

DOCUMENT RESUME

ED 273 335

JC 860 492

TITLE Pathways to Progress: A Comprehensive Study of Vocational Education in California Community Colleges. Executive Summary.

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SPONS AGENCY California Community Colleges, Sacramento. Office of the Chancellor.; Department of Education, Washington, DC.

PUB DATE Mar 86

CONTRACT 3-5-151-03

NOTE 33p.; For the complete report, see JC 860 493. Printed on colored paper.

PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC02 Plus Postage.

DESCRIPTORS College Role; *Community Colleges; Delivery Systems; *Educational Assessment; Educational Attitudes; Educational Legislation; *Educational Trends; Enrollment Trends; *Financial Support; Information Systems; Needs Assessment; Outcomes of Education; Program Evaluation; State Surveys; Student Characteristics; Technical Education; Two Year Colleges; *Two Year College Students; *Vocational Education

IDENTIFIERS *California

ABSTRACT

Using existing records, documents, and data files, a study was conducted to identify and describe the status of vocational education in California's community colleges in seven areas of investigation: vocational students, vocational programs, program delivery patterns, program planning, program funding, student outcomes, and major trends and issues. Study findings included the following: (1) 63.4% of vocational students were white, 45% were between the ages of 21 and 29, 48% attended only evening classes, 74% attended part-time, 67% were self-supporting, and 48% worked full time; (2) a major portion of vocational enrollments are concentrated in business, computer, and technical occupations; (3) occupational administrators anticipated changes in the mode of program delivery during the next 5 years to include more contractual education and more industry input, as well as changes in local program planning procedures and stronger linkage with the private sector; (4) community colleges have been affected by declining levels of funding; (5) student and employer follow-up efforts were limited; and (6) major factors affecting the current status of vocational education in the state included the dichotomy of perceptions about community colleges as institutions, problems of differentiating between vocational education and job training, the legislative context, lack of a clear philosophical framework for identifying the role of community colleges in the state's economic development program, a shift in the purposes of Vocational Education Act funds and a decline in buying power, and changing demographic patterns in the state and its community colleges. Based on study findings, recommendations were developed for the improvement of leadership, mission, and philosophy; program planning and coordination; student services and program impacts; vocational program funding; the state program approval process; and the state information system. (LAL)

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FOREWORD TO THE EXECUTIVE SUMMARY

This executive summary to the comprehensive study of vocational education in the California community colleges--Pathways to Progress--includes the Preface and Part I from the complete study. The executive summary provides a description of the study objectives and procedures, the highlights of the major factors that affect the status of vocational education in California community colleges and the recommendations.

The executive summary is intended to provide the most essential information and study results for persons who are interested in the overview of the study without delving into further documentation. Those interested in the full report should contact the Chancellor's Office, California Community Colleges.

PATHWAYS TO PROGRESS

**A Comprehensive Study of Vocational Education in
California Community Colleges**

**A Study Conducted
by:**

**CARVELL Education Management Planning, Inc.
P.O. Box 1027
Carmel Valley, California 93924**

For:

**Chancellor's Office, California Community Colleges
Sacramento, California**

March, 1986

This report is made pursuant to contract No. J-5-151-03. This project was supported by Vocational Education Act funds, P.L. 94-482, administered by the Chancellor's Office, California Community Colleges.

The activity which is the subject of this report was supported in whole or in part by the U.S. Department of Education. However, the opinions expressed herein do not necessarily reflect the position or policy of the U.S. Department of Education, and no official endorsement by the U.S. Department of Education should be inferred.

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PREFACE

For the past half decade community colleges in California have contended with difficult times. Dramatic changes in student characteristics, unstable and reduced financial resources, declining enrollments, shifts in decision-making power from the local level to the State, confrontational politics among factions within the community colleges themselves, and other operational problems that beset large urban districts as well as small outlying community colleges have provided a hay day for critics and investigative reporters. As a result, the recognition of the benefits of community colleges may be lost to their publics.

Amid this turbulence, intensive studies have been initiated about the mission of community colleges and various other aspects of their operation and role as part of the higher education system of the State. Although this report is one of many dealing with the complex issues related to community colleges, it differs from the others on several counts. First, it does not address the general problems of community colleges noted above, rather it is focused entirely on a single aspect--vocational education. This report is neither a promotional piece nor a counter argument for the findings and recommendations of other concurrent or recent studies of vocational education in California community colleges.

Second, the body of information compiled during this study is data based rather than anecdotal, i.e., existing records, documents, and data files were used to identify and describe the status of vocational education in six defined areas of investigation. From this information base, a seventh area emerged--the identification of major issues and trends that affect the nature and delivery of vocational education in community colleges in California.

Once the issues were identified, reactions and ideas from a broad range of community college educators were sought to help clarify the relevance of these issues to vocational education. Some of the external factors have an impact on other educational endeavors of community colleges, but only those having a direct relationship to vocational education are included in this report.

Third, the scope of this study called for describing statewide and state level topics related to community college vocational education, not individual districts or their programs.

In the final analysis of the factual information that was compiled, several themes emerged that seem to be of greatest concern to those who provided reactions to the preliminary study findings.

- How to ensure that community college vocational education receives its proportionate share of support, financing, and recognition from state and local decision makers who control the allocation of available resources.
- How to balance serving the needs of a diverse student population and at the same time respond to the changing demands of the employment community.
- How to incorporate necessary job training programs under the auspices of vocational education in response to local needs without loss of the important identity of comprehensive community colleges as a segment of higher education.
- How to ensure the quality of vocational programs and services, given the limitation of available resources.

Maintaining quality was of paramount concern, in light of the changing social and economic conditions under which vocational programs have had to operate during the past half decade. Quality is not merely a factor of what goes into a program, it also depends on the results achieved. Quality is something that can be recognized, but difficult to define. Especially in vocational education, measures of excellence must be found beyond those based solely on academic criteria. Program quality is a matter of attitude as well as ingredients and is not based on subject matter alone but on the extent to which defined outcomes are achieved--student successes in relation to goals.

Because of the data oriented approach taken in this study, several factors are reflected in the findings and recommendations. First, reliable and compatible information was limited on several of the topics addressed by the study, because of the manner in which data were collected, assembled and stored by the State. Second, part of the information on enrollments, programs and student outcomes was considered inaccurate, incomplete or untimely by state and local sources, yet the same information was used for financial and accountability purposes.

Third, much of the information about vocational education gathered by the state was compliance related; therefore, a large segment of activity not supported by federal vocational funds was not reflected in the state's information base.

Fourth, much of the available information housed by the state was compartmentalized in different operating units of the Chancellor's Office, California Community Colleges, (COCCC) and difficult to assemble or cross reference. None of these observations should be construed as a lack of cooperation from the COCCC staff. Many of the staff recognized the problems and assisted in finding and providing requested information, and despite the limitations noted here, the study did compile substantial information. However, this does not ensure continued amalgamation and analysis of data by the COCCC.

Finally, in times of crisis, there seems to be a tendency to over emphasize problems and neglect the benefits of an enterprise. It is hoped that this study was not unduly guilty of this perceptual flaw. The intended purpose of this report is to present objectively the current status of vocational education in community colleges so that efforts toward further progress can be continued.

Organization of the Report

This report is divided into five parts plus appendices. Part I is an executive summary which is intended to stand alone. It contains a description of the study, major factors that affect the status of vocational education in community colleges, 20 key findings, and major and supplementary recommendations. The final section of Part I concludes with a brief statement about the guiding principles for deliberating the mission of vocational education in community colleges and a conceptual model for understanding the relationship of vocational education to the other major instructional functions in community colleges. Although some 150 documents are referred to in the body of the report, such footnotes do not appear in the executive summary.

Part II is an explanation of the purpose and procedures used in the study.

Part III presents the historical background and chronological development of community colleges in California. This part provides an identification of the issues and trends that affect the nature and operation of vocational programs in community colleges in the State.

Part IV contains a summary of the major study findings in relation to each of the areas of investigation included in the scope of the study.

Part V contains eight major recommendations and related supplementary recommendations. The rationale and supporting findings used to clarify and amplify each recommendation are presented. Appendix materials follow Part V.

Study Team

The study was directed by Fred Carvell. Joan B. Carvell participated in all phases of the project and conducted the analysis of program and student enrollment data. Dr. Don B. Medley, Chairperson, School of Business Administration Computer Information Systems, California State Polytechnic University, Pomona, was responsible for coordinating the computer programming and re-runs of course activity and VEDS data tapes obtained from the COCCC. Dr. Ben K. Gold, consultant, assisted by providing information about special needs populations and the Student Accountability Model which were used to describe students served by community college vocational education programs in the State. Walter Brooks, from Shasta College, provided liaison with the student follow-up system being developed and pilot tested for the COCCC.

Acknowledgments

The study team conferred with many individuals and groups throughout the study. All were constructive and helpful in contributing information to describe the state of the art of vocational education in California's 106 community colleges. Their contribution is appreciated.

A special note of thanks goes to the study advisory committee who contributed to the process of identifying sources of data and rendering the massive amount of information into a cogent set of findings and recommendations. The names of the working committee members appear in the front of the report.

The study team conferred with over 45 organizations and groups during the study and enjoyed particularly close working relationships with several of them. Our appreciation goes to the California Community College Administrators of Occupational Education which allowed us to administer a survey to its membership, the California Community College Occupational Education Coalition which kept us posted on major issues and trends during the project year, and the COCCC State Occupational Education Advisory Committee for Evaluation and Research which identified research studies that were pertinent to this effort.

Finally, our appreciation goes to all the units of the COCCC that cooperated by providing information and computer data used in the analysis conducted by the study team.

Part I

EXECUTIVE SUMMARY: COMPREHENSIVE STUDY OF VOCATIONAL EDUCATION IN CALIFORNIA COMMUNITY COLLEGES

This executive summary contains the highlights of a year-long comprehensive study of vocational education in California community colleges (CCC). It summarizes the critical factors that affect the current and projected nature and context of community college vocational education, presents the key findings related to six specified areas of investigation within the scope of the study, and outlines the major and supplementary recommendations on which there was consensus by a study advisory committee. Details and documentation of the findings, rationale and historical background of the descriptive information are contained in the four additional parts that comprise the body of the final report.

Introduction

For 75 years community colleges in California have provided access for youths and adults who might not otherwise have had an opportunity to gain a postsecondary education. An increased number of those students have sought courses that are employment related either to gain entry to the workforce or to improve their career options even though they were already employed. Of course, some occupational students pursue higher education in four-year colleges and universities or other advanced training institutions, but little is known about the characteristics or magnitude of this group beyond a prototype description given in a state longitudinal study completed in 1981.

By any given measure, California community colleges (CCC) are the largest public system of postsecondary vocational education in the United States. Statistics for 1983-84 indicate that CCC:

1. Generated over 138.0 million annual hours of vocational instruction in 59.5 thousand courses, most of which were offered for credit and could be transferred to the California State University system.
2. Had 909.8 thousand students enroll in one or more vocational courses in the 16 major program disciplines; that is, three out of four students in the total system enrolled in a vocational course.
3. Had 2/3 of all vocational students enrolled in courses above the pre-vocational or beginning level.
4. Offered 314 different vocational programs, many of which were offered on more than one of the 106 colleges and 40 separate satellite centers, to prepare students for entry employment or occupational upgrading and career improvement.
5. Expended over \$586.2 million for vocational education; \$23.5 million of which was federal vocational education funds--about 4% of the total.

6. Awarded 19.6 thousand AA degrees in vocational areas; this represented 41% of all AA degrees awarded by CCCs.
7. Provided facilities, instructional staff and other instructional resources for delivering job training sponsored by major federal and state employment training programs intended to alleviate the training needs of a wide array of disadvantaged, unemployed, underemployed and special needs populations. In addition, CCC provided contractual education to industry.

Purpose of This Study

The purpose of this study was to investigate available data files and information that described the status of vocational education programs and services provided by California community colleges.

This study was directed toward describing the nature and scope of vocational education in California community colleges; however, this comprehensive effort did not include some aspects of community college vocational programs that were being investigated by other agencies or in other studies that were being conducted simultaneously in 1985. The results of such studies that were available at the time this report was prepared were considered in reaching conclusions and making recommendations.

Study Procedures

Heavy emphasis was placed on review of documentation and data files collected and housed by the Chancellor's Office, California Community Colleges (COCCC). The study team worked with an advisory committee and conferred with them both individually and as a group throughout the 12 month study. Major activities included:

- Review of over 150 reports, documents, and data files which are referred to appropriately in the text of the final report.
- A written survey of current practices and trends in community college vocational programs in which 52 of 70 districts responded representing 74% of the 106 colleges and 87% of the ADA generated in the State by vocational education programs.
- Contacts were made with 45 state agencies, professional organizations, and private companies. These contacts included administrators, faculty members, and staff members in such organizations.

- State and local plans for vocational education were reviewed to determine the nature and extent of vocational programs and services in community colleges in the state.
- An intensive effort was made to identify and utilize all relevant computer tapes containing data related to vocational enrollments and course activity by Taxonomy of Program (TOP) for 1983-84.

Information generated by the foregoing activities was compiled and analyzed in relation to seven factors which defined the scope of this study: 1) Student Data, 2) Program Data, 3) Program Delivery Patterns, 4) Program Planning, 5) Program Funding, 6) Student Outcomes, and 7) Critical Issues and Themes. The final topic was derived from an analysis of the previous six factors.

VOCATIONAL EDUCATION MISSION OF COMMUNITY COLLEGES

One of the strong interests among local and state community college educators during this study was the work of the Master Plan Commission in reviewing the overall mission of community colleges in California. This included a look at educational functions, finance, and governance issues. Thus, it was logical that the Commission study should look at some of the issues related to the role of vocational education in the mission of community colleges.

It was important and necessary that the Master Plan Commission review the overall mission of community colleges, but it is also critical that any redefinition of the community college mission be something more than a restatement without reaffirmation and commitment to all aspects of the community college mission by those who control the allocation of resources for community colleges. This is particularly true because the largest share of community college financing has shifted dramatically from local to state support since 1979.

A review of the historical development of community colleges shows that the original "junior college" mission of providing the first two years of college for transfer students has broadened to include other social and educational imperatives. Some community college educators assert that academic transfer programs are the most important component of the community college educational mission. It should be noted here that neither the purpose nor findings of this study are intended to contest the importance of the transfer function of community colleges, but the facts indicate that vocational programs by virtue of student demand, number of courses and instructional hours generated, are indispensable for many community colleges in the State.

The transfer function is one of the elements that distinguishes comprehensive community colleges from the narrower mission of technical institutes or the limited objectives of some adult education vocational programs. Many community college vocational students take general education transfer courses and many

declared transfer students engage in vocational course work as part of their community college experience. The interdependency between the two areas of instruction is stronger than many people may recognize. Thus, while the transfer program may be the cornerstone of community college education, vocational programs are the pillars which support many community colleges in the State because of their importance to students and the local business community.

OBSERVATIONS ABOUT COMMUNITY COLLEGE VOCATIONAL PROGRAMS

Among the notable observations that can be made from the findings of this study are:

- Community college vocational programs are a major factor in meeting the needs of youths and adults who wish to prepare for employment or upgrade their occupational skills. However, many of these students take individual courses rather than prescribed occupational programs. Little current information is available to describe the portion of vocational students who transfer to higher education institutions.
- Vocational programs in community colleges have succeeded in providing access to students in all 58 counties and, although there is room for improvement, this has been achieved with relative equity for students regardless of ethnic origin, sex or economic status.
- Generally, although there are some disfunctions, the largest vocational programs in the state are geared to the largest employment opportunities in business and industry, namely in office, data processing and computer occupations, in industrial and technical fields, and public services.
- Community colleges, as locally oriented institutions, have done a commendable job of meeting locally defined needs by responding as a deliverer of a wide variety of federal, state, and privately supported job training programs. However, in doing so, the issues of "college level", definition of vocational students, and control of quality in such programs have come to light.
- State and federal legislation that provides a legal framework for many vocational and job training programs offered in community colleges is often complicated, contradictory in nature, and cumbersome to administer at state and local levels because of differences in program scope and operational restrictions.

Before presenting the study recommendations, two elements that contribute to a better understanding of them are outlined. These are 1) major factors that affect the nature and status of vocational education in community colleges and 2) highlights of key findings from the review of available information sources describing vocational education in community colleges.

**MAJOR FACTORS AFFECTING THE CURRENT STATUS OF VOCATIONAL EDUCATION
IN CALIFORNIA COMMUNITY COLLEGES**

Aside from the statistics, computer data, and written documents that were used to compile a body of factual information to support the study recommendations, seven major factors were found to affect the context within which vocational education (VE) programs are offered in California community colleges (CCC). These factors are beyond the direct control of the community colleges. Some of them have implications for more than vocational programs, but they are noted here because they all have a direct impact on the nature, operation, and future of community college vocational education.

● **DICHOTOMY OF PERCEPTIONS ABOUT COMMUNITY COLLEGES AS INSTITUTIONS**

Perceptions about the role of community colleges as educational institutions differ widely. The dichotomy of perceptions can be placed into opposing categories which consider community colleges as:

- A segment of higher education for carrying out state policies and plans
- Institutions established primarily to meet locally defined needs and priorities.

Available evidence indicates that community colleges, in order to meet the needs of their students, must be facile in serving both functions.

● **PROBLEMS OF DIFFERENTIATING BETWEEN VOCATIONAL EDUCATION AND JOB TRAINING, IN PRACTICE, AND COMMUNICATING THE DIFFERENCE TO NECESSARY PUBLICS**

Although the Board of Governors (BOG) has adopted policies for vocational education, in practice there is still confusion between vocational education and job training. This has led to:

- Difficulty in defining and reporting data about vocational students
- Lack of understanding about the difference between VE and job training by many faculty, counselors, students, employers, vocational staff and the general public.

● **LEGISLATIVE CONTEXT INFLUENCING VOCATIONAL PROGRAMS**

Federal and state legislation has clouded the lines between secondary and postsecondary vocational education and has expanded the original purposes of vocational education beyond preparation for employment into social and economic domains. Factors that contribute to the need to reassess the influence of legislation on community college vocational programs are:

- Federal orientation for VE is at the secondary level and excludes VEA funds for use in baccalaureate level programs.

- Context of VEA legislation is based on precepts of the work force and education that were prevalent at the beginning of the twentieth century.
 - Current federal VE legislation is focused on access and services to special needs populations, many of whom are below college level in educational preparation or lack necessary motivation.
 - Recent job training legislation is directed toward short-term, intensive programs for under- and unemployed populations.
 - Many state and federal laws pertaining to employment programs consider CCCs as deliverers of educational and social services that may not be collegiate in nature.
- **LACK OF A CLEAR PHILOSOPHICAL OR CONCEPTUAL FRAMEWORK FOR IDENTIFYING THE ROLE OF COMMUNITY COLLEGES IN THE STATE'S ECONOMIC DEVELOPMENT PROGRAM OR HUMAN RESOURCE DEVELOPMENT POLICIES**

Neither the state legislature nor the executive branch of state government has defined the role of the State's educational system or community colleges per se in providing a contribution to the economic development or human resource development policies of the State; nor is there any indication of any serious pressure on the State's body politic to do so.

- Federal legislation has been a prime influence on how state vocational education programs are organized, meet standards, and report data on vocational students. As a result, federal guidelines, rather than a coherent state level plan designed to meet state needs, have been used to determine needs and establish priorities for vocational education. Defining roles of myriad deliverers of employment training has been left to competitive rather than cooperative modes of planning -- yet,
 - California with its \$450 billion annual product is the eighth largest economic entity in the world and the most populous State in the US. (References not in main report are noted in this section-136,137)
 - California's community colleges are the nation's largest public system for delivering postsecondary vocational education programs -- over one in five community college students in the nation are in California.
 - California's 106 community colleges provide a mechanism and resource for providing employment preparation in any of the 58 counties in the State. About one of every 17 adults in the state attended a community college in 1984.
- **A SHIFT IN THE PURPOSES OF VOCATIONAL EDUCATION ACT FUNDS AND A DECLINE IN BUYING POWER WHILE FUNDING FROM OTHER FEDERAL AND STATE EMPLOYMENT TRAINING PROGRAMS HAVE INCREASED**

Federal vocational education funds declined in actual amounts as well as in buying power between 1981 and 1983 during a period in which there was a tight funding squeeze placed on community colleges due to the effects of

Proposition 13. At the same time the purposes of the new act shifted in emphasis.

- Community colleges have been placed in competition to bid for job training partnership act (JTPA), employment training panel (ETP) and other outside funds to help offset the decline in buying power and fewer dollars to improve their programs. This has placed some financially pressed community colleges in the position of seeking offsetting funding from such sources in order to sustain existing vocational programs. In fact, COCCC fiscal data indicate less general fund dollars per hour of instruction were expended by local districts on vocational programs than on other programs.
- There is the serious danger of diminution of vocational programs as educational dollars are reduced because whole vocational programs can be eliminated due to their discrete nature.
- If external funding sources become the dominant factor in underwriting the cost of vocational programs offered by the colleges, the operational and philosophical differences between short-term, intensive job training and the broader aspects of vocational education could result in a schism between state and local priorities in decision-making processes.

● **CHANGING DEMOGRAPHIC PATTERNS IN THE STATE AND CHANGING CHARACTERISTICS OF COMMUNITY COLLEGE STUDENTS**

California's population reflects a diverse and changing pattern of ethnic characteristics as well as varying growth rates by region in the State. Projections strongly indicate this diversity will continue through the next decade. (146) This cultural and demographic collage requires that the 106 community colleges have to be increasingly flexible to meet diverse student needs and unique local demands.

- California's 26.3 million residents make it the most populous state in the nation and one of the ten fastest growing (11.4% increase in 1985).
- California has the nation's largest foreign born population -- drawn mainly from the Pacific Basin, Asia, Mexico, Central and South America.
- Including the foreign born, California has a combined ethnic minority population of about 33 percent which will reach 45 percent of the state's total population by the year 2000. The largest growth rates will occur among Hispanics and Asians.
- The most rapidly growing segment of the population is the 35 to 54 year old age group, while the traditional college age cohort (18 to 24) will continue to decline until the mid-1990s. Median age in the State is about the same as the average age of current community college students -- 30 years old.

The implication of these projected demographics for community colleges is significant:

- There will be a decrease in traditional college student population until the mid-1990s.
- A large portion of the foreign born and minority students will enter community colleges with English language limitations, in need of remedial education, financial assistance, and assistance in preparing for employment. About 80% of entering CCC students currently need some form of educational remediation.
- The extended life span and aging population will increase the portion of older adults who will seek recurring educational experiences in the community colleges.
- There will be a sustained increase in the number of women students, many as head of household, who will need special support services ranging from career counseling and employment preparation to child care services and financial aid.
- As the general population ages, there will be increased demand for programs to help people make career changes and improvements, re-training, and counseling services.

● SOCIAL, ECONOMIC, AND TECHNOLOGICAL CHANGES AND TRENDS

Vocational education is affected by myriad changes that alter the nature of work, the skills required by workers, the social and human environment within which work occurs, and the overall context of work for individual life styles of people from diverse cultural backgrounds.

The change from a production based economy to an information society with increased life expectancy, shifts toward worldwide interdependency, and other social changes that affect family and personal values are traumatic and the subject of exhaustive sociological and psychological inquiry. Study of the impact of social change on general education patterns and individual needs of youths and older adults was beyond the scope of this study. However, key events and trends cannot be ignored in terms of their impact on CCC vocational education programs. The following list is not exhaustive, but provides highlights of some of the elements affecting present and future vocational programs.

- California's strong economy and labor force will continue to grow, but so will the number of unemployed:
 - The average person will change jobs about five times during a working life.

Technological changes in the workplace will displace employees or change job skill requirements at a rate that may require retraining and career improvement become larger functions for CCCs than preparing new workers for the labor market.

- High technology will change the nature of educational and skill requirements for those entering as well as those already in the labor force.

- . Although California provides about 1/4 of the nation's high tech jobs and one dollar in every nine dollars of the State's product is generated in aerospace and related defense industries, growth in high tech employment occupations will not keep pace with jobs in service oriented fields that require lower job skills. (136)
- . The most valued areas of education and training may be those that improve abstract and symbolic thinking, understanding interrelated systems and processes, solving technical nonrepetitive problems, and working with diverse people to achieve defined job outcomes.
- The literature and history of work in the US indicate that there has been and will continue to be a shift from the linear progression from school to work to lifelong learning in which education and training will be interspersed with work and changing career status.
- The demands of the labor market, changing occupational requirements, and shifting economic patterns will place increasing tension on the dilemma of providing general versus specific occupational preparation and the need to teach basic competencies as part of the training process.

"It is absolutely imperative that high schools and ... community colleges, become aggressive in examining, developing, and sustaining quality educational programs to serve that great host of Americans who will keep this country working."

- from The Neglected Majority by Dale Parnell

HIGHLIGHTS OF THE STUDY FINDINGS

Twenty of the key study findings are summarized below. Details can be found in Part IV of the final report, appendix materials, and working papers delivered to the Vocational Education Unit of the COCCC. Additional findings are incorporated in the rationale and supporting statements that accompany each of the study recommendations presented in Part V of this report.

Students in Vocational Programs

1. Students served by CCC vocational programs are a diverse and bimodal population. (See Figure 1-A)
2. There has been a dramatic shift in student demand for vocational programs. (See Figure 1-B)
3. Community college vocational programs have generally provided access for women and minority groups and other special populations.
4. CCC administrators of vocational education anticipate that enrollment in vocational programs will continue to increase during the next half decade.

Vocational Programs

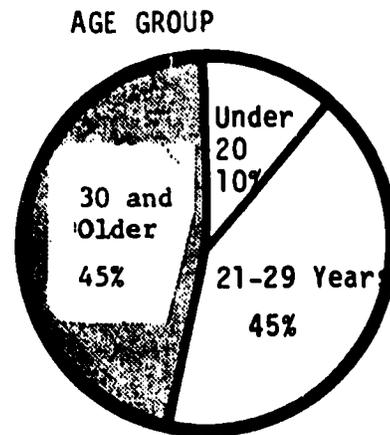
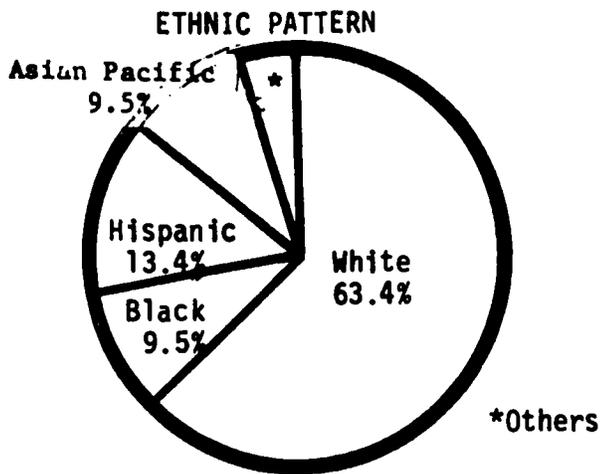
5. Differentiating between vocational education and job training in practice and communicating the difference to necessary publics is a continuing problem.
6. A major portion of CCC vocational education enrollments and student contact hours are concentrated in three major program areas--business, computer and technical occupations. (See Figure 1-C)
7. There is a disparity in COCCC records between the number of state approved programs (TOPs) and the actual number being offered by local districts.
8. CCCs are a major mechanism for providing a wide range of locally needed employment training programs.

Program Delivery Patterns

9. Vocational education in CCCs is delivered within the context of comprehensive colleges.
10. CCC occupational administrators responsible for leadership at the local level anticipate changes in the mode of delivering vocational programs during the next five years--more contractual education, more industry input in curriculum and greater use of computer aided instruction.

Figure 1-A

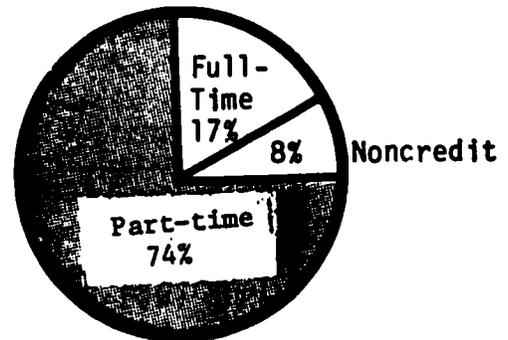
SELECTED CHARACTERISTICS OF STUDENTS WITH VOCATIONAL GOALS IN CALIFORNIA COMMUNITY COLLEGES, Spring 1984



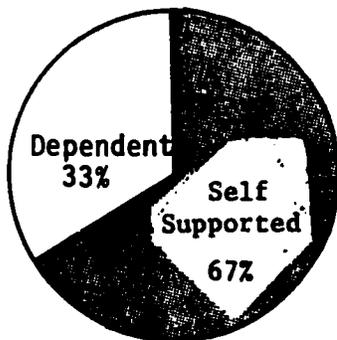
ATTENDANCE PATTERN



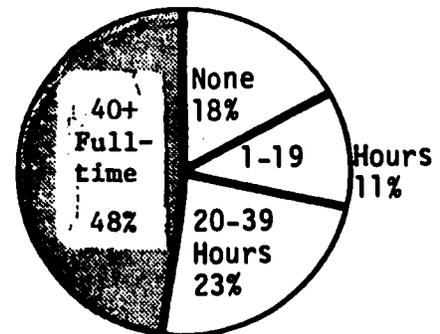
UNITS TAKEN



ECONOMIC STATUS



EMPLOYMENT PATTERN (Hours Worked Weekly)

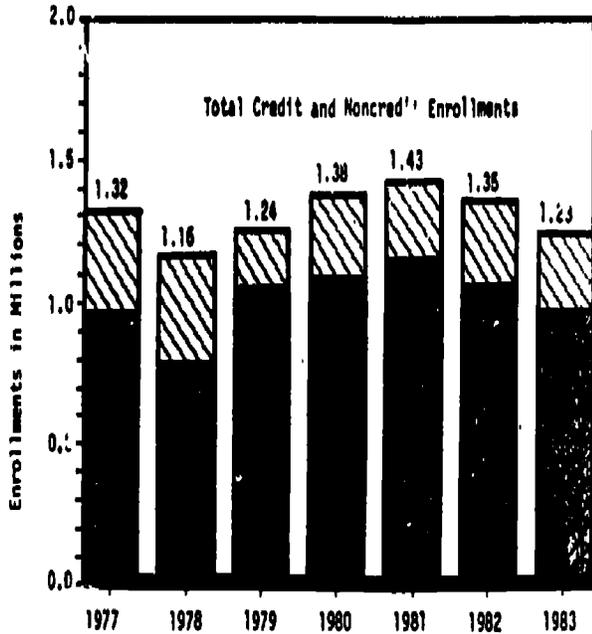


Note: Shaded areas denote primarily evening enrollments. Percents may not add to 100% due to rounding.

Source: Compiled from computer tapes supplied by Analytical Studies Unit, COCCC, May 1985.

Figure 1-B

PROPORTION OF TOTAL COMMUNITY COLLEGE ENROLLMENTS TAKING ONE OR MORE VOCATIONAL COURSES, 1977 TO 1983



1-12

■ Percent of total students who enroll in one or more vocational course in community college*

- 1977: 67.4%
- 1978: 74.3%
- 1979: 83.9%
- 1980: 78.6%
- 1981: 80.2%
- 1982: 78.3%
- 1983: 79.0%

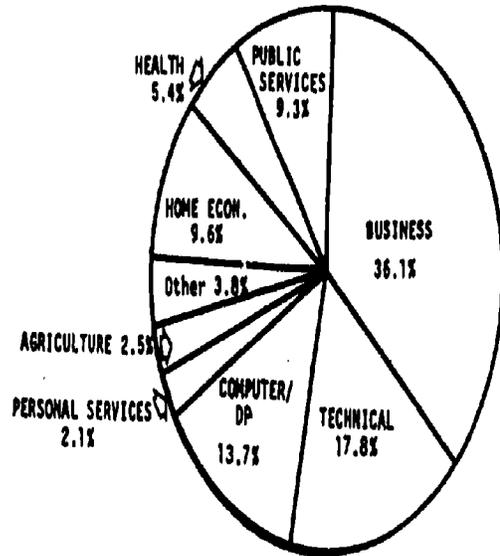
* Does not include enrollments in job training programs not generating AOA.

Sources: Total Community College Enrollments, Stats and Facts, CC²CC, 1984.
Unduplicated Vocational Education Enrollments, VEDS reports, years cited.

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Figure 1-C

PERCENT OF ENROLLMENTS BY MAJOR VOCATIONAL PROGRAM, 1983-84



COMPARISON OF TOTAL ANNUAL ENROLLMENT AND STUDENT CONTACT HOURS BY MAJOR VOCATIONAL PROGRAM AREA BY PERCENT, 1983-84

Major Program Area	Annual Enrollment	Annual Hours
BUSINESS OCCUPATIONS	36.1 %	28.2 %
TECHNICAL OCCUPATIONS	17.8	22.5
COMPUTER/DP OCCUPATIONS	13.7	12.1
HOME ECONOMICS/CONSUMER RELATED	9.6	5.6
PUBLIC SERVICE OCCUPATIONS	9.3	8.9
HEALTH OCCUPATIONS	5.4	10.2
AGRICULTURE RELATED OCCUPATIONS	2.5	2.6
PERSONAL SERVICE OCCUPATIONS	2.1	4.2
OTHER	3.5	5.7
TOTAL ALL VOCATIONAL PROGRAMS	100.0 %	100.0 %

Source: VEA and Course Activity Computer tapes for 1983-84 provided by the CCCC.

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Program Planning

11. Program planning at the local level depends mainly on cooperative efforts by groups of CCC occupational administrators and direct contacts with local employers.
12. Greater contact between CCCs and private sector groups is being fostered and used by community colleges.
13. CCC occupational administrators expect changes in local program planning procedures and stronger linkage with the private sector to occur in the future.
14. The COCCC lacks a cohesive and agreed upon statement of the purpose and role of vocational education in community colleges in California--the emphasis of vocational education in relation to job training and the role of the COCCC operations and staff with regard to compliance, planning and setting priorities for responding to district needs is not consistent.
15. State level planning is hampered by an inadequate needs assessment and a management information system that does not provide data in a timely manner or useful format.

Program Funding

16. CCCs, in general, and vocational programs in particular, have been affected by declining levels of funding which have not kept pace with inflation, and inconsistent funding formulas have impeded rational planning and provided little flexibility.
17. As VEA funds declined (1981-1983), there has been an increased reliance at the local level upon funds from other federal and state job training programs or upon private contractual education--it is estimated that about 60% of the districts provide some type of contractual education.

Student Outcomes

18. Establishing criteria and procedures for identifying vocational students for purposes of accountability and for determining program impact is a continuing problem.
19. Statewide student and employer follow-up to determine and assess student outcomes remains limited.
20. There is growing consensus that diverse student characteristics and varying student goals demand increased efforts to assess the needs of students prior to program placement.

RECOMMENDATIONS FROM THE COMPREHENSIVE STUDY OF VOCATIONAL EDUCATION

Eight major and 14 supplemental recommendations resulted from this study. All of the recommendations fall into six areas: 1) Leadership, Mission, and Philosophy, 2) Program Planning and Coordination, 3) Student Services and Program Impacts, 4) Vocational Program Funding, 5) State Program Approval Process, and 6) State Information System.

It should be noted that this study was directed toward statewide and state level issues. The recommendations follow this mandate and are focused on topics that should be deliberated by the Board of Governors (BOG) with subsequent review and action by the COCCC. Because of this orientation, the study team made an effort to show the relationship of each major and supplementary recommendation to the eight BOG adopted vocational education policies. The topic of each BOG policy and its relationship to each study recommendation is displayed on Table 1-1.

The study recommendations are presented by topic in the same sequence noted above in Part V of this report. However, each major and supplemental recommendation is followed by one or more statements providing its rationale, clarification, or amplification.

Table 1-1
RELATIONSHIP OF STUDY RECOMMENDATIONS TO BOARD OF GOVERNORS
ADOPTED VOCATIONAL EDUCATION POLICIES

BOG Policy Topic	Related Study Recommendations
1. State Leadership, Program Planning and Coordination as a Shared State and Local Responsibility	1.0, 1.1, 1.2, 2.0, 2.1
2. Allocation and Use of Funds	5.0, 5.1, 5.2, 6.0
3. Providing Access and Meeting Student Needs	1.3, 1.4, 4.0, 4.2
4. Assessment, Guidance and Counseling	4.0, 4.1, 4.2
5. Collaborative Efforts to Meet Job Market and Employment Training Needs	2.0, 2.1, 2.3, 3.0
6. Ensure that a Properly Qualified Professional Staff is Available to Deliver Vocational and Job Training Programs	2.4, 3.0, 8.2
7. Coordinated State and Local Endeavor to Assess Vocational Programs and Services	2.2, 2.3, 3.0, 7.0
8. BOG Efforts to Inform Various Publics About California Community College Vocational and Job Training Programs	1.0, 1.1, 8.0, 8.1, 8.2

LEADERSHIP, MISSION, AND PHILOSOPHY

RECOMMENDATION: | COCCC Mission Statement about Vocational Education

Given the changing demographics of the State, student demand, the growing need of industry and the State's economic development pattern, THE COCCC SHOULD EMPHASIZE THE PRIMARY FUNCTION OF VOCATIONAL EDUCATION AS PART OF THE MISSION OF CALIFORNIA COMMUNITY COLLEGES.

1.1 COCCC Leadership in Development of a State Policy for Human Resource Development

▷ Given the diversity of perceptions and expectations of community colleges by the State Legislature, general public, students, and many educators themselves, THE COCCC SHOULD TAKE A LEADERSHIP ROLE IN ACTIVITIES AND AFFAIRS THAT WILL CLARIFY THE HUMAN RESOURCE DEVELOPMENT POLICIES OF THE STATE OF CALIFORNIA AND THE ROLE OF CALIFORNIA COMMUNITY COLLEGES AS VOCATIONAL PROGRAM AND JOB TRAINING DELIVERERS IN THE STATE.

1.2 Delivery of Vocational Programs By Comprehensive Local Community Colleges

▷ Because of precedence and the demonstrated strength and effectiveness of CCCs in providing educational access to citizens of the State, VOCATIONAL PROGRAMS SHOULD CONTINUE TO BE OFFERED WITHIN THE CONTEXT OF COMPREHENSIVE COMMUNITY COLLEGES, BUT OTHER OPTIONS SHOULD BE CONSIDERED FOR COLLEGES THAT WISH TO DELIVER VE THROUGH DIFFERENT INSTITUTIONAL MODELS.

1.3 Role of Job Training in the Community Colleges

▷ Based on the vocational education policies adopted by the Board of Governor's, THE COCCC SHOULD DEVELOP AND COMMUNICATE ITS SUPPORT FOR THE ROLE OF CALIFORNIA COMMUNITY COLLEGES AS A MECHANISM FOR DELIVERY OF JOB TRAINING.

1.4 Role of Apprenticeship in Community Colleges

▷ THE COMMUNITY COLLEGES AND COCCC SHOULD EXAMINE THE AMBIGUITY SURROUNDING APPRENTICESHIP PROGRAMS WITHIN THE VOCATIONAL EDUCATION MISSION OF COMMUNITY COLLEGES.

PROGRAM PLANNING AND COORDINATION

RECOMMENDATION: **2** Area Program Planning and Coordination

REGIONAL AND AREA VOCATIONAL PROGRAM PLANNING EFFORTS AMONG LOCAL COMMUNITY COLLEGES SHOULD BE ENCOURAGED, STRENGTHENED AND UTILIZED BY THE COCCC.

2.1 Participation in the Planning Process

- ▷ THE COCCC SHOULD EXPAND EFFORTS TO UTILIZE A BROAD BASE OF LOCAL DISTRICT AND EMPLOYER PARTICIPATION IN IDENTIFYING VOCATIONAL PROGRAM NEEDS, PRIORITIES, AND METHODS OF COLLABORATIVE PLANNING FOR VOCATIONAL AND JOB TRAINING PROGRAMS.

2.2 Local Vocational Educational Plans

- ▷ USE OF LOCAL VOCATIONAL EDUCATION PLANS SUBMITTED TO THE COCCC SHOULD BE REVIEWED WITH THE OBJECTIVE TO SYSTEMATIZE AND SIMPLIFY SUCH DOCUMENTS AS PART OF A STATEWIDE PROGRAM PLANNING PROCESS AND NEEDS ASSESSMENT.

2.3 Use of Labor Market Information in Program Planning

- ▷ STRONGER EMPHASIS SHOULD BE PLACED UPON UTILIZATION OF LABOR MARKET INFORMATION AND TRENDS FOR VOCATIONAL PROGRAM PLANNING AT BOTH STATE AND LOCAL LEVELS.

2.4 Vocational Administrators, Faculty, and State Staff Inservice Needs

- ▷ THE COCCC SHOULD ESTABLISH AS A STATE PRIORITY THE IMPLEMENTATION OF INSERVICE ACTIVITIES AND PROFESSIONAL DEVELOPMENT PROGRAMS TO ASSIST VOCATIONAL ADMINISTRATORS, INSTRUCTORS AND STATE STAFF STAY CURRENT IN THEIR RESPECTIVE FIELDS.

RECOMMENDATION: 3 Development of Statewide Needs Assessment

THE COCCC SHOULD DEVELOP AND INITIATE A PROCESS FOR CONDUCTING A STATEWIDE NEEDS ASSESSMENT THAT CAN BE CARRIED OUT ON A CONTINUING BASIS.

STUDENT SERVICES AND PROGRAM IMPACTS

RECOMMENDATION: 4 Identification of Vocational Students

THE COCCC SHOULD CONTINUE, WITH COOPERATION FROM THE FIELD, TO IDENTIFY MORE SPECIFICALLY "VOCATIONAL STUDENTS" FOR PURPOSES OF DETERMINING PROGRAM ENROLLMENTS, PROGRAM IMPACTS IN TERMS OF STUDENT GOALS, NEED FOR STUDENT FOLLOW UP, VEA ALLOCATIONS, AND PUBLIC INFORMATION.

4.1 Student Assessment and Placement Models

▷ THE COCCC SHOULD GIVE PRIORITY TO THE DEVELOPMENT AND IMPLEMENTATION OF STUDENT ASSESSMENT AND PLACEMENT MODELS AND ENSURE THAT THESE MODELS INCLUDE APPROPRIATE PROVISIONS FOR STUDENTS WITH VOCATIONAL GOALS.

4.2 Student Follow-up System

▷ THE COCCC SHOULD CONTINUE TO SUPPORT AND EXPAND THE USE OF A VOCATIONAL STUDENT FOLLOW-UP SYSTEM THAT PROVIDES DATA ON A STATEWIDE BASIS ABOUT THE OUTCOMES OF VOCATIONAL PROGRAMS BASED ON STUDENT GOALS.

VOCATIONAL PROGRAM FUNDING

RECOMMENDATION: 5 State Division and Distribution of Federal VEA Funds

THE FORMULA FOR DIVISION OF THE CARL D. PERKINS VOCATIONAL EDUCATION ACT (PL 98-524) FUNDS BY THE STATE BETWEEN SECONDARY AND POSTSECONDARY INSTITUTIONS SHOULD BE REVIEWED WITH THE OBJECTIVE OF CHANGING THE PROCESS AND CRITERIA FOR DIVIDING THE FUNDS BASED ON NEED. IF SUCH A DIVISION CANNOT BE MUTUALLY AGREED UPON, THE MATTER SHOULD BE ADJUDICATED BY AN IMPARTIAL THIRD PARTY.

5.1 VEA Allocation Formula Used by COCCC

▷ COCCC ALLOCATION OF FEDERAL VOCATIONAL EDUCATION ACT (PL98-524) FUNDS SHOULD INCLUDE THE USE OF STUDENT CONTACT HOURS OR FTE GENERATED ANNUALLY BY EACH PROGRAM AS PART OF THE ALLOCATION FORMULA WITHIN PERMISSIBLE PROVISIONS OF THE LAW.

5.2 Funding of Special Projects

▷ AS PART OF ITS LEADERSHIP ROLE IN THE STATE, THE COCCC SHOULD FUND OVER A MULTI-YEAR PERIOD THOSE SPECIAL VOCATIONAL EDUCATION PROJECTS THAT HAVE AN IDENTIFIED NEED AND POTENTIAL FOR STATEWIDE IMPACT.

RECOMMENDATION: 6 Use of State Funds for Equipment

BASED UPON AN ACCURATE, EMPIRICAL AND UNIFORM METHODOLOGY WHICH RESULTS IN AUTHORIZATION OF A LINE ITEM, THE COCCC SHOULD DEVELOP A BUDGET PLAN TO CONTINUE FUNDING FOR RENEWAL AND UPDATING OF INSTRUCTIONAL EQUIPMENT FOR VOCATIONAL EDUCATION NEEDS IN THE STATE.

PROGRAM APPROVAL PROCESS

RECOMMENDATION: 7 Vocational Program Approval Process

In order to improve the accuracy of COCCC files THE CURRENT STATE PROGRAM APPROVAL PROCESS (for Vocational Programs) SHOULD BE REVIEWED AND MODIFIED TO IMPROVE ACCURACY AND CURRENCY OF STATE RECORDS.

STATE INFORMATION SYSTEM

RECOMMENDATION: 8 Coordination and Timeliness of State Reports

In order to improve the collection and utilization of locally generated reports to the State, THE COCCC SHOULD REVIEW THE PURPOSE AND USE OF EXISTING REPORTS TO DETERMINE HOW VOCATIONAL EDUCATION INFORMATION ON PROGRAMS, ENROLLMENTS, AND HOURS OF INSTRUCTION CAN BE MORE EFFECTIVELY COORDINATED AND UTILIZED.

8.1 Reporting of Non-VEA Vocational Programs

▷ In order to permit the COCCC to carry out the function of information dissemination, A SYSTEM FOR OBTAINING DATA ON VARIOUS NON-VEA VOCATIONAL AND JOB TRAINING PROGRAMS AND ENROLLMENTS SHOULD BE INSTITUTED.

8.2 Faculty/Staffing Reports

▷ In order to ensure a properly qualified staff, THE COCCC SHOULD INSTITUTE A SYSTEM FOR COLLECTION OF INFORMATION ABOUT VOCATIONAL EDUCATION INSTRUCTORS WHICH WILL PROVIDE ONGOING INFORMATION ABOUT THEIR EMPLOYMENT PATTERNS, DEMOGRAPHIC CHARACTERISTICS, FULL- AND PART-TIME STATUS, AND INSERVICE NEEDS.

CONCLUDING STATEMENT

This comprehensive study has shown the complexity of the issues and themes that affect vocational education in community colleges. It also compiled a body of information that gives a general picture of what might be called the state of the art in such programs in relation to the half dozen topics that were within the scope of the study. Most of the study recommendations deal directly with the need to strengthen or change activities at the state level to improve the effectiveness of vocational education in California community colleges. The areas for improvement range from a commitment by the COCCC to a philosophy encompassing vocational education to the mechanics of gathering data from local community college districts.

Guiding Principles for Assessing the Mission of Vocational Education

It should be noted that during the course of this study, other statewide efforts were being conducted to define the mission of community colleges or to address other elements of vocational programs. The plethora of suggestions emanating from these studies will pose a challenge to state and local vocational education decision makers. Finding a path through the maze of countervailing choices will not be easy without a clear set of guiding principles. So far as vocational programs in community colleges are concerned, this study points to five major guiding principles that should be kept in mind when deliberating the destiny of community college vocational education.

1. Vocational education must be recognized as a legitimate and equal component in the mission of community colleges. It is neither superior nor subordinate to other educational functions.
2. It is important to recognize that currently and in the foreseeable future, a plurality of community college students will seek vocational education as a means of achieving their goals. Many of these students will need remedial assistance and student support services to succeed in their programs, vocational and otherwise.

Another aspect of vocational program enrollments with planning implications for local and state levels is the bimodal nature of student characteristics; namely, younger, full-time, day, new career oriented students versus older, part-time, evening, career improvement or re-training oriented students. The former group of students calls for stronger articulation efforts with secondary schools, curriculum design and program development efforts along the line of 2 plus 2 programs; whereas, the latter group calls for stronger emphasis on job training, contractual education, and closer working relationships with federal and state job training programs.

3. It is generally agreed that vocational education is best delivered under the auspices of comprehensive community colleges where all students are exposed to a broad range of opportunities in higher education. Within this comprehensive institutional setting,

vocational education will include specialized job training programs offered through federal, state and private industry sponsorship. Some job training will not fit neatly within the existing academic structures or decision-making processes utilized by many community colleges. This will pose continuous difficulty unless flexible procedures are developed and utilized for selecting, approving, and monitoring such programs. However, the strength and benefits of comprehensive institutions must be paid for by the additional burden of handling special circumstances and programs.

4. Vocational education by virtue of its mission must be flexible and responsive to many national, state, and local forces that may not have a direct or immediate impact on other educational programs. Therefore, the internal integration of vocational programs with other educational functions of community colleges must be achieved at the same time that rapid and unforeseen adjustments must be made to external circumstances imposed by economic, labor market, and technological changes.
5. As emphasis in funding and policy development shifts from local districts to the State, a corresponding change in COCCC functions and operations would appear in order. Furthermore, as the proportion of federal vocational funds diminishes, the level of effort devoted to compliance monitoring and reporting by the COCCC should give way to stronger efforts in overall state needs assessment, program coordination and allocation of available resources to meet local needs and requirements. This calls for a re-examination of the mission of COCCC in terms of leadership, organization, and modes of operation.

Finally, in order to describe the nature and scope of vocational education, a more exacting management information system for collecting and analyzing data is required. This data system needs to exceed the current orientation to compliance for federal VEA funded programs.

A Conceptual Model of Relationships Among Major Instructional Components

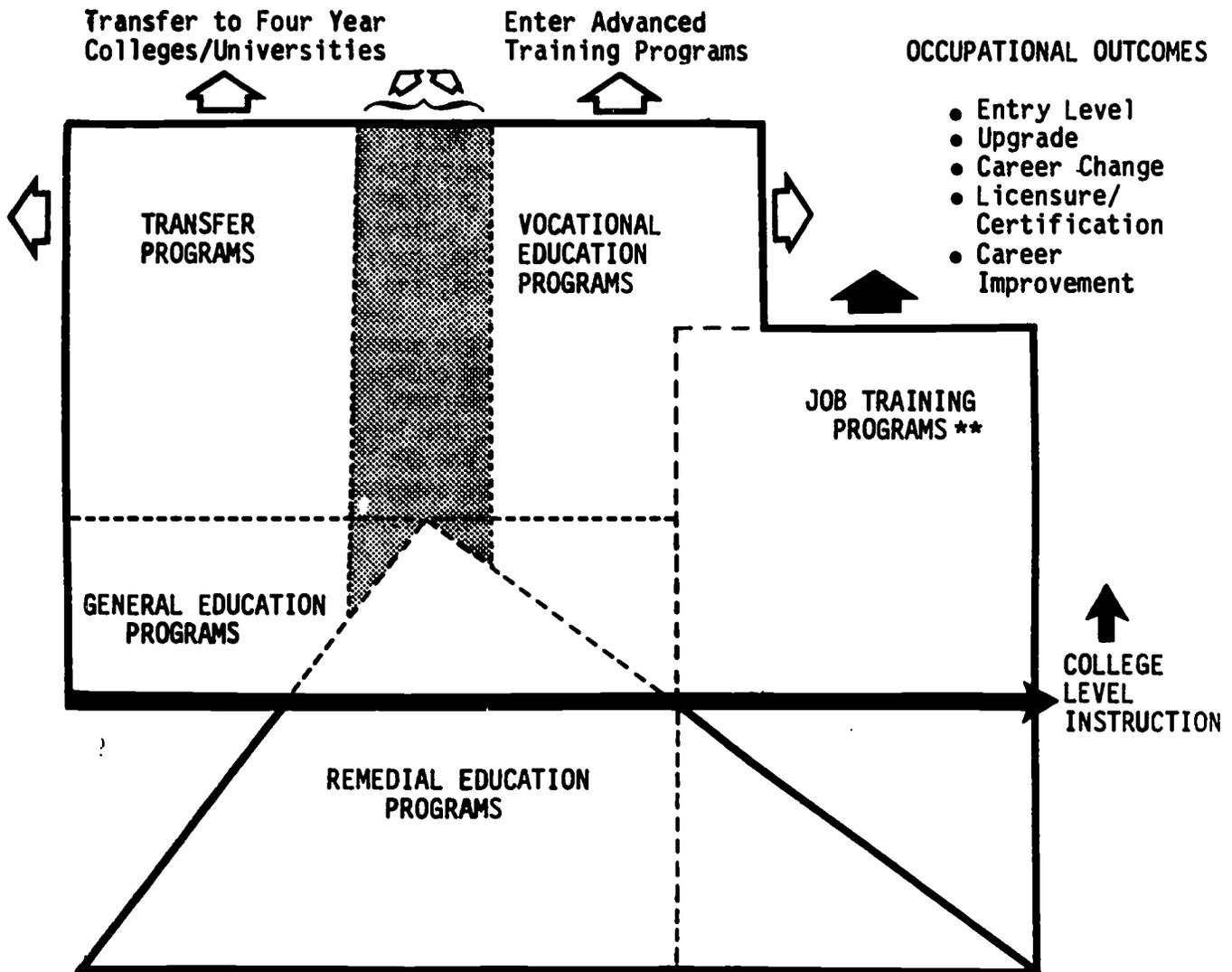
The conceptual model shown in Figure 1-D incorporates the principles noted above in depicting the relationships among four major instructional functions of community colleges. Counseling and guidance services are not shown in the model, but they too are an important part of the community college mission.

The first point of the conceptual model is that all instructional programs must be assessed as to whether they are college level. No course or program, regardless of subject area, should be awarded college credit, if it is not deemed to be college level. This does not mean that such instruction should be excluded, provided that the local community colleges offering it have a bonafide case for doing so if it meets other specified needs of students or employers or serves defined community needs.

The second point is that the line between college transfer and vocational education programs is not precise. There is an overlapping instructional (shaded) area. Students engage in both types of instruction and many move through the system, indistinguishable from each other in terms of the general

Figure 1-D

CONCEPTUAL MODEL* OF RELATIONSHIPS AMONG INSTRUCTIONAL COMPONENTS OF THE COMMUNITY COLLEGE MISSION



* A conceptual model is a simplified version of reality to assist in visualizing and understanding the complexities and relationships of actual processes. This model shows the relationships among four major instructional components of comprehensive community college programs: 1) General Education as part of Transfer and Vocational Education programs, 2) Overlapping transferability of course work from both Vocational Education and academic Transfer programs, 3) Overlap of Job Training, above and below college level, as part of Vocational Education programs in community colleges, and 4) Interplay with and relationship of Remedial Education, above and below college level instruction, to all other instructional programs, including transfer courses.

** Job Training programs refer to short-term intensive training offered under the purview of community college vocational education programs. This includes both public and private industry funded programs, such as Job Training Partnership Act (JTPA), Employment Training Panel (ETP), Apprenticeship programs, Adult Education or other non-credit courses, Contractual Education with private employers, and other job training above or below college level instruction.

education courses they take.

The third point is that job training has become a part of the vocational education in many community colleges and must be accommodated within the comprehensive institutional setting because of the absence of public post-secondary institutions that specialize in job training.

The fourth point is that remedial education serves all segments of the instructional program; transfer, vocational, job training, and general education. As long as community colleges subscribe to the importance of providing access to higher education, remedial programs will remain essential, but the way in which students progress through such programs must also be a factor in assessing their contribution to the overall mission of community colleges.

Finally, in vocational education, as in other disciplines, zeal to attain excellence need not impose strict administrative conformity, programmatic rigidity or avoidance of the needs of diverse student populations. The path of progress in vocational education will lie in more participative methods for allocating and managing available financial, physical, and human resources. New modes of decision making involving broad based input will be called for during the coming years. Above all the commitment to the role of vocational education in the overall mission of community colleges in California will have to be articulated and promoted by the COCCC so that local districts, students, legislators, employers, and the general public will have a clear understanding of its importance and contribution to the well-being of the State and the students who profit from such instruction.

- "People, organizations and other living organisms have learning curves that are S shaped. In learning, at first the individual has a period of slow orientation followed by rapid acceleration. At a certain point, the learning curve begins to slope downward. ...If an organization does not change its learning curve, that is, get on a new curve, its success life is sharply limited.

- Phillip Moffit, President, Esquire Magazine