.88</td>
<td>4.88</td>
<td>4.25</td>
<td>4.75</td>
</tr>
<tr>
<td>100-499</td>
<td>4.67</td>
<td>4.67</td>
<td>5.00</td>
<td>5.00</td>
<td>4.78</td>
<td>4.11</td>
<td>4.33</td>
</tr>
<tr>
<td>500 +</td>
<td>5.00</td>
<td>5.00</td>
<td>5.00</td>
<td>5.00</td>
<td>4.00</td>
<td>5.00</td>
<td>5.00</td>
</tr>
</tbody>
</table>

The goals for training demographic was determined to be statistically significant to employer satisfaction with training with respect to one measure, contract pricing. The relationship was statistically significant at 0.0051. A statistical significance was noted at a mean of 3.50 with regard to the relationship between the specific goal of “Mandated by the profession of the employee” and the measure of contract pricing. Further, statistical significance was noted at a mean of 3.50 with regard to the relationship between the specific goal of “Mandated by the profession of the employee” and the measure of the availability of institutional resources for training. The data are included in Table 20.
### Table 20

**Correlation between Employer Satisfaction and Goals for Training**

<table>
<thead>
<tr>
<th>Goals for Training</th>
<th>Employer Participation</th>
<th>Program Customization</th>
<th>Flexible Scheduling</th>
<th>Contract Pricing</th>
<th>Experienced Instructors</th>
<th>Institutional Resources</th>
<th>Student Persistence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upgrade Employee Performance in Current Jobs</td>
<td>4.75</td>
<td>4.63</td>
<td>4.63</td>
<td>4.50</td>
<td>4.50</td>
<td>4.13</td>
<td>4.63</td>
</tr>
<tr>
<td>Prepare Employee for New Skill or Job Classification</td>
<td>4.55</td>
<td>4.45</td>
<td>4.64</td>
<td>4.36</td>
<td>4.27</td>
<td>3.80</td>
<td>4.40</td>
</tr>
<tr>
<td>Mandated by Profession of Employee</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>3.50</td>
<td>4.00</td>
<td>3.50</td>
<td>4.00</td>
</tr>
<tr>
<td>Mandated by State or Federal Law</td>
<td>4.25</td>
<td>4.75</td>
<td>4.75</td>
<td>4.50</td>
<td>4.25</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Self-Enrichment or Personal Development</td>
<td>4.50</td>
<td>4.54</td>
<td>4.75</td>
<td>4.79</td>
<td>4.67</td>
<td>4.21</td>
<td>4.38</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>4.40</td>
<td>5.00</td>
<td>4.60</td>
<td>5.00</td>
<td>4.00</td>
<td>5.00</td>
<td>5.00</td>
</tr>
</tbody>
</table>

**Major Findings**

The analysis of the data collected in this study determined that six of the seven independent variables identified in the literature do not have a statistically significant relationship with employer satisfaction. The study did reveal, however, that flexibility of course and program scheduling has a statistically significant relationship with employer satisfaction.

The purpose of the study was to determine whether seven independent variables, as defined in the literature review, help determine employer satisfaction with workplace-based contract training at community and technical colleges in West Virginia. The Statistical Analysis System (SAS) was used to analyze the raw data. It is important to note that because the survey results were all skewed on the high or positive end, little variance between independent variables was noted.
The first test run on the raw data was a simple inferential statistical measure to determine any relationships between the seven independent variables, which correspond to research questions 2-8, and question 13 on the survey instrument, which was designed to determine an employer’s general level of satisfaction with the quality of training received from a community and technical college during the period July 1, 2000, through June 31, 2002. The data resulted in a mean range of 4.13 to 4.67 on the seven variables and a standard deviation range of 0.53 to 0.85. The full table of values is included in Appendix G. Independent variables, which corresponded to questions 5 through 11 on the survey instrument, are designated by amended title for purposes of reporting data analyses.

The second test run on the raw data was Pearson Correlation Coefficients. Question 13 on the survey instrument sought to measure the general level of employer satisfaction with workplace-based contract training at a community and technical college. Only one statistically significant correlation was shown between the seven measures and general employer satisfaction with contract training. The independent variable flexibility of contract course and program scheduling was statistically significant at the 0.05 value, with a correlation coefficient of 0.25654; the relationship was statistically significant at 0.0611. Although the correlation was small, no other statistically significant relationship existed. The other six variables were statistically insignificant and showed no correlation to general employer satisfaction. The data are reported in Table 21.
**Table 21**

Correlation between Independent Variables and Question 13—The General Level of Employer Satisfaction with the Quality of Training Provided by a Community and Technical College

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Question 13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employer participation in program design</td>
<td>0.08991 0.5220 53*</td>
</tr>
<tr>
<td>Customization of program content and method of delivery</td>
<td>0.12212 0.3837 53*</td>
</tr>
<tr>
<td><strong>Flexibility of contract course and program scheduling</strong></td>
<td><strong>0.25654 0.0611 54</strong>*</td>
</tr>
<tr>
<td>Contract pricing</td>
<td>0.22597 0.1004 54*</td>
</tr>
<tr>
<td>Use of adjunct faculty with business and industry experience</td>
<td>-0.03443 0.8048 54*</td>
</tr>
<tr>
<td>Availability of institutional resources for contract training programs</td>
<td>-0.00160 0.9909 53*</td>
</tr>
<tr>
<td>Employee-student persistence in training programs</td>
<td>0.06936 0.6216 53*</td>
</tr>
</tbody>
</table>

*Number of observations*

Additional Pearson Correlation Coefficients analysis revealed no correlation between whether an employer would recommend the community and technical college to other organizations as a provider of workplace-based contract training (question 14) and any of the seven independent variables. The mean range for the seven variables in this test was 4.15 to 4.67, and the standard deviation range was 0.53 to 0.79. Three forced-answer choices were available: (1) Would recommend; (2) Not sure; (3) Would not recommend. No correlation was statistically significant at the 0.05 value. The data are reported in Table 22.
Table 22

Correlation between Independent Variables and Question 14—The Likelihood of an Employer to Recommend to other Organizations a Community and Technical College as a Provider of Training

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Question 14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employer participation in program design</td>
<td>0.13660</td>
</tr>
<tr>
<td></td>
<td>0.3294</td>
</tr>
<tr>
<td></td>
<td>53*</td>
</tr>
<tr>
<td>Customization of program content and method of delivery</td>
<td>-0.06924</td>
</tr>
<tr>
<td></td>
<td>0.6223</td>
</tr>
<tr>
<td></td>
<td>53*</td>
</tr>
<tr>
<td>Flexibility of contract course and program scheduling</td>
<td>-0.13080</td>
</tr>
<tr>
<td></td>
<td>0.3458</td>
</tr>
<tr>
<td></td>
<td>54*</td>
</tr>
<tr>
<td>Contract pricing</td>
<td>-0.16152</td>
</tr>
<tr>
<td></td>
<td>0.2433</td>
</tr>
<tr>
<td></td>
<td>54*</td>
</tr>
<tr>
<td>Use of adjunct faculty with business and industry experience</td>
<td>0.09340</td>
</tr>
<tr>
<td></td>
<td>0.5017</td>
</tr>
<tr>
<td></td>
<td>54*</td>
</tr>
<tr>
<td>Availability of institutional resources for contract training programs</td>
<td>-0.08289</td>
</tr>
<tr>
<td></td>
<td>0.5552</td>
</tr>
<tr>
<td></td>
<td>53*</td>
</tr>
<tr>
<td>Employee-student persistence in training programs</td>
<td>0.04529</td>
</tr>
<tr>
<td></td>
<td>0.7474</td>
</tr>
<tr>
<td></td>
<td>53*</td>
</tr>
</tbody>
</table>

*Number of observations

A correlation was also shown between question 15—how likely an employer was to contract with a community and technical college for future training needs—and flexibility of contract course and program scheduling. Five forced-answer choices were available: (1) Would definitely use the community and technical college; (2) Would probably use the community and technical college; (3) Undecided about whether I would use the community and technical college; (4) Probably not use the community and technical college; (5) Definitely not use the community and technical college. The relationship was statistically significant at 0.0287, using the 0.05 correlation value, with a correlation coefficient value of -0.29791. The data are arrayed in Table 23.
Table 23

Correlation between Independent Variables and Question 15—The Probability of an Employer to Contract with a Community and Technical College to Meet Future Training Needs

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Question 15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employer participation in program design</td>
<td>0.09722</td>
</tr>
<tr>
<td></td>
<td>0.4886</td>
</tr>
<tr>
<td></td>
<td>53 *</td>
</tr>
<tr>
<td>Customization of program content and method of delivery</td>
<td>-0.22759</td>
</tr>
<tr>
<td></td>
<td>0.1012</td>
</tr>
<tr>
<td></td>
<td>53 *</td>
</tr>
<tr>
<td><strong>Flexibility of contract course and program scheduling</strong></td>
<td>-0.29791</td>
</tr>
<tr>
<td></td>
<td>0.0287</td>
</tr>
<tr>
<td></td>
<td>54 *</td>
</tr>
<tr>
<td>Contract pricing</td>
<td>-0.20023</td>
</tr>
<tr>
<td></td>
<td>0.1466</td>
</tr>
<tr>
<td></td>
<td>54 *</td>
</tr>
<tr>
<td>Use of adjunct faculty with business and industry experience</td>
<td>-0.00691</td>
</tr>
<tr>
<td></td>
<td>0.9605</td>
</tr>
<tr>
<td></td>
<td>54 *</td>
</tr>
<tr>
<td>Availability of institutional resources for contract training programs</td>
<td>-0.25666</td>
</tr>
<tr>
<td></td>
<td>0.0636</td>
</tr>
<tr>
<td></td>
<td>53 *</td>
</tr>
<tr>
<td>Employee-student persistence in training programs</td>
<td>-0.08366</td>
</tr>
<tr>
<td></td>
<td>0.5515</td>
</tr>
<tr>
<td></td>
<td>53 *</td>
</tr>
</tbody>
</table>

*Number of observations

Research Questions

Research question 1: Do employers that sponsor workplace-based, contract training at community and technical colleges in West Virginia have satisfaction predictors that are similar to employers in general? Only three other studies have been conducted to determine employer satisfaction with training delivered by community and technical colleges; studies in Iowa, Michigan, and Maryland revealed that the seven independent variables used in this study were predictors of employer satisfaction. For purposes of explanation, then, the term “employers in general” is defined as the population studied in the previous three studies.

Analysis of the data from the survey results of this study suggest that employers that sponsored workplace-based, contract training at a community and technical college in West
Virginia, during the study period July 1, 2000, through June 30, 2002, did have satisfaction predictors similar to employers in general.

Research question 2: What is the relationship, if any, between employer-sponsor participation in program design and employer satisfaction with workplace-based contract training programs? Using survey question 13, which sought to determine an employer’s general level of satisfaction with training, the research question was tested and it was determined that no statistically significant relationship existed between the variables. Table 24 presents the correlational data for research question 2.

**Table 24**

**Correlation of Employer Participation in Training Program Design and Employer Satisfaction with Training**

<table>
<thead>
<tr>
<th>Source</th>
<th>Correlation Coefficient</th>
<th>Correlation Value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employer Participation in Program Design</td>
<td>0.08991</td>
<td>0.5220</td>
<td>53</td>
</tr>
</tbody>
</table>

*No statistical significance revealed*

Research question 3: What is the relationship, if any, between customization of program content and mode of delivery and employer satisfaction with workplace-based contract training programs? Using survey question 13, which sought to determine an employer’s general level of satisfaction with training, the research question was tested and it was determined that no statistically significant relationship existed between the variables. Table 25 presents the correlational data for research question 3.
Table 25

**Correlation of Customization of Program Content and Mode of Delivery and Employer Satisfaction with Training**

<table>
<thead>
<tr>
<th>Source</th>
<th>Correlation Coefficient</th>
<th>Correlation Value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customization of Program Content and Mode of Delivery</td>
<td>0.12212</td>
<td>0.3837</td>
<td>53</td>
</tr>
</tbody>
</table>

*No statistical significance revealed*

Research question 4: What is the relationship, if any, between flexibility of course and program scheduling and employer satisfaction with workplace-based contract training programs? Using survey question 13, which sought to determine an employer’s general level of satisfaction with training, the research question was tested and it was determined that a statistically significant relationship existed between the variables at the 0.0611 value. It should be noted that because the data from the survey questions were predominantly scored on the high end, little variance between the independent variables was noted. Without significant variance in the data, the few correlations noted between variables are weak. The correlation between research question 3 and the independent variable “Flexibility of course and program scheduling,” showed the greatest variance and, therefore, the most statistically significant correlation among the research questions. It should be noted, however, that 93.05% of the responses to question 5 indicated a strong agreement or agreement with the importance of the independent variable. Table 26 presents the correlational data for research question 4.
Table 26

**Correlation of Flexibility of Course and Program Scheduling and Employer Satisfaction with Training**

<table>
<thead>
<tr>
<th>Source</th>
<th>Correlation Coefficient</th>
<th>Correlation Value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexibility of Course and Program Scheduling</td>
<td>0.25654</td>
<td>0.0611</td>
<td>54</td>
</tr>
</tbody>
</table>

*Statistical significance revealed at the 0.05 value

Research question 5: What is the relationship, if any, between the use of contract pricing and employer satisfaction with workplace-based contract training programs? Using survey question 13, which sought to determine an employer’s general level of satisfaction with training, the research question was tested and it was determined that no statistically significant relationship existed between the variables. Table 27 presents the correlational data for research question 5.

Table 27

**Correlation of Use of Contract Pricing and Employer Satisfaction with Training**

<table>
<thead>
<tr>
<th>Source</th>
<th>Correlation Coefficient</th>
<th>Correlation Value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of Contract Pricing</td>
<td>0.22597</td>
<td>0.1004</td>
<td>54</td>
</tr>
</tbody>
</table>

*No statistical significance revealed

Research question 6: What is the relationship, if any, between the use of adjunct instructors with business and industry experience and employer satisfaction with workplace-based contract training programs? Using survey question 13, which sought to determine an employer’s general level of satisfaction with training, the research question was tested and it was determined that no statistically significant relationship existed between the variables. Table 28 presents the correlational data for research question 6.
Table 28

**Correlation of Use of Adjunct Instructors with Business and Industry Experience and Employer Satisfaction with Training**

<table>
<thead>
<tr>
<th>Source</th>
<th>Correlation Coefficient</th>
<th>Correlation Value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of Instructors w/Business and Industry Experience</td>
<td>-0.03443</td>
<td>0.8048</td>
<td>54</td>
</tr>
</tbody>
</table>

*No statistical significance revealed

Research question 7: What is the relationship, if any, between the availability institutional resources and employer satisfaction with workplace-based contract training programs? Using survey question 13, which sought to determine an employer’s general level of satisfaction with training, the research question was tested and it was determined that no statistically significant relationship existed between the variables. Table 29 presents the correlational data for research question 7.

Table 29

**Correlation of the Availability of Institutional Resources and Employer Satisfaction with Training**

<table>
<thead>
<tr>
<th>Source</th>
<th>Correlation Coefficient</th>
<th>Correlation Value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability of Institutional Resources</td>
<td>-0.00160</td>
<td>0.9909</td>
<td>53</td>
</tr>
</tbody>
</table>

*No statistical significance revealed

Research question 8: What is the relationship, if any, between employee-student persistence and employer satisfaction with workplace-based contract training programs? Using survey question 13, which sought to determine an employer’s general level of satisfaction with training, the research question was tested and it was determined that no statistically significant relationship existed between the variables. Table 30 presents the correlational data for research question 8.
Table 30

<table>
<thead>
<tr>
<th>Source</th>
<th>Correlation Coefficient</th>
<th>Correlation Value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee-student Persistence</td>
<td>0.06936</td>
<td>0.6216</td>
<td>53</td>
</tr>
</tbody>
</table>

*No statistical significance revealed

**Summary of the Chapter**

A total of 56 employers who contracted with a community and technical college in West Virginia during the study period participated in this study to determine the association between employer satisfaction with contract training and seven independent variables, and to determine the relationship between seven independent variables and satisfaction. The purpose of this study was to determine whether these variables help determine employer satisfaction with workplace-based contract training, and to determine which variables are the most significant predictors of satisfaction. As a third purpose, this study sought to use the data to suggest a model for community and technical colleges in the state to effectively and cost-efficiently delivery of contracted training for business and industry employer groups that seek workplace-based training and educational programs.

To determine the relationship between the variables and employer satisfaction, the self-made survey instrument titled “The 2000-2002 West Virginia Community and Technical College Contract Training Evaluation Survey” was used. This instrument consisted of a demographic section to determine certain selected characteristics of respondents, seven Likert-type scale questions, a rank order question to determine the most significant predictor of satisfaction, and three final questions about general satisfaction, probability of recommending use of the community and technical college to other employers, and likelihood of contracting with a community and technical college for future training needs.
Data were analyzed at the 0.05 alpha value of significance using the Statistical Analysis System (SAS) and Pearson Correlational Coefficients test, and within the mean scores range of 3.73-5.00, as determined by calculation of the means and standard deviation from the total of 374 data points. Descriptive data, reported by frequency, were analyzed with SAS.

The analysis of the data collected in this study determined that employer satisfaction had a statistically significant relationship with only one of the seven independent variables listed in the research questions—flexibility of course and program scheduling. It should be noted, however, that because more than 93% of the responses were on the high end of the five-point scale, little variance between variables was noted, which accounts for only one correlation.

Data analysis of the demographic data collected in this study revealed that no statistically significant relationship existed between the lengths of time that employers conducted business at their present locations and satisfaction with training. Additionally, statistical significance was determined between organizational type and employer satisfaction with training. Three measures were significantly below the mean value of 3.73 among four organizational types. Interestingly, two frequencies were missing for question 2 on the survey instrument, and analysis revealed a statistical significance existed in three measures in the satisfaction levels of the two respondents that did not indicate organizational type. Further, the number of employees participating in contract training was determined to be statistically significant to employer satisfaction with training with respect to the measure of contract pricing only, and that significance was noted in the responses of employers that did not indicate a response to question 3, the number of employees participating in workplace-based contract training. Employers that indicated 500 or more employees participating in
training had the highest mean scores of the five subgroups. Finally, the goals for training demographics were determined to be statistically significant to employer satisfaction with training with respect to one measure, contract pricing. The relationship was statistically significant at 0.0051. Statistical significance was noted at a mean of 3.50 with regard to the relationship between the specific goal of “Mandated by the profession of the employee” and the measure of contract pricing. Further, statistical significance was noted at a mean of 3.50 with regard to the relationship between the specific goal of “Mandated by the profession of the employee” and the measure of the availability of institutional resources for training.
CHAPTER V

Summary and Conclusion

This chapter presents the summary, conclusions, and recommendations of the study. The chapter is divided into the following seven sections: (1) summary of purpose, (2) summary of procedures, (3) summary of descriptive data, (4) summary of findings, (5) conclusions, (6) implications, and (7) recommendations.

Purpose of the Study

This study was designed to examine the relationship between employer satisfaction with workplace-based contract training at community and technical colleges in West Virginia and seven independent variables identified in the literature as predictors of satisfaction. Demographic information was collected using an instrument adapted from the 1995 Maryland Community College Workforce Training Evaluation Needs Assessment (Clagett & Alexander, 1995). The instrument used in the Maryland study was an adaptation of instruments used in a 1991 Iowa Department of Education study and in a 1993 Michigan study (Jacobs, 1993) of workforce training programs provided by community and technical colleges in that state. Employer satisfaction with training was determined from scores on “The 2000-2001 West Virginia Community and Technical College Contract Training Evaluation Survey.” The following research questions guided this study:

1. Do employers that sponsor workplace-based, contract training at community and technical colleges in West Virginia have satisfaction predictors that are similar to employers in general?

2. What is the relationship, if any, between employer-sponsor participation in program design and employer satisfaction with workplace-based, contract training programs?
3. What is the relationship, if any, between customization of program content and mode of delivery and employer satisfaction with workplace-based contract training programs?

4. What is the relationship, if any, between flexibility of course and program scheduling and employer satisfaction with workplace-based contract training programs?

5. What is the relationship, if any, between the use of contract pricing and employer satisfaction with workplace-based contract training programs?

6. What is the relationship, if any, between the use of adjunct instructors with business and industry experience and employer satisfaction with workplace-based contract training programs?

7. What is the relationship, if any, between availability of institutional resources—consisting of at least on-site admission, registration, textbook sales, and academic advising—and employer satisfaction with workplace-based contract training programs?

8. What is the relationship, if any, between employee-student persistence and employer satisfaction with workplace-based contract training programs?

The results of the statistical analyses for research questions 2 and 3 indicated no significant relationship existed between the variables and employer satisfaction. The results for research question 4 indicated that a statistically significant relationship existed between flexibility of course and program scheduling and employer satisfaction. The results of the statistical analyses for research questions 5-8 indicated no significant relationship existed between the variables and employer satisfaction. When post hoc analyses were conducted,
however, a statistically significant relationship was determined to exist when demographic variables and employer satisfaction were compared.

It is interesting to note that the descriptive data revealed high satisfaction for all seven variables, specifically employer participation in program design and customization of program content and method of delivery, each with 98.12% of total responses indicating the variable was important to satisfaction. Flexibility of contract course program scheduling and contract pricing were also important predictors of satisfaction with positive, high-end responses accounting for 96.30% and 96.29% of all responses, respectively. Approximately 92.50 positive responses were recorded to indicate the importance of employee-student persistence to employer satisfaction with training, and nearly 91% of responses were scored at the 5 level or 4 level for the variable “Use of adjunct faculty with business and industry experience.”

These findings, in addition to the post hoc analyses of this study, could provide useful data helpful in the area of contact training, workforce development, and customized educational services for business and industry at community and technical colleges. These findings could also provide important information for central-office higher education administrators and for state-level lawmakers responsible for establishing fiscal, programmatic, and administrative policy for community and technical colleges. Finally, these findings could provide useful data to help determine the effectiveness of past and current higher education legislation in the state, specifically WV S.B. 547 (1995) and WV S.B. 653 (2000), which both addressed the community and technical college’s role in workforce development, contract training, and customized educational services for business and industry.
Summary of Procedures

The population of all employers (N=128) that contracted with a community and technical college for workplace-based contract training during the period July 1, 2000, through June 30, 2002, as determined by chief administrative staff at 11 of the state’s 12 community and technical colleges, were surveyed for the purpose of this study. [The one institution that failed to report population data indicated that workplace-based contract training had been provided by the institution to six employers during the study period, which suggests that community and technical colleges in West Virginia had a 100% participation rate. This participation rate exceeds that established by a 1989 study which showed that 93% of the colleges surveyed offered at least one contract training program for employers (AACC, 1991) and the rate of 90% established in 2000 (Dougherty & Bakia).]

This was a one-shot case study using a self-reporting questionnaire survey instrument to gather data. The total population (N=128) of employers was mailed a 15-question survey instrument (Appendix B), a cover letter with instructions for completing the survey (Appendix C), and a self-addressed, stamped envelope for returning the completed survey. A demographic section on the instrument included four questions, and “The 2000-2002 West Virginia Community and Technical College Contract Training Evaluation Survey” asked each employer to respond to 11 additional questions, based on a Likert-type scale, to measure their satisfaction with workplace-based contract training. The surveys were mailed to the respondents with instructions to return the completed instrument to the researcher within 15 days of receipt. The surveys were mailed two days in advance to allow a full 15 days for completion of the instrument. Each respondent’s returned survey was date and time stamped and given a number for purposes of coding the data. Follow-up e-mail and telephone requests provided for a final return rate of 44%. Of these, 97% were usable. Each returned survey
was assigned a numeric code based on the order of receipt, and data returned on the survey were entered into an ANSI file and statistically analyzed using the Statistical Analysis System (SAS). An alpha value of 0.05 and a mean score range of 3.73-5.00 were used to determine statistical significance between the variables.

**Summary of Descriptive Data**

Demographic data collected from the respondents included the following items: (1) length of time conducting business at the employer’s present location, (2) organizational type, (3) number of employees trained, and (4) training goals. To determine satisfaction, the respondents were asked to indicate the importance of each of seven independent variables. The demographic items and the independent variables were chosen based on research by Clagett and Alexander (1995).

Of the 54 respondents, 48 (89%) indicated they had conducted business at the present location for more than three years and four (7.5%) indicated they had conducted business for two to three years at the present location. Two (4%) indicated they had conducted business at the present location less than two years.

When considering the respondents’ organizational types, two respondents (3.85%) indicated they were involved in mining, two (3.85%) in business service or data processing, one (1.92%) in construction craft or trade, 16 (30.77%) in education or government, and four (7.69%) in wholesale, trade, or distribution. Two (3.85%) respondents indicated they were involved in health care, one (1.92%) in legal or social service, 15 (28.85%) in manufacturing, three (5.77%) in transportation, communication, or utilities, and eight respondents (15.38%) indicated the nature of their business as chemical.

Regarding the number of employees trained with workplace-based contract programs, 18 (35.29%) had fewer than 10 participating employees, 14 (27.45%) had 11-49 participants,
eight (15.69%) trained 50-99 employees, nine (17.65%) enrolled 100-499 participants. Two (3.92%) employers contracted for workplace-based training with a community and technical college in West Virginia for 500 or more employees.

The goals for training question showed that the most frequently selected goal (42) was “Upgrade the quality of employee performance in current job,” which is referred to in the industry as “Incumbent-worker training.” “Prepare the employee for a new skill or job classification” was selected 32 times, and “Self-enrichment or personal development of the employee” was selected 26 times. The training goals “Mandated by law (state or federal)” and “Mandated by the profession of the employee” were selected 11 and seven (7) times, respectively, and the least selected goal for training was “Other (please specify),” which was selected only five (5) times, but provided useful qualitative data and ancillary findings that might be helpful in designing future survey instruments and in conducting future studies.

Summary of Findings

Analyses of the data collected for this study indicated limited findings. The analyses of the data revealed that flexibility of contract course and program scheduling had a statistically significant relationship with employer satisfaction with workplace-based contract training. The literature indicates that meeting employers’ requests for customized course and program schedules is a major factor in employers’ decisions to contract with community and technical colleges for training (Bailey & Averianova, 2000; Dougherty & Bakia, 2000; Eisen, 1997; AACC, 1993; Powers et al., 1988; Kalan, 1984; Luther, 1984). No statistically significant relationship existed, however, between employer satisfaction and the other six variables.

Statistically significant relationships did exist between three of the four demographic variables and several independent variables identified in the literature as associated with
satisfaction. Statistical significance also existed between employers indicating mining, wholesale/trade/distribution, and legal/social service as organizational types and the availability of institutional resources. Statistical significance also existed between employers designating legal/social service as organizational type and the use of adjunct faculty with business and industry experience. Additionally, statistical significance existed between employee-student persistence, as a measure of satisfaction, and employers designating business service/data processing as organizational type. These data reveal that a correlation existed between organizational type and the variables associated with satisfaction. No statistical significance was noted between the demographic variable length of time at employer’s present location and any one or more of the seven independent variables.

When examining the relationship between employer satisfaction and the seven independent variables, statistical significance was shown between employer satisfaction and only one variable—flexibility of course and program scheduling. It should be noted, however, that because responses to the survey were predominantly on the high or positive end of the Likert-type scale (4-5), little variance existed among the variables and statistically significant relationships were difficult to establish. Where those relationships were shown to exist, the correlation was statistically weak. And because high-end responses to the importance of the seven variables to satisfaction ranged from 79.25% to 98.12% (with six of the seven variables falling above 90.75%), it was concluded that all seven variables are positively associated with satisfaction. These findings coincide with the literature, which indicates that employers are generally satisfied with workplace-based contract training delivered by community and technical colleges (Bragg & Jacobs, 1993; Clagett & Alexander, 1995; Wismer & Fadale, 1997). It was further concluded that because the seven variables were shown in previous studies in Iowa, Michigan, and Maryland to be predictors of
satisfaction, that research question 1 is answered in the affirmative: “Do employers that sponsor workplace-based, contract training at community and technical colleges in West Virginia have satisfaction predictors that are similar to employers in general?”

A statistically significant relationship existed between flexibility of contract course and program scheduling and the general level of employer satisfaction (question 13). Although the correlation was small (0.06 at the 0.05 value), no other statistically significant relationship existed. By frequency, 83.34% of employers responding selected Very satisfied or Satisfied to the question about the general level of satisfaction. This percentage was significantly higher than the 60% satisfaction rate found by Clagett and Alexander (1995) in the Maryland study.

Analysis also revealed no statistically significant relationship between whether an employer would recommend the community and technical college to other organizations as a provider of contract training and any one or more of the seven variables. By frequency, however, 83.33% of employers responding indicated they would recommend the community and technical college to other employers. This is slightly less than the 95% of Maryland respondents who would recommend (Clagett & Alexander, 1995), and the 96% percent of employers, in general, who would recommend (Zeiss, 1997).

Further, a correlation was also shown between flexibility of course and program scheduling and the likelihood of an employer to contract with a community and technical college for future training needs, which further supports the contention in the literature that flexibility of course and program scheduling is a primary predictor of satisfaction (Bailey & Averianova, 2000; Dougherty & Bakia, 2000; Eisen, 1997; AACC, 1993; Powers et al., 1988; Kalan, 1984; Luther, 1984). By frequency, however, only 77.78% of employers responding to question 15 on the survey indicated that they would definitely use or would
probably use the community and technical college for future training. This is slightly higher, however, than the national percentage of 58.9% of companies that used community and technical colleges to provide employee training in 2000 (VanBuren & Erskine, 2002).

**Conclusion**

The findings generated by the analyses of data collected for this study resulted in the following conclusions. The literature indicates that there is a relationship between all seven variables and employer satisfaction with workplace-based contract training at community and technical colleges. In this study, however, statistical significance existed only between one variable, flexibility of course and program scheduling, and employer satisfaction. Frequency data, however, suggested high levels of satisfaction for all variables. Because the data were skewed on the high or positive end of the scale, with 348 (93.05%) of 374 data points either a 4 or 5, the findings of this study do substantiate the contention in the literature that all seven variables are good predictors of employer satisfaction. These data are shown in Table 16.

An examination of the qualitative data obtained from comments included for questions 13-15 supported the findings that using adjunct faculty with business and industry experience was an important predictor of employer satisfaction with training programs. Although no statistical significance existed between employer satisfaction and this variable, nearly 91% of respondents indicated a high level of importance associated with this variable. Nine of the 17 qualitative comments (53%) support this finding, which includes the following:

1. “The colleges don’t always spend the time and effort to ‘hire’ the right instructors.”
2. “I would only recommend if I knew they [the community and technical college] were using real world [sic] instructors and not academically qualified personnel with no on the job [sic] history.”
3. “Assumes adjunct faculty with business and industry experience….”
4. “Some instructors did not follow course objectives.”
5. “We chose our own instructors.”
6. “The instructor was not [emphasis in the original] versed in ‘what’ our jobs were.”
7. “[Name withheld] is also an excellent instructor.”
8. “Excellent instructor for computer skills.”
9. “… instructors [sic] approach … was exemplary.”

The quantitative and qualitative data obtained from this study suggest an important relationship between employer satisfaction and the use of adjunct faculty with business and industry experience, although no statistically significant relationship could be established. This finding supports the literature that suggests a correlation between the use of instructors with business and industry experience and employer satisfaction with workplace-based contract training programs (AACC, 2000; Warford & Flynn, 2000; Powers et al., 1988; Kaplan, 1984; Kopecek, 1984).

The least important predictor of employer satisfaction, by frequency, was the availability of institutional resources, but no qualitative data were included to support this finding. The literature, however, suggests that on-site institutional support services (such as testing, assessment, admission and registration, academic advising, access to library holdings, counseling, tutoring) are associated with satisfaction (AACC, 1991; Powers et al., 1988; Flory, 1986; Kopecek, 1984).

**Implications**

Daniel (1996) reported that the educational community and educational policy makers have historically favored and continue to favor research that has immediate practical implications (Kaestle, 1993; Kerlinger 1969, 1977, 1979). Findings from this study meet this
criterion. The findings from this study indicated that all variables identified in the literature as predictors of employer satisfaction were also identified, by frequency, as associated with satisfaction among employers surveyed in this study. The only statistical significance indicated in the study, however, was related to flexibility of course and program scheduling and employer satisfaction. Therefore, the findings of this study provided limited support for the previous findings in the literature about the other six variables and employer satisfaction.

The result of this study also provided information about the relationship between demographic variables and employer satisfaction, which relationship was not indicated in the literature. (Clagett and Alexander collected similar data in the 1995 Maryland study, but did not include these variables in the analyses of the data.) This study, therefore, provided no support for the findings in the literature but did provide a basis for a recommendation for a future study. The result of this study also provided information about an association between the use of adjunct faculty with business and industry experience and employer satisfaction. Qualitative data obtained from this study, which correlated to responses on quantitative measures, suggest a strong correlation between the variables, and provide a basis for a recommendation for a future study.

This study surveyed a high percentage (78.43%) of small-size employers, organizations indicating less than 100 employees (35.29% indicating less than 10 employees), which is characteristic of the state of West Virginia, but which may not be characteristic of other states or of states in general. The study provided limited support for generalization except to states with employer demographics similar to West Virginia. The study did, however, provide an equitable sampling of the population across organizational types, with one or more respondents representing all 10 organizational categories. Generalization with regard to organizational type, though somewhat limited, may be
possible. The goals for training listed in this study are similar to those listed in the 1995 Maryland study, and are accepted as standards within the field of training. Generalization, therefore, of the findings that suggested an association between training goals and employer satisfaction may be possible given the foregoing.

This study is only the fourth such study, to the researcher’s knowledge, that has examined employer satisfaction with training provided by community and technical colleges to business and industry employers. According to Wismer (1995), few studies have been conducted by community and technical colleges that serve business and industry customers to determine customer satisfaction with contract training programs. Wismer recommended, however, that state associations of continuing education conduct a survey similar to the 1993 Michigan study to identify customer satisfaction and training needs. To date, and to the researcher’s knowledge, only Maryland (Clagett & Alexander, 1995) and this study about West Virginia employers have been the only two studies to result from Wismer’s recommendation. Without studies in all 50 states, however, it will be difficult for any national standards to emerge and be accepted, and even more difficult for the nation’s nearly 1,300 community and technical colleges to provide workplace-based contract education that meets employers’ expectations and that leads to employer satisfaction. And with community and technical colleges viewed as only one of eight service provider types that provide training for business and industry, and with a decrease in the number of employers choosing a community and technical college to provide training, employer satisfaction is paramount to capturing a share of the training market (VanBuren & Erskine, 2002).

Given the findings of this study and the implication of the results of the data, it is reasonable to assume that employee satisfaction is not a given. It is also reasonable to suggest that community and technical colleges not assume that employers seeking to provide
workplace-based training for incumbent employees or new hires will automatically turn to the community and technical college. Qualitative data obtained in this study support this suggestion.

Recommendations

Analyses of the data collected for this study provided the bases for the following recommendations:

1. It is recommended that this study be replicated in other states, particularly those designated as a Southern Regional Educational Board (SREB) peer institution. Such studies will allow for broader generalization of the data.

2. It is recommended that future studies examine the relationship between additional demographic variables—such as amount of and availability of employer training dollars, organizational department (training, human resources, research and development, etc.) responsible for training, and quality of employer-provided training facilities—and employer satisfaction with training. The findings between these variables may be significant, especially because a variety of factors influence the quality of training and, therefore, employer satisfaction.

3. It is recommended that future studies examine the relationship between the number of employees trained (and employer size) and employer satisfaction with training. Mean employer size varies by state and region of the United States, with high concentrations of small-size employers (fewer than 500 employees) in some states and high concentrations of large-size employers (more than 500 employers) in other states. Determining whether a relationship exists between employer size, or number of employees trained, and employer satisfaction may be helpful.
4. It is recommended that this study be replicated in West Virginia at the close of 2006, which marks the end of the six-year “compact” period designated by WV S.B. 653. Community and technical colleges that fail to meet the mandates, which include workforce development and contract training provided to business and industry, may be forced to dissolve or merge with other institutions.

5. It is recommended that a future study that addresses the relationship between employer satisfaction and the use of adjunct faculty with business and industry experience in workplace-based or campus-based contract training be conducted. Findings of such a study might help community and technical college staff responsible for contract training develop a model profile for selecting and mentoring adjunct faculty hired for purposes of contract training.

6. It is recommended that a future study be conducted that examines the relationship between the intrinsic and extrinsic job satisfaction of community and technical college staff responsible for the delivery of workforce development programs and contract training for business and industry and employer satisfaction with such programs.

7. It is recommended that a future study be conducted that addresses the relationship between the availability of institutional resources for workplace-based contract courses and employer satisfaction be conducted. Findings from such a study might help community and technical college staff determine which support services are necessary to ensure employer and employee satisfaction with contract training programs and to budget accordingly.

8. It is recommended that a future study examine the variables that are associated with employee satisfaction with workplace-based or campus-based contract
training programs for business and industry. Results of such a study might help employers and community and technical college staff design and coordinate the delivery of meaningful, effective, and cost-efficient contract training programs for incumbent employees and new hires.

9. It is recommended that the results of this study be made available to chief administrative staff at the state’s 12 community and technical colleges, to the office of the vice chancellor for community and technical college education and workforce development at the Higher Education Policy Commission (HEPC), to the provosts and presidents of the state’s 12 community and technical colleges, and to the state’s legislative leadership serving on the Senate and House education committees when used to determine fiscal, programmatic, and administrative policy about workforce development and contract training at community and technical colleges in the state.
References


Charleston, WV: Author.


Community College Workforce Training

Evaluation and Needs Assessment Survey

D. How satisfied was your organization with the quality of the training?
1. Very satisfied
2. Satisfied
3. Uncertain
4. Unsatisfied
5. Very unsatisfied

E. Would you recommend the community college to other businesses or organizations that want to achieve the same employee training goals?
1. Yes
2. No
3. Not sure

F. Assuming your organization had future training needs and the community college offered appropriate courses or programs, how likely would you be to use the community college to meet those needs?
1. Would definitely use the community college
2. Probably would use the community college
3. Not sure if I would use the community college
4. Probably would not use the community college
5. Definitely would not use the community college

The following questions address your employee training needs over the next 3 years.

G. Listed below are several types of training. Please indicate how strongly each is needed by your business and its employees by circling the appropriate number (the higher the number, the stronger the need):

### Technical Training

<table>
<thead>
<tr>
<th>Training Category</th>
<th>Not Needed</th>
<th>Moderate Need</th>
<th>Strong Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic skills (reading, math)</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Computer applications/programming</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Customer service training</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Interpersonal relations/team building</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Languages (English, second languages)</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Manufacturing/Industrial</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Modern office technologies</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Telecommunications/networking</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Writer/Editorial communications</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
Management Training

<table>
<thead>
<tr>
<th>Service</th>
<th>Not Needed</th>
<th>Moderate Need</th>
<th>Strong Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting/finance</td>
<td>1</td>
<td>2</td>
<td>3 4 5</td>
</tr>
<tr>
<td>Career planning/job setting</td>
<td>1 2</td>
<td>3 4</td>
<td>5</td>
</tr>
<tr>
<td>Environmental management</td>
<td>1 2</td>
<td>3 4</td>
<td>5</td>
</tr>
<tr>
<td>Export/Import/international trade</td>
<td>1 2</td>
<td>3 4</td>
<td>5</td>
</tr>
<tr>
<td>Marketing/promotion/sites</td>
<td>1 2</td>
<td>3 4</td>
<td>5</td>
</tr>
<tr>
<td>Personnel/labor laws</td>
<td>1 2</td>
<td>3 4</td>
<td>5</td>
</tr>
<tr>
<td>Supervision/leadership</td>
<td>1 2</td>
<td>3 4</td>
<td>5</td>
</tr>
<tr>
<td>Total Quality/Continuing Improvement</td>
<td>1 2</td>
<td>3 4</td>
<td>5</td>
</tr>
</tbody>
</table>

H. Whether included in the above list or not, please describe the kind of training most needed by your employees in terms of subject matter and level:

I. Approximately how many employees will participate in further education or training opportunities? (circle all that apply)

J. Would your organization want future employee training to be in the form of courses creditable toward a degree, noncredit courses awarding continuing education units (CEU's), or noncredit courses without CEU's?

K. Listed below are several training-related services community colleges can provide. Please indicate how strong a need your organization has for each service (the higher the number, the stronger the need)

<table>
<thead>
<tr>
<th>Service</th>
<th>Not Needed</th>
<th>Moderate Need</th>
<th>Strong Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analysis to assess employee needs</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assistance employing employees in college</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consulting</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customized job-skills training</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Help in seeking funds for training</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Online support services/testing/advising</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Televised/computerized instruction</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

L. How long have you operated at this location?

1. Less than 2 years.
2. 2 to 8 years.
3. More than 8 years.

M. What is the zip code of this site?__________________________

N. How many employees do you have at this site?________

O. Please indicate the nature of your business:

1. Agriculture/mining
2. Business services/data processing
3. Construction/craft or trade
4. Education
5. Finance/insurance/real estate
6. Government
7. Health care
8. Legal/social service
9. Manufacturing
10. Retail trade
11. Transportation/communication/utilities
12. Wholesale trade/distribution

P. What can the community college do to improve the performance of your organization or help you operate your business more effectively?

Q. Would you like to be contacted for further discussion of your educational and training needs?

1. Yes
2. No

If yes, contact person: _______________________
Telephone: _______________________

Please return completed survey in the prepaid envelope provided or mail to: Office of Research and Analysis, Prince George's Community College, 301 Largo Road, Largo, MD 20772. Thank you.
APPENDIX B

The 2000-2002 West Virginia Community and Technical College Contract Training Evaluation Survey

Information obtained from individual community and technical colleges indicates that your organization contracted with a community and technical college in West Virginia at some time during the period July 1, 2000, through June 30, 2002, for the design and delivery of one or more workplace-based, credit or noncredit contract training programs. Please take a few minutes to complete the following two-page form.

1. Please indicate, by circling the appropriate response, the length of time you have conducted business at your present location.
   1. Less than two years
   2. Two to three years
   3. More than three years

2. Please identify the nature of your organization’s business from the list provided below.
   1. Mining
   2. Business service/data processing
   3. Construction craft or trade
   4. Education/Government
   5. Wholesale/Trade/Distribution
   6. Health care
   7. Legal/social service
   8. Manufacturing
   9. Transportation/Communication/Utilities
   10. Chemical

3. Please indicate the approximate number of your employees that participated in workplace-based (at your facility) credit or noncredit contract training with a community and technical college in West Virginia during the period July 1, 2000, through June 30, 2002. (Circle one choice only.)
   (a) Fewer than 10  (b) 11-49  (c) 50-99  (d) 100-499  (e) 500 or more

4. Please identify your organization’s goal(s) for training by circling one or more applicable responses. (Please select all that apply.)
   1. Upgrade the quality of employee performance in current jobs
   2. Prepare the employee for a new skill or job classification
   3. Mandated by the profession of the employee (e.g., required CEUs)
   4. Mandated by law (state or federal)
   5. Self-enrichment or personal development of the employee
   6. Other (please specify) ______________________________________________________

5. As an employer that contracted with a community and technical college for a contract credit or noncredit training program, my participating—to some degree—in the program design is important.
   _____ Strongly agree    _____ Agree    _____ Undecided    _____ Disagree    _____ Strongly disagree

6. Customization of the contract credit or noncredit training program content and method of delivery (that is, custom-designed or tailored curriculum and method of content delivery) is important.
   _____ Strongly agree    _____ Agree    _____ Undecided    _____ Disagree    _____ Strongly disagree

7. Flexibility of contract course and program scheduling (that is, having courses and programs delivered anytime and anywhere, and using formats other than a traditional 15-week college semester) is important.
   _____ Strongly agree    _____ Agree    _____ Undecided    _____ Disagree    _____ Strongly disagree

8. Contract pricing (that is, being offered contract rates for credit and noncredit training rather than paying full, on-campus tuition and fees) is important.
   _____ Strongly agree    _____ Agree    _____ Undecided    _____ Disagree    _____ Strongly disagree

9. Using adjunct faculty with business and industry experience (that is, the use of part-time instructors with practical, applied, and industry-specific skills—rather than traditional, on-campus instructors—to teach in contract training programs) is important.
   _____ Strongly agree    _____ Agree    _____ Undecided    _____ Disagree    _____ Strongly disagree

--Additional questions on reverse side!
10. The availability of community and technical college institutional resources for contract training programs (that is, on-site admissions, registration, and textbook sales; on-site academic advising; use of college library and/or computer labs) is important

___ Strongly agree  ___ Agree  ___ Undecided  ___ Disagree  ___ Strongly disagree

11. Employee-student persistence (that is, the retention rates of employees enrolled as students in workplace-based training programs) in contract credit and noncredit training programs is important.

___ Strongly agree  ___ Agree  ___ Undecided  ___ Disagree  ___ Strongly disagree

12. Please rank, in order of importance, each of the following reasons your organization selected community and technical college to provide workplace-based contract training (with "1" designating Most important and "7" designating Least important).

___ Employer-sponsor participation in program design
___ Customization of program content and mode of delivery
___ Flexibility of course and program scheduling
___ Contract pricing
___ Adjunct faculty with business and industry experience
___ Availability of institutional resources
___ Employee-student persistence

13. Please indicate, by circling one response only, your general level of satisfaction with the quality of the training your organization received from a community and technical college during the period July 1, 2000, through June 30, 2002. (Space is provided to share specific comments that clarify the level of satisfaction selected. Written comments are optional, and qualitative data collected will be included in a section on emergent categories)

___ Very satisfied  ___ Satisfied  ___ No opinion  ___ Dissatisfied  ___ Very dissatisfied

Comments _______________________________________

14. Please indicate, by circling the appropriate response, whether you would recommend to other organizations a community and technical college as a provider of workplace-based contract training. (Space is provided to share specific comments that clarify the level of satisfaction selected. Written comments are optional, and qualitative data collected will be included in a section on emergent categories)


Comments ______________________________________

15. How likely are you to contract with a community and technical college to meet future training needs? (Space is provided to share specific comments that clarify the level of satisfaction selected. Written comments are optional, and qualitative data collected will be included in a section on emergent categories)

1. Would definitely use the community and technical college
2. Would probably use the community and technical college
3. Undecided about whether I would use the community and technical college
4. Probably not use the community and technical college
5. Definitely not use the community and technical college

Comments ______________________________________

THANK YOU! Your thorough and prompt response to this survey instrument is greatly appreciated. Please return the completed survey form in the enclosed envelope by March 15, 2003.
APPENDIX C

February 28, 2003

Dear Employer Representative:

You have been selected to participate in a study titled Predictors of Employer Satisfaction with Workplace-Based Contract Training Programs at Community and Technical Colleges in West Virginia. I am conducting this timely research as part of my dissertation for the Ed.D. in Educational Leadership at Marshall University Graduate College. I am also the Director of Continuing Education at West Virginia State Community and Technical College, and I am responsible for contract training programs at my institution; over the past seven years, in fact, I have worked with dozens of employers to design and coordinate the delivery of credit and noncredit training programs for incumbent employees. I need your help to finish my study.

The literature suggests that seven variables help predict your satisfaction with contract credit and noncredit training programs that are designed and delivered by community and technical colleges for employers that sponsor on-site, or "workplace-based," training for employees. Determining your level of satisfaction in general (and not specifically with a particular institution) using "The 2001-2002 West Virginia Community and Technical College Contract Training Evaluation Survey" will help determine which variables are the most significant predictors of satisfaction. College administrators, policy makers, and employers can use the results of this study to design and deliver more effective and cost-efficient workforce development and training programs.

Your participation in this study is entirely voluntary, and you are not required to respond to every item. Your responses are not coded, will not be tracked, and will remain anonymous through reporting the data in aggregate form. Confidentiality will be maintained.

Approximately 5-10 minutes will be required to complete the enclosed survey instrument. And your taking just a few moments out of your busy schedule to help me will be greatly appreciated. Please return the completed survey instrument in the self-addressed, stamped envelope by March 15, 2003. To receive an electronic copy of the study, please mail your request to me at davisme@wvce.edu. In advance, I thank you for your cooperation and your help.

Sincerely,

Mark E. Davis, Ed.D. Candidate
Education Leadership Studies Program
Marshall University Graduate College

Enclosures 2
October 3, 2002

Mark E. Davis
292 Chappell Road
Charleston, West Virginia 25304

Re: Exempt Student Study No. EX03-0014 - Predictors of Employer Satisfaction with Workplace-Based Contract Training Programs at Community and Technical Colleges in West Virginia

Dear Mr. Davis:

Thank you for the above study. The purpose of the study is to measure employer satisfaction with workplace-based credit and noncredit training programming delivered under contract arrangement with community and technical colleges in West Virginia during the period of July 1, 2000, through June 30, 2002. Participants will complete an anonymous survey.

The study as submitted would be exempt from IRB review and approval in accordance with 45 CFR 46.101 b.

Sincerely yours,

Henry K. Driscoll, M.D.
IRB Chairperson

c: Dr. Prisk

HKD/tjs

Daviesexempt00014oct02
APPENDIX E

Qualitative Data
(Comments from Questions 13-15 on Survey Instrument)

13. Please indicate, by circling one response only, your general level of satisfaction with the quality of the training your organization received from a community and technical college during the period July 1, 2000, through June 30, 2002. (Space is provided to share specific comments that clarify the level of satisfaction selected. Written comments are optional, and qualitative data collected will be included in a section on emergent categories)

____ Very satisfied  ____ Satisfied  ____ No opinion  ____ Dissatisfied  ____ Very dissatisfied

Comments ____________________________________________________________________________________________

1. “As always, [name of institution included but withheld here] efforts in higher education and economic development are beyond reproach.”

2. “Would have like to make [sic] the session more industry & company specific.”

3. “[Name of training coordinator withheld here] at [name of institution withheld here] is outstanding. She has assisted us in the coordination and scheduling of courses. [Name of instructor withheld] is also an excellent instructor.”

4. “Because of our specialized training equipment, we use the CTC [community and technical college] for generic PC and software training only.”

5. “Some instructors did not follow course objectives; other instructors were outstanding.”

6. “We have only done ½ day and 1 day seminars.”

7. “Excellent instructor for computer skills.”

8. “Need to be notified from institution courses available that relate to workforce.”

9. “We chose our own instructors and had the college process the payroll. The colleges don’t always spend the time and effort to ‘hire’ the right instructors.”

10. “The instructor was not [emphasis included by the respondent] versed in ‘what’ our jobs were. The overall course was ‘OK.’”
14. Please indicate, by circling the appropriate response, whether you would recommend to other organizations a community and technical college as a provider of workplace-based contract training. (Space is provided to share specific comments that clarify the level of satisfaction selected. Written comments are optional, and qualitative data collected will be included in a section on emergent categories)

1. Would recommend
2. Not sure
3. Would not recommend

Comments ____________________________________________________________

1. “[Name of institution omitted by researcher] instructors [sic] approach toward the adult education process was exemplary.”
2. “The overall value of the CTC training is excellent—[sic] cost and quality is very good.”
3. “If subject matter was compatible with college course offerings.”
4. “I would only recommend if I knew they [the CTC] were using real world [sic] instructors and not academically qualified personnel with no on the job [sic] history.”
5. “It would depend on the training needs of the organization. The local community college has a narrow scope of what it does well.”
6. “Assumes adjunct faculty with business and industry experience in adult education.”
7. “Would recommend with the qualifier that it would depend on the specific topic and individual institution and its strengths and programs I have knowledge [of]. I would not give a ‘blanket’ recommendation.”
15. **How likely are you to contract with a community and technical college to meet future training needs?**
(Space is provided to share specific comments that clarify the level of satisfaction selected. Written comments are optional, and qualitative data collected will be included in a section on emergent categories)

1. Would *definitely* use the community and technical college
2. Would *probably* use the community and technical college
3. *Undecided* about whether I would use the community and technical college
4. Probably *not* use the community and technical college
5. Definitely *not* use the community and technical college

**Comments**

1. “Very near future—[sic] plan to downsize & cross-train maintenance mechanics to combine crafts—[sic] also train operators to maintenance.”
2. “I would like to have had more upfront input on course development before I would commit capital $ [dollars] to a program.”
3. “We have had an outstanding relationship with CTC, [name of institution included but omitted by researcher to maintain anonymity], [name of second institution omitted by researcher], and [name of vocational center omitted by researcher].”
5. “Have good relationship with [name of institution included but omitted by researcher] for our training needs. Would use community college or [name of institution omitted by researcher] if [name omitted] couldn’t meet our needs.”
6. “We would only use a facility [community and technical college] that we work with to provide instructors.”
7. “Difficult to find instructors in tune with workforce needs. Also have had difficulty with timeliness of class preparation and pricing.”
8. “This depends on specific topic area or need.”
APPENDIX F
Length of Time Variable
Full Array of Demographic Data

1. Please indicate, by circling the appropriate response, the length of time you have conducted business at your present location.

1. Less than two years  
2. Two to three years  
3. More than three years

1. Less than two years (Corresponds to summary data included in Table 17a)

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<th>Std Dev</th>
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2. Two to three years (Corresponds to summary data included in Table 17b)

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3. More than three years (Corresponds to summary data included in Table 17c)

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*The “T” designations correspond to questions 5-11 on the survey instrument and to the seven independent variables listed in the study and included in the specific research questions that guided the study.*
13. Please indicate, by circling one response only, your general level of satisfaction with the quality of the training your organization received from a community and technical college during the period July 1, 2000, through June 30, 2002. (Space is provided to share specific comments that clarify the level of satisfaction selected. Written comments are optional, and qualitative data collected will be included in a section on emergent categories)

____ Very satisfied  ____ Satisfied  ____ No opinion  ____ Dissatisfied  ____ Very dissatisfied

<table>
<thead>
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<th>Variable</th>
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*The "T" designations correspond to questions 5-11 on the survey instrument and to the seven independent variables listed in the study and included in the specific research questions that guided the study.
CURRICULUM VITAE

MARK EDWARD DAVIS

Office Address
West Virginia State College
Community & Technical College
Campus Box 190, P.O. Box 1000
Institute, WV 25112
304-766-5116

Home Address
929 Chappell Road
Charleston, WV 25304
(304) 925-7277
davisme@mail.wvsc.edu

EDUCATION

Ed.D. Leadership Studies/Higher Education Administration, Marshall University

M.A. Humanities, West Virginia Graduate College

B.A. History and Education, West Virginia State College

Th.G. Theology, Bethany Theological Seminary

A.A. General Studies, Southern West Virginia Community and Technical College

PROFESSIONAL EXPERIENCE

INTERIM EXECUTIVE DIRECTOR, CONTINUING EDUCATION AND COMMUNITY SERVICES
WEST VIRGINIA STATE COLLEGE
August 2000 to present

PROGRAM DIRECTOR, A.A.S. in EMPLOYEE BENEFITS AND CLAIMS ADMINISTRATION
July 2001 to present

ASSISTANT DIRECTOR, CONTINUING EDUCATION AND EXTENSION SERVICES
WEST VIRGINIA STATE COLLEGE
October 1996 to July 2000
Program and Curriculum Development

C Assisted in the design, development, and workplace-based delivery of the A.A.S. in Employee Benefits and Claims Administration degree program for Acordia National and West Virginia Bureau of Employment Programs/Workers’ Compensation Division.

C Helped with the design, development, and workplace-based delivery of the A.A.S. in Community Behavioral Health Technology degree program and the Collegiate Certificate in Community Behavioral Health Technology for Shawnee Hills Community Mental Health/Mental Retardation Center.

C Assisted in the design, development, and workplace-based delivery of the A.A.S. in Technical Studies and the Collegiate Certificate in Technical Studies for NGK corporation.

C Designed and coordinated delivery of a 10-course modular Pre-LPN Transition Program for CAMCHSI nursing employees, which allowed for students to matriculate into the ADN Program at the University of Charleston.

C Helped design and coordinated the delivery of a grant-funded (helped write proposal) Respiratory Therapy Training Program for incumbent employees of CAMC, Thomas Memorial Hospital, and St. Francis Hospital.

C Helped with the design, development, and workplace-based delivery of the A.A.S. Paramedic Technology program for Kanawha County Emergency Ambulance Authority employees.

C Helped design and coordinate the delivery of a four-credit-hour Critical Care Transport course, the first of its kind in the State, for three ambulance authorities and the WV EMS Technical Support Network.

C Coauthored a 14-module, 43-clock-hour lobbyist training for the American Association of Retired Persons.

C Designed the college component for a college transition pilot program for West Virginia Rehabilitation Center and West Virginia Rehabilitation Services clients, planned for its fifth year in 2002.

C Assist in the design and delivery of special topics credit courses for College personnel staff development.

C Helped design and coordinated the delivery of a 36-hour Electrical Welding Technician IV training program for Mayflower Vehicle Systems, Inc. employees.

C Helped design and develop the Community and Technical College’s Weekend Program.

C Authored an evaluation report to the President on the effectiveness of the College’s educational outreach program to downtown Charleston businesses through the WVSC Capitol Center.

C Helped design and coordinated the delivery of multiple A.A.S. in Occupational Development degree programs, under the auspices of the U.S. Department of Labor, Bureau of Apprenticeship and Training, for area fire fighter, law enforcement, and child care employees.

C Conducted a review of four West Virginia Regional Jail Authority facilities and submitted an evaluation and recommendation report to the WVRJA Executive Director.

C Helped design and coordinate the delivery of United for Better Training, a cooperative joint venture with WVSCTC, Ben Franklin Career Center, and the West Virginia Rehabilitation Center.
C Designed and delivered a 37.5-clock hour business and technical writing short course for employees of the WV Bureau of Employment Programs/TANF Monitoring Unit, and awarded 11 skill set certificates.

C Designed and delivered a 37.5-clock hour “train-the-trainer” program in law enforcement supervisory management to area police officers, and awarded 26 skill set certificates.

C Helped design and coordinated the delivery of the new Collegiate Certificate in Law Office Technology at the request of the West Virginia Supreme Court of Appeals.

C Designed and helped coordinate the delivery of the first credit courses through the newly established Advantage Valley Community College Network program for State employees at the Capitol Complex.

C Helped coordinate the delivery of a three-county, 15-course Adult Advantage program for nontraditional students in Kanawha, Putnam, and Clay counties.

**Budget Preparation/Policy and Procedure Development**

C Prepare the annual operating budget for the delivery of workforce development programs, contract credit courses, customized contract courses, and continuing education short courses, workshops, and seminars.

C Responsible for annual, self-supporting budget of approximately $550,000 of gross sales of contract credit and noncredit training.

C Helped write the College’s Strategic Plans for 1997-2002.

C Submitted a recommendation to the President about increasing adjunct faculty contract salary.

C Coauthored the institutional evaluation based on the Kellogg Commission’s *Engaged Institution Characteristics* report.

C Helped write the College’s institutional Compact (2000-2006) for submission to the Higher Education Policy Commission.

C Coauthored the College’s *Part-Time Faculty Handbook*.

**Business and Industry Partnerships**

C Develop and maintain professional and contractual relationships with 40 organizations, agencies, and groups sponsoring workforce development, customized and contract training, contract credit courses and continuing education short courses, workshops, and seminars.

C Negotiate, write, and administer contracts, agreements, and memoranda of understanding for customized, contract training and workforce development programs and activities.

C Promote collaborative partnerships between business, industry, and other organizations and agencies sponsoring credit and noncredit workforce development training for employees.
• Assisted in the design of multiple databases for Continuing Education and Community Services contract credit programming.

**Workforce Development and Customized Contract Training**

- **Design, promote, and coordinate the delivery of:** continuing education short courses, workshops, seminars, and customized contract training, contract credit courses, and certificate and two-year degree programs to business, industrial, governmental, professional, labor, educational, agency, and other organizational entities in the greater Kanawha Valley and in Putnam, Clay, and Boone counties.

- **Develop, administer, and analyze needs assessments, interview schedules, and survey instruments for adult populations served by:** contract credit courses, certificate and two-year degree programs, and continuing education short courses, workshops, and seminars.

- **Conduct Work Keys Job and Occupational Profile analyses for area business and industrial organizations to determine skills-area workforce development and training needs.**

- **Serve as an instructor and facilitator for:** contract credit courses, workforce development programs, and continuing education short courses, workshops, and seminars in business and professional writing, grammar skills, oral communication and presentation skills, team building, customer service, and leadership skills.

- **Recruit, hire, monitor, conduct orientation and in-service training for adjunct faculty and resource persons for off-campus, contract credit course and continuing education program staffing.**

- **Design, arrange, and direct in-service and orientation training for CECS faculty and resource persons.**

- **Conduct assessment and evaluation of instruction, content, and program design of off-campus, contract credit courses and noncredit short courses, workshops, and seminars.**

- **Serve as the Admissions, Registration, and Records offices liaison for student/employees enrolled in workplace-based, employer-sponsored credit course, collegiate certificate, and degree programs.**

- **Helped write a grant proposal for West Virginia Development Office Workforce Development Initiative Program funding for a collaborative workforce training and retraining program among area companies.**

- **Designed and delivered a 37.5-clock-hour supervisory management in manufacturing program for Mayflower Vehicle Systems, Inc., and awarded 11 skill set certificates.**

- **Wrote a successful grant proposal for funding from the Governor’s Committee on Crime, Delinquency, and Correction/Law Enforcement Training Subcommittee to deliver a “train-the-trainer” course in law enforcement supervision and management.**

**Economic and Community Development**

- **Helped design, develop, and coordinate the College’s Clay County Initiative, in conjunction with Clay County Schools and the Central Appalachian Empowerment Zone, that provides on-site delivery of credit courses and two Allied Health certificate and degree programs to adults and high school students.**
Coauthored the *Hard-to-Employ* grant, which was subsequently awarded through Kanawha County Private Industry Council (now Region III--Kanawha County Workforce Investment Board.)

Serve on the Putnam County School-to-Work Work-based Experience Advisory Committee.

Direct, promote, and coordinate continuing education programs and community service activities for Orchard Manor Residents Management Council and residents of Charleston Housing Authority and Kanawha County Housing Authority public neighborhoods.

Serve on the Region III--Kanawha County Workforce Investment Board and the Employer Relations subcommittee.

**General Administrative**

Maintain working relationships with all College administrators, division deans, academic department chairs, program directors, full-time and part-time faculty, and classified staff.

Help the Provost and the Assistant Provost write grant proposals and administer grant awards, and serve as principal investigator for certain grants.

Serve on the advisory committees of all 24 associate degree programs.

Serve on the College’s Marketing Task Group, Publications Committee, Land-Grant Advisory Committee, District III Consortium, Student Hearing Council, Community and Technical College Study Commission, Parking and Environmental Safety Committee, personnel search committees, and other special-purpose committees.

Assume administrative authority of the WVSCTC in the absence of the Provost, the Assistant Provost, and the Dean of Academic Affairs.

*Adjunct Faculty Member*  
*Wheeling Jesuit University*  
*April 1998 to present*  

Teach modules in report writing, research methods and design, business ethics, and culture and culture conflict to students enrolled in the Bachelor of Arts in Organization Leadership and Development (BOLD) program in the Kanawha Valley, and serve as a project coordinator for the BOLD program in Charleston, West Virginia.

*President/Consultant*  
*Davis Associates/"WriteRight!"*  
*June 1997 to present*  

Provided proofreading, editing, and technical and professional writing consulting services to business, industrial, organizational, and agency entities.

Developed and conducted evaluations and assessments of programs.

Proofread and edited in-house documents and reports.

Developed and administered programs in communication and interpersonal relationship skills.
Adjunct Faculty Member  
*West Virginia State College*

*August 1996 to present*

C Teach courses in Technical Writing, interdisciplinary humanities, English Composition I and II, to nontraditional adult students at off-campus, workplace-based locations.

Adjunct Faculty Member  
*West Virginia University*

*English Department  Institute of Technology*

*May 1996-May 1997*

C Taught courses in English Composition I and II for the Community College Division, Tech Prep, on-campus summer program, and Extension and Community Service Division at off-campus sites in the Kanawha Valley.

Adjunct Faculty Member  
*Southern West Virginia*

*Humanities, Social Science Departments  Community College*

*June 1995-May 1997*

C Taught courses in history and English Composition I and II in on-campus and off-campus settings and via distance learning (interactive classroom, compressed audio-video).

C Completed a grant proposal for National Endowment for the Humanities funding to help the College establish an interdisciplinary humanities course component.

C Helped with on-campus and off-campus admissions and registration.

Substitute Classroom Teacher/ Substitute Principal  
*Boone County Schools*

*January 1995-December 1996*

C Taught multiple disciplines, as an Option IV substitute teacher, for Boone County Schools.

C Worked extensively with the Homebound Program and served as a mentor to at-risk students.

C Served as a substitute principal at Van Elementary School.

Graduate/Research Assistant  
*West Virginia Graduate College*

*Humanities Department*

*January 1993-December 1995*

C Reviewed curriculum materials and wrote abstracts and recommendations for use in Humanities courses.
C Served as liaison between the Graduate college and Boone, Lincoln, and Logan County public schools, Boone Campus of Southern West Virginia Community and Technical College, and the communities at large.

C Distributed general and registration information and met with county personnel directors to promote the Humanities program in the area.

C Worked with the West Virginia Graduate College Humanities Program director in successfully establishing an off-campus, cohort program for public school teachers in Boone, Lincoln, and Logan counties.

Senior Pastor  
*Van Baptist Church*  
*Van, WV*  
*July 1987-June 1997*

- Carried out pastoral and general ministerial duties (including sermon and lesson preparation and delivery, administration, fiscal) for a multi-generational congregation.
- Served on various standing and ad hoc committees of the regional denominational council.
- Established youth ministry, bus ministry, and visitation ministry.
- Supervised remodeling of the physical facilities including sanctuary, classrooms, and auxiliary building.

Surveyor/Draftsman  
*Eastern Associated Coal Corporation*  
*Wharton, WV*  
*November 1978-April 1987*

- Responsible for field and underground engineering tasks necessary for the operation of a multi-site mining operation employing more than 1,000 workers.
- Updated mining maps, traverse logs, and surveying field books, and performed general drafting work.
PROFESSIONAL, ORGANIZATIONAL, and COMMUNITY MEMBERSHIPS and ACTIVITIES

National Academic Honor Society, Alpha Kappa Mu, Member

International Honor Society in History, Phi Alpha Theta (WVSC chapter), Member

West Virginia Community College Association, Member

Southern West Virginia Community College:
  Vice-president, Boone-Lincoln Campus Alumni Association, 1996
  President, Boone-Lincoln Campus Alumni Association, 1993-1995
  Former member Boone-Lincoln Campus Advisory Council
  Co-captain, Foundation Fund Raiser, Boone Campus 1993, 1994

The 1994 Values Conference, University of Charleston
  Planning Committee Member, Education Team Member

  Steering Committee Member, Faculty Trainer, NIF Moderator

Kanawha County CPEC, Arts, Culture, and History Subcommittee member, 1997

Metro Area Agency on Aging, Board of Directors Member, Advisory Council Member, 1999-2002

American Association of Community Colleges (institutional membership), 1998-2002
  Business and Industry Liaison


Kaset/Achieve Global “Success Through Service” and “Keeping the Skills Alive” Certification Training
  Certified Trainer, 1999

National Center for Human Relations, WVSC, Symposium III Human Relations Ambassador, 1999
  Guest Speaker for WVU/MUGC doctoral course Community and Junior College Education, 1999, (subject: Workforce Education)

2000 ACT Work Keys Job Profiling Training Program, Authorized Job Profiler Certification

American Society of Training and Development, member, 2000-2002

ASTD/Kanawha Valley Chapter, member and president-elect, 1999-2002

Region III--Workforce Investment Board of Kanawha County, Member, 2000-2002

West Virginia Center for Civic Life, Board Member, 2000-2002

Kid’s Count, Board Member, 2002
RESEARCH, PUBLICATIONS, AND PRESENTATIONS

The State of Humanities Studies at Southern West Virginia Community and Technical College. December 1995. (Master of Arts research paper.)


“Community” or “Community and Technical”: An Examination of West Virginia Senate Bill 547. December 1996. Presented to doctoral students participating in Community and Technical College course. Disseminated to West Virginia Senate Education Committee.


Strategies for Teaching Writing Skills to Adult Learners as Part of Work Force Training at the Work Site. May 1999. Presented to doctoral minor chair in partial fulfillment of doctoral minor course work.


The Future of Adult Education. Presentation to faculty and staff group at Wheeling Jesuit University, May 2000.

Predictors of Employer Satisfaction with Workplace-Based Contract Training Programs at Community and Technical Colleges in West Virginia. (Doctoral dissertation research.)