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AUTHOR	Lynch, Robert; And Others
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ABSTRACT

In 1989-90, a national survey was conducted to assess the scope and nature of contract training and other economic development activities at community colleges and technical institutes. The survey was sent to a random sample of 246 community colleges, requesting information on the colleges' workforce and economic development activities in 1988-89. Major findings, based on a 72% response rate, included the following: (1) the majority (94%) of the public community colleges in the sample offered at least one course on a contract basis to public or private employers; (2) most colleges had relatively modest contract education programs, with the number of courses offered at the median college only 50, the median number of students enrolled 919, and the median number of employer clients served 24; (3) frequently offered contract courses dealt with job-specific skills, basic reading, writing, and math skills, and "other" miscellaneous courses; (4) on average, private firms comprised approximately 70% of the employer clients served by community college contract education programs; (5) on average, 61% of job-specific courses offered were developed jointly by colleges and their clients; (6) employers themselves provided the largest share of revenues needed to support contract education, followed by subsidies from state and local governments; and (7) approximately 80% of the public community, technical, and junior colleges received funds through the Vocational Education Act; approximately 50% received Job Training Partnership Act funds; and approximately 50% received funds from other state, local, and federal agencies that support business assistance programs or vocational training. Data tables and the survey instrument are included. (JMC)

National Center for Research in
Vocational Education

University of California, Berkeley

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COMMUNITY COLLEGE INVOLVEMENT IN CONTRACT TRAINING AND OTHER ECONOMIC DEVELOPMENT ACTIVITIES

Report of a National Survey Conducted by the American Association of Community and Junior Colleges and the National Center for Research in Vocational Education

Robert Lynch
Catonsville Community College

James C. Palmer
Center for Community College Education, George Mason University

W. Norton Grubb
University of California at Berkeley

National Center for Research in Vocational Education
University of California at Berkeley
1995 University Avenue, Suite 375
Berkeley, CA 94704

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This research developed from an idea of Jim McKenney's at the American Association of Community and Junior Colleges, and he was helpful in every stage of its development. The staff of the AACJC was unfailingly supportive in carrying out the survey. James Jacobs of the Industrial Training Institute provided useful information from his own research and experience that helped improve the final report.

SUMMARY

Although contract training and other activities related to economic development have been widely promoted in community colleges and technical institutes, little is known about the magnitude of such efforts. In a first attempt to assess the scope and nature of these activities, the American Association of Community and Junior Colleges in conjunction with the National Center for Research in Vocational Education undertook a national survey of a sample of its member institutions. This report presents the major findings of this survey.

The issues raised by contract education are complex, and often not fully debated. Contract training seems to offer something for everyone: educational institutions strengthen their connections to employers and enhance their community service; individuals receive training appropriate to their employment; businesses benefit from better-trained employees, and may have some of their training costs subsidized; and communities benefit from economic development. One the other hand, there are potential drawbacks as well, particularly since contract training represents short-term and specific training rather than the broader education that community colleges have emphasized, and because contract training may represent ways for employers to gain public subsidies without any guarantee that either employees or communities benefit. These issues, while impossible to resolve conclusivley through a survey, help formulate a series of questions both for the current study and for subsequent investigations.

An initial survey proved too complex for community colleges to address, indicating how limited the information about contract training and other economic development activities currently is. A simpler survey was then sent to a random sample of community colleges, with a completion rate of seventy-two percent representing an adequate cross-section of public community, technical, and junior colleges. The most important findings include the following:

- During 1988-89, the majority of public community colleges (ninety-four percent) offered at least one course on a contract basis to public or private employers.

- Despite the large proportion of colleges that provide some contract training, most colleges have relatively modest contract education programs. The number of courses offered at the median college was only fifty; the median number of students

enrolled was 919; and the median number of employer clients served was twenty-four At most colleges, enrollment in contract classes is only a small fraction of enrollments in regular credit courses.

- Frequently offered contract courses deal with job-specific skills (offered by ninety-three percent of the colleges), followed by courses in basic reading, writing, and math skills (offered by sixty percent of the colleges), "other" miscellaneous courses (offered by forty-six percent of the colleges), and academic courses that are tied to apprenticeship programs (offered by thirty-five percent of the colleges).

- Courses focusing on job-related skills are more likely than other contract courses to be customized — that is, developed specifically for the employer rather than taken "off-the-shelf" from the regular college curriculum. On average, approximately sixty-seven percent of the job-related courses offered per college were customized, as opposed to only twenty-seven percent of all other courses.

- On average, private firms make up the majority (approximately seventy percent) of the employer clients served by community college contract education programs. Public agencies account for twenty percent of the clients served.

- Colleges often collaborate with their clients in the development of customized courses. On average, sixty-one percent of the job-specific courses offered were developed jointly by colleges and their clients. Other courses, including basic skills and academic courses, are more likely to be taken "off the shelf"; only forty-six percent were developed jointly, the remainder were developed solely by the college.

- Employers themselves provide the largest share of revenues needed to support contract education, followed by subsidies from state and local governments.

- Community colleges engage in many other non-instructional services to the business community, though these services are not as widespread as contract training. Approximately one-third of the colleges provide special services to small businesses, eighteen percent help businesses obtain funding or loans, and approximately thirteen percent help businesses in contract procurement.

- During 1988-89, approximately eighty percent of the public community, technical, and junior colleges received funds through the Vocational Education Act (VEA).

Approximately two-thirds of these monies were used to support credit instructional programs; another seventeen percent was devoted to non-credit instruction, and the remainder was utilized for other activities.

- Approximately fifty percent of the colleges received Job Training Partnership Act (JTPA) funds during 1988-89, and twenty percent served as regional administrative agencies for JTPA.

- During 1988-89, approximately fifty percent of the colleges participating in the survey received funds from other state, local, and federal agencies that support business assistance programs or vocational training. Like the amounts of VEA and JTPA funds, the resources per college from these agencies vary widely.

These results allay several possible fears about contract education. While contract education has become widespread, in most institutions it remains a limited program with relatively restricted enrollments compared to the regular credit courses of community colleges and technical institutes. It is also clear that there is substantial collaboration between colleges and their clients about contract education. Finally, the fear that employers are using contract education as a way of getting public funding for specific training seems unfounded, since employers are the largest single source of funding and also provide in-kind contributions in the form of donated equipment and the use of facilities.

Other issues surrounding contract training remain murky. Community colleges have not collected much systematic data about economic development activities, and many descriptive questions cannot be answered. In addition, there is virtually no information about the effects of contract training, for either the individuals enrolled in them or for the employers who sponsor them. Above all, the role of contract education in economic development remains unclear, and the effectiveness of strategies promoted in the name of economic development unknown.

Contract education is clearly here to stay; it is widespread, and its potential benefits to students, employers, and postsecondary institutions are substantial. As it further develops, it will be worth continued effort to document—more carefully than has been possible so far—its scope, content, and effectiveness.

INTRODUCTION

Economic development has become a widely-heralded justification for community college participation in job training. Encouraged by state and federal subsidies and promoted by professional organizations such as the American Association of Community and Junior Colleges (AACJC), contract education for specific businesses and training for special populations (such as displaced workers or homemakers) now complement the standard programs in vocational education which have traditionally linked community colleges and technical institutes with the world of work. By helping industries add or retain jobs and by retraining workers with inadequate skills, community colleges have sought to become primary players in state and national efforts to remain economically competitive.

While these new roles have been promoted by policymakers and community college leaders, little is known about the extent of economic development activities undertaken within community colleges and technical institutes outside of the regular curriculum. Many of these activities, such as customized training for businesses or short-term vocational classes, are offered in the form of noncredit community service courses, and are, therefore, not always subject to state reporting requirements. Other activities, such as one-on-one counseling for operators of small businesses, do not require formal instruction and cannot be measured by enrollment or other standard indicators of the collegiate enterprise. It is hard to derive a composite picture of the non-traditional economic development services offered by community colleges, because little information is available beyond anecdotal evidence or descriptions of individual college programs.

To develop a better description of these services, the National Center for Research in Vocational Education (NCRVE) contracted with the AACJC to conduct a national survey of public community, technical, and junior colleges. The questionnaire, distributed to a random sample of institutions in the fall of 1989, sought information about two broad areas: (1) training offered to public and private employers on a contract basis, and (2) college services such as business incubators or contract procurement assistance that are subsidized by federal funds made available through the Job Training Partnership Act (JTPA) and the Carl D. Perkins Vocational Education Act of 1984 (also known as the Vocational Education Act [VEA]).

This report presents the results of the survey. After reviewing briefly the issues raised by the development of contract education and other economic development activities, we describe the methodology of our survey and then highlight key findings. A concluding section summarizes the results and outlines issues meriting further investigation.

ECONOMIC DEVELOPMENT AND CONTRACT TRAINING: ISSUES AND QUESTIONS[1]

Recent interest in economic development has generated new ideas for vocational programs and job training in which educational institutions see themselves as driven more by the needs of employers than by other concerns. When vocational educators in community colleges and technical institutes rely on economic development as a "new" justification for expanded programs, they often refer to the specific practice of contract training. Contract training is the provision of relatively firm-specific skill training for individual firms—a form of training which is more responsive to a firm's needs than are general vocational programs. However, the variety of assistance to firms has expanded well beyond the provision of contract training, and one purpose of the survey reported in this monograph is to document the nature and scope of these efforts. Finally, while the majority of contract training is provided to individual firms, community colleges and technical institutes often contract with public agencies to provide relatively short-term training to specific groups of individuals, including clients of the Job Training Partnership Act (JTPA) or Welfare-to-Work programs sponsored by the Family Support Act of 1988.

The funding for contract training is bewildering in its variety. In some (but not all) states, contract training qualifies for credit, and colleges are reimbursed through conventional state aid mechanisms for enrollments in contract courses. In other cases, states pay for contract education through programs that fund non-credit adult education. In addition, virtually every state has enacted programs to support firm-specific job training, though some are relatively small. (These state-level programs are surveyed in McDonnell & Zellman, forthcoming.) In almost all states, these programs operate through community colleges, technical institutes, and area vocational schools, providing yet another source of

[1] This section is drawn largely from Grubb and Stern (1989).

funding for contract training. Federal funds from the Perkins Act, which supports vocational education at both the secondary and the postsecondary levels, have sometimes been used for contract training and have also been incorporated in state economic development programs which in turn support contract training. However, the 1990 Amendments to the Perkins Act changed the allocation of funds between state and local uses and reduced state discretion. It is possible that states will reduce the allocation of these funds to state economic development initiatives. The JTPA provides support for classroom training, work experience programs, on-the-job training, and other employment-related services; many local JTPA programs have subcontracted with community colleges and technical institutes to provide some (or even all) of their services, and in some cases a community college is the administrator of the JTPA program. The most recent addition to the major sources of funding for contract training is the Family Support Act of 1988, which provides federal funding for welfare-to-work programs for welfare recipients. While the amount of such funds being used for education and training is small in many areas (Grubb et al., 1990), local welfare programs often turn to community colleges and technical institutes both for vocational training and for remedial education.

A final and critical source of funding, in those forms of contract training that serve individual firms, is contributions from the firms themselves. While descriptions of contract education programs indicate that such contributions can be substantial, it has been impossible to know whether firm contributions are important or trivial. To be sure, some state economic development programs require firms to provide a specified fraction of total costs, most often fifty percent, but, since such programs are relatively small in most states, such requirements may not affect the majority of contract training. States requiring contributions from firms include Delaware, Idaho, Indiana, Kansas, Kentucky, Massachusetts, Missouri, Nebraska, New Hampshire, New Jersey, New Mexico, Ohio, Oregon, South Dakota, Tennessee, Virginia, Wisconsin, and Wyoming (see McDonnell & Zellman, forthcoming). Thus the magnitude of firm contributions remains unknown, though this is crucial to evaluating the benefits of contract training.

The variety of funding sources is matched by the variety of the training programs themselves. Some operate with firm donations of equipment, materials, space, and even instructors, while others appear to depend wholly on public facilities. Some take place on the firm's premises, while others are located on the campus of a postsecondary institution or some third location. In some, the firm participates in choosing participants, while in

others the institution providing the training recruits and selects the participants. Many customized programs operate with open entry/open exit schedules, though some also use the regularly-scheduled programs of their institutions, operating on a standard academic schedule. Most customized training programs appear to be of relatively short duration, certainly shorter than the period required for a certificate program or an associate degree. Because of the lack of information about the characteristics of programs, it is difficult to generalize about contract training; virtually the only certainty is that the number and variety of these programs has increased substantially over the past few years.

Contract training offers some obvious advantages to postsecondary educational institutions. One of the most important is the connection it provides to employers. Persistent criticisms of vocational education are that it tends to become insulated from labor market developments, it is unresponsive to changing conditions, and it is unwilling to vary the standard "academic" format of collegiate institutions. However, the activity around customized training presents a very different image of community colleges and technical institutes; they appear flexible, responsive, creative in devising alternative formats for vocational courses, and willing to work with employers in customizing training rather than teaching courses in the same way to all students.

A second advantage to customized training is the contribution of equipment by contracting firms. These contributions can help vocational programs keep up to date. Vocational programs all have a hard time finding the funds to purchase equipment, especially in high-tech areas where equipment is expensive and changes rapidly; most states provide relatively little funding for equipment, and most fail to provide any cost differentials for the higher costs of certain vocational programs. While much of the program improvement funds of the Perkins Act have been used for equipment, the amounts of such funds in most states are quite insubstantial, amounting to between two percent and four percent of postsecondary vocational budgets (Grubb, 1988). Therefore, contributions of equipment or materials can be a real benefit to vocational programs, keeping them current.

Customized training also presents new opportunities for combining general and specific training. The balance between the two has always been an issue in vocational programs, and ways of integrating general or academic skills with narrower, job-specific skills have been difficult to achieve. But with customized training, students can enroll in

college vocational and academic courses at the same time that they receive firm-specific training, in theory facilitating the integration of general and specific education. Whether many customized training programs take advantage of this opportunity is unclear since many of them appear to be too short to pay much attention to such integration, but the opportunity to do so still exists.

Finally, contract training may be socially efficient, as well as beneficial to firms and students. If there are economies of scale in training, then small and medium-size firms cannot provide their own training except at enormous cost per worker. Indeed, it appears that many firms which have participated in contract training programs are small and medium-sized. They turn to community colleges and technical institutes precisely because they are better organized to provide training, at lower costs for organization and overhead, than are the firms themselves.

The most obvious benefit of customized training—the benefit to the firm, in the form of lower training costs and improved productivity—isn't clear until we know the division of cost between the firm and the educational institution. If the firm pays the full cost of its specific training, then the advantage to the firm comes from the possible economies of scale, or from the greater joint productivity of specific training undertaken with general or academic education. If, on the other hand, the public sector pays for the majority of costs through its subsidies to community colleges and technical institutes or through the recent state-funded job training programs, then the firm benefits from having its training expenses paid at public expense. Indeed, many programs of customized training justify their performance by evidence of decreased costs to firms (e.g., Fadale & Winter, 1988; Office of the Legislative Analyst, 1986).

Contract training seems to have something for everyone: educational institutions increase their enrollments, enhance their services to their communities, and strengthen their connections to employers; students get training appropriate to their employment; firms benefit from higher productivity and economies of scale in training, and they may have part of their training costs subsidized; and communities benefit from economic development.

Nonetheless, there are potentially serious drawbacks to contract training and other economic development efforts. One drawback involves the role of contract training in gaining access to employment for minorities and access to non-traditional occupations for

women. If the educational institution recruits and selects the individuals to be trained, then we would expect affirmative action policies to be in place since two-year colleges and technical institutes have been more committed to affirmative action than almost any other sector of education. If, on the other hand, the firm recruits and selects trainees or selects trainees from its existing labor force, then any patterns of employment discrimination within the firm may show up in the customized training program as well. Evaluations of customized training programs, therefore, need to consider the composition of trainees to ensure that existing policies designed to enhance the employment of minorities and women are not undermined. However, it is also important to recognize that where customized training is used for the upgrading of skills and retraining of existing workers who might otherwise be laid off, there may be no alternative.

Yet another practical concern about customized training involves a long historical battle over vocational education. A persistent criticism is that vocational education tends to become overly narrow and occupation-specific, so that individuals trained are prone to become unemployed as production methods change and particular sectors decline (Grubb, 1979). The recent criticism from the business community of "narrow vocationalism" has been the most timely expression of this concern leading to efforts to broaden vocational programs and integrate them more firmly with academic components. The emphasis on flexibility in the labor force also argues for more general training (Doeringer, Terkla, & Topakian, 1987; Spenner, 1988). But customized training for specific firms—along with short-term JTPA programs, welfare-to-work programs, and the job training programs sponsored by states—represents the contrary trend, in the direction of more specific, shorter-term, and narrowly-defined training. This generates the question of whether customized training programs are in the *long-run* interests of employees, or whether the programs simply serve to provide short-term training which is quickly made obsolete.

A third possibility is that contract training merely substitutes for the training which firms would otherwise provide themselves. For example, in an examination of customized training in New York, thirty-four percent of firms would have provided training in the absence of customized training, and another forty-five percent would have purchased training elsewhere; only twenty percent reported that they would not have provided training (Fadale & Winter, 1988). This implies that the program provided public subsidies to many firms without any change in their training or in subsequent productivity.

A final problem with contract training involves its effect on local economic development. A crucial question, rarely asked and even less often answered, is how contract education might be expected to further economic development? One answer, of course, is that by lowering training costs it lures employment from other regions—a model of economic development associated with "smokestack-chasing," in which a community competes using public subsidies to have firms locate there rather than in neighboring communities. There are serious questions about whether relatively minor training subsidies can have much effect on the location of firms—this kind of "beggar-thy-neighbor" policy is indefensible from a state or national perspective because the employment gains to one community are losses to another. If, instead, contract training is promoted as a way of enhancing local employment rather than "smokestack chasing," then the appropriate questions are how and by how much it might be expected to increase employment. Without answering these questions, the effectiveness of contract training—both for the individuals who enroll in it and for the communities that sponsor it—remains unclear.

Of course, many of these issues are extremely complex and cannot possibly be resolved through a survey of local practices. However, even the most basic questions about the form and magnitude of contract training remain unanswered; so, an appropriate starting point in evaluating contract training is to describe the current efforts in community colleges and technical institutes.

THE SURVEY METHODOLOGY

In surveying contract training and other economic development activities, the American Association of Community Junior Colleges (AACJC) faced the task of balancing the desire for in-depth information with the need for a brief survey instrument that could be easily filled out by responding colleges. Because time and resources were limited, it was also necessary to utilize a sample of colleges rather than surveying all community colleges and technical institutes. Planning for the survey involved pretesting and refining a questionnaire and drawing a representative, random sample of institutions.

The Survey Instrument

When the project began in the spring of 1989, little was known about the availability of information on contract programs or other economic development activities. The initial survey instrument, developed in consultation with the National Center for Research in Vocational Education, was, therefore, pretested with ten community colleges. The questionnaire was overly ambitious, aimed at gathering detailed information on the subject areas covered by work force training programs and the staffing and funding used to support those services. Among other items, the questionnaire asked for all courses offered to public and private employers on a contract basis during 1988-89, as well as for the funding sources and instructional hours for each course.

The results of the pretest were dismal, indicating that such detailed information was not readily available. Interviews with staff at the ten colleges indicated that while the requisite data existed, it was were inconveniently stored (often in file cabinets) and could be retrieved only with great difficulty. Only four of the ten colleges were able to complete the questionnaire, and the number of hours required for the task ranged from six to forty-three. As a result, the questionnaire was simplified. The revised version asked for data in broad categories, rather than on a course-by-course basis. Because of space limitations, those responding to the survey were rarely guided by operational definitions. For example, when asked to indicate the number of courses taught on a contract basis, no definition for the term "course" was provided. Thus, data on the number of "courses" offered may be based on a number of activities ranging from short workshops lasting only an hour or two to semester-long classes encompassing several hours of instruction. (In the first draft of the questionnaire, it became apparent that most colleges could not provide information about the number of instructional hours, so the revised questionnaire asked only about the number of courses regardless of duration.) In addition, respondents were asked to provide estimates if hard data was not available; no follow-up was conducted to determine the extent to which survey responses were estimated or to determine the accuracy of those estimates. Pilot tests of the reduced questionnaire revealed an average response time of only 2.1 hours—a necessary reduction in the burden placed on the responding colleges, though one made at the cost of considerable detail in the survey findings. A copy of the final questionnaire is included in Appendix B.

Although our inability to collect more information about contract training programs is disappointing from a research perspective, we suspect that it reveals a more important point about the current status of contract training. Currently, these and other economic development activities are still in early stages at most colleges. Because they are fairly novel efforts and because they fall outside the conventional structure of courses and programs, they are not subject to the reporting requirements of the other academic and vocational components of community colleges and technical institutes, and data is not readily available. But this also means that colleges themselves have not felt the need to document the magnitude of their contract training—even as a way of promoting their own efforts—or to inquire about the effects on individuals trained or on firms served, or to ask what their contributions to local economic development have been. There has so far been very little self-consciousness about what contract training accomplishes and how it fits with the other missions of community colleges and technical institutes. We suspect that this lack of information cannot last long, particularly in the current climate of accountability for public funds, and that postsecondary institutions would benefit from being able to document more precisely the magnitude of their economic development activities.

Sample Selection and Response Rate

Using AACJC's institutional data base, a twenty-five percent random sample of the 982 AACJC member public community, technical, and junior colleges was selected for inclusion in the survey. The sample, which included 246 colleges, was stratified by enrollment (under 3,000; 3,000 to 7,000; over 7,000) and by location (rural, suburban, and urban), resulting in a matrix of nine institutional categories.

In September 1989, the survey instrument was sent to the chief academic officers (CAOs) of each of the 246 institutions with a cover letter signed by AACJC president Dale Parnell. The CAOs were asked to forward the questionnaire to those on the college staff who were most knowledgeable about the issues addressed in the survey. Colleges were requested to return the questionnaire by the end of October.

In early November, follow-up letters were mailed to institutions which had not yet returned the survey. By the end of November the response rate was only fifty-four

percent. In order to increase returns, the 112 colleges who had not responded (or who indicated that they would not respond) were matched with randomly selected colleges with the same enrollment and location characteristics. For example, a non-responding college of large size in an urban location was matched with another large urban college. Questionnaires were sent to these newly-selected institutions in December, and by mid-February, sixty-four (fifty-seven percent) had returned the survey instrument, bringing the total number of responding colleges to 176. Because the second sample was matched with the first, the total response rate for the survey was seventy-two percent (176 of 246 colleges).

Table 1 details the distribution of responding and non-responding colleges within the cells of the size and location matrix. The data indicates that while smaller colleges (under 3,000 students) were somewhat underrepresented and medium-sized colleges (3,000-7,000 students) were somewhat overrepresented, the distribution of the 176 responding colleges is similar to the distribution of the population of colleges. This suggests that the responding institutions are generally representative of community colleges and technical institutes in the United States. We were particularly concerned that colleges without contract education, or without strong economic development programs, would be less likely to respond. The result would have been an overstatement of the extent to which community colleges engage in these activities. However, phone calls to a small sample of non-respondents indicated that this was not the case. In addition, our efforts to describe differences among institutions of different sizes and different locations generally found relatively few patterns. (Those few that we detected, apart from those differences obviously related to size, are described in tables in Appendix A and discussed in the text.) We conclude, therefore, that contract training and economic development activities are relatively similar across different types of colleges, and, therefore, that the variation in non-response is unlikely to affect our conclusions.

BASIC FINDINGS

A central purpose of the survey was to develop an aggregate picture of the volume and nature of instructional services provided by community colleges to public or private employers on a contract basis. For the purposes of the study, these services were defined

Table 1

Size and Location of Responding Institutions Compared to Population of Public Community, Technical, and Junior Colleges

	Fall 1988 enrollment			
Location	< 3,000	3,000 - 7,000	7,000 >	Total
Urban				
All colleges	6%	9%	10%	25%
Responding colleges	2%	12%	10%	24%
Suburban				
All colleges	8%	11%	12%	31%
Responding colleges	8%	14%	12%	34%
Rural				
All colleges	34%	9%	1%	44%
Responding colleges	30%	11%	1%	42%
All locations				
All colleges	48%	29%	23%	100%
Responding colleges	40%	37%	23%	100%

as those classes offered to employees of a business, industry, or public agency (or to the members of a labor union) and as such were, therefore, not open to the general student body. Colleges were asked to indicate the number of such courses offered during academic year 1988-89, the number of students in those courses, and the number of businesses, public agencies, or unions with which arrangements for instruction had been made. The survey also gathered data on the following: the types of instructional services provided, the types of agencies that received this training, the ways in which those services were funded, and the extent to which colleges collaborated with their corporate clients to design and deliver courses.

Volume of Training Provided

How large an enterprise is contract training? The survey findings provide a mixed answer. Almost all of the responding colleges—ninety-four percent—indicated that they offered at least one course to a public or private employer during the 1988-89 academic year (see Table 4); in this sense, contract training is widespread. The proportion of colleges providing at least some contract training is higher than figures reported in earlier studies: Deegan and Drisko (1985) found that sixty-five percent of the nation's two-year colleges had established contract education programs by 1983, and Cohen (1987) reported that seventy-five percent of the nation's public community colleges offered "customized" courses to business and industry in 1986. While the differences may be due to survey methodology and varying terminology used to label contract education, they may also signify growth in contract education.

The most common form of contract education, job-specific skills training, was provided by ninety-three percent of all institutions (see Table 2). In addition, sixty percent of institutions provided remedial education on a contract basis, thirty-five percent offered general education for apprenticeship programs, and forty-six percent offered other kinds of contract education. Furthermore, there are remarkable consistencies across community colleges of different types—small and large, rural, suburban, and urban. For example, while a higher proportion of urban colleges (sixty-nine percent) provide basic skills instruction than do suburban colleges (fifty-five percent) or rural colleges (fifty-eight percent)—a difference which is almost surely linked to the presence of more educationally

disadvantaged individuals in cities—the differences are small, and all types of contract training are widespread (see Appendix Table A-1).

While contract education is widespread, at most colleges the number of clients and students served is relatively small; therefore, most contract training is concentrated at a minority of institutions. Data in Table 3 illustrates the skewed distribution of contract services. The ranges of courses offered, clients served, and students enrolled at individual colleges are quite large. But the medians are extremely low, indicating that most colleges cluster at the lower ends of the range. For example, the number of job-specific courses offered per college in 1988-89 ranged from one to 550. The median, however, was only thirty-nine. Clearly, the college offering 550 courses is an anomaly; at most institutions, contract training is a relatively small enterprise. Table 4 provides further evidence, indicating that almost half (forty-nine percent) of the responding colleges offered fewer than fifty contract courses during 1988-89; sixty-nine percent offered fewer than 100. (This data is consistent with earlier studies showing that most of the contract education offered by community colleges is accounted for by a relatively small number of institutions; see Palmer, 1990, pp. 25-26.)

To some extent, of course, these findings reflect differences among institutions that vary enormously in size. The inclusion of both large and small institutions in Tables 3 and 4 obviously increases the ranges of courses, clients, and students. The inclusion also increases the skew of these distributions and, therefore, the differences between the means and the medians. However, these patterns are persistent even when we disaggregate institutions of different size and location (Appendix Table A-2); even in small institutions or in rural institutions, there are substantial ranges of courses offered and individuals served and substantial differences between medians and means. This implies the uneven emergence of economic development activities; while virtually all institutions have some form of contract education, some have well-developed and substantial activities while others have small programs that are barely underway.

The same pattern emerges when one contrasts enrollment in contract courses with enrollment in regular, credit curricula which are open to the general student body. Table 5 makes this comparison, showing the distribution of responding colleges by "contract-to-credit" ratios, defined as the numbers of students enrolled in contract courses during 1988-89 divided by the numbers enrolled in credit courses in the fall of 1988. The mean ratio is

Table 2

Proportion of Colleges Offering Contract Training During 1988-89

Type of contract training	Percent of colleges providing training
Job-specific skills training designed to provide the skills or knowledge needed to perform a job, improve current performance, or prepare for advancement	93%
The academic or general education portion of **apprenticeship programs**	35%
Courses in **basic reading, writing, or math skills**	60%
Other courses that do not fit into any of the above categories (examples include academic courses that are not part of apprenticeship programs, as well as, recreational, health, or other personal interest classes)	46%

Table 3

Volume of Contract Training Provided During 1988-89

	Mean	Median	Range
Number of courses provided			
Job-specific skills	80	39	1 - 550
Formal apprenticeship	21	9	1 - 144
Basic academic skills	12	6	1 - 134
All other courses	38	10	1 - 761
Total, unduplicated	107	50	1 - 1,065
Number of clients/employers			
Job-specific skills	43	19	1 - 1,000
Formal apprenticeships	27	5	1 - 433
Basic academic skills	5	3	1 - 38
All other courses	11	4	1 - 171
Total, unduplicated	56	24	1 - 1,023
Number of students enrolled			
Job-specific skills	1149	600	10 - 20,700
Formal apprenticeships	260	71	6 - 1,979
Basic academic skills	253	93	3 - 6,500
All other courses	621	195	10 - 8,863
Total, unduplicated	1867	919	10 - 27,000

Table 4

Number of Contract Courses Provided During 1988-89

Type of course	Percent of colleges providing: At least one course	Less than 25 courses	25-50 courses	51-100 courses	100 or more courses
Job-specific skills	93%	44%	16%	16%	24%
Apprenticeships	35%	93%	2%	3%	2%
Basic academic skills	60%	93%	4%	2%	1%
Other contract courses	46%	90%	5%	2%	3%
SUMMARY	94%	30%	19%	20%	31%

Table 5

Ratio of Contract Enrollment During 1988-89 To Regular Credit Enrollment in Fall 1988

	Contract/credit ratio					
	0	.01 - .09	.10 - .19	.20 - .29	.30 - .50	.50+
Job-related training	8%	24%	24%	10%	17%	17%
All contract training	10%	19%	18%	11%	17%	25%

Notes: The percentages in the table refer to percentages of responding colleges. For example, eight percent of the responding colleges reported they had no enrollments in contract job-related training during 1988-89; twenty-four percent of responding colleges had contract/credit enrollment ratios of .01 through .09, and so on.

The mean contract/credit ratio for job-related courses was .336 with a median of .153.

The mean contract/credit ratio for all contract courses was .455 with a median of .221.

(It should be noted that the "0" column includes a small number of colleges who indicated that they offered contract courses, but they provided no enrollment data.)

.455, giving the impression that contract enrollment approaches fifty percent of credit enrollment. But the median ratio is .221 indicating that at half of the colleges there are one or fewer contract students for every five students enrolled in regular credit courses. The relatively high mean appears to be an artifact of the few anomalous colleges which have unusually large contract education programs; at most colleges, credit enrollment outstrips contract enrollment by a wide margin. It should also be noted that the ratios would have been smaller had *annual* credit enrollment been used instead of *fall semester* enrollment. In addition, a student enrolled for credit is generally enrolled throughout a semester, and often for several courses, while a contract course is virtually always of shorter duration than a conventional semester course, and most individuals in such courses are enrolled for only one. While data limitations make it difficult to compare the magnitude of contract training with regular credit instruction, it is reasonably clear that contract education remains a relatively small part of the postsecondary enterprise, at least in a majority of community colleges and technical institutes.

Types of Training Provided

Besides examining the volume of contract courses provided, the survey also asked the responding colleges for information on (1) the broad subject areas covered by the classes; (2) the degree to which the courses were customized to fit the needs of the employer clients; (3) the extent to which assessment was incorporated in the training; and (4) the degree to which college credit was awarded for completion of the courses. The survey revealed that while courses were often tailored to meet job-specific training needs, academic credit courses have a significant presence.

Course Subject Areas

The responding colleges were asked to indicate the proportion of courses that fell into each of four broad categories:

1. Job-specific skills training designed to provide the skills or knowledge needed to perform a job, improve current performance, or prepare for advancement.

2. The academic or general education portion of apprenticeship programs.

3. Courses in basic reading, writing, or math skills.

4. Other courses that do not fit into any of the above categories; for example, academic courses that are not part of apprenticeship programs, as well as, recreational, health, or other personal interest classes.

Our findings, presented above in Table 2, reveal that while most contract training focuses on job-specific skills, colleges often offer their clients other types of instruction. While virtually all (ninety percent) of responding colleges included job-specific classes in their contract education, sixty percent offered basic academic skills classes, followed by "other" courses (forty-six percent), and the academic courses that are part of apprenticeship programs (thirty-five percent). A slightly different pattern emerges when one examines mean and median enrollments (see Table 3). Classes focusing on job-specific skills attract the largest number of students, but "other courses" are the second largest category. Thus, relatively large numbers of colleges offer remediation, but the enrollments in such courses are relatively lower than they are in the "other " courses.

Customization

Overall, colleges reported that forty-eight percent of the contract courses they offered in 1988-89 were customized to meet specific employer needs; the remaining fifty-two percent were "off-the-shelf" courses from the regular curriculum. The degree to which courses were customized depended largely on the subject area covered. While the majority (sixty-seven percent, on average) of job-related courses were customized, only a minority (twenty-nine percent, on average) of the apprenticeship, basic skills and "other" classes were tailored to meet employer needs (see Table 6). When it comes to academic skills, personal interest courses, or other non-vocational areas, employers seem more willing to rely on standard courses from the regular curriculum.

When we examine responses for different types of community colleges, in Table A-3, there is a distinct tendency for urban community colleges to customize their job-related courses more often than rural community colleges. (These patterns do not necessarily reflect size differences between urban and rural institutions, however, since customization does not vary much among colleges of different sizes.) One possible interpretation is that employers in urban areas operate on a larger scale, facilitating customization. Conversely, in rural areas dominated by small employers, it may be less feasible (or simply prohibitively expensive) to customize courses for small numbers of students.

Assessment

The survey provides no information on the way students are selected for contract courses. In many cases, screening may be a function of the hiring process; assessment upon entrance may, therefore, not be necessary, because courses are designed for a predetermined group of employees whose jobs require them to learn specific skills. Nonetheless, the responding colleges were asked to indicate the percent of courses in which students' basic skills were assessed at the outset. Most colleges (seventy-seven percent) replied that such assessment occurred in at least some contract classes, but these classes are in the minority. On average, the colleges reported only thirty-one percent of the contract courses had a basic skills assessment component; the median was twenty percent (see Table 7).

College Credit

Most colleges (sixty-two percent) indicated that college credit was available for at least some of the contract courses offered in 1988-89. On average, however, only thirty-one percent of the contract courses offered per college allowed students to earn credit (see Table 7). Not surprisingly, the majority of students do not earn college credit for the contract courses they complete .

Organizations That Contract With Colleges

During 1988-89, the responding colleges provided instruction for a variety of organizations, including private companies or firms, public agencies, and other non-profit groups (see Table 8). It appears, however, that the private sector enjoys the largest share of college services. On average, seventy-two percent of all clients with whom colleges contract to provide training were private enterprises.

In many cases, these organizations are partners in the training effort rather than passive consumers of educational services. Almost all (ninety-six percent) of colleges reported that at least some classes were offered at company work sites. Most classes, though, were offered at the college. When asked to indicate the percent of contract courses offered at the work place, the mean response was fifty-nine percent, and the median response was ten percent. A notable minority of the colleges (thirty-nine percent) noted that employers donated equipment during 1988-89 for the training. When asked to indicate

the value of these equipment donations, the mean response per college was $96,000, while the median response was $20,000; responses ranged from $100 to $1,000,000. In addition, some customized courses—especially those dealing with job-specific skills—were developed jointly by the college and the employer (see Table 9).

The high degree of cooperation in the development of courses is encouraging. While colleges strive to meet the needs of their employer clients, it appears unlikely that they abandon control of course content and instruction, as some critics claim. For their part, employers appear willing to work with colleges, respecting their expertise in instructional matters. Further research should examine the respective roles played by colleges and employers and the ways in which interaction between the two organizations affects the content and delivery of contract courses.

Funding

Eighty-five percent of the responding colleges provided information on the revenues that supported contract education during 1988-89. The average total revenues received per college ranged from $430 to $3,500,000. The median, however, was only $100,000, and the mean was $267,072. The distribution of annual revenues per college is therefore skewed, with most clustering at the lower end. This matches the pattern revealed in the distribution of courses offered and students served. Contract training does not appear to be a large money maker at most colleges.

Overall, employer funds accounted for forty-two percent of the total revenues received by the responding colleges and state/local funds accounted for twenty-five percent. According to the data in Table 10, employers contributed more than fifty percent of the revenues needed to fund the classes at forty-two percent of colleges. In contrast, only twenty-three percent said state and local governments provided more than fifty percent of the revenues; these are institutions in which the normal state aid formulas provide the majority of funding for contract education. Eight percent cited students as the primary revenue source, and five percent cited the federal government—in all likelihood, colleges which operate large programs for JTPA and welfare-to-work programs—as the primary revenue source.

Table 6

Customization of Contract Courses

	Type of contract training	
	Job-related courses	All other courses
Percent of courses that are customized:		
Mean response of responding colleges	67%	29%
Median response of responding colleges	80%	10%
Range of responses	0-100%	0-100%

Table 7

Assessment of Students and Availability of College Credit

	Mean response of colleges	Median response of colleges	Range
Percent of contract courses starting with some form of assessment of students' basic academic skills or ability to learn	31%	20%	0-100%
Percent of contract courses for which college credit was available	30%	63%	0-100%

Table 8

Types of Companies/Organizations/Clients Receiving Contract Training

	Percent of colleges provicing training	Average percent of clients in each category
Private companies or firms	96%	72%
Local/state/federal agencies	84%	20%
Other (e.g., non-profit)	60%	8%

Table 9

Development of Customized Courses

	Type of contract training	
	Job-related courses	All other courses
What percent of customized courses were developed by college staff only?		
Mean response of responding colleges	26%	44%
Median response of responding colleges	10%	46%
Range of responses	0-100%	0-100%
What percent of customized courses were developed jointly by college staff and employer/clients?		
Mean response of responding colleges	61%	46%
Median response of responding colleges	70%	40%
Range of responses	0-100%	0-100%
What percent of customized courses were developed by employer clients?		
Mean response of responding colleges	12%	8%
Median response of responding colleges	2%	1%
Range of responses	0-100%	0-100%

When we examine different types of postsecondary institutions, there is a distinct tendency for urban colleges and large colleges to receive a larger proportion of revenues from employers, while small and rural colleges have smaller employer contributions and rely somewhat more on state and local resources (see Appendix Table A-5.) This is consistent with the likelihood that urban employers are likely to be larger and better able to fund customized training, while the small employers typical in rural areas rely on the regular state grants to community colleges and technical institutes and on state economic development programs. It may also reflect a greater willingness on the part of public officials in rural areas to use public subsidies to lure employment into depressed rural areas, though this hypothesis would require additional and more detailed research.

Given the large share of revenues contributed by employers, it appears that contract training does not in general constitute a public subsidy of private benefits. This is not to say that such subsidies do not take place; after all, twenty-three percent of all colleges (and thirty-four percent of those with enrollments under 7,000) reported no contributions from employers whatsoever for their contract education, and horror stories about public subsidies for private purposes continue to circulate. (For one such analysis of California's Employment Training Panel, see Office of the Legislative Analyst, 1986.) However, where one would not expect there to be any employer contributions, some community college contract education programs support JTPA and welfare clients. More persuasively, the finding that employers contribute forty-two percent of total funds for contract education or that a majority of funding comes from employers in forty-two percent of colleges, suggests employers are providing a reasonable share of support for contract training.

Other Services to the Business Community

Besides contract education, the responding colleges were asked to list any other activities they undertook during 1988-89 to support the business community. The findings, detailed in Table 11, reveal that while colleges offer a number of services, they are not as widespread as contract training. This finding is consistent with earlier studies indicating that most colleges confine their economic development role to instruction and do not venture into wider service functions (see Palmer, 1990, pp. 19 -24). Approximately one-third of the colleges offered services to small businesses, eighteen percent helped businesses obtain loans or financing, and thirteen percent provided assistance in procuring

contracts. Almost a third of the colleges (thirty-one percent) cited a wide variety of "other" services listed in Table 12. These results are testimony to the new roles community colleges and technical institutes are playing. Although not all institutions are providing a full variety of economic development services, there are numerous models and precedents indicating the flexibility and responsiveness of these institutions as economic conditions change and new demands are placed upon them.

Participation in Federal Programs

Another objective of the survey was to determine the extent to which community colleges use federal or state funds earmarked for vocational education, job training, or economic development. The results indicate that most receive funding through the Carl D. Perkins Act of 1984 (also known as the Vocational Education Act [VEA]). A smaller proportion, but still a substantial fraction, have participated in programs sponsored by the Job Training Partnership Act (JTPA). Survey responses also indicate that colleges receive funding from numerous state and federal agencies which support programs for special populations.

Tables 13, 14, and 15 summarize data pertaining to Perkins Act and JTPA funds. Eight out of ten responding colleges received Perkins monies in 1988-89 and one out of two colleges received JTPA funds. (However, it is important to remember that the patterns of spending Perkins funds in 1988-89 may not persist, since the 1990 amendments changed the allocation of funds and the purposes for which they can be spent.) In addition, twenty percent of the responding colleges indicated that they served as regional administrative agencies for JTPA. These tables include other information about the amount of money received per college and the number of clients served. In all cases, the ranges of funding received were great, but the means and medians were relatively low. Thus the familiar skewed distribution appears, with a few institutions receiving relatively high awards and most institutions receiving awards that are considerably lower.

In addition to the amount of money awarded and clients served, the colleges were asked to indicate how Perkins Act and JTPA funds were used. Responses indicate most Perkins monies were used for credit instruction, though a significant proportion was allocated for non-credit programs and other activities (see Table 13). JTPA funds were

also used for credit and non-credit instruction, but these resources were more often allocated for non-instructional services such as assessment, placement, and job-placement services (see Table 15).

These results confirm the limited importance of federal funds for community colleges and technical institutes. Federal funds for postsecondary vocational education through the Perkins Act are extremely limited, and have generally been thought to have only limited influence on postsecondary institutions. Similarly, while many community colleges and technical institutes have participated actively in JTPA the sums involved are relatively small compared to the state and local revenues that provide the mainstay of funding and to the contributions from employers who support contract training (see also Grubb et al., 1990).

Other Government Programs and Initiatives

Over half (fifty-six percent) of the responding colleges indicated that they received monies through other state, federal, or local initiatives designed to assist business with its training needs or to provide special populations (such as displaced homemakers or workers) with job training or upgrading. Table 16 details the funding received per college through these initiatives, as well as the number of students served through such programs. Table 17 lists the disparate funding sources that were cited; they include a variety of both state and federal grants, including many state economic development programs. Though it is hard to interpret this listing, since open-ended questions are usually plagued by vague responses, it can easily be seen that community colleges rely on a myriad of agencies for funding to support job training and economic development.

CONCLUSIONS AND FURTHER QUESTIONS

In drawing conclusions about contract training, it is important to keep in mind the limitations of the survey we used. Because most community colleges and technical institutes keep poor records about contract education, the questionnaire used was highly simplified and asked for information in aggregated form; respondents were encouraged to

provide estimates where hard data was unavailable, and the accuracy of these responses is unknown.

Nonetheless, the data lead to several conclusions about the nature of contract training for employers, the community college role in economic development, and the governmental support community colleges receive for business assistance and labor force development:

- The vast majority of public community colleges (ninety-four percent) offered at least one course on a contract basis to public or private employers.

- Despite the large proportion of colleges that provide some contract training, most colleges have relatively modest contract education programs. The number of courses offered at the median college was only fifty; the median number of students enrolled was 919; and the median number of employer clients served was twenty-four. At most colleges, enrollment in regular credit courses far exceeds enrollment in contract classes.

- The most frequently offered contract courses deal with job-specific skills (offered by ninety-three percent of the colleges), followed by courses in basic reading, writing, and math skills (offered by sixty percent of the colleges), "other" miscellaneous courses (offered by forty-six percent of the colleges), and academic courses that are tied to apprenticeship programs.

- Courses focusing on job-related skills are more likely than other contract courses to be customized (that is, developed specifically for the employer rather than taken "off-the-shelf" from the regular college curriculum). On average, approximately sixty-seven percent of the job-related courses offered per college were customized, as opposed to only twenty-seven percent of all other courses.

Table 10

Sources of Revenue

	Percent of Revenue				
Source	0	1-10%	11-33%	34-50%	Over 50%
	Percent of Responding Colleges				
Employers	23%	12%	19%	4%	42%
Students	58%	23%	14%	1%	4%
Federal	67%	17%	10%	1%	5%
State/local	43%	9%	16%	8%	23%

Table 11

Other Labor Force and Economic Development Activities

Activity	Percent of colleges providing the activity	Number of employers served per college by activity		
		Mean	Median	Range
Small business development center	33%	99	110	3-1,575
Business incubators	8%	14	5	1-100
Small Business Administration training workshops	33%	216	'8	2-1,947
Advanced technology centers	7%	84	16	1-663
Minority business development centers	6%	25	10	1-100
Assisting businesses obtain funding/loans	18%	22	15	1-88
Assisting businesses in contract procurement	13%	59	13	1-40
Other activities	31%	90	20	1-600

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Table 12

Other Economic Development Activities Listed by Responding Colleges

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Assistance to inventors

California State Chancellor's Office Economic Development Network
Cape Cod Labor Conference
Chamber of Commerce Business Development Week
Chamber of Commerce Business Exposition
Chamber of Commerce Training Workshops
CustomFit

Entrepreneur survival skills training
Export-import training
Expanding new businesses

Grant development to support training

High Impact Training Services

Industrial retention, expansion, attraction
Industrial start-ups
Industrial training program
Involved with PIC for displaced workers

Job skills program

Local manufacturing grants to open a training center

Miscellaneous business services

Opened a SBDC

Part of regional/county economic development team
Professional development center for training

Redevelopment Agency
Regional and State Advising Council
Regional consortium for economic development
Regional economic development seminars
Regional Public/Private Coalition
Resource for locating employees

SBDC training sessions
S.C.O.R.E.
Seminars for economic development corps and women/minority entrepreneurs
Small Business Assistance Center
Sunshine State Skills Program

Table 12 (continued)

Technical assistance
Technology Transfer Program
Teleconference on economic development
Training for displaced workers

Virginia State Department of Industrial Training

Work force development
Workshop on Women and Minority Business Development

Table 13

Findings Concerning Perkins Act Funding

	Mean	Median	Range
Award per college during 1988-89	$207,233	$166,417	$958 - $1,110,877
Percent of funds allocated to			
Credit programs	65%	68%	9%-100%
Non-credit programs	17%	13%	1%-100%
Other activities	16%	15%	1%-41%

Table 14

Findings Concerning JTPA Funding

	Mean	Median	Range
Colleges serving as JTPA administrative entities (21% of responding colleges)			
Total funds administered per college in 1988-89	$631,289	$109,234	$2,411 to $5,108,645
Total no. of clients served per college	311	[illegible]	5 to 2,680
Colleges that are direct recipients of JTPA funds (53% of responding colleges)			
JTPA allocation per college	$184,676	$99,500	$4,000 to $1,114,652
Total number of clients served per college	179	83	15 to 1,248

Table 15

Activities Funded Through JTPA Funds

Service	Percent of clients receiving service
Assessment	66%
Counseling	65%
Job search skills	53%
Placed in jobs	41%
Remedial/Basic skills	44%
Credit vocational courses	44%
Non-credit vocational courses	26%

Note: Percentages total to more than 100 percent because clients usually receive more than one type of service.

Table 16

Other Local, State, and Federal Funding Received to Help Businesses or Assist Special Populations Obtain Job Training or Upgrading

	Mean	Median	Range
Per-college funding from other sources	$136,577	$26,214	$1,800 - $1,715,131
Students served per college with these funds	769	241	3 - 9,634
Businesses served per college with these funds	136	14	1 - 5,200

Note: These funds include any government monies earmarked for either assistance to business enterprises or assistance to special populations (such as displaced homemakers or workers) who need job training or retraining.

Table 17

Activities and Programs Funded Through Other Federal, State, or Local Initiatives

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Adult Education
AFDC, Title III
Aids for Handicapped
Area Agency on Aging
At-Risk Alternative High School

CDA training
Coop Education
Critical Industry and SBDC training programs - displaced workers, career counseling
Custom Training
Custom Training for Economic Growth
Customized job training and Weatherization training

Department of Education Industry
Department of Labor - machinist retraining
Dislocated Workers
Displaced Homemakers - New Jersey Division on Women

Elevator Installation and Maintenance - VEA grant
Employment Training Panel (CA)

F.A.R.M. Project

GAIN
Governor's Workforce Initiative Program

High school dropouts

Industrial Training Grant

Job training
Job skills, upgrade, placement
JTPA-ICCB State Department of Education - training for small businesses
JTPA Individual Referral
JTPA summer youth program

Kansas Department of Corrections - basic education
Kansas Technology Enterprise Corporation

LPN-to-RN Transition Program

Maryland Industrial Training Program
Mass Jobs - Bay State Skills Corporation
Migrant Education
M-Job (Michigan)

Table 17 (continued)

National Council on Aging
New Jersey Department of Higher Education Challenge Grant
Non-traditional opportunities for single parents and displaced homemakers

Pace, VCIP, Student Support Services
Pennsylvania Customized Job Training Program
Prairie State 2000 Authority
Prison and transition training
Project Forward Step (Perkins)
Project Hire
Public Assistance, Information, Referral, Retention

Quik-Start/Industrial Start-up

REACH - New Jersey state precursor to Federal Jobs/Welfare
R.N. Retraining - Minnesota Job Skills Partnership (JTPA)

Service Grants Sunshine State Skills
Single Parent/Displaced Homemaker
Small Business Center
Small business training
State apprenticeship
State Chancellor Employee Training Office funds
State Department of Commerce and Community Affairs - industrial attraction
State Department of Labor customized training program
State Department of Vocational Technical Education and Economic and Employee Development
State funding for training in new technology and new/expanding business
State OJT
State PIC
State - Pre-employment training
State workforce/upgrade training

Teen Parent
10/10 funds
Tennessee Small Business Development
Trade Adjustment Act

U.S. Department of Education - Coop Ed and Project Success
U.S. Department of Health Training for Native Americans
United Way - Literacy projects

Vocational Opportunity Training Education - Division of Alcohol and Substance Abuse

Welfare recipients - assessment, testing, counseling, literacy
Women in High Technology
Women in Non-Traditional Services Sex Equity Grant

Table 17 (continued)

Women in Technology/Dislocated Workers
Women in Transition
Women's Center
Work Force Initiative (On-the-Job Literacy)
Working opportunities for women

Youth Training

- On average, private firms make up the majority (approximately seventy percent) of the employer clients served by community college contract education programs. Public agencies account for twenty percent of the clients served.

- Colleges often collaborate with their clients in the development of customized courses. On average, sixty-one percent of the job-specific courses offered were developed jointly by colleges and their clients. Other courses, including basic skills and academic courses, are more likely to be taken off the shelf; on average, only forty-six percent were developed jointly, while the remainder were developed solely by the college.

- Employers themselves provide the largest share of revenues needed to support contract education, followed by subsidies from state and local governments.

- Community colleges engage in many other non-instructional services to the business community, though these services are not as widespread as contract training. Approximately one-third of the colleges provide special services to small businesses, twenty percent help businesses obtain funding or loans, and approximately thirteen percent help businesses in contract procurement.

- During 1988-89, approximately eighty percent of the public community, technical, and junior colleges received funds through the Carl D. Perkins Vocational Educattion Act of 1984 (also known as the Vocational Education Act [VEA]). Approximately two-thirds of these monies were used to support credit instructional programs; another seventeen percent were devoted to non-credit instruction, and the remainder was utilized for other activities.

- Approximately fifty percent of the colleges received JTPA funds during 1988-89, and twenty percent served as regional administrative agencies for JTPA.

- During 1988-89, approximately fifty percent of the colleges participating in the survey received funds from other state, local, and federal agencies which support business assistance programs or vocational training. Like the amounts of VEA and JTPA funds, the resources per college from these agencies vary widely.

These results allay several possible fears about contract education. Clearly, while contract education has become widespread, in most institutions it remains a limited program with relatively restricted enrollments compared to the regular credit courses of community colleges and technical institutes, and it is far from being a big money-maker. There is little danger at this point of having the traditional vocational and academic missions of community colleges undermined by contract education.

In addition, it is relatively clear that there is substantial collaboration between colleges and their clients about contract education. Only a minority reported that courses were developed entirely by employers; in the majority of cases there is collaboration in the development of courses, as well as sharing of equipment and facilities. While there is extensive customization, particularly in job skills courses, there is also considerable use of the regular courses offered by community colleges and technical institutes. This suggests that a good deal of contract training provides opportunities to combine relatively employer-specific content—in the customized components—with more general content (including basic skills instruction).

Finally, the fear that employers are using contract education as a way of getting public funding for their specific training seems unfounded. According to the results of this survey, employers are the largest single source of funding for contract education and provide a majority of funding in forty two percent of institutions. They also provide in-kind contributions in the form of donated equipment and the use of facilities. While there still may be cases where employers manage to get community colleges to provide private training wholly at public expense, this situation cannot be typical.

However, other issues surrounding contract training remain murky. Our experience with this survey confirms that community colleges rarely gather data on educational processes and outcomes. Even though college leaders have promoted contract education and other economic development services as novel contributions to their communities, they have not seen fit to collect much systematic data; their information on the scope and effects of these programs rarely goes beyond the anecdotal. As a result, a full appreciation of college involvement in these non-traditional vocational education activities awaits more precise data. Both standardization of definitions and collection of information on a course-by-course basis would be required to replace the estimates reported in our survey with more accurate results.

Two issues are worth special notice in future investigations. One is that there is virtually no information about the effects of contract training for either the individuals enrolled or for the employers who sponsor them. Does contract training improve access to employment among those who would otherwise be unemployed, for example, or does it provide long-term employment benefits? Do employers who used customized training benefit in the form of higher productivity, or fewer errors at work, or reduced turnover, or improved communications? To be sure, the variation in purposes within contract education, from employer to employer and from course to course, is substantial; so, success cannot be measured in any one way. So far, however, there has been little attention to the consequences of contract education.

Secondly, the role of contract education in economic development remains completely unclear. "Economic development" is still a slogan without much definition. The conditions under which employment increases occur in a region—whether increases represent "smokestack chasing," which reduces employment in other regions, or a net gain in employment—and the role of short-term training in encouraging either type of increase is uncertain. These and other questions related to the effectiveness of strategies promoted in the name of economic development are rarely asked, much less answered.

Contract education is clearly here to stay; it is widespread, and its potential benefits to students, employers, and postsecondary institutions are substantial. As it further develops, it will be worth continued effort to document—more carefully than has been possible so far—its scope, content, and effectiveness.

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APPENDIX A

TABLES

Table A-1

Proportion of Colleges Offering Contract Training

	By Size			By Location		
	< 3,000	3,000 - 7,000	7,000>	Urban	Suburban	Rural
Job-Specific	92%	95%	93%	93%	93%	93%
Apprenticeship	34%	35%	38%	45%	37%	28%
Basic Skills	56%	63%	60%	69%	55%	58%
All Other	42%	46%	53%	50%	40%	49%

Table A-2

Volume of Contract Training Provided

	By Size			By Location		
	<3,000	3,000-7,000	7,000>	Urban	Suburban	Rural
Courses Provided						
Job-Specific	50/21	94/42	108/79	106/59	89/43	58/30
Apprenticeship	6/4	29/13	31/19	28/10	28/17	7/4
Basic Skills	12/5	12/6	13/7	14/8	12/5	12/4
All Others	54/7	22/11	39/10	21/10	41/12	47/5
Number of clients/employers						
Job-Specific	20/15	60/19	55/29	79/26	37/19	28/15
Apprenticeship	5/3	33/8	54/9	19/3	35/6	25/4
Basic Skills	5/3	5/3	5/3	5/3	4/3	5/3
All Others	12/4	8/3	14/5	7/5	14/4	11/3
Number of Students Enrolled						
Job-Specific	720/322	1666/600	1920/1601	2037/1142	1604/920	984/49
Apprenticeship	30/10	125/11	146/9	313/101	366/141	102/35
Basic Skills	105/23	128/30	270/53	206/157	359/81	200/64
All Others	276/18	226/14	385/25	496/180	786/299	582/132

In every cell, the first figure is the mean and the second is the median.

Table A-3

Ratio of Contract Enrollment to Regular Credit Enrollment

	By Size			By Location		
	<3,000	3,000 - 7,000	7,000+	Urban	Suburban	Rural
Job related						
0	10%	5%	17%	8%	7%	13%
.01 - .09	18%	30%	25%	26%	27%	20%
.10 - .19	24%	25%	23%	26%	25%	22%
.20 - .29	10%	8%	13%	8%	12%	10%
.30 - .50	18%	14%	18%	19%	15%	16%
.50+	21%	19%	5%	13%	14%	20%
All Contract/Training						
0	10%	5%	13%	7%	8%	12%
.01 - .09	15%	22%	23%	16%	23%	18%
.10 - .19	15%	18%	25%	29%	18%	12%
.20 - .29	12%	11%	11%	19%	7%	11%
.30 - .50	14%	22%	13%	11%	22%	16%
.50+	35%	22%	14%	18%	22%	31%

Table A-4

Customization of Contracted Courses

Percent of courses that are customized

	By size			By Location		
	<3,000	3,000 - 7,000	7,000+	Urban	Suburban	Rural
Job-Related						
Mean	59%	67%	62%	72%	69%	52%
Median	75%	80%	76%	90%	80%	50%
All Other						
Mean	25%	31%	28%	36%	21%	29%
Median	3%	4%	15%	12%	3%	1%

Table A-5

Sources of Revenue

	By Size			By Location		
	<3,000	3,000 - 7,000	7,000+	Urban	Suburban	Rural
Employers						
0%	32%	35%	12%	22%	30%	32%
1-10%	14%	5%	12%	11%	4%	15%
11-50%	22%	30%	18%	27%	19%	26%
Over 50%	32%	30%	59%	41%	47%	28%
Students						
0%	59%	60%	56%	43%	74%	55%
1-10%	23%	20%	27%	35%	8%	28%
11-50%	17%	15%	9%	16%	11%	16%
Over 50%	2%	5%	9%	5%	8%	1%
Federal						
0%	74%	68%	68%	65%	72%	73%
1-10%	14%	18%	18%	30%	9%	15%
11-50%	9%	12%	12%	5%	15%	10%
Over 50%	3%	2%	3%	0%	4%	3%
State/Local						
0%	48%	48%	41%	43%	59%	39%
1-10%	3%	7%	27%	14%	13%	4%
11-50%	18%	28%	20%	22%	25%	22%
Over 50%	31%	17%	12%	22%	4%	35%
Other						
0%	88%	92%	94%	92%	98%	84%
1-10%	9%	7%	3%	8%	0%	12%
11-50%	3%	0%	3%	0%	2%	3%
Over 50%	0%	2%	0%	0%	0%	1%

APPENDIX B

QUESTIONNAIRE

1988-89 WORKFORCE AND ECONOMIC DEVELOPMENT ACTIVITIES AT COMMUNITY, TECHNICAL, AND JUNIOR COLLEGES

A SURVEY CONDUCTED BY
THE AMERICAN ASSOCIATION OF COMMUNITY AND JUNIOR COLLEGES
AND
THE NATIONAL CENTER FOR RESEARCH IN VOCATIONAL EDUCATION

Community, Technical, and Junior colleges are increasingly involved in providing education and training to America's workforce. These "workforce" or "laborforce" development efforts take a variety of forms: specific training partnerships with employers, services and educational programs for specific target populations, "vocational" courses open to all students, and local "economic development" activities which assist individual (and groups of) business and community members.

With your help, this survey will enable educators and policy-makers to obtain a more comprehensive picture of the role our institutions play in providing training and education for America's workforce.

This survey asks you to provide information on "workforce development" efforts in which your institution participated during the 1988-89 academic year (roughly, July 1, 1988 through June 30, 1989, or whatever comparable time frame is most convenient for you to use to reflect the last "academic year").

The professional staff member primarily responsible for providing non-credit courses and services can most likely complete most of this survey, although some assistance from other staff may be necessary. We understand that some of the data being requested may be difficult to retrieve (or simply unavailable); in these cases, **please provide your best educated estimate of the data.** Our pretesting of this survey suggests that it takes less than two hours to complete.

All your responses will remain confidential! While your participation in the study will be acknowledged, no institution's name will be associated with any of its individual responses.

Please indicate here a contact person or the primary respondent to whom we could address any additional questions we may have:

NAME: _____ PHONE: (____) _____

TITLE: _____

COLLEGE: _____

If you have any questions at all, please contact the survey coordinator:

Bob Lynch
American Association of Community and Junior Colleges
One Dupont Circle, N.W., Suite 410
Washington, D.C. 20036
(202) 293-7050

THANKS VERY MUCH FOR YOUR ASSISTANCE!!

1988-90 WORKFORCE AND ECONOMIC DEVELOPMENT ACTIVITIES AT COMMUNITY, TECHNICAL, AND JUNIOR COLLEGES

Throughout this survey, use available data; in cases where data are inaccessible, please provide your best educated estimates. Please do not omit any items!.

PART A - General Information: 1988-89 Academic Year

1. Is your institution formally represented on the local Private Industry Council (PIC)? YES _____ NO _____

2. In the Fall, 1988 semester or term, how many individual students were enrolled in credit courses? _____
   What percent were in a "Vocational" or "Occupational curriculum/major? _____ %.

3. For your TOTAL non-credit/community services/continuing education activities in all of 1988-89:

Category/Type/Focus of Course	No. of Enrollments	No. of Courses
Vocational, Job-related, Apprenticeships		
Basic ("remedial") Academic Skills and E.S.L.		
All Other (health, recreation, personal interest, etc)		
TOTAL FOR 1988-89		

PART B - Contract Training For Employers: 1988-89 Academic Year

The questions in this section refer to courses or programs which you provided in 1988-89 specifically to or for a business, industry, public agency, or union, rather than courses which are "open" to anyone. These are often referred to as "contract," "employer-specific," or "customized" programs or courses.

1. Please indicate the number of courses offered, number of employers/companies, and number of student enrollments during 1988-89 for the following categories of courses:
   (Some companies may be counted in more than one "category" - that's okay!)

Types of Courses/Training in 1988-89	No. of Courses	No. Companies/ Employers	No. Students/ Enrollments
Job-Specific Skills training to provide skills or knowledge to perform a job, improve current performance, or prepare for advancement: e.g., word-processing, accounting, welding, CAD/CAM			
Formal Apprenticeships - the academic (typically classroom portion of apprenticeships)			
Basic Academic Skills - courses focused on basic English, reading, and math skills (often considered "remedial", "pre-college" or "workplace literacy"), including E.S.L.			
All other courses that do not fit one of the above categories; for example, personal interest, recreational, health, other academic courses, etc. provided to employers/businesses			

2. Since the previous question may include companies counted more than once, please indicate for how many separate, unduplicated companies/employers your college provided courses; _____.

3. This question has several parts, and, like Questions 1 & 2, refers to courses provided to or for specific employers, companies, or agencies. **If data are inaccessible, provide your best estimate.**

For Courses Provided to Employers/Companies/Clients

a. Types of employers/companies/clients

Percent of clients that were private companies or firms	_____%
Percent of clients that were local/state/federal government	_____%
Percent of clients that were other (e.g., non-profit) organizations	_____%
	100%

b. Percent of courses with some form of assessment conducted at the outset of students' basic academic skills or ability to learn _____%

c. Percent of courses for which college credit (not CEUs) was available _____%

d. Percent of courses offered at employer/client worksite _____%

e. Approximate dollar value of equipment/materials donated to the college by employers to support these courses/programs $_____

f. Total revenues (dollars received) in 1988-89 for these courses/programs $_____

Percent (or $$) from employers/companies	_____% or $_____
Percent (or $$) from students/employees (tuition, fees, etc.)	_____% or $_____
Percent (or $$) from Federal programs or funds	_____% or $_____
Percent (or $$) from State/Local programs or funds	_____% or $_____
Percent (or $$) from any other sources (please list below)	_____% or $_____
	100%

4. For this question, please separate the courses provided to employers or companies into two categories: (a) job-specific skills plus apprenticeships, and (b) basic academic skills plus all other courses.

	Job-Specific	All Others
a. Percent of courses that were "customized" (vs "off-the-shelf") for client	_____ %	_____%
% of those customized courses developed solely by college faculty/staff	_____%	_____%
% of those customized courses developed cooperatively with employer/client	_____%	_____%
% of those customized courses developed solely by company/employer/client	_____%	_____%
	100%	100%
b. Instructors		
% of courses taught by "regular full-time" college faculty/staff	_____%	_____%
% of courses taught by "regular part-time" college faculty/staff	_____%	_____%
% of courses taught by employees of company/client	_____%	_____%
% of courses taught by others not regularly employed by the college	_____%	_____%
	100%	100%

PART C - Other Economic Development Activities

In addition to courses and training provided to specific employers, many colleges engage in a variety of other "labor force development" and "economic development" activities. During 1988-89, how many clients/companies/businesses did the college serve in any of the following activities:

Activities in 1988-89 Academic Year	No. of Businesses Served
a. Small Business Development Center (SBDC)	_____
b. Business Incubators	_____
c. U.S. Small Business Administration (SBA) training (number of workshops _____)	_____
d. Advanced Technology Centers	_____
e. Minority Business Development Centers	_____
f. Assistance to business in obtaining financing/funding/loans, etc. in 1988-89	_____
--->>(Approximate $$ value of financing received:_____)	
g. Contract procurement assistance to businesses in 1988-89	_____
--->>(Approximate $$ value of contracts received:_____)	
h. Other economic development activities in 1988-89:	
_____	_____
_____	_____

PART D - Allocating Local, State, and Federal "Vocational" Funds

This section asks questions related to all "workforce," "laborforce," or "vocational"-related training, courses, or activities - not just service provided to specific employers. Please provide your best estimate of your institution's level of funding and the allocations of those local, state, or federal government funds in 1988-89. Your accounting office may have some of this information or might assist you in providing estimates.

1. Perkins Act ("Vocational Education") Funding Received in 1988-89 $_____

   Percentage allocated to **credit** faculty, staff, equipment, courses, programs: _____%
   Percentage allocated to **non-credit** faculty, staff, equipment, courses, programs: _____%
   Percentage allocated to **other activities** (please specify):
   _____ _____%
   _____ _____%
   100%

2. Did your college serve as an "Administrative Entity" for JTPA (Job Training Partnership Act) during 1988-89? YES _____ NO _____
   a. If "No," skip to question 3
   b. If "Yes,": What was the total amount administered by the college in 1988-89? $_____
      Number of separate, unduplicated JTPA clients receiving services: _____
      Approximate % of clients receiving the following services (may total over 100%):

Assessment	____%	Vocational Education in credit classes	____%
Counseling	____%	Vocational Education in non-credit courses	____%
Job Search Skills	____%	Other: _____	____%
Placed in jobs	____%	_____	____%
Remedial/Basic Skills	____%	_____	____%

3. Did your college receive any JTPA funds directly in 1988-89? YES _____ NO _____
   a. If "No," skip to Question 4
   b. If "Yes,": What was the total amount received directly by the college? $_____
      Number of separate, unduplicated JTPA clients receiving services: _____
      Approximate % of clients receiving the following services (may total over 100%):

Assessment	____%	Vocational education in credit classes	____%
Counseling	____%	Vocational education in non-credit courses	____%
Job Search Skills	____%	Other: _____	____%
Placed in jobs	____%	_____	____%
Remedial/Basic Skills	____%	_____	____%

4. Many local and state governments have developed special programs to provide funds to help businesses or special target populations (displaced homemakers, displaced workers, welfare recipients, high school dropouts, etc) obtain job training or upgrading, generate new jobs, etc. Please list here any of these special local or state funds or programs, as well as any federal funding not covered above, that your college used to provide services, courses, or training in '88-89.

Title (& brief description) of Program or Source of Funding	Dollars Received	Students Served	Businesses Served
	$		
	$		
	$		
	$		

PLEASE REVIEW THE SURVEY AND RESPOND TO EACH ITEM WITH DATA. IF THE INFORMATION REQUESTED IS INACCESSIBLE, PLEASE PROVIDE YOUR BEST INFORMED ESTIMATE.