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ABSTRACT

A study was conducted for the American Association of Community and Junior Colleges (AACJC) and the Association of Community College Trustees (ACCT) to determine the nature and extent of partnerships that exist between community colleges and business/industry and high schools in the United States. The survey of 1,219 colleges sought information on the colleges' characteristics; establishment of business, industry, labor councils; participation in private industry councils; coordination with business/industry; large private sector employee training; public sector employee training; small business support; high school/college partnerships; and economic development offices. Based on responses from 770 (63.2%) of the colleges, study findings revealed: (1) 41% of the colleges had established business, industry, labor councils on their campuses; (2) two-thirds of the colleges participated in the area Private Industry Council; (3) two-thirds of the responding colleges had appointed business/industry coordinators on their campuses; (4) nearly three-fourths of all respondents offered training for large private sector employees, and three-fourths offered training for public sector employees; (5) 83% of the colleges reported providing small business support beyond traditional credit course work; (6) nearly 90% of respondents had collaborative arrangements with the high schools in their areas; and (7) 80% of the colleges reported involvement with local and state economic development offices. Appendices include the survey instrument, descriptions of exemplary cooperative programs, and a statement of the interests and activities of the AACJC/ACCT Keeping America Working Project. (HB)

IN SEARCH OF COMMUNITY COLLEGE PARTNERSHIPS

Dr. Philip R. Day, Jr., president of Dundalk Community College, Dundalk, Maryland, has over 15 years of administrative and teaching experience within community colleges and higher education in general. He has considerable experience in institutional planning, management, and evaluation activity with particular emphasis on student support systems, innovative and nontraditional delivery systems, instructional design, and program development.

Since July 1, 1982, when Dr. Day assumed his present position, the college has experienced a 60 percent enrollment growth from approximately 2,000 to 3,000 fulltime equivalent students. The increase is due in large measure to the adoption of a comprehensive strategic planning and marketing development process which has enabled the college to focus its resources and to respond to economic and social trends on both local and national levels.

Under Day's leadership, the college has established cooperative ventures with business and industry, including customized training programs with such companies as Bethlehem Steel, General Motors, W.R. Grace, and Eastern Stainless Steel.

Formerly, Dr. Day served as executive director of the New England Consortium of Community/Junior Colleges and Technical Institutes at Greenfield, Massachusetts; assistant to the president for planning and development at Greenfield Community College, Massachusetts; dean of student affairs and education services and director of planning, research, and development at the University of Maine at Augusta; and vice president of planning and development and vice president for educational affairs at Piedmont Technical College, South Carolina.

Dr. Day received his doctoral degree in higher and adult education from the University of Massachusetts. Earlier in his academic career, he graduated from a comprehensive community college.

Dr. Day has written extensively on community college education.

IN SEARCH OF COMMUNITY COLLEGE PARTNERSHIPS

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This monograph focuses on community college partnerships with business and industry, and with high schools. It is the second in a series of four publications. The third volume is a companion to the second and is titled *Directory of Business/Industry Coordinators*. It includes the names and addresses of more than 200 college administrators who are responsible for establishing and maintaining effective relationships with local business and industry. The fourth in the series is called *Keeping America Working: Profiles in Partnerships*. It will examine in detail the nature of the partnerships conducted by approximately 50 colleges across the country. *Profiles* will be available in summer 1985. The first volume in the series is titled *Putting America Back to Work: The Kellogg Leadership Initiative*.

This series of monographs was sponsored by the Keeping America Working project, a joint program of the American Association of Community and Junior Colleges (AACJC) and the Association of Community College Trustees (ACCT). The Project's principal interests are to encourage the development of partnerships between two-year colleges and business and industry, to collect data about these partnerships, and to publicize the information as one means of extending the number and quality of these relationships. A description of the interests and activities of the Keeping America Working Project is presented in Appendix E.

The four volumes in the series represent a significant contribution to the growing body of knowledge about community college interaction with local enterprises for the purpose of enhancing human and economic development.

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TABLE OF CONTENTS

Page

TABLES:

FIGURES:

FOREWORD

In several respects, the last several years have not been good ones for the American economy. The federal deficit for the 1984 fiscal year was $175.3 billion, and the Administration expects it to approach $200 billion for fiscal year 1985. The nation's trade imbalance is expected to climb to $100 billion for the same period. The country's total indebtedness has risen to $1.645 trillion; the interest charges alone for this indebtedness for October and November 1984 were $26 billion. Government spending is running approximately 16 percent ahead of last year while income for the government is lagging by an average of 3 percentage points. All of these figures come from the U.S. Department of the Treasury.

Complicating this unhappy picture and contributing to the circumstances that have helped create it is the fact that the American economy is being challenged as never before by a number of countries that have emerged as powerful international economic centers—Korea, Japan, China, and several other East Asian countries, among others. A combination of cheap labor and government subsidies, as well as the application of cost-effective automated production systems, has permitted these countries to produce and export to all regions of the world product lines that were once dominated exclusively by American industry—steel, automobiles, clothing, heavy equipment, and other machinery. These countries and others have cut substantially into the American share of these markets and the prospect that they will continue to command healthy shares is strong.

Another complication is the speed at which the economy is changing in this country. Just 20 years ago it took 15 years to translate invention to application in the workplace; now it takes an average of about three years. Automotive production systems have become so adaptable that industrialists are finding increasing numbers of situations in which they can be used to replace human workers. Chrysler Corporation, for example, in spite of its projection that its 1984 profits will be triple its 1983 record of $701 million and its plans for building five new cars in the next four years, plans to hire only up to 2,000 new workers to fill production slots. It has automated its production system to the point that it can produce more cars and trucks with fewer persons than it could just five years ago. Computer controlled robots have replaced some workers.

This scenario suggests that the American economy must run leaner and stronger to maintain its competitive edge. The nation must do a better job of using, coordinating, and supporting the systems that play a lead role in keeping its economic system healthy.

The education system is one of those key systems. Each component within the national education system has its important function. But, until recently, one of the least recognized (and consequently undervalued) components in this system was the community, technical, and junior college—the 1,221 two-year colleges that exist in every state in the country and within easy commuting distance for nearly every American.

The community, technical, and junior colleges have a special role to play in the economic vitalization of the United States. Their mission places them squarely in the service of local communities—their businesses, their public agencies, their schools, and their cultural and social groups and organizations. For years they have provided education, technical assistance, and community service programs designed to meet the needs of the communities. In the last few years, when the central issue in the nation was the economy, the colleges redoubled their efforts to work with local employers (both public and private) to train employees to handle new machines, new processes, and new jobs; the colleges increased their education and training services for government agencies and other public enterprises; they offered a variety of technical assistance to the districts they serve; they coordinated their academic and training programs with those offered by area high schools. In so doing, they established themselves as significant participants in the economic development plans of local communities.

The colleges have not always been recognized as significant parts of a comprehensive economic development scheme. They went about their business quietly, without fanfare. Because they are local institutions, they saw no need to share their work at the national level. The requirements of the national economy, however, changed circumstances. To pull out of the sequence of recessions of the late 1970's and the early 1980's, all national resource systems had to be energized and put to work.

In response to the call, the American Association of Community and Junior Colleges in 1981 convened a special task force to prepare a policy paper that laid out the work that would have to be done to stimulate economic recovery. The Putting America Back to Work task force published the policy paper in 1982 and since that time the paper has served as a guidepost for a good part of the Association's partnership activities. A central recommendation of the policy paper is that community, technical, and junior colleges should be recognized as significant cogs in the nation's economic development machinery.

The survey results reported in this monograph are the latest Association effort to quantify and qualify the partnerships two-year colleges have developed with three key community sectors: business, government, and

high schools. The report adds new detail to the already complex mosaic that the Association has created of its connections with other economic entities in communities across the country. It both confirms and complements the series of related AACJC monographs published on these issues since 1980.

Special thanks for this report go to Dr. Philip R. Day, Jr., president of Dundalk Community College, Dundalk, Maryland, who authored this monograph. The activities of his own college provide an exemplary model of what is best in partnership building for economic development. Thanks, too, go to K. Rajasekhara, director of institutional research and grants at the college, who conducted the research and prepared the data.

Dale Parnell
President
American Association of Community
and Junior Colleges

Executive Summary

A national survey of community, technical, and junior colleges, conducted for the American Association of Community and Junior Colleges (AACJC) and the Association of Community College Trustees (ACCT), reveals the nature and extent of partnerships that exist between colleges and two significant community entities: business/industry and high schools. The results of this study provide valuable information that can help determine future program needs and requirements for technical assistance to these organizations.

Out of the 1,219 colleges surveyed, 770 responded, an overall response rate of 63.2 percent. The highlights of the results are given below.

College Characteristics

- Among the respondents, 78 percent represent community/junior colleges; 14 percent technical colleges; and the remaining represent other types of institutions.
- 55 percent of the respondents are located in urban and suburban areas while 45 percent are located in rural areas.
- 56 percent of the colleges reported they are governed by appointed board members and the remaining 47 percent are governed by locally elected members.

Business, Industry, Labor Council (BIC)

- 41 percent of the respondents have established Business, Industry, Labor Councils on their campuses.
- 76 percent of those who said they have established BICs have done so on a formal basis.
- Nearly one-fourth of the colleges house the BICs on their campuses.
- About one-third of the BICs are funded publicly; one-tenth receive both public and private funding, and over one-half have no funding to support their councils.
- About one-half of all the respondents who reported receiving support receive it from federal and state funding sources; corporations support nearly 17 percent of the councils.

Private Industry Council (PIC)

- Two-thirds of all respondents indicated that they participate in the area Private Industry Council.

Business/Industry Coordination

- Two-thirds of the respondents have appointed business/industry coordinators on their campuses.

Large Private Sector Employer Training

- Nearly three-fourths of all respondents said they offer employee training programs for large private sector employers.
- Nearly 41 percent of all respondents offer customized training; 28 percent provide job-specific training; 14 percent offer generic training; and nine percent provide all three types of training.
- 30 percent of all respondents provide employee training programs for major, local labor unions.
- 78 percent of the respondents reported offering training at plant/business sites.
- 35 percent of the respondents reported contract training as the main source of funding for their cooperative efforts with local business; 31 percent reported income from tuition; 23 percent indicated state grants as a method of supporting these activities; 10 percent of the respondents listed federal grants as a source of support.
- 68 percent of the respondents reported that their training is subsidized by state and/or local funding.
- 26 percent of the respondents provided contract training for the area employment security system.

Public Sector Employers

- Three-fourths of all respondents reported that they offer training for public sector employees. More urban and suburban colleges (80 percent) engage in such training than do institutions located in rural areas (70 percent).
- Nearly one-half of all the public employee training provided by the respondents is for the employees of city and county governments. Training employees of school districts is second (23 percent); 11 percent of the respondents train state government employees.

Small Business Support

- 83 percent of the respondents reported providing small business support beyond traditional credit course work.

- One-third of all respondents who provide support to small business offer it in the form of short-term workshops/seminars; 23 percent of the respondents offer short courses; 19 percent of the respondents offer technical assistance.
- Nearly two-thirds of all respondents reported offering small business support services in credit form.

High School/College Partnerships

- Nearly nine out of ten respondents said they have collaborative arrangements with the high schools in their areas.
- More than two-thirds of the colleges reported offering credit courses to local high school students; one-tenth offer non-credit courses; and over one-fifth reported offering both credit and non-credit courses to high school students.
- 30 percent of the respondents reported having advanced placement programs; 29 percent have articulated some of their courses with the schools; 13 percent share faculties; 11 percent indicated that they have cooperative program enrollment; and 11 percent reported that they share facilities with local schools.

Economic Development Offices

- 80 percent of the colleges reported involvement with local and state economic development offices.
- 52 percent of all respondents reported cooperative programs with both local and state economic development offices; 34 percent reported such relationships with only local offices; and 14 percent reported involvement with state economic development offices only.
- Nearly one-half of all respondents reported providing technical assistance to economic development offices.

INTRODUCTION

In a 1983 report to the President of the United States, the *Business-Higher Education Forum* stated:

> Human resources are an essential ingredient in the process of technological innovation and economic competitiveness. Yet the American workforce may not be prepared for the new competitive challenges. Shortages are developing in critical skills, such as computer science and engineering; some industries are becoming less people intensive, thus supplying fewer jobs; one in every five American workers is functionally illiterate and unable to participate even in entry-level training. In the next decade, 15 million new workers will enter the workforce. They, and many of the hundred million currently employed, will need education, training and retraining to keep abreast of the changing job needs.

The report authors wrote that in general U.S. institutions are inadequately prepared for this important challenge. A specific recommendation of this study was that greater initiatives need to be demonstrated and acted upon between industry and colleges. "Working together, businesses and universities can pool talents and resources to accomplish what they could not achieve working independently. Potential benefits include the expeditious transfer of research results to commercialization and education of students on subjects relevant to industrial needs."

One particular sector of higher education—the community, technical, and junior colleges—has been engaged in the realization of this strategic objective for some time.

Collaboration between community, technical, and junior colleges and business and industry in the education of the adult workforce has assumed greater importance in recent years. Because economic revitalization and defense preparedness rely heavily on an adequate supply of highly skilled workers, the cooperation between these two segments is more and more crucial. However, literature describing the extent and the areas of recent cooperative programming between community colleges and businesses and industries is limited.

Beder and Darkenwals (1979) and Goldstein (1980) in their studies included education/industry cooperation as one of several topics in relation to broader issues of industrial education and education/industry articulation. Beginning in early 1982 under the direction of Dale Parnell, president of the American Association of Community and Junior Colleges,

a sequence of reports was issued designed to provide insight into the nature of college/business cooperation. *Proven Partners* (Parnell and Yarrington), *Shoulders to the Wheel* (Jackman and Mahoney), and *Community College Centers for Contracted Programs* (Mahoney) were published in 1982 through AACJC. Each contains case studies and analyses of partnerships between two-year colleges and local business and industry.

In March 1982, a joint task force sponsored by AACJC and the Association of Community College Trustees issued a concept paper entitled "Putting America Back to Work." One of the five principles presented in the concept paper was the development of incentives to promote greater cooperation between private/governmental employers and educational institutions to prepare citizens for careers of regional and/or national priority.

Under the aegis of this task force and with the support of the W.K. Kellogg Foundation, AACJC/ACCT published a monograph in 1984 titled *The Kellogg Leadership Initiative* (Mahoney). The monograph sets the economic backdrop against which college/business partnerships are played, suggests a range of program activities in which colleges might engage to work with the private sector, and shows how strategic planning procedures might be applied to ensure responsive and effective cooperation between colleges and business.

Fenwick (1983) and Lynton (1984) published two related studies for the American Council on Education, the former offering examples of various partnerships and the latter analyzing the dimensions of these connections and the need for expanded effort.

On the issue of college/high school partnerships, the Task Force on Education for Economic Growth in its report (1984) recommended the creation of broader and more effective partnerships to improve education in the states and communities of the nation. It emphasized both the school/business partnerships following the Adopt-A-School model and increased cooperation among postsecondary institutions and high schools to help clarify high school goals and redefine school curriculum. The Task Force also acknowledged that the number and diversity of partnerships in a majority of states have been growing for the past three years. AACJC/ACCT is committed to tracking and encouraging this growth. The survey and its results are manifestations of this commitment.

Purpose of Study

This study examines college partnerships with large and small business employers, public employers, and high schools. Specific areas addressed in the survey are:

A. Existence of formal/informal linkages like business/industry labor councils.
B. Degree of contract training with large private sector employers or labor unions such as General Motors, U.S. Steel, United Auto Workers, etc.
C. Extent to which the colleges are making inroads into the vast training opportunities with public employers, including the military
D. Degree to which the colleges are aggressively involved in providing training and technical assistance to small businesses, e.g., international trade, downtown small business support centers, etc.
E. Existence and extent of collaboration with high schools to improve continuity of learning and to enhance the movement of high school students to community, technical, and junior colleges.
F. Extent of the colleges' involvement with local and state economic development offices and the nature of college services provided to these offices

In addition to these areas, general information items were included in the survey. The results of this study are aimed at providing valuable information to help determine future program needs and requirements for technical assistance.

METHODOLOGY

Study Population

The study population consisted of 1,219 community, technical, and junior colleges located in the United States and its territories. At the time of the study, this field was the entire two-year college network. Also included in this population were ten branch campuses operated in foreign countries. Six types of institutions constituted the study population: (1) community/junior college, (2) vocational/technical college, (3) two-year branch of four-year college, (4) one campus of a multi-campus college, (5) one college of a multi-college system, and (6) administrative unit of district or main college of multi-unit institution. A map showing the location of each of the colleges is presented in Appendix A.

Survey Instrument

The survey instrument was developed in close consultation with the American Association of Community and Junior Colleges. In addition to the general and specific areas of inquiry, the instrument contained comment sections to allow respondents to elaborate on their experiences. Critical elements to ensure success and descriptions of particular problem areas were sought in these comment sections.

In an effort to minimize misinterpretation, definitions of terms also were included in the survey instrument. Brief definitions are given below.

Industry: business, industry, labor and government agencies, and organizations.

Large business/industry: an industry employing 100 or more employees.

Small business/industry: an industry employing fewer than 100 employees.

Generic training: general occupational education that provides foundational support to many jobs within an occupational cluster, e.g., typing for secretaries.

Customized training: any training that meets the specific needs of an employer.

Job specific training: training for a specific job, e.g., first line supervisors.

Private Industry Council (PIC): a formal advisory body that was created at the state and local levels through the Job Training Partnership Act (JTPA).

The survey instrument is shown in Appendix B.

Procedure

The questionnaire was mailed to the presidents of all community, technical, and junior colleges with a cover letter from the president of AACJC explaining the study and asking their cooperation and assistance in completing the survey form. After a follow-up mailing, usable returns were received from 770 colleges or 63.2 percent of the study population.

Data Analysis

The data were analyzed using the *Statistical Package for Social Science* (SPSS) (Nie, Hull, Jenkins, Steinbrenner, and Bent, 1975 and Nie and Hull, 1981). Responses were cross-tabulated with respect to the primary location of the college: urban, suburban, and rural. Also, the overall frequency responses were obtained. A few cases in each analysis had to be discarded due to missing data.

FINDINGS

Among the respondents, 78 percent represented community/junior colleges, 13.5 percent technical colleges, and the remaining represented other types of institutions. (See Table 1 on the following page.) More than 55 percent of all the colleges responding to the survey are located in urban and suburban areas, while nearly 45 pecent are located in rural areas.

Business, Industry, Labor Council

One Keeping America Working Project official noted that "...initiatives in human capital development are unlikely to happen if there are not in place, in every community, mechanisms for ensuring regular dialogue and collaboration between those sectors that shape or use education and training." (Eskow)

In an effort to ascertain the existence of a business, industry, labor council, the survey asked the colleges if they sponsored such a council. Over 41 percent of all respondents indicated they have established a council. (See Table 2 on the following page.) More institutions (52.2 percent) located in the urban areas have business, industry, labor councils than those (33.5 percent) located in the rural sections of the nation. Among those that have created councils, more than three-fourths have established them on a formal basis. (See Table 3 on page 14.) The majority (76 percent) of those councils are housed off-campus.

Council Funding

The majority—57 percent—of institutions reported that they receive no public monies to finance council operations. Nearly 30 percent of all the respondents who have established councils said their councils are funded publicly. (See Table 4 on page 14.) Just over 13 percent of the councils are supported by both public and private funding.

Nearly one-half of all the respondents said they received funding for their councils from federal and state governments. (See Table 5 on page 15.) Almost 17 percent of the respondents said their councils are funded by corporations, while only 8.4 percent are supported by foundations. The second highest percentage of colleges reporting funding appears in the "other" category--25.4 percent. No details to describe this category were gathered, but followup questionnaires will collect information on this point.

TABLE 1
RESPONDENTS BY TYPE OF INSTITUTION
(in Percentages)

TYPE OF INSTITUTION	URBAN	SUBURBAN	RURAL	OVERALL
Community/Junior College	76.2	89.5	78.9	76.9
Vocational Technical College	16.2	10.6	13.6	13.9
Two-Year Branch of 4-year College	6.3	1.1	6.3	5.2
One Campus of a Multi-Campus College	1.4	2.1	1.5	1.8
One College of a Multi-College System	4.3	1.1	1.9	2.5
Admin. Unit of District or Main College of Multi-Unit Institution	1.4	1.1	2.3	1.8
TOTAL	29.2	26.2	44.6	100.0
NUMBER OF RESPONDENTS	210	188	320	718

TABLE 2
EXISTENCE OF BUSINESS, INDUSTRY, LABOR COUNCILS BY LOCATION
(in Percentages)

COUNCIL	URBAN	SUBURBAN	RURAL	OVERALL
Established	52.2	42.6	29.8	40.3
Not Established	47.8	57.4	66.5	59.7
TOTAL	29.1	26.0	44.9	100.0
NUMBER OF RESPONDENTS	205	183	316	704

TABLE 3
BUSINESS, INDUSTRY, LABOR COUNCIL STRUCTURES BY LOCATION
(In Percentages)

STRUCTURE	URBAN	SUBURBAN	RURAL	OVERALL
Formal	78.4	80.7	70.3	76.2
Informal	21.6	19.3	29.7	23.8
TOTAL	36.9	27.9	35.2	100.0
NUMBER OF RESPONDENTS	116	88	111	315

TABLE 4
PUBLIC FUNDING OF BUSINESS, INDUSTRY, LABOR COUNCILS BY LOCATION
(In Percentages)

PUBLIC FUNDING	URBAN	SUBURBAN	RURAL	OVERALL
Yes	30.2	27.3	31.5	29.9
No	58.3	56.1	56.2	57.0
Mixed	11.5	16.7	12.4	13.1
TOTAL	38.2	26.3	35.5	100.0
NUMBER OF RESPONDENTS	96	66	89	215

TABLE 5
OTHER SOURCES OF FUNDING FOR BUSINESS, INDUSTRY, LABOR COUNCILS BY LOCATION
(In Percentages)

OTHER SOURCES OF FUNDING	URBAN	SUBURBAN	RURAL	OVERALL
Corporate	21.8	19.4	10.7	16.7
Foundation	9.9	7.8	7.4	8.4
Federal	17.8	18.2	21.5	19.4
State	29.7	26.0	33.1	30.1
Other	20.8	28.6	27.3	25.4
TOTAL	33.8	25.7	40.5	100.0
NUMBER OF RESPONDENTS	101	77	121	299

Private Industry Council (PIC) Representation

Over two-thirds (69 percent) of all the respondents said they were represented on PICs.

Business/Industry Coordination

Nearly two-thirds of all the respondents said they have appointed a business/industry coordinator who serves as a liaison between various instructional departments on the campus and industries in the area.

Large Private Sector Employer Training

Employee Training

Nearly three-fourths of all respondents said they offer employee training programs for large private sector employers. Nearly 41 percent of the respondents said they provide contract training to large private sector employers that are national/international in scope. Colleges located in the urban and suburban areas offer more than one-half of the contract training compared to the colleges located in rural areas that administered just over one-fourth (28 percent). Of the types of contract training offered by

the colleges to large private sector employers, nearly one-half of all the respondents said that their training is customized; over one-fourth (28.4 percent) is job specific; 14.1 percent is general training; and nine percent said they provide all types of training. (See Table 6 below.)

TABLE 6
TYPE OF CONTRACT TRAINING BY LOCATION
(In Percentages)

TYPE OF TRAINING	URBAN	SUBURBAN	RURAL	OVERALL
General	[illegible]	[illegible]	12.6	14.1
Customized	[illegible]	[illegible]	[illegible]	[illegible]
Job Specific	[illegible]	[illegible]	[illegible]	28.4
All of the Above	[illegible]	12.5	2.0	[illegible]
TOTAL	36.4	30.7	32.9	100.0
NUMBER OF RESPONDENTS	114	96	103	313

Training for Major Labor Unions

Thirty percent of the respondents said they offer employee training programs for major, local labor unions, e.g., CWA, AFL-CIO, UAW, etc. A greater percentage of colleges located in the urban and suburban areas engage in this type of training than do those located in the rural areas. For example, 48 percent of urban and 34 percent of suburban institutions have training programs for labor unions compared to 15 percent of rural institutions.

Training at Site

Nearly eight out of ten colleges surveyed said they train private firm employees at the plant/business site. A greater percentage (85 percent) of institutions located in urban and suburban areas train on site than those (69 percent) located in rural settings.

Funding Methods for Training

The respondents indicated that multiple sources are used to support training programs. Over 35 percent of all respondents reported contracts

as the main source of funding. (See Table 7 below.) The next highest source of funding for the training was tuition charges (31.4 percent). State grants was ranked third (23.4 percent). More than ten percent of the respondents listed federal grants as a source for supporting the training. Nearly 68 percent of the respondents reported that their training programs are subsidized by state and/or local funding agencies.

Also, one-fourth of all respondents said that they provide training for the employment security system in their areas.

TABLE 7
METHODS OF FUNDING TRAINING PROGRAMS BY LOCATION
(In Percentages)

FUNDING METHODS	URBAN	SUBURBAN	RURAL	OVERALL
Contract	36.6	36.2	33.9	35.1
Tuition	30.7	31.6	32.7	31.4
State Grant	21.8	23.6	24.6	23.4
Federal Grant	11.9	9.6	8.8	10.1
TOTAL	32.8	29.8	37.4	100.0
NUMBER OF RESPONDENTS	436	395	496	1,327

Public Sector Employers

Training

Three-fourths of all respondents reported offering training programs for public sector employees. More urban and suburban colleges (80 percent) engaged in such training than did those located in rural areas (70 percent).

Employer Types

Most colleges reported that they provided training to more than one public sector category. Nearly one-half of all the training reported is for the employees of city and county governments. (See Table 8 following.)

Training of employees of school districts was second with 22.7 percent. Nearly 12 percent of the respondents reported providing training for employees of state governments. Military personnel were trained by 9.3 percent of the respondents.

TABLE 8
PUBLIC SECTOR EMPLOYER TYPE BY LOCATION
(In Percentages)

PUBLIC SECTOR TYPES	URBAN	SUBURBAN	RURAL	OVERALL
City	26.6	23.4	24.2	24.8
Counties	22.7	24.7	25.0	24.1
School Districts	17.1	22.4	27.9	22.7
States	12.0	12.1	10.7	11.6
Federal	10.5	7.6	4.9	7.5
Military	11.1	9.8	7.3	9.3
TOTAL	33.7	28.6	37.7	100.0
NUMBER OF RESPONDENTS	515	437	577	1,529

Small Business Support

Eighty-three percent of the respondents reported that they provided support to small businesses beyond traditional credit course work. Of those colleges that provided support to small businesses in non-credit form, short-term workshops/seminars led the list with 32.7 percent. (See Table 9 on following page.) The next most frequent non-credit service type was short courses of 15 hours or less (28.1 percent). Technical assistance received an 18.9 percent response, and small business support center received 11.9 percent. Usually, more than one type of non-credit service was indicated by the respondents. Nearly two-thirds of the respondents reported offering similar types of services in credit form.

High School/College Partnerships

In an effort to improve continuity of learning and to enhance the movement of high school students to community, technical, and junior colleges,

linkages between these two groups have expanded recently. The colleges were asked if they had developed collaborative arrangements with local high schools. Nearly nine out of ten respondents said that they have developed such relationships. Among those who reported such linkages, more than two-thirds (69.0 percent) offered credit courses, less than one-tenth (9.6 percent) offered non-credit courses, and over one-fifth (21.4 percent) offered both credit and non-credit courses to high school students. (See Table 10 on following page.)

TABLE 9
TYPES OF NON-CREDIT COLLEGE SERVICES BY LOCATION
(In Percentages)

NON-CREDIT SERVICE TYPES	URBAN	SUBURBAN	RURAL	OVERALL
Technical Assistance	19.4	17.4	19.7	18.9
International Trade	5.1	6.0	2.1	4.1
Short-Term Workshops/ Seminars	32.8	30.7	34.1	32.7
Small Business Support Center	11.7	14.1	10.6	11.9
Short Courses (15 hours)	27.9	27.9	28.9	28.1
Other	4.0	3.9	4.6	4.3
TOTAL	27.5	30.0	42.5	100.0
NUMBER OF RESPONDENTS	470	512	727	1,709

Nearly 30 percent (29.7) of the respondents said they offered advanced placement programs to high school students. (See Table 11 on the next page.) Almost 29 percent (28.6) of the respondents indicated they articulate programs with the schools; 12.5 percent share faculties; 10.6 percent offer co-op program enrollment; and 10.3 percent share facilities. Almost all institutions offer more than one type of program to high school students.

Collaboration With Economic Development Offices

Eight out of ten respondents reported active collaboration with local and state economic development offices. More than one-half (52.0 percent)

of all respondents stated they worked with both local and state levels; one-third (33.0 percent) reported linkages with only local offices; and 14.2 percent said they provided services for only state economic development departments. (See Table 12 following this page.)

TABLE 10
CREDIT/NON-CREDIT COURSES FOR HIGH SCHOOL STUDENTS BY LOCATION
(In Percentages)

CREDIT/NON-CREDIT	URBAN	SUBURBAN	RURAL	OVERALL
Credit	65.5	66.0	73.1	69.0
Non-Credit	11.5	11.9	6.9	9.6
Both	23.0	22.0	20.0	21.4
TOTAL	29.3	26.8	43.8	100.0
NUMBER OF RESPONDENTS	174	159	260	593

TABLE 11
TYPES OF COLLEGE/HIGH SCHOOL COLLABORATIVE PROGRAMS BY LOCATION
(In Percentages)

PROCRAM TYPES	URBAN	SUBURBAN	RURAL	OVERALL
Advanced Placement	30.5	29	28.9	29.7
Coop Program Enrollment	10.5	10.6	10.7	10.6
Sharing Faculties	11.1	11.6	14.3	12.5
Sharing Facilities	9.8	8.5	11.8	10.3
Articulation of Programs	28.7	30.9	26.9	28.6
Other	9.4	8.5	7.4	8.3
TOTAL	29.8	28.2	42.0	100.0
NUMBER OF RESPONDENTS	498	472	702	1,672

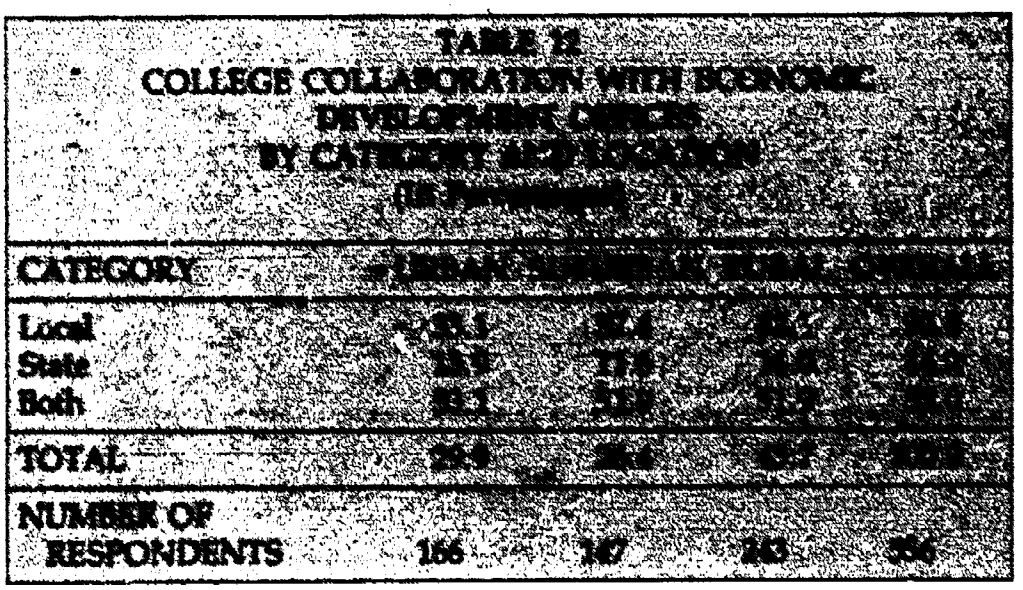


TABLE 12
COLLEGE COLLABORATION WITH ECONOMIC DEVELOPMENT OFFICES BY CATEGORY AND LOCATION (in %)

CATEGORY				
Local				
State				
Both				
TOTAL				
NUMBER OF RESPONDENTS	166	147	243	556

Nearly one-half of the colleges said that they offer technical assistance to local and state economic development offices.

Critical Elements for Success in College/ Business Collaboration

The colleges were asked to identify what they considered to be the critical factors for success in their collaborative programs. The following elements were common among all successful programs:

1. *Communication*—Open communication between colleges and business/ industry.

2. *Flexibility*—The ability to respond immediately to the needs of the industry. According to many respondents, the colleges should be flexible enough to design "tailor-made" programs for business and industry based on their training needs and to offer them at times convenient to the industries.

3. *Quality Training*—The presentation of up-to-date, high quality, and relevant courses by faculty who are highly competent, creative, and committed.

4. *Resource Sharing*—Shared (colleges and industries) responsibilities for program resources, including facilities, personnel, equipment, and cost.

5. *Cooperative Planning*—Careful and thorough planning based on the identification of common needs.

6. *College Commitment*—Administration and faculty support.

These findings substantiate those found by Mahoney (1982) and Warmbrod (1982).

In addition to the listing of factors responsible for success, the respondents were asked to send information on their exemplary programs. Descriptions of several programs and practices were received from the respondents. Capsule descriptions of representative programs are given in Appendix C.

Problem Areas in Establishing Collaborative Programs With Business/Industry and High Schools

The colleges were asked to identify and describe briefly the problem areas they experienced in establishing cooperative programs with business/ industry and with high schools. A review of their responses is presented below.

A. Concerns Regarding Business/Industry

1. *Lack of Resources*—Lack of personnel and inadequate funding were mentioned by most respondents as chief factors in preventing the establishment of successful collaborative programs.

2. *Lack of Time*—The lack of staff time was mentioned by many respondents as an important problem. Often industries demand quick start-up training programs, a demand that reduces planning time. Also, many reported problems related to the schedules of training programs.

3. *Credibility*—Many respondents expressed concern regarding the image of community colleges among businesspersons. Some stated that businesspeople do not understand community colleges. Also, a few mentioned that businesspeople lack respect for the practicality of college offerings.

4. *Lack of Communication*—Many respondents reported that faulty communications often hindered the development of successful collaborative projects with industries.

5. *Bureaucracy*—Some respondents indicated that college procedures were often cumbersome and required extreme amounts of time and paperwork to complete a task. A few stated that the implementation of some projects was delayed because some corporations were not locally based. They had to wait for decisions from the corporate hierarchy.

6. *Labor Unions*—Some respondents listed labor agreements/restrictions, shift work, and union-management differences as inhibiting factors for successful collaboration. Some stated that labor was not as receptive to collaborative efforts as management.

7. *Competition*—Competition with other universities and colleges located in the area often was mentioned as a limiting factor.

8. *Lack of Qualified Faculty*—A major problem expressed by the respondents was the scarcity of qualified faculty to conduct training programs on short notice.

9. *Duplication of Services*—Another important concern expressed by the respondents was that too many local and state agencies duplicated the services needed by business and industry.

10. *High Cost of Training*—Shortage of trainees in a single company might make a class too costly according to some respondents.

B. Concerns Regarding High Schools

1. *Territoriality*—The most often cited problem mentioned by the respondents was "turf." Cooperative programming was viewed by secondary school personnel as an intrusion into their programs. There was a reluctance on the part of the high school staff to give up anything. Declining enrollments, according to many respondents, have forced high schools to become protective.

2. *Scheduling*—Calendars and course offerings often conflict.

3. *Competition*—Many respondents reported that high school staff feared competition with their adult education and advanced placement programs. Also, there was a fear of loss of budget by "giving up" student contact. In addition, respondents indicated competition from other four-year colleges and universities was a problem.

4. *Attitude of High Scho Staff*—Many respondents said that high school staff are reluctant share the time of their better academic students. The high school staff often view the college articulation program as a threat.

5. *Lack of Resources*—Inadequate funds and lack of staff were mentioned as problem areas in establishing successful collaborative programs with the high schools.

6. *College Image*—The perception of high school officials that community colleges are second-rate institutions was a hindering factor, according to some respondents.

7. *Teacher/Faculty Union*—Many respondents said that union contracts sometimes interfered with the establishment of cooperative programs.

8. *Lack of Communication*—Lack of communication among college and high school officials often prevented the establishment of successful collaborative programs according to the respondents.

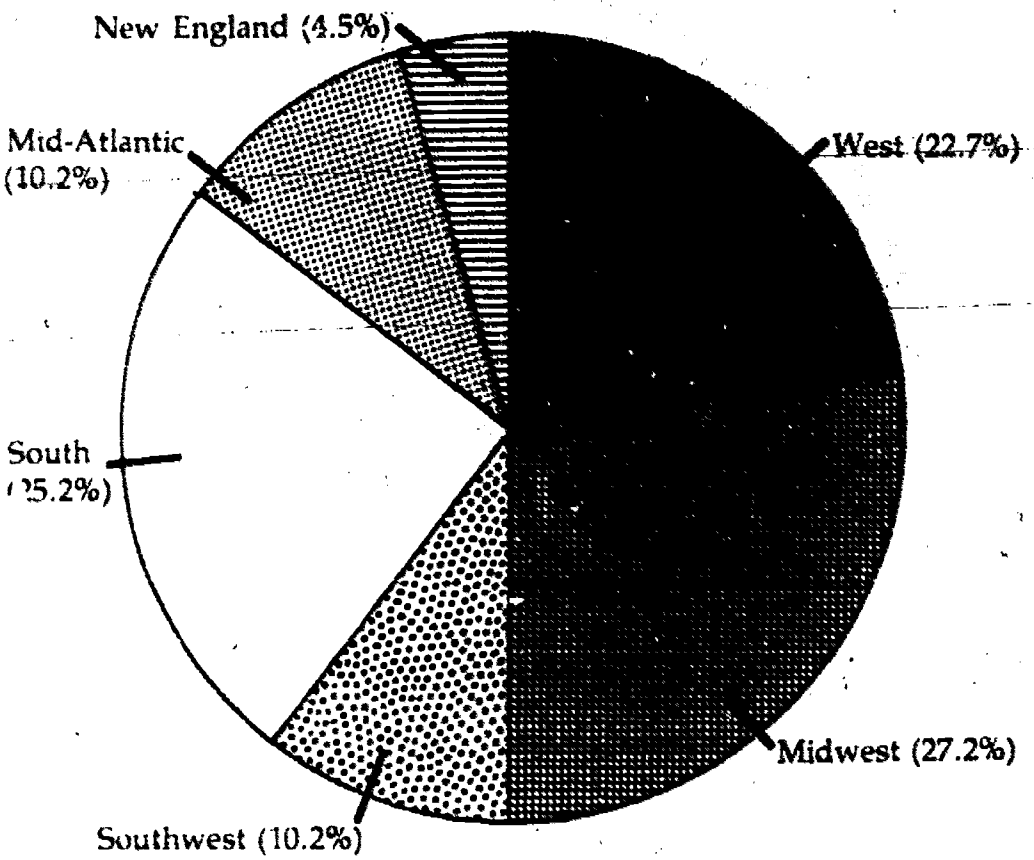
There was general consensus among the respondents that there was a lack of state level commitment for linkage-building between colleges and high schools. They strongly felt that states should formulate a policy that directly encourages and rewards articulation among college and high schools.

Review of Responses By Region

The responses of the institutions by region were reviewed to see if there were any differences. The six regions are New England, Mid-Atlantic, South, Southwest, Midwest, and West. The list of states in each region is given in Appendix D. Nearly three-fourths of all respondents are located in the West, Midwest, and Southern regions. (See Figure 1 below.) More than half of all the responding institutions from the South, Southwest, and Midwest regions are located in rural areas. Ninety percent of the governing boards of the colleges located in the New England, Mid-Atlantic, and Southern regions are appointed while the governing boards in nearly three-fourths of the other three regions are locally elected.

FIGURE 1

RESPONDENTS BY REGION



Business, Industry, Labor Council

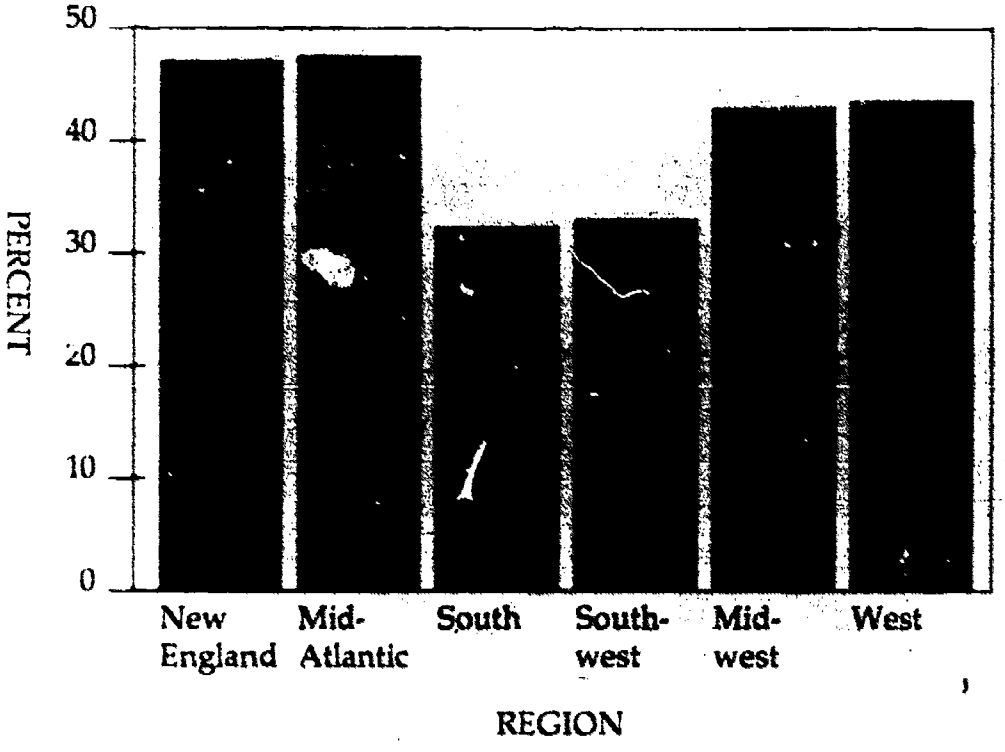
Nearly one-half of the New England and Mid-Atlantic institutions have established business, industry, and labor councils compared to one-third of those located in the South and Southwest. In the Midwest and West regions, 43 percent have established BICs. (See Figure 2 below.) Among those institutions that have established the councils, three-fourths are on a formal basis. About one-half of the councils located in the Mid-Atlantic, South, Midwest, and West regions are supported by either public or a combination of public and private funding sources, while only about one-third of those in New England states and one-fifth in Midwestern states have this kind of support.

Private Industry Council (PIC) and B/I Coordination

More than three-fourths of all institutions located in the Mid-Atlantic region, about two thirds in the South, Midwest, and Western regions,

FIGURE 2

BUSINESS, INDUSTRY, LABOR COUNCILS BY REGION



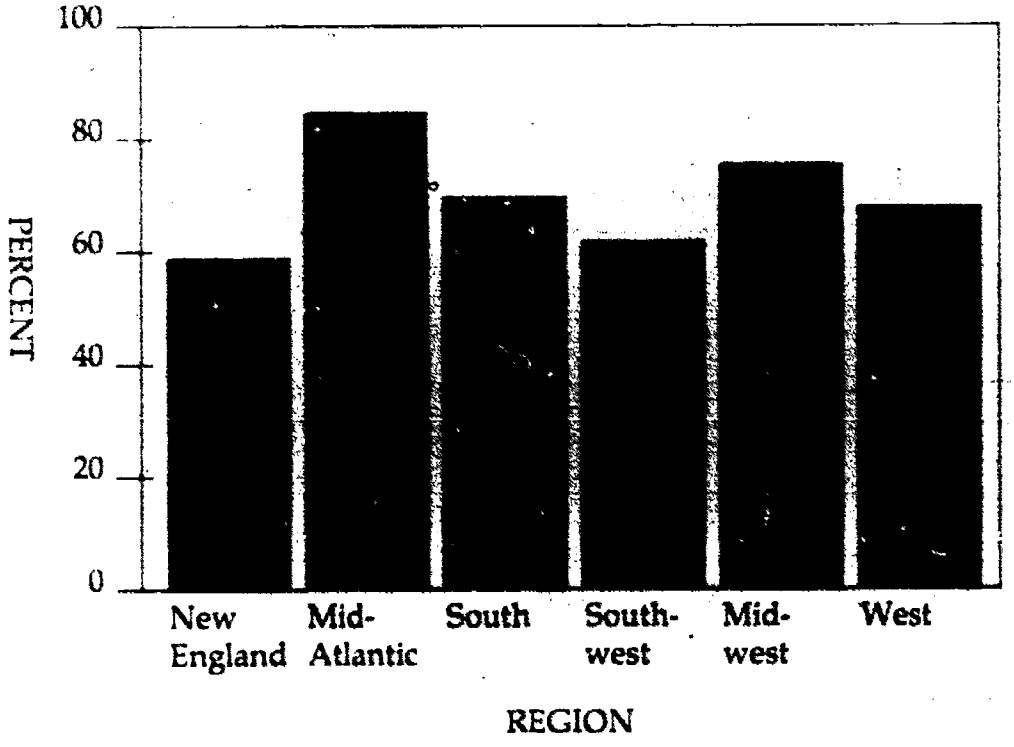
and less than half in the New England and Southwest regions reported representation on Private Industry Councils (PIC). A larger majority (75 percent) of colleges in the Mid-Atlantic and Midwestern regions have appointed business/industry coordinators compared to other regions (South, 65 percent; New England and West, 62 percent each; and Southwest, 51 percent).

Large Private Sector Employer Training

In large private sector employer training, Mid-Atlantic institutions are ahead of all institutions located in other regions. For example, 86 percent of the institutions located in the Mid-Atlantic region reported that they provide employee training programs for large private sector employers compared to 75 percent in the Midwest, 71 percent in the South, 68 percent in the West, 62 percent in the Southwest, and 59 percent in the New England states. (See Figure 3 below.) Again, more institutions (65 percent)

FIGURE 3

LARGE PRIVATE SECTOR EMPLOYEE TRAINING BY REGION



in the Mid-Atlantic region offer contract training than institutions located in other regions where the percentage varied from a high of 45 in the Midwestern regions to a low of 21 in the New England region. Nearly nine out of ten institutions located in the Mid-Atlantic and Southern regions offer either customized or job specific training to the employees of large private sector firms. Eight out of ten institutions in the Southwest, Midwest, and Western regions, and six out of ten in the New England region, provide this training.

Over one-third of the institutions located in the Mid-Atlantic, Midwest, and Western regions offer employee training programs for major, local labor unions. Only one-tenth of all institutions located in the Southern region offer the training programs. Training at plant/business sites is offered by nearly 90 percent of the Mid-Atlantic institutions and only 63 percent of the Southwestern institutions. There is no significant difference in funding methods of training among the six regions.

Public Sector Employers

A great majority (82 percent) of the institutions located in the Mid-Atlantic area provide employee training for public sector employers, compared with only 41 percent in the New England region. The percentages in other regions varied from 69 to 77. Nearly one-half of all institutions (except those in the New England region) offer training for employees of city and county governments. Only one-third of the New England institutions offer such training.

Small Business Support

Support to small businesses beyond traditional credit course work ranged from a high of 91 percent (Mid-Atlantic and Midwest) to a low of 61 percent (New England). With respect to the types of non-credit services offered to small businesses, there was no significant difference among institutions located in the six regions.

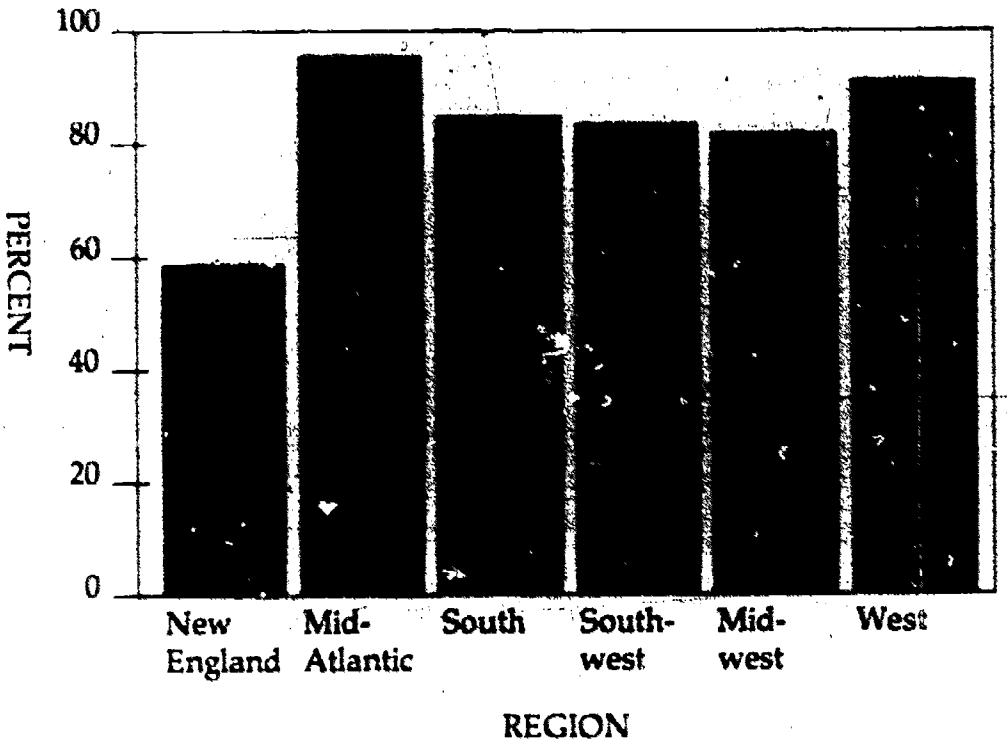
High School/College Partnerships

An overwhelming majority (96 percent) of the institutions located in the Mid-Atlantic region have collaborative arrangements with their area high schools. Except in the New England region where only 59 percent reported collaborative arrangements, all other institutions have cooperative arrangements ranging from 81 percent to 91 percent. (See Figure 4 on the following page.) Among colleges having collaborative arrangements, the program of advanced placement varied from 34 percent

in the Southwest to 23 percent in the New England region. Similarly, cooperative program enrollment ranged from 13 percent (South and Southwest each) to two percent (New England). There was no significant difference among regions in the area of program articulation.

FIGURE 4

HIGH SCHOOL-COLLEGE COLLABORATION
BY REGION



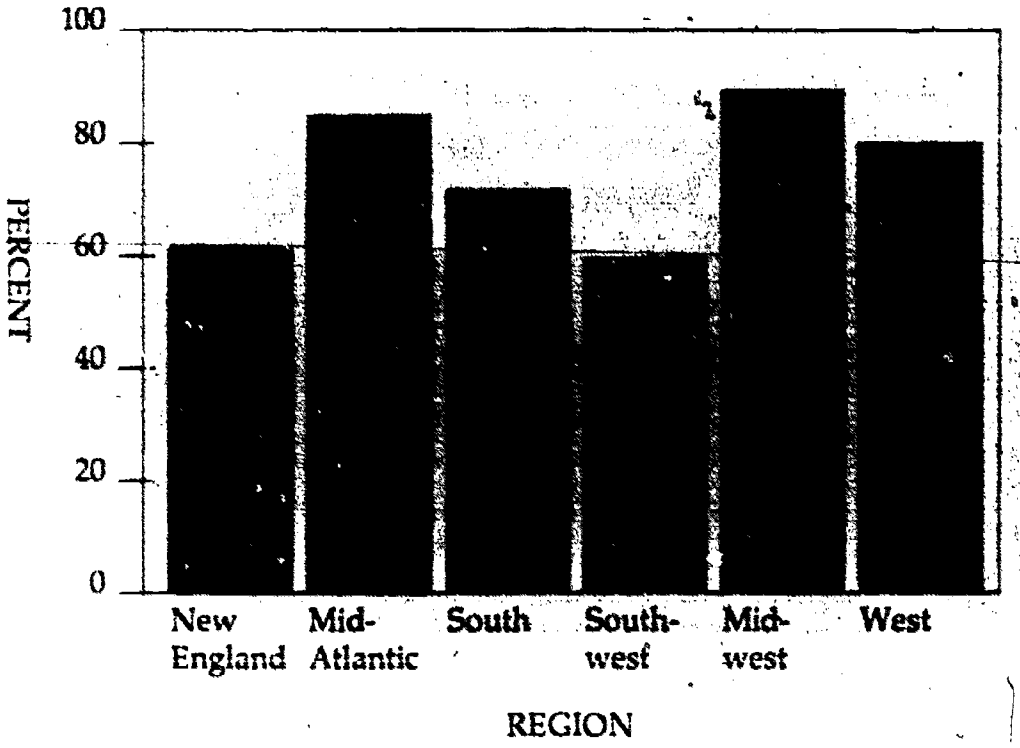
Collaboration with Economic Development Offices

Institutions located in the Mid-Atlantic and Midwest regions reported higher collaboration rates (90 percent) with local and state economic development offices than institutions located in other regions. Southwest institutions have the lowest rate (59 percent) of involvement. (See Figure 5 on the following page.) Among those that reported participation, over one-half of all institutions located in the Mid-Atlantic and Western regions are involved only with local economic development offices, while only 18 percent of the Midwestern colleges work with local offices only. More institutions (35 percent) in the New England region are involved only with

state economic development offices than colleges in other regions. A larger number of institutions (63 percent) in the Midwest region reported active participation in both local and state economic development office activities than institutions from other regions. With respect to the provision of technical assistance to economic development offices, Mid-Atlantic and Midwestern institutions scored highest. More than one-half of all institutions in these two regions offered technical assistance. Fewer institutions (28 percent) in the New England and Southwestern regions offered this service.

FIGURE 5

ECONOMIC DEVELOPMENT OFFICE COLLABORATION BY REGION



Conclusions

This study examined community college partnerships with business/industry and high schools. The results show that mechanisms to ensure regular dialogue and collaboration between community colleges and local business/industry are in place in many locations. In an effort to build new initiatives in human capital development, several colleges have established business, industry, labor councils on their campuses. However, the majority of institutions do not have established councils. Since two-thirds of the responding colleges have appointed a business/industry coordinator, it appears that this is the preferred mechanism to ensure on-going dialogue with the target population.

A note of caution needs to be offered to those who may conclude that the colleges are doing "all they can." The facts that over 60 percent of the respondents do not have established business, industry, labor councils and only 41 percent of the respondents indicated that they offer contract training with large private sector employers (firms employing more than 100 employees) indicate that there is still a great deal of room for expansion and improvement. Additionally, while many colleges (80 percent) are offering a range of traditional credit/non-credit courses for small businesses, only 19 percent are offering technical assistance and only 12 percent are offering the services of a small business support center. Both of these areas make a significant contribution to regional economic development, but they are receiving little or no attention by a significant majority of community colleges.

More active roles are being taken by the colleges in private industry councils and economic development offices. The presidents of these active colleges are members of local or regional PICs that play a leading role in economic development activities of the regions. Whether or not the involvement of the presidents in this area influences related program activities within the institutions is not known specifically, but experience suggests that linkages and joint programs are more apt to develop when a president or his/her designee is involved.

This survey indicates that the nation's community, technical, and junior colleges are working cooperatively with a large variety of public and private sector organizations to provide general and specialized training programs for their employees. The training needs of a vast majority of small businesses are being met through these colleges. The services vary from short-term workshops/seminars, to full fledged degree programs, and, to a lesser extent, technical assistance.

The study points out the factors responsible for successful collaboration

between the colleges and business/industry as well as problem areas in such collaborative efforts. Elements that contribute to the success of program development and implementation include effective communication, flexibility (quick response system), quality training, resource sharing, cooperative planning, and college commitment. Major problem areas include lack of resources, limited planning time, uncertain college credibility, and ineffective communications.

Collaboration between community colleges and high schools exists in many locations according to the survey. The cooperation ranges from program articulation and advanced placement to sharing faculties and facilities. However, the survey points out some concerns regarding such partnerships. Specific concerns centered on the issue of "whose agenda was being met," the college or the high school. It is apparent that the type of collaborative efforts generally offered are directed toward issues related to student recruitment, enrollment development, etc., rather than the larger issues identified in the previously cited *Task Force Report on Education for Economic growth* 1984), e.g., goal clarification, curriculum revision, and redefinition.

A review of responses by region reveals that the college/business/industry collaboration is the strongest in the Mid-Atlantic region. This region led all other regions in building successful college partnerships with large business employers, with public employers, with small business employers, and with high schools.

As the survey reveals, many community colleges have recognized the need to work more closely with business/industry, and they now provide customized training to meet the needs of the employers. Also, there is a growing cooperative effort between community colleges and high schools to improve the education of youngsters through the establishment of flexible scheduling and program articulation. The study demonstrates that there is room for improvement in the efforts of community, technical, and junior colleges to reach out and accommodate the training/educational needs of these target groups through increased partnership building.

Recommendations

Although successful collaborations between the community colleges and business/industry and high schools exist, many concerns were raised by the respondents. The lack of resources, faulty communication, and a mixed community college image were the three main concerns raised by the respondents.

The issue of the community college image is a particularly problematical one because the dimensions of it vary with the audience. For example, top management personnel in business and industry are most frequently graduates of four year colleges and universities. Generally, they view these institutions as primary resources for providing employee education and training, for the institutions carry an academic aura with them and the executives benefit by association with them. The same benefit accrues to executives who work with respected consulting firms. Working with community colleges does not produce the same kind of residuals. The contrast is one that requires community colleges to work especially hard to establish effective partnerships, particularly since competition among these service deliverers has intensified in the last few years.

In their relationships with high schools, community colleges face similar image problems as they do with top level managers in the private sector—but with an additional component. High school officials frequently view community colleges with suspicion, questioning the motives of the colleges when they offer to enter into partnerships. High school officials frequently worry about such overtures because they wonder what they might lose by joining in—the time of their better students (through advanced placement programs), vocational courses (in competition with community college occupational offerings), adult education programs, and the funding that accompanies each of these activities.

Many colleges conduct training programs under contract to the business/industry. The income produced by such arrangements could be used to reduce resource shortages. Also, by delivering quality programs, publicizing successful projects, and involving the business community in program planning and delivery, colleges can reduce or eliminate any hint that their programs and services are second-rate. Sound communication between campus and business/industry personnel is most crucial if collaboration is to succeed. The communications should be open and honest concerning the types of services that the college can and cannot deliver. This directness will help build college credibility in the local business world.

Concerns were raised by the respondents in regarding collaboration

between community colleges and high schools. Two concerns stand out clearly: one is "turf" and the other is the community college image. The most frequent concern raised by the respondents was territoriality. Building partnerships was viewed by the high school staffs as intrusions into their programs. Because of this perception, high school personnel are reluctant sometimes to participate actively in a collaborative effort. A statewide policy for the establishment of college/high school collaboration could help minimize or eliminate such disharmony. The second concern raised by the college respondents was the community college image. For high school staffs, the colleges are seen as pressing for their own vested interests; that is, the colleges are most concerned about recruiting students, shaping curricula to meet their own program requirements, and assuming program areas (like adult education) that they think are inappropriate for high schools to administer. These concerns cannot be overcome in a short period of time. Image building is a long and slow process. Open communication, honors programs, scholarships, flexible scheduling, transfer placements, and public image building would help to alleviate this concern.

Additionally, if the colleges develop a "roll up the sleeves" and "let's work together" attitude on the substantative issues that have been identified in so many national reports (curriculum revision and redefinition, goal clarification, and improving student retention and outcomes)—rather than the college-based issues related to FTE expansion and student recruitment—the resulting achievement will lead to improved relationships and a redefined (and positive) perspective on the role of the comprehensive community college.

Publication of both business/industry and high school collaborative exemplary projects would help build the community college image in the community.

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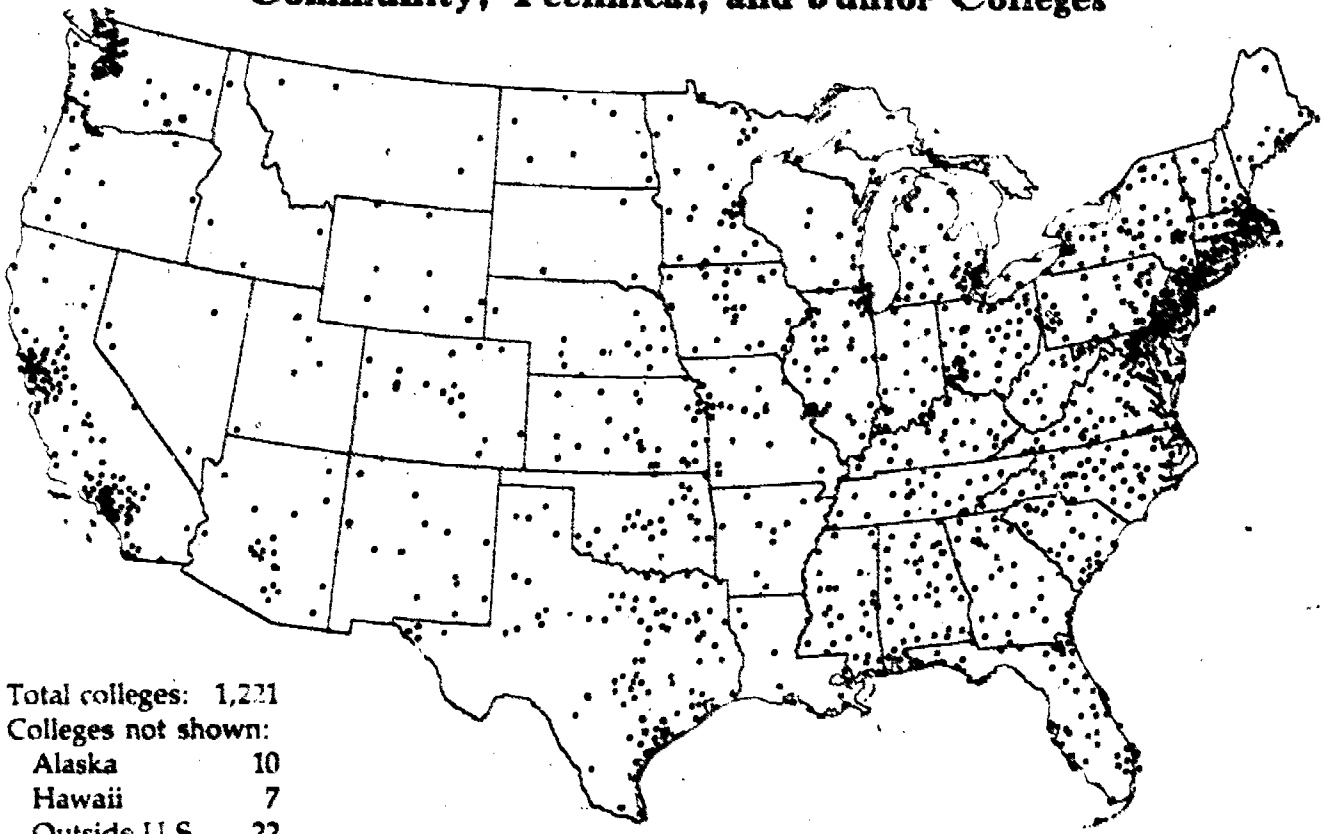
APPENDIX A

MAP LOCATING COLLEGES

Opportunity With Excellence

Community, Technical, and Junior Colleges



Total colleges: 1,221
Colleges not shown:

Alaska	10
Hawaii	7
Outside U.S.	22

Form a Great Network Through
The American Association of Community and Junior Colleges

APPENDIX B

American Association of Community and Junior Colleges Keeping America Working Project Industry-Community College Survey

The purpose of this survey is to determine the nature and extent of partnership efforts among community, technical and junior colleges. Please complete and return by September 10, 1984. Definitions of certain terms that appear on this survey are on page four.

I. GENERAL

1. Name of Institution _____

Address _____

2. Type of Institution:

__ 1. Community/Junior College

__ 2. Vocational Technical College

__ 3. Two-Year Branch of 4-year College

__ 4. One Campus of a Multi-Campus College

__ 5. One College of Multi-College System

__ 6. Admn. Unit of District or Main College of Multi-Unit Institution

3. Type of Governance

__ 1. Locally Elected

2. Appointed Board

4. Do you have a Business, Industry, Labor Council?

A. __ yes (1) __ no (2)

If yes, is your Council a formal structure?

B. __ yes (1) __ no (2)

4. Do you have a Business, Industry, Labor Council? (continued)

   If yes, is your Council housed on campus?

   C. __ yes (1) __ no (2)

   If yes, is your Council funded publicly?

   D. __ yes (1) __ no (2) __ mixed (3)

   If answer is no or mixed funding, check other sources of funding.

   E. __ corporate (1) __ foundation (2)

   __ federal (3) __ State (4) __ other (5)

   F. Is your college represented on a Private Industry Council (PIC)?

   __ yes (1) __ no (2)

5. Do you have a Business/Industry coordinator?

   Name _____

6. Primary Location

   __ (1) Urban __ (2) Suburban __ (3) Rural

II. LARGE PRIVATE SECTOR EMPLOYER (More than 100 employees)

7. Does your college engage in employee training programs for large private sector employers?

   yes (1) no (2)

8. Do you have contract training with large private sector employers, e.g., General Motors, U.S. Steel, etc., that are national/international in scope?

   __ yes (1) __ no (2)

9. If yes, check the type of training offered.

   ___ generic (1) ___ customized (2) ___ job specific (3)

10. Does your college engage in employee training programs for major, local labor unions, e.g., CWA, AFL-CIO, UAW, etc.?

    ___ yes (1) ___ no (2)

11. Does your college train employers at the plant/business site?

    ___ yes (1) ___ no (2)

12. Methods of Funding: ___ contract (1) ___ state grant (3)

    ___ tuition (2) ___ federal grant (4)

13. Does your state and/or local funding agency subsidize the training program?

    ___ yes (1) ___ no (2)

14. Does your college provide contract training for the employment security system?

    ___ yes (1) ___ no (2)

III. PUBLIC SECTOR EMPLOYERS

15. Does your college engate in employee training for public sector employers?

    ___ yes (1) ___ no (2)

    If yes, check the appropriate public sectors

    ___ city (1) ___ counties (2) ___ school districts (3)

    ___ states (4) ___ federal (5) ___ military (6)

IV. SMALL BUSINESS SUPPORT (less than 100 employees)

16. Does your college provide support to small business beyond traditional credit course work?

    __ yes (1) __ no (2)

    If yes, check the following list for type of non-credit services:

    __ technical assistance (1) __ international trade (2)

    __ short-term workshops/seminars (3) __ small business support center (4) __ short courses (15 hours (5)

    __ other (6)

17. Does your college provide the above services in credit form?

    __ yes (1) __ no (2)

HIGH SCHOOL/COLLEGE PARTNERSHIPS--COLLABORATION WITH HIGH SCHOOLS

18. Do you have collaborative arrangements with high schools aimed at improving continuity of learning and enhancing the movement of high school students to community, technical, and junior colleges?

    __ yes (1) __ no (2)

19. If yes, __ credit (1) __ non-credit (2)

20. If yes, check the appropriate programs:

    __ advanced placement (1) __ sharing of facilities

    __ coop program enrollment (2) __ articulation of programs (5)

    __ sharing with faculties (3) __ other (6)

V. OTHER COLLABORATIONS

21. Have you been involved with the local and state Economic Development Offices?

    ___ yes (1) ___ no (2)

    If yes, specify: ___ local (1) ___ state (2)

22. Do you provide technical assistance to the Economic Development Offices?

    ___ Yes (1) ___ no (2)

23. Explain briefly the critical elements for success in your collaboration:

    _____

    _____

    _____

24. Explain briefly problem areas in establishing collaborative programs with:

    a. Business/Industry: _____

    b. High Schools: _____

THANK YOU

Please return the survey in the enclosed postpaid envelope. If you have background information, brochures, etc., on exemplary projects of industry-college and high school-college collaborations, please send under separate cover to Dr. Philip R. Day, Jr., President, Dundalk Community College, Dundalk, MD 21222.

DEFINITIONS PERTAINING TO DATA ELEMENTS

I. *Primary Location of College*

Urban—The central city of a metropolitan area with a population of 100,000 or more.

Rural—Outside corporate limits of a central city and having a population of less than 50,000.

Suburban—Within the standard metropolitan area, but outside the central city and having a population of 50,000 or more.

II. *Industry/Training*

Industry—Refers to business, industry, labor and government agencies and organizations.

Large Business Industry—100 or more employees

Small Business Industry—Less than 100 employees

Generic Training—General occupational education that would provide foundation support to many jobs within an occupational cluster, e.g., typing for secretaries.

Customized Training—Any training which meets the specific needs of an employer.

Job Specific Training—Training for a specific job, e.g., first line supervisors.

Private Industry Council (PIC)—a formal advisory body that was created at the state and local levels through the Job Training Partnership Act (JTPA).

APPENDIX C

SELECTED EXEMPLARY PROGRAMS

1. *Collaboration with Business/Industry*

(1) Vance-Granville Community College, one of 58 community and technical colleges in North Carolina, provides custom-designed employee training programs for industries located in the area. For example, the college trained employees of Max Factor, a cosmetic manufacturing company, in skills ranging from chemical compounding to set-up mechanics. Set-up mechanics is the art of modifying machinery to accommodate an ever-changing product line.

Similar customized training programs have been established in community colleges across the state of North Carolina to meet the special needs of the industry in their areas. North Carolina's new industrial training service program is a national model. The system's success is attributable to the formal ties between the Department of Community Colleges and the Department of Commerce that assure that services needed by industry can be properly planned and provided for (Campbell and Faircloth, 1982). In recognizing the key role that is being played by the North Carolina Community College System in the state's economic development, the legislature appropriated for the 1983-85 biennium alone more than $12 million for the program, making it the best funded customized training service in the nation.

(2) Dundalk Community College in Maryland successfully implemented a unique program of customized training for steel and other industries. The approach takes into account issues related to traditional labor/management problems and the need to base training programs upon identified, job-related competencies. The college used DACUM procedures to pinpoint competencies. Specific emphasis was placed on the college's emerging relationship with local steel and other heavy industries and its potential for participating in future program development (Day, 1984).

(3) The Center for Agriculture, Business and Industry at Carl Sandburg College, Illinois, under its "Contracting with Business and Industry" program, provides individualized training programs

tailored to meet specific short or long-term goals. At Protexall Manufacturing in Galesburg, employees were trained to service and repair microprocessors used to control sewing machinery. The training was held at the plant site and the student-employee received a state-accredited college certificate. This program saved the company "thousands of dollars in repair costs" according to the vice president of production. The state's High Impact Training Services (HITS) program provides a direct cash grant to new or expanding businesses to offset the initial costs of training qualified employees. The employer details the specific skills needed by an employee and the college center provides the required training and handles paperwork needed for the employer to receive the training funds from the state.

(4) Salem Community College in New Jersey provides multi-craft mechanic training programs for Shell Chemical Company and customized employee training programs for Anchor Glass Corporation. The college also offers a management interaction program designed to improve the supervisory skills of first and second line supervisors.

(5) Santa Fe Community College in Florida has a formal agreement with General Electric Company to provide the following specific training needs: (1) safety training, (2) maintenance training, (3) supervisor training, (4) problem solving training, (5) operator training, and (6) auditor training. In addition, the company requested the college to prepare an orientation training film describing GE products to new employees and to the general public.

(6) Edison Community College in Florida, through its Institute of Government, provides management training for city and county governments in Southwest Florida. The Florida Institute of Government is headquartered in Tallahassee with operations decentralized on nine state university and four community college campuses. The college's Institute of Government serves three counties and their municipalities.The program was designed (1) to enhance the relationship between the college and the public sector in the college's service area, and (2) to promote efficiency and effectiveness in local governments and state agencies through performance-based training and problem solving through technical assistance.

(7) Mercer County Community College in New Jersey has established a unique working relationship with Mercer County small businesses through the establishment of a small business development center on its campus. The center publishes *Mercer County Small Business Review* three times a year for more than 6,000 small businesses located in the county. The *Review* includes tips for small businesses, grants available to small businesses, a calendar of events, small business alerts, and other items of interest. The center recently published a *Shall Business Resource Directory* that contains a listing of associations and public agencies that provide services to the small business community of Mercer County.

(8) College of San Mateo in California has established a successful cooperative agreement with the Hospital Consortium of San Mateo County to provide specialized training programs for hospital personnel. The program calls for additional slots in the college's associate degree nursing program and upgrading training for paraprofessional nurses working in consortium hospitals. Two levels of upgrade training are available: aides to LPN, and LPN to RN. The hospitals benefit because their staffs include more nurses competent to function at higher levels. Further, the hospitals are able to provide advancement opportunities to employees that serve as morale boosters at little cost to the hospitals. Another successful collaborative project was an entry-level and upgrading training program for electronics assemblers and electronics engineering technicians. Entry-level training is targeted on unemployed persons who are referred to the college program by state and local agencies. The training is offered on the campus in an environment structured to simulate industrial conditions. The upgrading training project enables assemblers currently employed in industries to become electronics engineering technicians. The project component includes self-paced, competency-based training packages using video disc and an interactive computer delivery system.

(9) John Wood Community College (JWCC) in Illinois has developed a unique common market concept: Contracting for Community-based Educational Services. Given the variety and quality of postsecondary educational institutions in the area, duplication of programs and services at JWCC was viewed as extremely costly. To avoid duplication the college established a common market of schools so that students attending JWCC would have access to all

the educational programs available in the area. The concept was to share human as well as physical resources, avoid duplication of effort, and stress cooperation rather than competition. Students are admitted, counseled, registered, and given financial aid at JWCC. They pay the low community college tuition rate. After conclusion of each academic term, JWCC reimburses the contracting institution for the total credit hours generated by its students. The rate of payment to each institution was established through negotiation.

The success of the college in using contractual arrangements with traditional educational institutions encouraged staff members to explore similar relationships with private business/industry. One example of this kind of relationship is the Broadcast Electronics Technology Program. This unique program was jointly developed by the college and Harris Corporation. The college contracts with Harris for instruction in the technical areas, with payment on a per-credit hour basis. Students are trained on modern, continuously updated equipment on the site. General education courses and electives necessary to complete the certificate and degree requirements are taken through JWCC. This program, started in 1979, helps to meet the immediate and long-term needs for skilled technicians in the electronics industries.

Another exceptional program called SPIRIT (Specialized Programs in Retail and Industrial Technology) was started at JWCC in 1982. SPIRIT facilitates the development of a total training program for one student to meet the needs of an employer. A prospective employer has the opportunity to select and personally train a participant, with no commitment to hire the trainee or to pay the trainee while the training is in process. In fact, the employer receives a small payment from JWCC for his/her services as field faculty. JWCC's role is to bring the employer and potential employee together, guide the educational process, and provide additional coursework as needed to create a total program. The JWCC staff believe that the future of the contractual common market system looks promising. According to the staff, eight years of impressive growth, documented cost effectiveness, and a history of student successes have shown that the contractual concept as implemented by JWCC is a solid one.

2. *Collaboration with High Schools*

Although there are many examples of successful collaborative programs existing between community colleges and businesses and industries, in

formation on similar cooperative programs between the colleges and high schools is limited. During this study, some respondents sent brochures and other materials describing college/high school partnerships. Here are brief descriptions of representative programs.

(1) Maricopa Technical Community College in Arizona has developed a program called Credit by Articulation with the Phoenix Union High School District. Through this program the students attending high schools can earn college credits for mastery at the high school level of the same required competencies as college programs. There is no cost to the students for credits earned by articulation. Credits are granted for regular degree or certificate courses. Through credits by articulation, a student can finish college sooner at less cost. Recent state legislation has encouraged transferability and interface of secondary and postsecondary programs.

- The college is planning to relocate all its machine tools to the nearby high school district vocational center in return for use of its facilities for evening classes; new equipment (e.g., CAD, etc.) purchased by the center is being housed on the college campus for use by both the high school and college students.

(2) Sacramento City College (SCC) and Sacramento City Unified School District (CSUSD) in 1982 appointed a Joint Articulation Council to develop a formal structure for an articulation partnership between the two. The council established four objectives to achieve its purposes: (1) curriculum integration and articulation of selected high school and college occupational programs; (2) development of a case assessment/placement model in conjunction with one of the feeder high schools; (3) planning an articulation continuum for instructional programs and student services; and (4) dissemination of information about these activities to appropriate personnel. The immediate outcome of the project has been the strengthening of the linkage between SCC and SCUSD. The ultimate goal is the creation of an articulation system that will serve as a model for other colleges and secondary schools in California.

(3) Norwalk State Technical College in Connecticut, in cooperation with the Bridgeport Board of Education, Norwalk Board of Education, and Stamford Board of Education, initiated and sponsored a Saturday Academy Program in science, engineering, and tech-

nology during the spring of 1982. The program, consisting of seven Saturday sessions, was designed to encourage, motivate, and stimulate ninth grade students from area towns to continue with math and science while in high school to prepare them for careers in science and engineering.

(4) John Wood Community College in Illinois, in collaboration with five area high schools, established the JWCC Escrow Program. The program is designed to help bridge the gap between high school and college. Through the program, a high school student can take regular college level courses, available at area high schools, during the senior year. By completing introductory college courses in high school, the credit is held "in escrow," and the student can move directly to more advanced college courses during the freshman year.

(5) Tri-Cities State Technical Institute in Tennessee has established articulation agreements with several area high schools. Staff develop articulation forms for most curricula that identify the specific competencies the students have demonstrated in their courses. Based on the teacher's assessment of student competencies in his/her course (students must function at the 80 percent level or higher) and the concurrence of the appropriate college department head and the college dean of students, students are awarded credit for their high school work.

(6) Ashland Community College in Kentucky established a formal cooperative agreement with Ashland Public Schools. The formal agreement stipulates that the Board of Education will provide facilities, equipment, and other resources for the college. In turn, the college will establish educational programs relating to the understanding and use of computer and information processing equipment, support a learning resources center, and provide for the services of a program coordinator for these activities. Both the board and the college will provide faculty and staff development oopportunities for their respective employees.

Appendix D

States By Region

1. *New England*
   Connecticut
   Maine
   Massachusetts
   New Hampshire
   Rhode Island
   Vermont

2. *Mid-Atlantic*
   Delaware
   District of Columbia
   Maryland
   New Jersey
   New York
   Pennsylvania

3. *South*
   Alabama
   Florida
   Georgia
   Kentucky
   Louisiana
   Mississippi
   North Carolina
   South Carolina
   Tennessee
   Virginia
   Puerto Rico, Virgin Islands,
   Panama Canal Zone

4. *Southwest*
   Arkansas
   New Mexico
   Oklahoma
   Texas

West
Alaska
Arizona
California
Colorado
Hawaii
Idaho
Montana
Nevada
Oregon
Utah
Washington
Wyoming

Trust Territories:
American Samoa
Guam
Micronesia
Wake Island

5. *Midwest*
   Illinois
   Indiana
   Iowa
   Kansas
   Michigan
   Minnesota
   Missouri
   Nebraska
   North Dakota
   Ohio
   South Dakota
   West Virginia

APPENDIX E

AACJC/ACCT KEEPING AMERICA WORKING PROJECT

The Keeping America Working Project (KAW) is jointly sponsored by the Washington, D.C.-based American Association of Community and Junior Colleges and the Association of Community College Trustees. It is a community, technical, and junior college response to the forces transforming the American economy. The KAW effort is led by a Task Force of distinguished Americans. It is chaired by Philip K. Hammond, president of Dynamic Sciences, a Los Angeles-based electronics firm. The Task Force vice chair is Don C. Garrison, president of Tri-County Technical College in South Carolina. Dale Parnell, president of the American Association of Community and Junior Colleges, also serves as the KAW project director. James McKenney serves as associate director. (A complete list of Task Force members and staff is presented below.)

The Keeping America Working Project is devoted to helping the leaders of the nation's businesses, industries, labor unions, and governments understand that the 1,221 community, technical, and junior colleges are in place and ready to serve national, state, and local needs for economic and human resource development. KAW welcomes opportunities to present the educational and training services available through the community, technical, and junior college system of the nation to employers, trade associations, labor unions, state and local governments, high schools, and other interested agencies and institutions. Special KAW efforts include emphasis upon the following priorities:

- Business, Industry, and Labor Partnerships

In what specific ways can partnerships be developed between colleges and the larger private sector employers of a region? How may representatives of organized labor groups be effectively involved in such partnerships? How can such partnership programs fit into the overall economic development plans for a given region?

- Public Employer Partnerships

How can community, technical, and junior colleges work more effectively with school districts, city, county, state, and federal government entities to deliver long- and short-term education and training programs?

Can such partnership efforts among public sector employers reduce governmental costs, or release training funds for other purposes? How can the resources (e.g., faculty expertise) of the college help solve economic development and related problems?

• Small Business Partnerships

What can community colleges do to help small businesses meet their employee training needs? How can community colleges help small businesses remain economically healthy and a part of a thriving economy? How can small businesses use the resources of the community college most effectively?

• High School/College Partnerships

How can community colleges and high schools join in partnerships that will effectively benefit students? Can community, technical, and junior colleges join with their high school colleagues to help improve the product? How can the resources of the high schools and colleges be joined on behalf of students? How can high schools and colleges address the problems stemming from a loss of continuity in learning?

The Sears-Roebuck Foundation has awarded the largest single two-year grant in its history to the American Association of Community and Junior Colleges/ Association of Community College Trustees (AACJC/ACCT) Keeping America Working (KAW) project . The $950,180 grant establishes a national Partnership Development Fund (PDF) to support pilot projects that will enhance collaboration between community, technical, and junior colleges, and business/industry/labor; public employers; small business; and high schools. To reach project goals, grants will be awarded to selected colleges on a request for proposal basis. The average grant is expected to be $8,000 with 30–40 colleges participating during the 1985-86 college year. Preference will be given to proposals aimed at more than one of the target priorities, as well as applications that include matching funds or in-kind local services.

In another KAW program recognizing college and employer partnerships, Los Angeles County Community College District (CA), Valencia Community College (FL), and State Technical Institute at Knoxville (TN) won the 1985 College/Employer/Labor Partnership Awards. Presentation of the awards was made during the 65th annual convention of the American

Association of Community and Junior Colleges on April 15 in San Diego, California. The awards program recognizes community, technical, and junior colleges for implementing successful cooperative training programs with local employers and is supported through a grant from HBJ Media Systems Corporation (FL), headed by president Steven Dowling.

The Los Angeles Community College District project involved three colleges and Lockheed California Company, the International Association of Machinists and Aerospace Workers, and the Engineers and Scientists Guild in retraining 765 laid off or likely-to-be-displaced aerospace workers.

The local Business Advisory Council cooperated with Valencia Community College to provide computer programming training to severely handicapped persons that resulted in 100 percent placement in jobs in the computer industry.

The Aluminum Company of America (ALCOA-Tennessee) and State Technical Institute at Knoxville (TN) developed a partnership to train apprentices in industrial, electrical, and mechanical maintenance and machining through a customized training program delivered at the plant by both Institute instructors and ALCOA personnel.

Runners-up in the award 1984-85 competition were: Eastfield College (TX), Essex Community College (MD), Dutchess Community College (NY), Horry-Georgetown Technical College (SC), Metropolitan Technical Community College (NE), VanceGranville Community College (NC), and Waukesha County Technical Institute (WI).

KEEPING AMERICA WORKING

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Other AACJC publications on Community College/Business partnerships:

Employee Training and Productivity, Roger Yarrington, editor, 1980. A report of the 1980 Wingspread conference on industry-education cooperation for increasing productivity through employee training. Cosponsors were AACJC, the American Vocational Association, and the American Society for Training and Development. Included in this book are background papers and further recommendations for a national policy on human resource development. $5.

Shoulders to the Wheel, Jackman/Mahoney 1982. Describes 40 examplary cooperative programs between community colleges and business and industry, outlines the benefits and problems of these programs, and sketches general concerns about their expansion within the colleges. The monograph also contains contact names, addresses, and telephone numbers, and offers a comprehensive bibliography. $6.

Community College Centers for Contract Programs, Mahoney, 1982. In this sequel to *Shoulders to the Wheel*, the publication focuses on 15 model administrative units already established on community college campuses to coordinate and expand contract programs with business/industry and other community groups. The monograph summarizes center characteristics and outlines the implementation and operation recommendations and advice collected from center directors. $6.

Kellogg Leadership Initiative, Mahoney, editor, 1984. A report and guidebook on the history and purposes of the AACJC/ACCT project, Putting America Back to Work (completed in January 1984 and succeeded by Keeping America Working), outlining current and future roles for community colleges in economic and human resource development. Includes guidelines for applying strategic planning procedures to the creation of partnerships between the colleges and the public and private sectors. With annotated bibliography and tables. $8.50.

Planned AACJC publications

Directory of Business/Industry Coordinators, (spring 1985)
Keeping America Working: Profiles in Partnerships (spring 1985)

All AACJC publications are available from:

AACJC Publication Sales
80 S. Early Street
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