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TRENDS IN VOCATIONAL EDUCATION
IN NEW JERSEY
WITH RESPECT TO CAPITAL FACILITIES

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State of New Jersey
Department of Community Affairs
Division of State & Regional Planning
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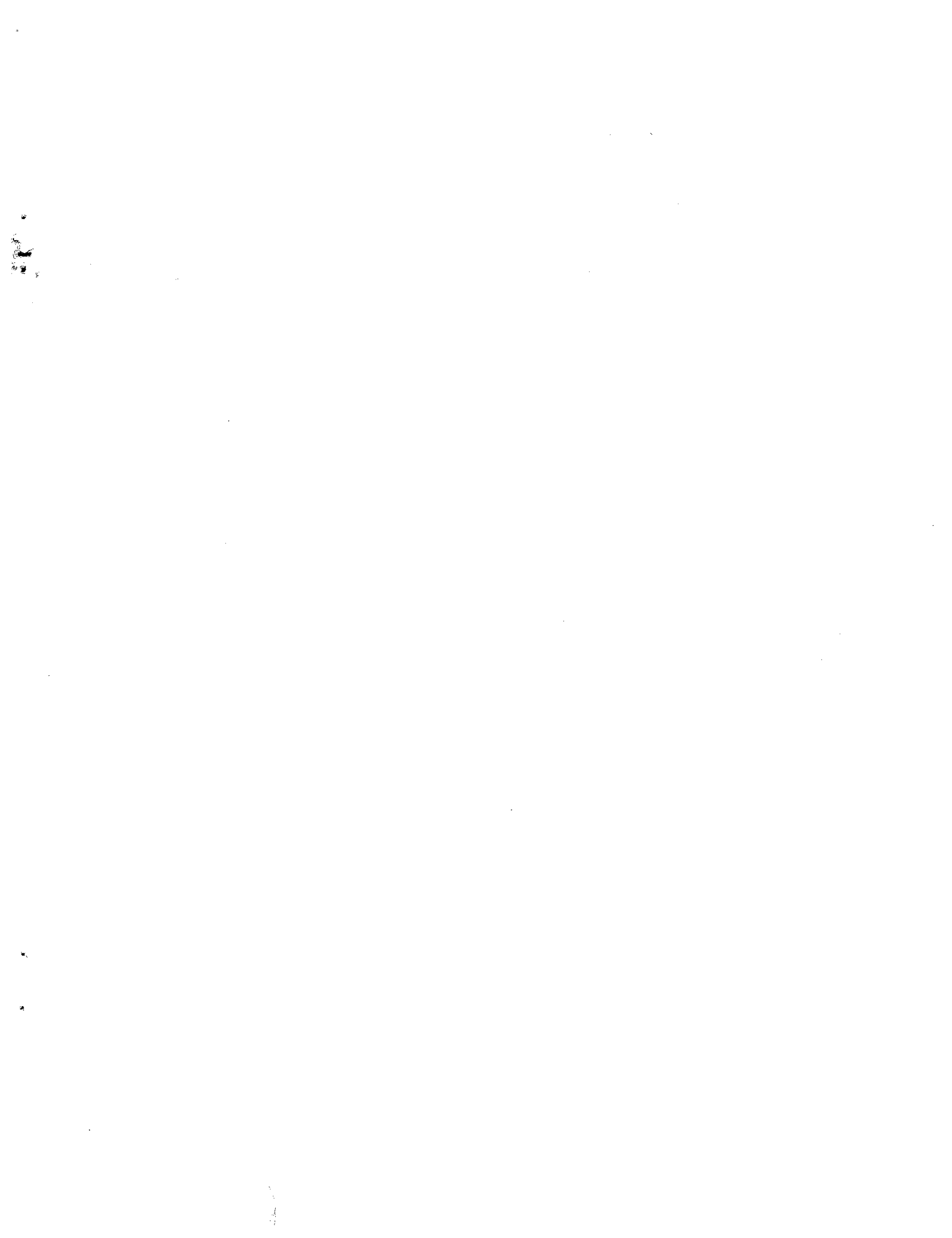
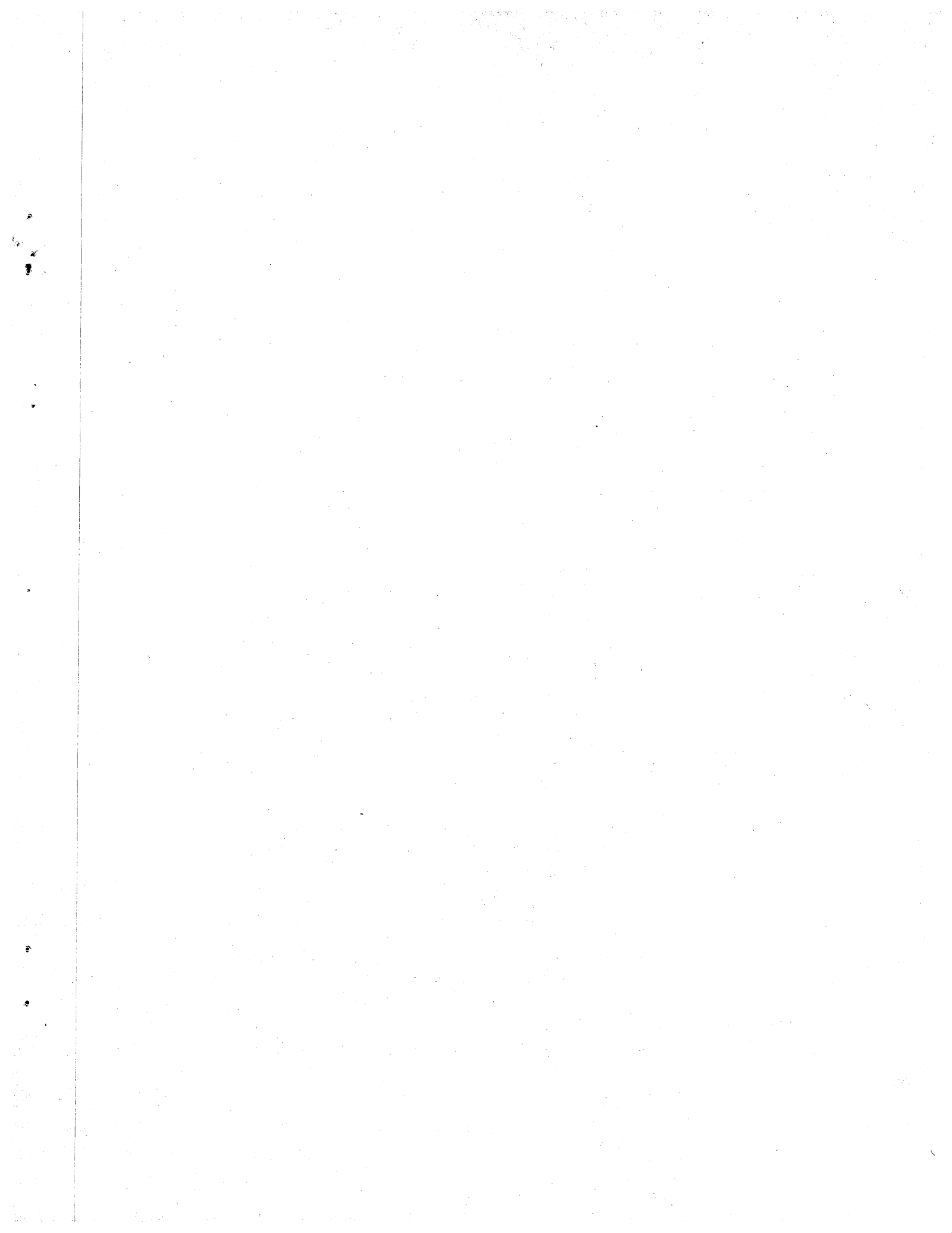


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INTRODUCTION

Long-range planning of facilities and capital needs attempts to efficiently relate departmental programs designed to meet these needs to the funds available now and in the future. Considering population growth projections and the geographic dispersal of this population, as well as the required services and facilities, long range planning is a necessity for meeting the needs of New Jersey in an orderly, programmed manner so as to provide the highest degree of services possible at any one time to the people of the State.

More importantly, however, long range planning is especially necessary in order to avoid wasteful crisis situations which are more costly in the long run. Such costs can be calculated both in terms of people denied services or inconvenienced because of a lack of facilities, and in terms of increased costs -- construction, acquisition of land, professional fees, and interest rates -- during inflationary periods. Moreover, the lack of a clearly defined and coordinated development program can lead to costly duplicated services and facilities. Therefore, in order to be effective, long-range planning must cross departmental jurisdictions. Only in this way can the needs of the State be anticipated and met in an orderly, efficient way.

One of the components of any long-range statewide plan will be the needs in the area of vocational education. Since this activity has very specific needs in terms of personnel, facilities, equipment, etc., it lends itself directly to the benefits of long-range planning. Such planning will help to provide more complete and coordinated services to meet the vocational education needs of New Jersey.

The development of this paper revolves primarily around a study of the status of vocational education in New Jersey. This includes a definition of "vocational education" and a delineation of its goals; an inventory of the availability of vocational education in New Jersey, including the roles of different levels of government in providing such education; a brief discussion of statewide trends in vocational education and four-year colleges in the context of nationwide trends in the same areas; and an examination of specific problems in providing vocational education to the State. This "study in context" is followed by a description of the effect the needs in vocational education will have on State expenditures, including costs of facilities, projections of State expenditures for vocational education, and other factors. This, in turn, is followed by a final section of conclusions and recommendations.

Information for this paper came from the following sources:

- (1) New Jersey Department of Education, Division of Vocational Education;
- (2) New Jersey Department of Higher Education;
- (3) magazine and newspaper articles;
- (4) personal conversations with:
 - a. Harold Seltzer, Director of Occupational Research Development, N.J. Division of Vocational Education;
 - b. William Wenzel, Associate Director Administrative Services, N.J. Division of Vocational Education;
 - c. Arthur C. Wenzel, Director of Manpower Development and Training, N.J. Division of Vocational Education;
 - d. Robert Wolf, Division of Vocational Education (private facilities);
 - e. Mrs. M. H. Fairbanks, Department of Higher Education (enrollment data);
 - f. Sally Davenport, Department of Higher Education, Community Colleges Office;

- g. Ronald Marlowe, Department of Higher Education,
State College Office;
- h. John Sladicka (intern), Department of Higher Education,
State College Office
- i. Mary M. Pieslak, Principal, Girls' Vocational Department,
Marie H. Katzenbach School for the Deaf.

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SUMMARY

Availability of Vocational Education in New Jersey

(1) New Jersey is making every effort to provide vocational education programs, services, and activities to as many of its citizens as possible. Vocational education is available at four levels: (a) secondary, (b) post-secondary, (c) adult, and (d) special needs (handicapped and the disadvantaged). By 1977, the enrollment in these four areas in the public sector is projected to be 317,449.

(2) The New Jersey Division of Vocational Education is placing heavy emphasis on increasing and maximizing the availability of vocational education services directed toward the urban and rural poor. Significant monies are being allocated for vocational programs in depressed areas.

(3) The availability of vocational education in New Jersey will be further expanded by the anticipated construction of thirteen new vocational-technical school facilities by 1978.

(4) At present, vocational education is available through four types of facilities -- local schools, county community colleges, state facilities, and private facilities.

(5) As of the 1972-1973 school year, the career offerings at the sixteen New Jersey community colleges gave a combined total of 106 separate programs. The State-operated facilities offer a combined total of 56 career programs.

(6) At the end of FY 1972, a total of 132 private facilities were in operation. A total of 18,079 students were enrolled. By 1977, it is projected that 22,519 students will be enrolled at the private vocational/technical schools.

National Trends: Vocational Education and College

(1) A national trend may well be developing away from college and towards a more marketable vocational education. As of September, 1972, there were an estimated 300,000 unfilled places in the colleges and universities scheduled to reopen.

(2) Applications at colleges for the 1973-1974 school year are also down. Only one-fourth of the 451 members (mostly private institutions) in The Association of American Colleges had more applicants than in 1972. The National Association of State Universities and Land Grant Colleges reported a 4.2 per cent decline in the applications to its members -- the first overall decline in ten years.

(3) Declining college enrollments are being primarily attributed to five factors:

- (a) A smaller pool of 18-year-olds in the country;
- (b) Reduced pressure from the military draft;
- (c) The rising cost of a college education;
- (d) A questioning of the value of a liberal-arts education as opposed to shorter, less expensive vocational training; and
- (e) "Stopping out", or postponing college entrance in order to travel or get some work experience.

(4) While many liberal arts colleges languish or go out of business for lack of students and money, vocational schools are booming. In ten years, the proprietary schools have grown to about 10 per cent of the U.S. population enrolled in higher education.

(5) The trend towards vocational/occupational education also includes the increase in popularity of the two-year community colleges. Enrollments at these schools increased 5.4 percent last year and are expected to go up by the same proportion next year. The two-year college movement is, in fact, becoming a key-stone of the new approach to vocational education.

(6) Vocational education is pulling out of the role as a "step-child" to four-year college and is being regarded as one of several ways of preparing for a career.

National Trends and New Jersey

(1) The trends being felt nationwide in vocational and college education are also being experienced in New Jersey. Some four-year college enrollments are down, enrollment projections are down, attendance at community colleges is on the upswing, and many vocational education programs are over-subscribed.

(2) As a total group, the public and independent four-year colleges and universities in New Jersey measured an enrollment decline from 1971 to 1972. As a separate group, however, the independent institutions have had increasingly declining enrollments since 1969.

(3) Current projections are down 7 percent from the figures estimated as part of the Department of Higher Education's master plan in July, 1972. This is a drop of 14,000 full-time students from the 213,000 who were expected to fill the state's colleges and universities in 1980.

(4) There has been a steady increase in enrollments at the county community colleges from a total (full-time and part-time) of 37,861 students in 1969 to 59,715 students in 1972. At the independent institutions, however, enrollments increased steadily until 1972 when there was a net total decline of 245 students.

(5) An increase in enrollments at community colleges, however, may not be significantly reflective of a trend away from four-year college and towards vocational education -- at least in New Jersey. (Refer back to pages 43-45)

(6) New Jersey is definitely experiencing a greater popularity of vocational education. Enrollments are projected to 339,968 students in 1977.

Why Vocational Education Is Needed

(1) Society today needs technicians trained in twentieth century skills and is willing to pay well to get them.

(2) New Jersey is facing a shortage of skilled and technical manpower. However, even though there is a demonstrated need for skilled and technical labor, the average unemployment rate in New Jersey during 1971 was recorded at 7 percent of the work force. This indicates that there is a need for a comprehensive and realistic employment-oriented education in the schools.

(3) It is vital that we reshape our educational system to meet the career demands of the complex technological society we live in.

Problems of Vocational Education In New Jersey

(1) A major problem being faced by the N.J. Division of Vocational Education is the lack of sufficient funds to meet all the needs and requests of the State.

(2) Technological change is taking place so rapidly that it is difficult to appropriately update vocational education equipment when funds are limited.

(3) Personnel is a significant problem in some vocational areas, due to factors ranging from a lack of teaching experience to meet a 6-year experience requirement (See "Technical, Trades, and Industry") to a general lack of people trained to teach in specialized areas (See "Cooperative, Disadvantaged, Handicapped Vocational Education").

(4) The projected demand for the kinds of manpower produced by vocational education programs greatly exceeds the projected supply. The Division of Vocational Education projects that in 1977 there will be a supply of 84,144 persons to meet a 137,846 person need -- a 39 percent deficit in the labor supply.

(5) Vocational education for the handicapped is a particular problem. The programs and services need to be greatly expanded.

Effect Of Vocational Education Programs On State Expenditures

(1) The amount of aid given by the State for vocational education depends on the specific program involved. Most programs have some requirement for the matching of federal funds by State and/or local funds.

(2) For the 1973/1974 school year, the distribution of funds for all vocational education programs is estimated as follows:

Federal	-----	\$ 13,246,732
State	-----	12,172,315
Local	-----	22,200,000
TOTAL:		<u>\$ 47,619,047</u>

(3) The State pays \$600/FTE (full-time equated student) in aid to the county community colleges.

(4) In FY 73, the State expended a total of \$28,747,484 in aid to the county community colleges.

(5) For FY 74, the Department of Higher Education has requested a total of \$32,545,408 for State Aid for Community Colleges. This total amount has been recommended by the Bureau of the Budget for appropriation.

(6) No information is available on the amount of State aid to county community colleges that goes specifically to occupational programs. Therefore, it is not possible to determine the role that State expenditures to community colleges play in the overall State subsidization of vocational education.

(7) The Marie H. Katzenbach School for the Deaf is the only facility operated by the State that totally State-funded. Both the New Jersey Residential Manpower Center and the Newark Manpower Training Skills Center receive their funds from the Federal government.

(8) From 1965 through 1971, a total of 21 area vocational-technical schools -- full-time plus shared-time -- were constructed at a total cost of \$76,036,262.

(9) In FY 1972, eight construction projects were started. The cost of these facilities is estimated to be \$15,910,444.

(10) Ten area vocational-technical schools are in varying stages of planning for future implementation at a total estimated cost of \$48,565,000. The capacity of these facilities will be 2,500 full-time and 5,940 shared-time students.

III

VOCATIONAL EDUCATION
GENERAL UNDERSTANDING AND BACKGROUND

A Definition

Vocational education is an element of education which will assist individuals to prepare for effective participation in our society. As such, it provides instruction to individuals with special needs and to individuals in need of assistance in making occupational decisions.¹ The specific orientation is towards entrance into useful and rewarding employment, but there is also consideration of the individual in his total human needs, not just job training.

Goals

The goals of vocational in New Jersey are stated as follows²:

- (1) Providing a coordinated comprehensive program to assist each person in reaching the level of vocational attainment to which he or she aspires and for which he or she possesses ability;
- (2) Guiding individuals toward and placing them in occupational roles of contemporary society;
- (3) Relating occupational preparation to the general education essential in modern society;
- (4) Establishing standards of achievement consistent with both occupational requirements and individual abilities;
- (5) Developing responsible attitudes and habits of work;
- (6) Developing an awareness of the changing nature of society and of the need for continuing education;

(7) Promoting communication and cooperation among the social, economic, educational, and other groups concerned with qualified manpower and vocational education;

(8) Providing for the continued training and adequate supply of vocational teacher educators, maintaining programs of teacher training, and developing innovative programs which pertain to qualifying and training of teachers for vocational education purposes;

(9) Provide improved leadership in vocational-technical education by initiating programs and facilities for emerging occupations and promoting opportunities for disadvantaged persons, where these do not exist or are limited.

Occupational and Vocational Education

In trying to gain an understanding of vocational education it is important to note that the terms "occupational" and "vocational" education are synonymous. They can be, and are, used interchangeably.

FOOTNOTES

Chapter III

¹ N.J. Department of Education, Division of Vocational Education, State Plan: An Overview, FY 1972-1973, p. 1.

² N.J. Department of Education, Division of Vocational Education, 1972-1973 State Plan for Vocational Education, Part II -- Annual and Long Range Program Plan Provisions, p. 41.

IV

THE AVAILABILITY OF VOCATIONAL EDUCATION
IN NEW JERSEY

New Jersey is making every effort to provide vocational education programs, services, and activities to as many of its citizens as possible. A basic delivery system of vocational education in New Jersey is through the area school set-up.¹ Several of these schools were in existence in New Jersey before federal legislation provided for them. They are administered by either a county board of vocational education or a comprehensive high school board of education. These area schools form the foundation of the New Jersey system. Vocational programs are also offered in a wide variety in comprehensive high schools not designated as area schools. On the post-secondary level, programs are offered in technical institutes, administered by county boards of vocational education, in comprehensive community colleges, and in private business, technical and trade schools.

In addition, programs for apprentices and adults are being offered across the State. A special needs program is also available to meet the needs of individuals with learning disabilities; the goal of this program is occupational development and entry-level employment.

When discussing the availability of vocational education, it is important to define the various levels at which such education is offered. The levels include secondary, post-secondary, adult, and special needs.

(1) Secondary -- Grades 9-12 in public and private schools.

(2) Post-Secondary -- Education designed for people who have left school and who require education preparatory to entering the labor market.

This program usually leads to an associate degree as part of the occupational

education function of community colleges. However, such a program can not be limited solely to vocational education above grade 12. The needs of high school dropouts require vocational education at a lower grade level.

(3) Adult Education is designed for those already employed who require training to upgrade their skills or who require new training. This is usually a single course as opposed to an entire program.

(4) Special Needs Education is aimed at the handicapped and the disadvantaged. "Handicapped" is defined as being mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped, seriously emotionally disturbed, crippled, or other health impaired persons who by reason of their handicapping condition cannot succeed in a regular vocational or consumer homemaking education program.² "Disadvantaged" refers to persons who have combinations of academic, socio-economic, cultural, or other handicaps which prevent them from succeeding in regular vocational education or consumer and homemaking programs designed for persons without such handicaps. For that reason they require specially designed educational programs or related services or both in order to benefit from vocational education or consumer and homemaking education. The term also includes persons whose needs for such programs or services result from poverty, neglect, delinquency, or cultural or linguistic isolation from the community at large, but does not include physically or mentally handicapped persons unless such persons also suffer from the handicaps described above.³

Statistics pertaining to enrollments at these various levels of education are illustrated in Figure IV-1.

FIGURE IV-1
VOCATIONAL EDUCATION ENROLLMENTS
PUBLIC SECTOR

Level	Latest Data Available*	1973 (Estimated)	1977 (Estimated)
(1) Secondary 9-12	181,476	221,703	243,102
(2) Post-Secondary	20,530	27,479	30,225
(3) Adult	36,423	40,328	44,122
(4) Special Needs	<u>21,029</u>	<u>20,870</u>	<u>26,211</u>
TOTAL:**	238,429	289,510	317,449

*1971-1972 school year, including county community colleges

**These totals are as close as possible to the unduplicated number. This should be noted inasmuch as the numerical total for each column is greater than the total that is indicated.

Source: New Jersey Department of Education, Division of Vocational Education, 1972-1973 State Plan for Vocational Education, Part II--Annual and Long Range Program Plan Provisions, p. 14, adapted.

The Division of Vocational Education is currently placing heavy emphasis on increasing and maximizing the availability of vocational education services directed toward the urban and rural poor. To achieve this end, several courses of action have been proposed.

(1) Increase the number of urban and/or rural vocational programs that contain comprehensive career development programs.

(2) Increase the number of urban and rural poor enrolled in vocational education projects.

(3) Increase the number of vocational education programs conducted by Model Cities and/or rural impacted areas, each one to be based upon an identified need within that site.

(4) Place heavy emphasis on vocational education programs in areas of high youth unemployment. Significant funds have been allocated for vocational education programs in depressed areas.

The Vocational Education Division is also working towards expanding the availability of its programs in other ways. For example, the Division supports existing efforts to provide vocational education programs for the returning veteran, whose transition to civilian life often necessitates special educational services and, more specifically, the services of vocational education. The Division further encourages those districts who have not responded to do so; and wherever possible, provides resources and services for the planning and development of these programs. As of April 1972, the number of New Jersey veterans taking advantage of both educational and training benefits numbered more than 33,000. Training is provided through courses in public vocational, private trade, technical, business, correspondence, computer programming, and beauty culture schools as well as hospital training, flight training above the private license stage, apprenticeship training, in-plant training, and on-the-job training.

The Division also wants to increase the number of vocational programs designed to serve the disadvantaged (primarily academic) and the handicapped. Cooperative Vocational Education Programs⁴ (C.V.E.) are especially important to mentally and physically handicapped persons, slow learners, and school-alienated youth for whom special programs are developed. Cooperative Education students are given assignments with either public or private employers. A minimum of 15 hours per week is spent at the work station under supervision of qualified personnel. Funding priority is given to schools with high youth unemployment and dropouts, school districts within economically depressed areas, school districts

within urban areas, school districts having high rates of disadvantaged and handicapped pupils, and to regular on-going programs. Programs are designed mainly for secondary and post-secondary students in depressed areas enrolled in agricultural education, business education, distributive education, health education, home economics education, and industrial education programs.

In order to assure that the available vocational education programs will be used appropriately and that vocational education will be viewed as one of several means of preparing for a career -- as opposed to being regarded as being for those who "can't make it" into college -- the Division of Vocational Education's program planning emphasizes the importance of providing educational experience in elementary schools. Moreover, pre-school programs will be designed to develop positive attitudes towards entry into new school experiences as well as to begin career awareness education. The development of career awareness and an understanding of the world of work is a paramount concern of the Division of Vocational Education. The nature of the process necessitates the development of programs at an early elementary stage.

Studies are also being made of existing and proposed programs of vocational education in order to develop new types of occupational courses which will respond to the needs of contemporary society. The specific program developments will focus on the following areas:

- (1) Communications and media;
- (2) Environmental control;
- (3) Fine arts and humanities;
- (4) Hospitality and recreation;
- (5) Marine science;
- (6) Personal services;
- (7) Public services;
- (8) Transportation.

The availability of vocational education in New Jersey will be further expanded by the anticipated construction of several new facilities.

The location of these facilities is projected in the following areas of the State:

(1) Atlantic, Bergen, Burlington Counties	7
(2) Camden, Cape May, Cumberland, Gloucester Counties	2
(3) Hunterdon, Mercer, Middlesex, Monmouth Counties	2
(4) Morris, Ocean, Passaic Counties	1
(5) Somerset, Sussex, Union Counties	1
	<hr/>
TOTAL:	13

FIGURE IV-2

PROJECTED NUMBER OF CONSTRUCTION PROJECTS
FOR THE NEXT FIVE YEARS
VOCATIONAL-TECHNICAL SCHOOLS

Year	Number of Projects	Total Building Capacity
1974	3	1,750
1975	3	1,200
1976	3	1,300
1977	2	1,000
1978	2	1,000
	<hr/>	<hr/>
TOTAL:	13	6,250

Source: 1972-1973 State Plan for Vocational Education, Part II, p. 118

Availability Of Vocational Education In Existing Facilities

At the present time, the availability of vocational education is through four types of facilities -- local schools, county community colleges, state facilities, and private institutions.

Local Schools. Practically every school district in New Jersey offers some form of vocational education -- primarily at the secondary level, grades 9-12. There are 605 school districts in the State with a total of 300 high schools.

At the "local school" level, vocational education is available through area vocational technical schools and regular comprehensive high schools not designated as area schools. The comprehensive high schools generally provide a more extensive vocational education program. The area vocational-technical schools are 35 federally and State supported school districts providing skilled and semi-skilled training in 68 program areas; 19 of the schools are administered by County Boards of Education and the remaining 16 are administered by Comprehensive High School Boards of Education (See Figures IV-3 and IV-4).

In addition to providing day school for secondary students, these area schools also provide adult apprenticeship training, evening trade extension classes, and technical education evening programs. For FY 1972, a total of 50,980 students were prepared with marketable skills through all these programs, with the specific distribution as follows:

(1) Secondary day school students	25,754
(2) Adult apprenticeship training	6,935
(3) Evening trade extension classes	14,555
(4) Technical education evening programs	3,646
TOTAL:	<u>50,980</u>

FIGURE IV-3

Area Vocational-Technical Schools Administered By County Boards For Vocational Education (Location of Administrative Office)

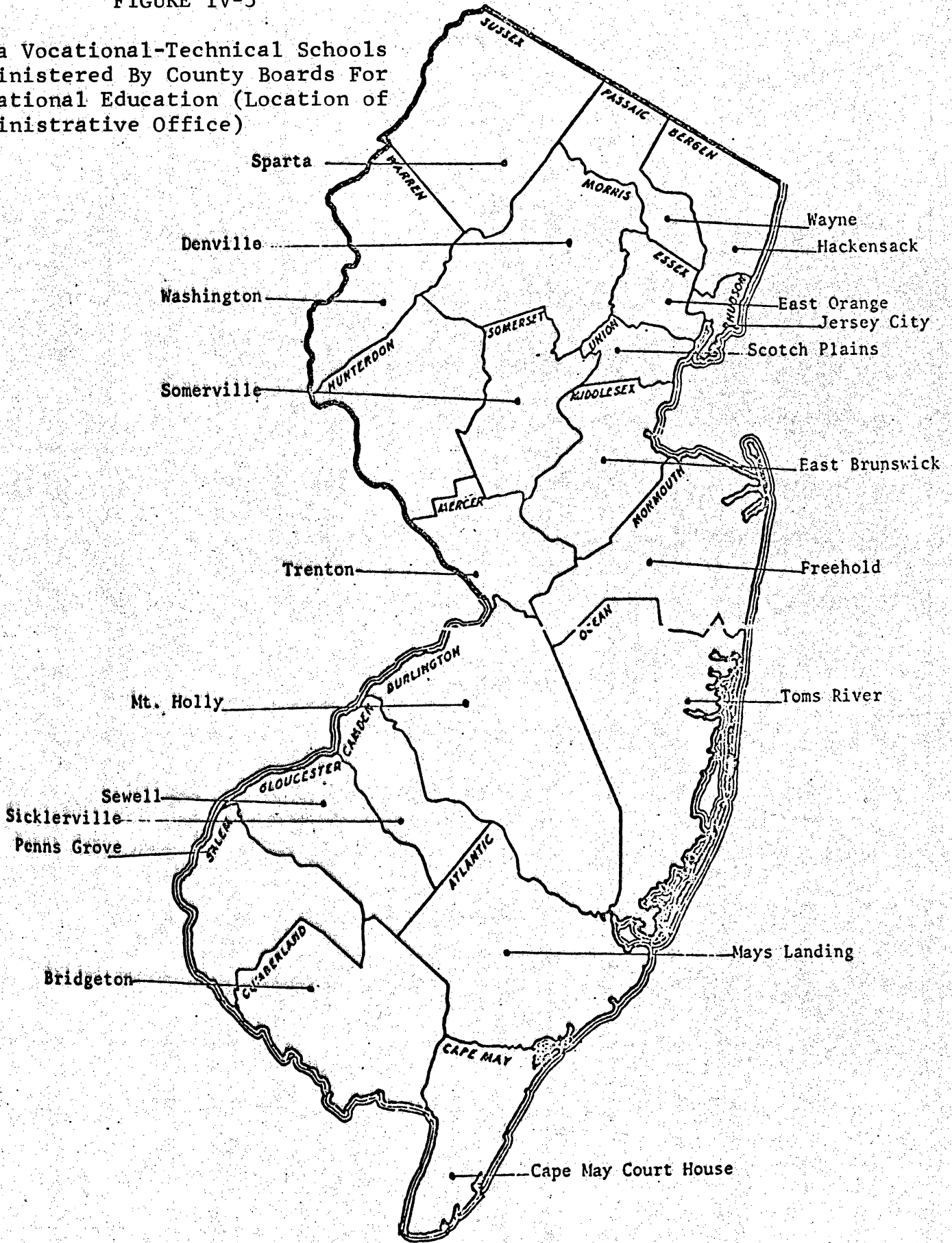
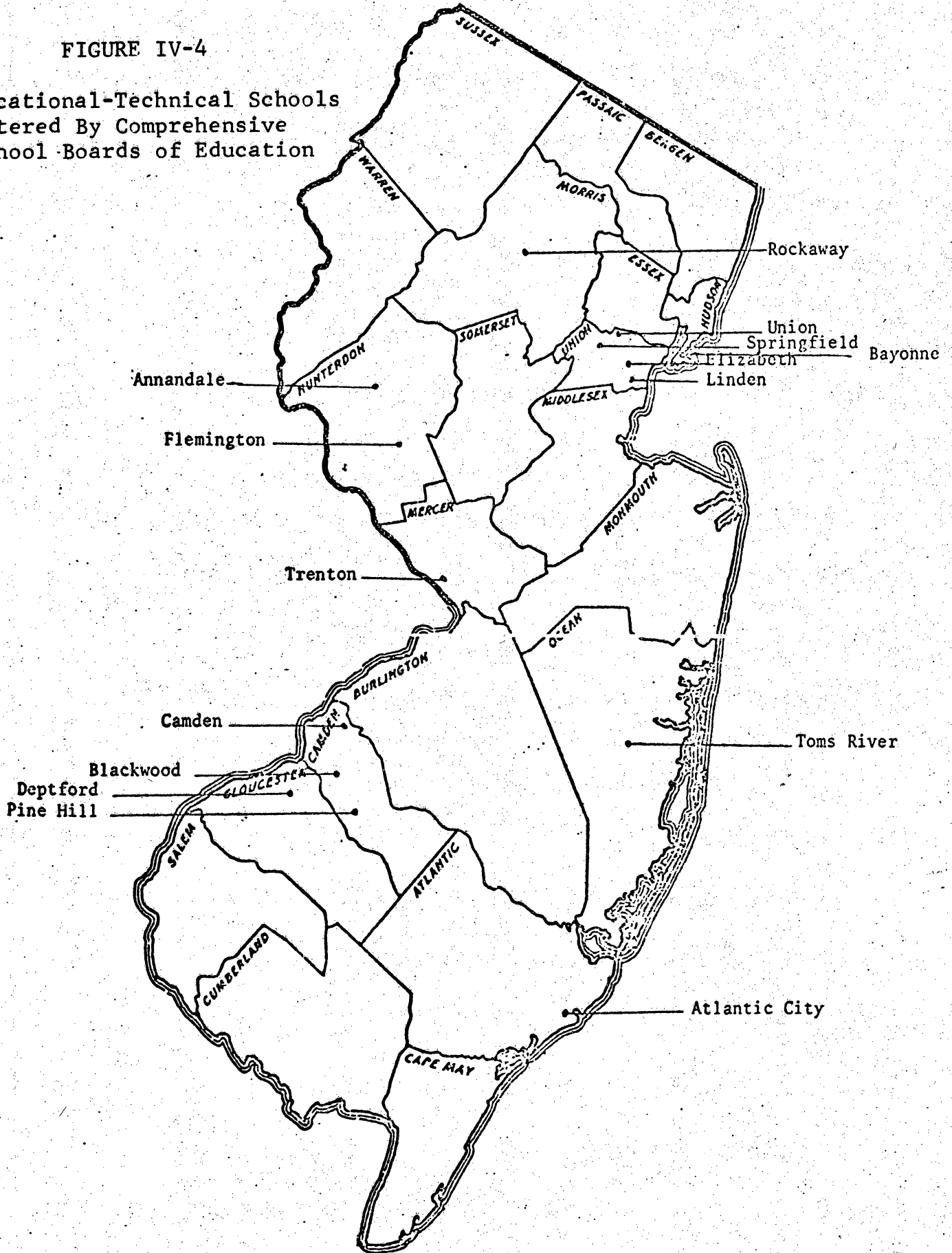


FIGURE IV-4

Area Vocational-Technical Schools
Administered By Comprehensive
High School Boards of Education



There are two types of area vocational-technical school facilities.⁵ The first type is a specialized facility in which students attend on a full-time basis and receive occupational training as well as the academic courses required for graduation. Students may elect to pursue sports and other co-curricular activities as offered by the area vocational-technical school. The second type of area vocational-technical school facility is a shared-time center which provides shop-laboratory training to students from schools in the area which do not offer the desired occupational program. Academic subjects and other activities are provided in the local school districts.

As the area vocational-technical schools are increasingly expanding physical facilities and program offerings, regular comprehensive high schools also continue to expand their program offerings.⁶ In many cases, however, it has been found that programs offered in the comprehensive high schools can be more efficiently operated in the area vocational-technical schools. In these cases, students can attend on a full-time or shared-time basis, allowing certain programs to be discontinued in the comprehensive high school.

A summary of the availability of secondary vocational education through the "local schools" is shown in Figure III-5.

FIGURE IV-5
LOCAL SCHOOLS: VOCATIONAL EDUCATION

Area of Education and/or Training	FISCAL YEAR 1972		Total Secondary Enrollment
	Number of Programs	Number of Schools Offering Programs	
(1) Agriculture	Not indicated	25	1,555
(2) Distributive Education	150	Not indicated	6,950
(3) Health occupations	132*	65*	1,474
(4) Occupational home ec.	65	Not indicated	2,616
(5) Office occupations	220	Not indicated	86,944
(6) Technical education	---Not indicated for secondary level-----		
(7) Vocational industrial education	---Not indicated for secondary level-----		

*These totals also include programs provided at the post-secondary, adult, disadvantaged, and handicapped levels. The secondary level was not separated except in terms of enrollment figures.

Source: New Jersey Department of Education, Division of Vocational Education, New Jersey Annual Descriptive: Report of Program Activities in Vocational Education, Fiscal Year 1972, pp. 2-12.

County Community Colleges. The comprehensive community colleges are the higher education system's center of vocational education below the baccalaureate level. As of the 1972-1973 school year, the career offerings at the 16 New Jersey community colleges gave a combined total of 106 separate programs offered within areas of allied health; business-related; technology and engineering related; public service; and developmental and pre-admission. In addition, 17 transfer programs were offered.

Because of the great need for academic transfer programs, the community colleges have been prevented from developing a broad range of one-year certificate and two-year vocational/occupational programs. It is important to make special note of this fact since most of the 106 occupational programs offered on a total statewide basis are offered on a very limited basis at the individual community college level. This can be clearly seen by referring to the course offerings listed in Figure IV-6. However, some of this pressure should be lessened by the addition of more spaces in the four-year colleges since part of the present enrollment at community colleges consists of qualified students who wanted to attend a four-year public institution and were denied admission because of lack of space.⁸

State Facilities. The State presently funds three facilities that provide vocational education and training: (1) New Jersey Residential Manpower Center; (2) Newark Manpower Training Skills Center; and (3) Marie H. Katzenbach School for the Deaf -- Vocational Department.

(1) New Jersey Residential Manpower Center.⁹ Located in Edison Township this facility is operated by the State Department of Education, Division of Vocational Education, under contract with the United States Department of Labor, Manpower Administration, in conjunction with the New Jersey State Department of Labor and Industry through its Employment Service. This center was formerly the Job Corps Center funded by the Office of Economic Opportunity.

FIGURE IV
EDUCATIONAL OFFERINGS
NEW JERSEY COMMUNITY COLLEGES
1972-1973**

New Jersey Community Colleges

Atlantic Community College
Mays Landing, New Jersey 08330

Bergen Community College
400 Paramus Road
Paramus, New Jersey 07652

Brookdale Community College
765 Newman Springs Road
Lincroft, New Jersey 07738

Burlington County College
Pemberton-Browns Mills Road
Pemberton, New Jersey 08068

Camden County College
Post Office Box 200
Blackwood, New Jersey 08012

Cumberland County College
Post Office Box 517
Vineland, New Jersey 08360

Essex County College
31 Clinton Street
Newark, New Jersey 07102

Gloucester County College
Tanyard and Salina Road
Sewell R.D., New Jersey 08080

Mercer County Community College
P.O. Box B
Trenton, New Jersey 08690

Middlesex County College
Edison, New Jersey 08817

County College of Morris
Route 10 & Centergrove Road,
R.D. #1
Dover, New Jersey 07801

Ocean County College
Hooper Avenue
Toms River, New Jersey 08753

Passaic County Community College
170 Paterson Street
Paterson, New Jersey 07505

Somerset County College
Post Office Box 3300
Somerville, New Jersey 08876

Union College*
1033 Springfield Avenue
Cranford, New Jersey 07016

Union County Technical Institute*
1776 Raritan Road
Scotch Plains, New Jersey 07076

**State of New Jersey, Department of Higher Education, Trenton, New Jersey,
May, 1972.

*Union College and the Union County Technical Institute serve together as the
Community College in Union County under the direction of the Union Coordinating
Agency. The programs of both institutions are thereby coordinated so as to offer
the equivalent of other two-year Community Colleges.

EXPLANATION OF SYMBOLS

- D - Indicates degree programs offered during day.
- N - Indicates degree programs which may be completed by exclusive night attendance.
- (a) - Indicates programs which offer certificates and degrees.
- (c) - Indicates programs which offer certificates.
- (d) - Indicates programs which offer diplomas.

(Under Union, Career Programs with a "T" indicate that these programs are offered at Union County Technical Institute. All programs not so marked are offered at Union College.)

Listings include programs offered as of September, 1972 which lead to a degree, diploma or certificate. Individual courses also may be offered in various subjects. Check college catalogs for such courses.

PROGRAMS	ATLANTIC	BERGEN	BROOKDALE	BURLINGTON	CAMDEN	CUMBERLAND	ESSEX	GLOUCESTER	MERCER	MIDDLESEX	MORRIS	OCEAN	PASSAIC	SOMERSET	UNION
CAREER															
ALLIED HEALTH															
Animal Science Technology					D N										
Dental Assistant									D						D T
Dental Hygiene		D			D					D					D T
Environmental Health Technology										D N					
Health Technology															D T
Hospital Unit Management							D								
Inhalation Therapy	D	D	D										D (d)		
Laboratory Technology				D N	D N				D N						D T
Medical Office Assistant		D													D N T
Medical Laboratory Technician		D	D							D					
Medical Laboratory Technology					D						D N				D T
Medical Records Technician							D								
Medical Technology	D														
Nursing	D	D	D			D	D		D N	D				D	D
Ophthalmic Science Technology					D N										
Physical Therapy Assistant							D								
Practical Nursing															D N T
Radiologic Technology		D					D			D N			D		
Registered Nurse							D	D N			D	D N	D		
Rehabilitation Technology										D					

PROGRAMS	ATLANTIC	BERGEN	BROOKDALE	BURLINGTON	CAMDEN	CUMBERLAND	ESSEX	GLOUCESTER	MERCER	MIDDLESEX	MORRIS	OCEAN	PASSAIC	SOMERSET	UNION
BUSINESS-RELATED															
Accounting	DN	DN	DN	DN	DN	DN	DN	DN	DN	DN	DN	DN	DN	DN	DN
Advertising Design									DN	DN					
Aerospace Operations Management									DN						
Business Data Machine Operator							DN (d)								
Business Management or Administration	DN	DN	DN	DN		DN	DN	DN	DN		DN	DN		DN	
Clerk Typist					DN (c)										
Computer Programming or Data Processing		DN (c)		DN	DN	DN		DN	DN	DN		DN		DN	DN
Data Processing for Businessmen		DN					DN		N						
Data Processing Machine Operator							DN (d)								
Foods Management	DN														
General Business				DN					DN				DN	DN	
Hotel-Motel Management	DN														
Hotel-Restaurant Management	DN									DN					
Industrial Supervision						DN			DN						
Job Horizons (Clerical Retraining)										D (c)					
Operational Accounting							DN (d)								
Marketing	DN		DN		DN	DN		DN	DN	DN	DN	DN		DN	
Office Career Training					DN (d)		DN (d)								
Real Estate												DN (c)			
Retail Business Management		DN								DN					
Secretarial Science	DN	DN	D	DN	DN	DN (a)	DN	DN	DN	DN	D	DN	DN	DN	DN
Secretary Trainee					DN (c)										
Transportation and Distribution Management						DN									
Specialized Secretarial Options:															
Educational								DN							
Executive	DN	DN						DN							
Legal	D					D		DN							
Medical	D						D	DN							

PROGRAMS	ATLANTIC	BERGEN	BROOKDALE	BURLINGTON	CAMDEN	CUMBERLAND	ESSEX	GLOUCESTER	MERCER	MIDDLESEX	MORRIS	OCEAN	PASSAIC	SOMERSET	UNION
TECHNOLOGY AND ENGINEERING RELATED															
Apprentice:															
Mechanical									N						
Electrical									N						
Tool and Die									N						
Architectural Drafting									DN (c)						
Architectural Technology							D		DN						
Automotive Technician			DN (a)												
Aviation Technology									DN						D T
Aviation Education									DN						
Aviation Electronics									DN						
Aviation Instrumentation									DN						
Biological Technology										DN					
Chemical Technology		D		D				DN		DN	DN				DN T
Civil Engineering Technology								DN	DN	DN		DN			DN T
Commercial Art									DN						
Communications Media Technology			DN						DN						D T
Computer Technology											DN	DN			
Drafting and Design			DN	DN		DN			DN						
Drafting Technology								DN	DN (c)						
Electrical Engineering Technology					DN		D		DN	DN		DN			DN T
Electrical-Mechanical Technology					DN				DN						DN T
Electrical Power Technology									DN						
Electronic Technology	D		DN	DN	DN				DN		DN				DN T
Fire and Safety Science							DN								
Flight Attendant									DN						
Flight Technology									DN						
Industrial Technology						DN									
Machine Shop Technology									DN						
Mechanical Engineering Technology					DN				DN	DN					
Mechanical Technology											DN				DN T
Quality Control Technology										N (c)					
Scientific Computer Programming							DN			DN					
Visual Communications Technology												DN			

PROGRAMS	ATLANTIC	BERGEN	BROOKDALE	BURLINGTON	CAMDEN	CUMBERLAND	ESSEX	GLOUCESTER	MERCER	MIDDLESEX	MORRIS	OCEAN	PASSAIC	SOMERSET	UNION
PUBLIC SERVICE															
Advanced Water Operations												DN (c)			
Child Care Technology						DN		D							
Corrections Administration										N (c)					
Community and Government Service						DN			DN						
Community Service Technician												DN			
Educational Media Technology				DN											
Educational Technology				DN					DN	DN					
Human Services Aide					DN (c)										
Law Enforcement				DN (c)		DN (c)									
Legal Technology						DN									
Library Assistant			N			N			DN						
Library Technical Assistant				DN (d)											
Mental Health Assistant			DN												
Operation Police Manpower												DN (c)			
Ornamental Horticulture						D			DN						
Police Science - Law Enforcement	DN	DN	DN	DN	DN	DN (a)	N	DN			DN	DN			DN
Public Safety and Service									DN						
Pre-School Teaching			N		DN		DN								
Recreational Leadership							D								
Social Service							DN								
Social Worker Aide				DN	DN		DN		DN						
Social Work Assistant						D									
Teacher Aide	DN		DN		DN	DN (a)			DN	DN (c)		DN			
Volunteers in Probation												DN (c)			
Waste Water Operations												DN (c)			
DEVELOPMENTAL AND PRE-ADMISSION															
General							DN (d)		DN				DN		
Pre-Technical											D				DN

PROGRAMS	ATLANTIC	FERGEN	BROOKDALE	BURLINGTON	CAMDEN	CUMBERLAND	ESSEX	GLOUCESTER	MERCER	MIDDLESEX	MORRIS	OCEAN	PASSAIC	SOMERSET	UNION
TRANSFER															
Architecture									DN						
Business and Accounting	DN	DN	DN	DN	DN	DN	DN	DN	DN		DN	DN		DN	DN
Education	D	DN	DN	DN		DN	DN	DN				DN			DN
Engineering			DN	DN	DN		DN		DN	DN	DN	DN			DN
Health & Physical Education			DN			D	D								
Humanities & Fine Arts	DN		DN	DN			DN		DN		DN	DN	DN		
Industrial Arts												DN			
Liberal Arts & Sciences	DN	DN		DN	DN	DN	DN	DN	DN	DN	DN	DN	DN	DN	DN
Mathematics	DN		DN	DN		DN	DN				DN			DN	DN T
Music	DN		DN				D								
Music Education							D					DN			
Police Science – Law Enforcement	DN			DN	DN		N	DN							DN
Pre-Dental							DN			DN					
Pre-Medical							DN			DN					
Science	DN		DN	DN		DN	DN			DN	DN	DN		DN	DN
Social Sciences	DN		DN	DN			DN				DN	DN	DN		
Theater & Dramatic Arts			DN	D	DN							DN			

The major objective of the Center is to provide an educational program for youth who have been unable to achieve in a typical school due to environmental conditions. The inclusion of the residential component, in addition to occupational and basic education programs, provide planned environmental living.

The 350-student residential Center offers training in 12 occupational areas -- police; transportation (truck driving) and warehousing; auto mechanics; auto body; residential and industrial electricity; commercial and industrial electronics; machine shop; welding; visual communications; carpentry; cooking; and baking.

Basic education ranges from tutoring in remedial reading to the development of computational skills, communicative abilities, and favorable attitudes. Included also is special instruction preparing trainees for the High School Equivalency examination as well as English as a second language.

The students at the Center are men between 16 and 22 years of age and are classified as "hard-core disadvantaged." A student cannot have a history of serious criminal or anti-social behavior that would jeopardize his own safety or that of others.

(2) Newark Manpower Training Skills Center.¹⁰ This Center was established to help solve three problems: (a) the high rate of unemployment in the Newark area where skilled jobs are available; (b) the shortage of skilled workers to fill these job openings; and (c) the need for more area facilities in which to train the unemployed and underemployed in the skills required for these job openings.

The Center currently offers day and evening training in 17 occupations -- baker; brokerage clerk; building service worker; clerical skills: accounts clerk, clerk typist, keypunch operator, medical records, stenographer; cook; duplicating machine operator; electrician's helper; licensed practical nurse; nurse aide; production machine occupations; radio-T.V. service repairman; welder combination; and woodworking machine operator. The courses vary in length from 12 to 52 weeks.

A pre-vocational program allows potential trainees to explore several training areas by participating in on-going classes. When it is determined which occupation trainees are best suited for, they enter the program when a vacancy occurs.

The vocational programs offered at the Center are designed primarily to respond to the demands of the labor force.

Adjacent to the Center is the construction of a new facility -- Project COED (Center for Occupation, Experimentation, and Demonstration). This is a State funded cooperative vocational education, funded entirely by the State and run in cooperation with the Newark Board of Education. This facility will be run on a shared-time basis with the students coming from Newark's public high schools.

(3) Katzenbach School. The Marie H. Katzenbach School for the Deaf is an educational institution under the management of the State Department of Education. It is part of the public school system of the State -- a day and boarding school for deaf residents between the ages of four and twenty-one. While the primary handicap must be deafness, some of the students have other handicaps -- i.e., spastic disability, cerebral palsy, functioning as mentally retarded, etc.

The Katzenbach School offers a comprehensive vocational program to its students. The School is totally funded by the State which also channels federal funds to the institution. It is the only school of its kind with a vocational program approved by both federal and state governments.

In 1965, the Katzenbach School used federal funds to start the first four technical courses for the deaf in the nation. It began offering courses in electricity, heating and ventilating, mechanical drawing and design, and library aides.

The Vocational Departments offer courses in General Shop, Arts and Crafts, Fine Arts, Driver Education, Home Economics, Introduction to Vocations, and 30 trades and occupations listed below.

- | | |
|---------------------------------|---|
| (1) Commercial Food Service | (16) Photography |
| (2) Dressmaking | (17) Photo-Engraving |
| (3) Alterations-Dress Tailoring | (18) Photo Offset Printing |
| (4) Power Machine Sewing | (19) In-Plant Printing |
| (5) Drapery Making | (20) Letterpress Printing |
| (6) Business Training | (21) Linotyping-Manual & Automatic |
| (7) Advanced Business Machines | (22) Upholstery |
| (8) Library Aides | (23) Metal Trades |
| (9) Home Decorating | (24) Wood Trades |
| (10) Hospital Aides | (25) Heating and Ventilating |
| (11) Vocational Homemaking | (26) Auto Body Repair |
| (12) Commercial Art | (27) Electricity |
| (13) Layout and Design | (28) Household Appliance Repair |
| (14) Floriculture | (29) Drafting and Design |
| (15) Horticulture | (30) Related Vocational-Academic Subjects |

There are 163 girls and 186 boys between the ages 11 and 21 who receive instruction daily in the vocational department. All students are New Jersey residents.

Private Facilities. The Division of Vocational Education reports that during FY 1972 there were no significant gains or losses in the operation of the private (or proprietary) vocational schools ¹¹ -- termed "proprietary" because they make profits for their owners. ¹² At the end of FY 1972, a total of 132 private facilities were in operation. This number reflected a net loss of one school since 10 new schools opened and 11 closed.

The total number of students enrolled was 18,079 -- a decrease of one percent from the preceding year. Projected enrollments at the private vocational/technical schools are estimated at 18,731 in 1973 and a projected 22,519 in 1977. ¹³

The private school system has been in operation for over 80 years and conducts vocational programs primarily at the post-secondary education level. Most of the proprietary schools are business education schools; however, some offer training in trade and technical areas, in cosmetology and in modeling.

The private facilities, which receive no State or federal subsidies or funds, have continued their flight from the center cities. During Fiscal Year 1972, Lincoln Technical Institute -- a subsidiary of the Ryder Corporation -- moved from downtown Newark to Union. The Taylor Business School, a subsidiary of I.T.T., has opened a new school in Paramus. ¹⁴

The Private Vocational School Offices at the State level also supervise the operation of New Jersey domiciled correspondence schools. During FY 1972, no new schools were approved; however, the enrollment in the 17 approved schools increased from 27,450 in FY 1971 to 34,635 in FY 1972.

Government Roles In Providing Vocational Education

In providing vocational education, the governments' role is defined in terms of governmental levels -- local/municipal, county and State.

Local/Municipal. Public schools are required to provide an education for everyone, and can elect to provide vocational education. However, there is no State requirement for the provision of such education.

State. The State has several functions in terms of vocational education.

- (a) It serves as a consultative service organization for people who want to provide vocational education.
- (b) It monitors programs to determine and improve program effectiveness.
- (c) It administers and distributes federal and State funds for vocational education.
- (d) It provides on-site visitations for program monitoring as well as for consultation services when problems arise.
- (e) It provides vocational education through three State-operated facilities -- the New Jersey Residential Manpower Center, the Newark Manpower Training Skills Center, and the Marie H. Katzenbach School for the Deaf. Each of these facilities is described in the preceding section.

The State also has the important responsibility to provide vocational education at its correctional institutions. It has been demonstrated that there is a relationship between recidivism and the educational level and vocational skills.¹⁵ Those leaving New Jersey's penal institutions often carry a double handicap -- a criminal record and, too frequently, a lack of skills that may have formed the economic motivation for criminal activity. Many of those released will return to prison.

One way to break the cycle of recidivism is vocational training.

Vocational education is a powerful element in rehabilitation. By teaching proper attitudes, assisting in assessing past performances, and developing goals based on newly acquired skills, it may be possible to reverse anti-social attitudes and to adopt acceptable behavior patterns¹⁶

Vocational training has traditionally been part of prison life, but it must be recognized that if such programs are to serve their purpose, they must provide realistic training for existing, available jobs, and they must be backed up with guidance and placement services of extraordinary effectiveness.¹⁷ The Division of Vocational Education recognizes its responsibility in the area and is prepared to act to improve and expand vocational education in New Jersey's penal institutions.¹⁸

County. At the county level, vocational education is provided primarily through community colleges which are responsible for providing post high school occupational education below the baccalaureate degree. The community college system also has a particular obligation to people who are uncertain about their educational interests or abilities and who, as a result, want to explore a variety of occupational and academic programs.¹⁹

The program emphasis of the county community colleges -- liberal arts or occupational -- depends on a number of factors which may vary from county to county. These factors can include such things as the needs of the county, the cost of a liberal arts vs. occupational program,²⁰ and the educational goals of county residents.

Community colleges should focus on developing a broad range of occupational programs, including transfer occupational programs, terminal two-year programs as well as shorter certificate programs. The latter are particularly important

if the community colleges are to assume an appropriate role in re-training adults and in providing educational opportunities for many high school graduates.²¹ In order to remain comprehensive institutions, however, community colleges should develop an appropriate balance between career and academic programs. While it is undesirable to set any mathematical proportions between these programs, it seems probable that under most circumstances at least 50 percent of all enrollments should be in career programs.

Since many needed occupational programs are expensive and highly specialized, individual counties will not have sufficient populations to provide adequate enrollment to make certain programs economically practical. In order to meet this problem, the county community colleges should develop regional patterns of specialization.²²

Private Sector. The role of the private sector in providing vocational training can be defined as a supplement and/or alternative to such programs available through the public school systems (including State and county facilities). Proprietary schools provide occupational training with little or no academic component and prepare their students for a wide range of careers. Most of the schools are business education schools, but some offer training in trade and technical areas, in cosmetology, and in modeling.

The vocational programs conducted by private schools are primarily on the post-secondary level; however, training is also provided to high school drop-outs who may be frustrated with and disinterested in the academic aspects of school. Veterans often attend proprietary schools to prepare themselves for a new career. There is also a certain portion of the proprietary school clientele who attend because they feel that an education which is "paid for" is superior to that which is available to them "free," through the local school system.

The proprietary school in certain cases also provides vocational instruction under contract to local schools. This is the case when the vocational training is most conveniently and economically available through the private school and is in the best interests of the students served.

FOOTNOTES

CHAPTER IV

1. The area school set-up consists of 35 federally and State supported school districts providing skilled and semi-skilled training. Of the 35 districts, 19 are county vocational-technical systems under the county boards of freeholders. The remaining 16 districts are comprehensive high schools with a minimum of 5 vocational program offerings provided to a predetermined geographic area.
2. New Jersey Department of Education, Division of Vocational Education, 1972-1973 State Plan for Vocational Education, Part I-Administrative Provisions, p. 7.
3. Ibid., p. 6.
4. New Jersey Department of Education, Division of Vocational Education, 1972-1973 State Plan, Part II-Annual and Long Range Program Plan Provisions, pp. 63-64.
5. New Jersey State Department of Education, Division of Vocational Education, New Jersey Annual Descriptive: Report of Program Activities in Vocational Education, Fiscal Year 1972, p. 26
6. Ibid., p. 2
7. See Figure IV-6 for a specific listing of the separate programs under each general area and the community colleges that offer them.
8. New Jersey Department of Higher Education, "Master Plan Number 2, draft," op. cit., Chapter 5, pp. 3 and 15-16.
9. The primary source of this information is a pamphlet put out by the Center entitled "New Jersey Residential Manpower Center -- Edison, New Jersey."
10. The primary source of this information is a pamphlet put out by the Center entitled "Newark Manpower Training Skills Center."
11. New Jersey Division of Vocational Education, 1972 Annual Descriptive, op. cit., pp. 61-62.
12. Time, "Learning for Earning," July 31, 1972, p. 38.
13. New Jersey Division of Vocational Education, 1972-1973 State Plan, Part II, p. 14.
14. New Jersey Division of Vocational Education, 1972 Annual Descriptive, op. cit., p. 62.

15. Commission on Vocational Education in Correctional Institutions, Final Report (Trenton, New Jersey, June, 1972), p. 8.
16. Ibid., p. 10.
17. New Jersey Department of Education, Division of Vocational Education, 1973-1974 New Jersey State Plan for the Administration of Vocational Education, Part II--Annual and Long Range Program Plan Provisions, pp. 57-58.
18. Ibid., p. 58.
19. Department of Higher Education, "Master Plan Number 2, draft," op. cit., Chapter 5, pp. 5, 9.
20. This can be a very important factor since occupational education is significantly more expensive than liberal arts.
21. New Jersey Department of Higher Education, "Master Plan Number 2, draft," op. cit., Chapter 5, p. 15.
22. Ibid., p. 16.

VOCATIONAL EDUCATION AND COLLEGE

National Trends

As indicated by newspaper and magazine articles -- as well as by enrollment figures and projections -- a national trend seems to be developing away from a college education and towards a more marketable vocational education. As of September 1972, there were an estimated 300,000 unfilled places in the colleges and universities scheduled to reopen. A survey by the National Association of College Admissions Counselors indicated that about 1,500 colleges still had room for 175,000 students in their freshman classes and 125,000 transfer students in upper classes. Almost 9 out of 10 Roman Catholic and other private sectarian schools still had openings; public and private non-sectarian colleges, 7 out of 10.¹

Applications at colleges for the 1973-1974 school year were also down. A survey conducted by The Association of American Colleges found that of its 451 members -- most of them private institutions -- only one-fourth had more applicants than in 1972; The National Association of State Universities and Land Grant Colleges reported that applications to the nation's 109 major state university systems and campuses had dropped off by 4.2 percent -- the first overall decline in ten years.² The U.S. Office of Education predicts that this decline will translate into a fall enrollment of 9.2 million -- roughly the same as the 1972-1973 school year.³ It should be noted, however, that it is not the elite colleges or the great State universities that are hurting. The pinch is being felt mostly by the small independent institutions.

According to educators, declining college enrollments are primarily attributed to the following five factors:⁴

- (1) A smaller number of 18-year-olds in the country. The large number of babies born after World War II have already completed college.
- (2) The absence of a military draft has resulted in fewer young men going to college to get educational deferments.
- (3) The rising cost of a college education is primarily affecting middle-income families (an annual average of \$3,280 for resident students at private four-year schools).⁵
- (4) A questioning of the value of a liberal-arts education as opposed to shorter, less expensive vocational training. (Liberal arts can no longer be considered viable vocationally; it is simply considered preparation for graduate school.)⁶
- (5) "Stopping out," the newest factor in reduced enrollment. Many high-school graduates are postponing their entrance into college in order to travel or get some work experience. Thousands more are quitting college temporarily for the same purpose.

While many liberal arts colleges languish or go out of business for lack of students and money, vocational schools are booming. Among the chief beneficiaries of this trend are the nation's 9,000 proprietary schools -- privately owned, profit-making institutions. In ten years these schools have grown to about 1 million students, or about 10 percent of the U.S. population enrolled in higher education.⁷

Proprietary schools train students for a wide range of careers -- from fashion modeling to computer programming to flying All share a businesslike outlook: compared with standard college programs, the proprietary schools' training courses are short (often less than a year) and tuition is cheap (about \$1.50 per classroom hour as against the colleges' \$4.00 or more).⁸

Job placement is much more important to both the schools and their students than an impressive degree. Moreover, the proprietary school responds more rapidly to change than most public colleges. Public education takes three years to do what the proprietary school can do in three months.

The trend towards vocational/occupational education and away from the four-year college institutions also includes the increase in popularity of the two-year community colleges. High college costs and the feeling that a college degree will no longer automatically increase their economic status is causing many students to commute to cheaper two-year community and technical colleges near their homes. Enrollments at these schools rose 5.4% in 1972 and are expected to have increased by the same proportion in 1973.⁹

The steady growth in the number and enrollment of two-year colleges are positive testimony that these institutions have fulfilled a definite need in our society.¹⁰ The burgeoning two-year college movement is, in fact, becoming a keystone of the new approach to vocational education.¹¹ Vocational education is steadily pulling out of the role as a "step-child" to four-year college education, as a dumping ground for pupils considered incapable of coping with academic work, and is being regarded as one of several ways of preparing for a career. It is in this sense that the community college plays a primary role in serving those people who are uncertain about their educational interests or abilities and who consequently want to explore a variety of occupational and academic programs.¹²

Further, in the light of present-day employment statistics, the role of the community college in providing occupational education becomes clearer still.

The high rate of unemployment in the U.S. is especially tragic when compared with the demand for semi-professional, technical workers. An estimation based on data indicates that, in the years immediately ahead, some 200,000 technicians will be needed annually. A big task of the community college, then, is to provide vocational and technical curricula which will prepare the student to fill vacancies in the semi-professional and vocational fields.¹³

Occupational education is a major function of the comprehensive community college. In terms of numbers served, it may become the foremost function.

Although there are variations from State to State, the typical community college is described by experts as meeting the following criteria:

- (1) locally situated and controlled, with sufficient State participation to maintain standards;
- (2) admitting all students who can benefit by a program;
- (3) charging little or no tuition to people who live in the community;
- (4) having almost the entire student body commute to the facility;
- (5) comprehensive in its programs, with an increasing number of technical and semi-professional courses; and
- (6) providing services to aid under-educated students of post-high-school age.¹⁴

The theme of equality of opportunity is at the heart of the movement towards community colleges. The development of human resources instead of material resources is the primary emphasis. For this reason and many others, the two-year colleges are growing about twice as fast as any other part of higher education. It is reasonably certain that this growth not only will continue, but will be augmented even more in the years ahead.¹⁵

National Trends and New Jersey

The trends being felt nationwide in vocational and college education are also being experienced in New Jersey. Some four-year college enrollments are down, enrollment projections are down, attendance at community colleges is on the upswing, and many vocational education programs are over-subscribed.

Four-year college enrollments. In September 1972, Rutgers University enrolled some 38,353 students -- an increase of 1,489 over 1971. However, this enrollment proved to be more than 1,000 students short of the figures the university was counting on to justify its subsidy from the State.¹⁶ Two undergraduate divisions of the University showed declines in full-time enrollment -- the College of Engineering in New Brunswick and the Newark College of Arts and Sciences. Livingston College and Rutgers College, both in the New Brunswick area, registered increases, but they were not as large as expected. Only the College of Agriculture and Environmental Science, the College of Pharmacy, and the nursing school met or topped enrollment goals in the undergraduate division. The College of South Jersey missed its goal by 194 students.

On the graduate level, the law schools in Camden and Newark went beyond their enrollment goals, as did the Graduate School of Social Work. The Graduate School of Business Administration, on the other hand, fell 213 students short of the 1,381 it had expected to enroll.

In March 1973, it was reported that Rutgers-Newark -- at the new \$30 million campus with an enrollment capacity of 13,000 -- had an enrollment of only 7,500 students.¹⁷ There is 52,000 square feet of unused space at Rutgers-Newark, although some of this surplus is caused by old buildings that have been vacated for the new campus facilities.

Along with enrollment declines at Rutgers, the undergraduate enrollments at other colleges and universities in New Jersey -- both public and independent (private) -- showed a definite decline from 1971 to 1972 after increasing from 1969 to 1970 and from 1970 to 1971.

FIGURE V-1
 UNDERGRADUATE ENROLLMENT IN NEW JERSEY
 FOUR-YEAR COLLEGES
 NEW JERSEY RESIDENTS ONLY

Year	PUBLIC INSTITUTIONS			IND. INSTITUTIONS			Grand Total
	Full-time	Part-time	Total	Full-time	Part-time	Total	
1970	48,261	30,547	78,808	25,125	15,658	40,783	119,691
1971	54,299	32,315	86,614	25,756	13,671	39,427	126,041
1972	61,826	23,884	85,710	25,311	11,904	37,215	122,925

Source: New Jersey Department of Higher Education, Office of Research, Trenton.
 Table: "Enrollment in New Jersey Colleges and Universities, 1970, 1971, 1972."

This decline in enrollments has also been felt at the graduate and first professional level, although only at the public institutions. The independent institutions have measured a consistent year-to-year increase since 1970.

FIGURE V-2
 GRADUATE AND FIRST PROFESSIONAL ENROLLMENT
 IN NEW JERSEY

Year	PUBLIC INSTITUTIONS			IND. INSTITUTIONS			Grand Total
	Full-time	Part-time	Total	Full-time	Part-time	Total	
1970	4,903	19,628	24,531	3,450	8,056	11,506	36,037
1971	5,670	20,850	26,520	4,383	7,980	12,363	38,883
1972	5,814	19,348	25,162	4,444	8,604	13,048	38,210

Source: New Jersey Department of Higher Education, Office of Research, Trenton.
 Table: "Enrollment in New Jersey Colleges and Universities, 1970, 1971, 1972."

While as a total group the public and independent four-year colleges and universities measured an enrollment decline from 1971 to 1972, the picture is different when considering the public and private institutions separately. The independent institutions have had increasingly declining enrollments since 1969. This is directly in line with the statement that the nationwide enrollment-decline pinch is being felt mostly by the small independent schools.¹⁸ On an individual basis, three of New Jersey's smaller private schools have registered consistent enrollment increases -- Drew, Princeton, Felician -- but, except for Princeton, none of the increases are significant.

The public institutions as a group showed an enrollment decline only from 1971 to 1972. However, this decline -- a net loss of 1,726 New Jersey residents and a total loss of 1,670 students including out-of-state students -- included both substantial increases at some schools and large losses at others, the most notable of which is at Newark State. It should also be noted that part of the enrollment increases is due to the opening of two new State colleges -- Ramapo and Stockton. (See Figure V-3)

It is difficult to precisely pin-point the reason(s) for the enrollment declines. However, it is most probable that the declines are very much reflective of nationwide trends.

Enrollment projections. In 1971, New Jersey was just tipping the "export" balance so that for the first time in decades more of the State's undergraduates were attending college inside the State than outside it.¹⁹ Since then, however, a wide variety of factors -- including a dropoff in college applications and the end of the draft -- have cast uncertainty on college-level enrollment projections in New Jersey.

Colleges and Universities	1970 Change from 1969 Enrollment		1971 Change from 1970 Enrollment		1972 Change from 1971 Enrollment	
	New Jersey Residents Only	Out-of-State plus N.J. Residents	New Jersey Residents Only	Out-of-State plus N.J. Residents	New Jersey Residents Only	Out-of-State plus N.J. Residents
Public						
NCE	+ 65	+ 57	- 337	- 310	- 316	- 327
Glassboro	+ 738	+ 791	+ 674	+1006	-1700	-1826
Jersey City	+ 430	+ 431	+ 476	+ 455	- 464	- 530
Montclair	+ 76	+ 50	+2119	+3126	+1152	+1227
Newark	+6480	+7515	+ 355	+ 302	-4056	-4002
Paterson	- 373	- 436	+ 354	+ 359	+1593	+1600
Ramapo	-----Not Open	-----	+1498	+1526	+ 789	+ 820
Stockton	-----Not Open	-----	+ 953	+ 987	+ 801	+ 820
Trenton	+ 182	+ 221	+ 690	+ 611	+ 475	+ 448
NET TOTAL:	+7598	+8629	+6782	+7172	-1726	-1670
Independent						
Alma White	- 38	- 44	- 30	- 29	- 26	- 27
Bloomfield	+ 70	+ 59	+ 90	+ 82	- 152	- 143
Caldwell	+ 125	+ 132	+ 15	- 30	- 14	+ 24
St. Elizabeth's	- 31	- 56	- 43	- 75	+ 7	- 9
Don Bosco	- 18	- 10	+ 4	+ 2	- 1	- 14
Drew	+ 45	+ 71	+ 67	+ 81	+ 78	+ 98
Fairleigh Dickinson	- 439	- 167	- 469	- 432	- 910	- 795
Felician	+ 151	+ 48	+ 36	+ 45	+ 4	+ 1
Georgian Court	+ 41	+ 23	+ 4	+ 3	+ 2	- 27
Immaculate C.S.	+ 107	+ 107	- 3	- 3	- 147	- 147
Monmouth	- 113	+ 123	- 446	- 430	- 665	- 904
N.E. Col. Bible	- 21	- 21	- 9	- 6	+ 42	+ 28
Princeton	+ 12	+ 299	+ 116	+ 258	+ 62	+ 129
Rider	+ 185	+ 182	- 348	- 336	- 191	- 342
St. Peter's	- 772	- 801	- 331	- 350	- 78	- 95
Seton Hall	-1263	- 272	- 9	- 60	- 10	- 50
Shelton	- 4	- 22				
Stevens	+ 36	+ 19	- 27	- 101	- 46	- 74
Upsala	+ 18	+ 34	+ 109	+ 77	- 211	- 254
Westminster	+ 9	- 29	+ 10	+ 12	+ 16	+ 34
NET TOTAL:	-1900	-323	-1264	-1292	-2211	-2567
GRAND TOTAL:	+5698	+8306	+5518	+5880	-3937	-4237

*Not including Rutgers; includes both full-time and part-time students.

Source: New Jersey Department of Higher Education, Office of Research, Trenton. Table: "Enrollment in New Jersey Colleges and Universities, 1970, 1971, 1972," adapted.

Current projections are down 7% from the figures estimated as part of the Department of Higher Education's master plan in July 1972. This is a drop of 14,000 full-time students from the 213,000 who were expected to fill the State's colleges and universities in 1980.²⁰ However, 24,090 spaces beyond those already in existence or being built will still be needed by 1980 to meet the most recent enrollment projections. The largest demand for these spaces -- 15,311 of them -- is expected at two-year community colleges.

Community colleges. Attendance at community colleges in New Jersey is definitely increasing. As of September 15, 1972, there were 16 county community colleges and 8 private community/junior colleges in operation.

At the county community colleges, both full-time and part-time enrollments have been increasing steadily -- from a total of 37,861 students in 1969 to 59,715 students in 1972. At the independent institutions, enrollments increased steadily until 1972 when there was a net total decline of 245 students; this total included a decrease of 326 full-time students and an increase of 81 part-time students. (See Figure V-4, following page)

However, even though there has been an increase in enrollments at community colleges, this increase may not be significantly reflective of a trend away from the four-year college institution and towards vocational education -- at least in New Jersey. This trend may be attributed to several factors:

(1) Much of the enrollment increase is due merely to the fact that the community colleges are in existence now and were not before. Additional increases will be felt as each new college opens. (See Appendix, Figure I for individual school enrollment changes.)

FIGURE V-4
COMMUNITY COLLEGE ENROLLMENT
IN NEW JERSEY
NEW JERSEY RESIDENTS ONLY

Year	PUBLIC INSTITUTIONS			INDEPENDENT INSTITUTIONS			Grand Total
	Full-time	Part-time	Total	Full-time	Part-time	Total	
1969	20,617	17,244	37,861	1,378	684	2,062	39,923
1970	24,455	21,846	46,301	1,708	762	2,470	48,771
1971	29,052	24,835	53,887	1,799	833	2,632	56,519
1972	30,798	28,917	59,715	1,473	914	2,387	62,102

Source: New Jersey Department of Higher Education, Office of Research, Trenton.
Table: "Enrollment in New Jersey Colleges and Universities, 1970, 1971, 1972."

(2) To date, the community college is a place for people uncertain of their goals and for people who would otherwise not go to college. Many of these students may elect to take the career programs but their attendance at the school is not automatically to be construed as a step in that direction. In many cases, these students may find the community college to be the open door to higher education.

(3) Community colleges have also largely been places for qualified students who wanted to attend a four-year public college and were denied admission because of lack of space. These students enroll in transfer programs, and about 60% of them do transfer to four-year institutions.

(4) The actual enrollments in the career programs are not conclusive. Many of these students may have enrolled because of parental pressure. That is, many students may be forced to enroll in an occupational program because an "academic" program is considered worthless in the marketplace; such an enrollment may be very much contrary to the student's own wishes. This element, plus those

students who voluntarily enroll in the occupational programs but find dissatisfaction with them, may well account in large part for those students who transfer to four-year institutions from the occupational programs -- a little under 50% of the career program enrollment.

Since New Jersey still exports a large number of its higher education students -- about 43%²¹ -- no clear cut pattern in community college attendance can really be determined until there is a greater freedom of choice in college attendance. That is to say, until there are more spaces available at all levels of higher education so that the majority of students at each given level of education -- whether it be at the community college or four-year institution -- are there as a result of choice of and not because of lack of space elsewhere, the primary role of the community college in the trend towards occupational education cannot be precisely determined.

Vocational education. In keeping with a nationwide trend, vocational education is doing well in New Jersey. Enrollments totalled 254,690 students in the 1971-1972 school year and are projected to a total of 308,241 in the 1972-1973 school year.

Although no statistics are available from the Division of Vocational Education to indicate the extent to which vocational education programs are oversubscribed, there are other indications.²²

(1) The Middlesex County Vocational System recently opened a facility in East Brunswick with a capacity of about 1,200 students. This school has been constantly oversubscribed and, as a result, the Vocational System is planning to build another facility.

FIGURE V-5
VOCATIONAL EDUCATION ENROLLMENTS

School Year	Public Sector*	Private Vocational/ Technical Schools	Grand Total
1971-1972	238,429	16,261	254,690
1972-1973	289,510	18,731	308,241
1976-1977	317,449	22,519	339,968

*Includes secondary 9-12, post-secondary, adult, and special needs.

Source: New Jersey Department of Education, Division of Vocational Education, 1972-1973 State Plan for Vocational Education, Part II-Annual and Long Range Program Plan Provisions, p. 14.

(2) Essex County operates a "shared-time" center -- where part of the day is spent in the high school and part in the vocational center -- that has also been oversubscribed to the point where the county is now trying to expand the facilities.

(3) Camden County is expanding its facilities to meet the demand for vocational education and training.

(4) The vocational education programs in comprehensive high schools are also experiencing oversubscription and increased popularity.

Much of this growth has occurred within the past ten years, due not only to a gradual movement away from the "necessity" of a four-year college education, but also to a greater availability of federal and state funds for vocational education since 1963. These funds helped make it possible for schools to purchase necessary equipment and expand their facilities and programs to meet vocational needs.

The private sector is also experiencing oversubscription in certain areas of training. For example, a decrease in the demand for draftsmen has greatly slowed down these programs. Increased demand for tractor-trailer drivers -- due in large part to the decline of railroads and small airports as shipping modes -- is causing these programs to boom and, therefore, to attract more applicants than there are enrollment spaces. Training programs for paramedical personnel are also very popular; however, many computer schools have closed due to their oversaturation of the market with computer people.

New Jersey is experiencing a definite trend in increased popularity of vocational education. Even among veterans there has been a decided trend towards a "non-academic", vis a vis academic, education, especially in the past five years. There is also a considerable degree of transfer from college to vocational training.

Of course, it should be kept in mind that a certain element of those enrolled in vocational programs -- especially at the secondary level -- may be enrolled for personal rather than professional reasons. For example, a person may elect to take typing and/or shorthand not because he/she wants to be a secretary but because it will be of personal use, whether at school or on the job.

Why Vocational Education Is Needed

Today's society requires technical personnel trained in twentieth century skills. Good jobs with good salaries exist for those trained in electronics, computer programming, appliance repairs, mechanics, and drafting. Growing numbers of technicians are also needed in the paramedical fields. The nation is experiencing a shortage of physical therapists, X-ray technicians, lab assistants, and operating room attendants.²³ It has been estimated that in the years immediately ahead, some 200,000 technicians will be needed annually.²⁴

In its own right, New Jersey is facing a shortage of skilled and technical manpower in almost all of the seven vocational fields -- agriculture, distribution and marketing, health occupations, home economics, office occupations, technical, and trade and industry. Many occupational groups are in need of more trained personnel due to replacement factors and an increase in new jobs.²⁵ (See Section IV, Problems -- "Demand and Supply" for a specific description of excesses and deficits in the labor supply.)

Nevertheless, with this demonstrated need for skilled and technical labor, the average unemployment rate in New Jersey during 1971 was recorded at 7 percent of the State's work force.²⁶ The unemployed are disproportionately represented by youth, by the undereducated, and by non-whites. About 60 percent of the unemployed never finished high school. This high rate of unemployment at a time when there is a great demand for semi-professional technical workers clearly indicates the need for comprehensive and realistic employment-oriented education in the schools, primarily at the secondary level.

The need for good vocational education is extensive, and the fact that it is in short supply is aggravating some pressing social problems. The Council²⁷ cites unemployment as an important cause of unrest and violence prevalent in the nation today.

.
For students not planning to attend college, vocational education is preferable to the high school's "general" course . . . Not only is the unemployment rate lower among vocational graduates, but they get jobs faster, are better satisfied with their jobs, and keep jobs longer than comparable graduates of other high school programs.²⁸

It is vital that we reshape our educational system to meet the career demands of the astonishingly complex technological society we live in. The greatest harm done by overemphasis on college preparation is that it wastes the potential of many young people. The notion that college offers the only avenue to success often leads to the idea that one is a failure without such education at an early age.²⁹

While public schools may not always be able to turn out graduates ready to enter the work force, they can provide the background essential for further training. This preparation should include first-rate, up-to-the-minute training in vocational education, and cooperative programs with local industries should be developed wherever possible.³⁰

Programs of this orientation are particularly crucial in New Jersey in areas where there is (1) a high percentage of dropouts, grades 7-12; (2) a high percentage of households with incomes under \$3,000 per year (economically depressed); (3) a high rate of unemployment; (4) a high rate of youth unemployment, ages 16-21. Not surprisingly, most of these factors occur together in the same general geographical areas (See following maps).

Of those students currently in high school, only three out of ten will go on to academic college-level work; and half of these will drop out before getting a baccalaureate degree. Therefore, eight out of ten presently enrolled high school students should be getting occupational training of some sort. Unfortunately, only two of these eight are, in fact, getting such training.³¹ On the basis of these statistics, enlightened vocational education is very much needed.

Effect of Vocational Education on Demand for College Spaces

Although enrollments and projections at four-year colleges are down while attendance at community colleges and vocational schools is up, it is very difficult to assess the specific impact that vocational education has on the demand for college spaces. No studies in this area have been undertaken by the Department of Higher Education and too many varied factors are involved in the student declines at four-year institutions to be able to isolate the impact of one element. However, since vocational education is booming, it is reasonable to assume that it does have some effect on college enrollments.

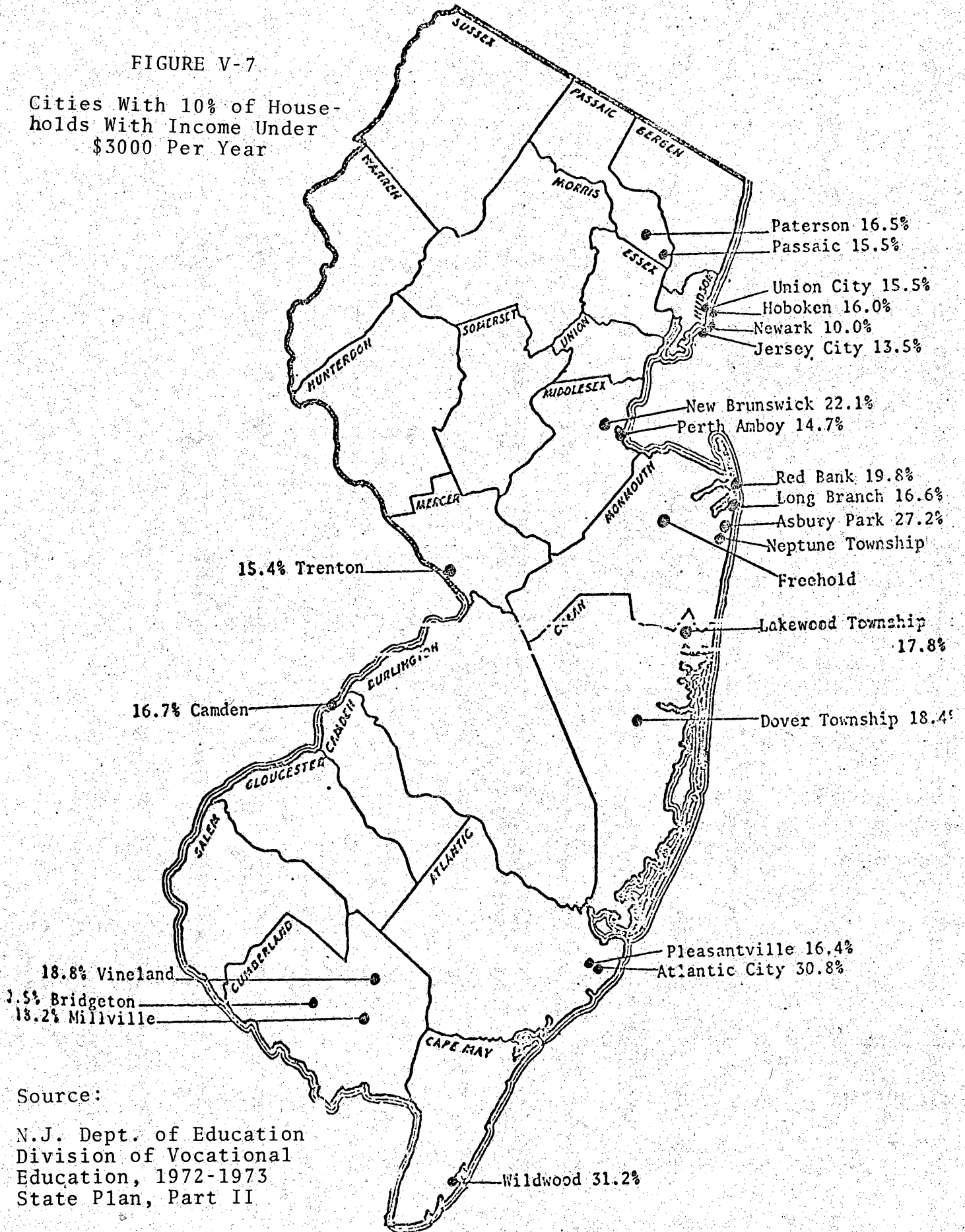
Moreover proposals to build two or three new state colleges have not been under active discussion for some time. No planning money for new state colleges is included in the FY 1974 state budget, and the following trends have been observed:

- (1) State college construction, except at the new Ramapo and Stockton State Colleges, is essentially complete and adequate to meet planned enrollment goals;
- (2) Community college predictions would indicate a need for 15,000 spaces by 1980;
- (3) Rutgers University has an excellent modern plant adequate to meet enrollment demand, but improvements in the use of existing space should remain a high priority.³²

Such a slowdown in college space construction must be due in some part to a greater acceptance of vocational education -- both at the secondary school level and as a post-secondary alternative. However, since the effect vocational education is having on the demand for college spaces is not really known, this is an area requiring further extensive research.

FIGURE V-7

Cities With 10% of Households With Income Under \$3000 Per Year



Source:

N.J. Dept. of Education
Division of Vocational
Education, 1972-1973
State Plan, Part II

FIGURE V-8
Areas Of Economic
Depression

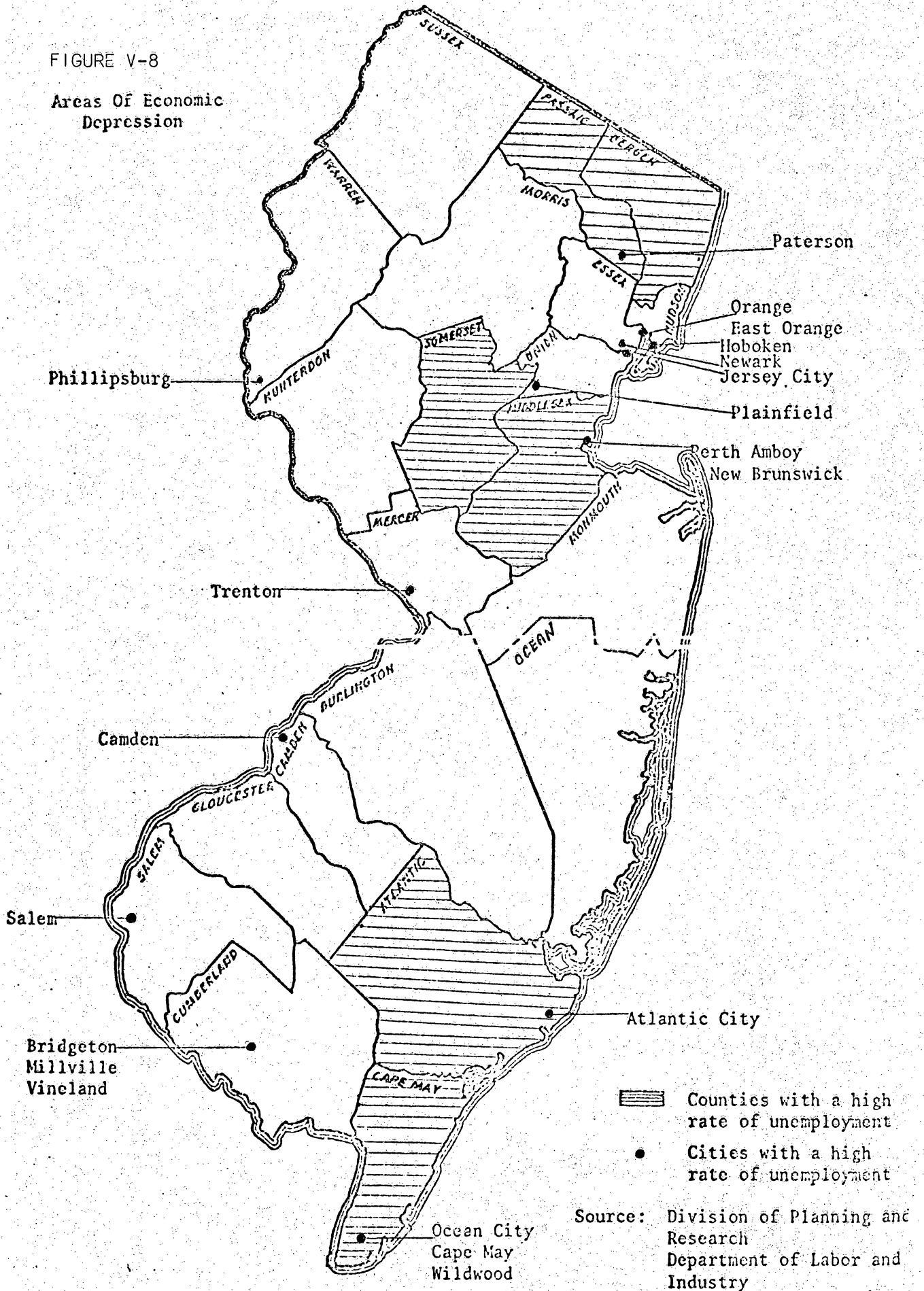
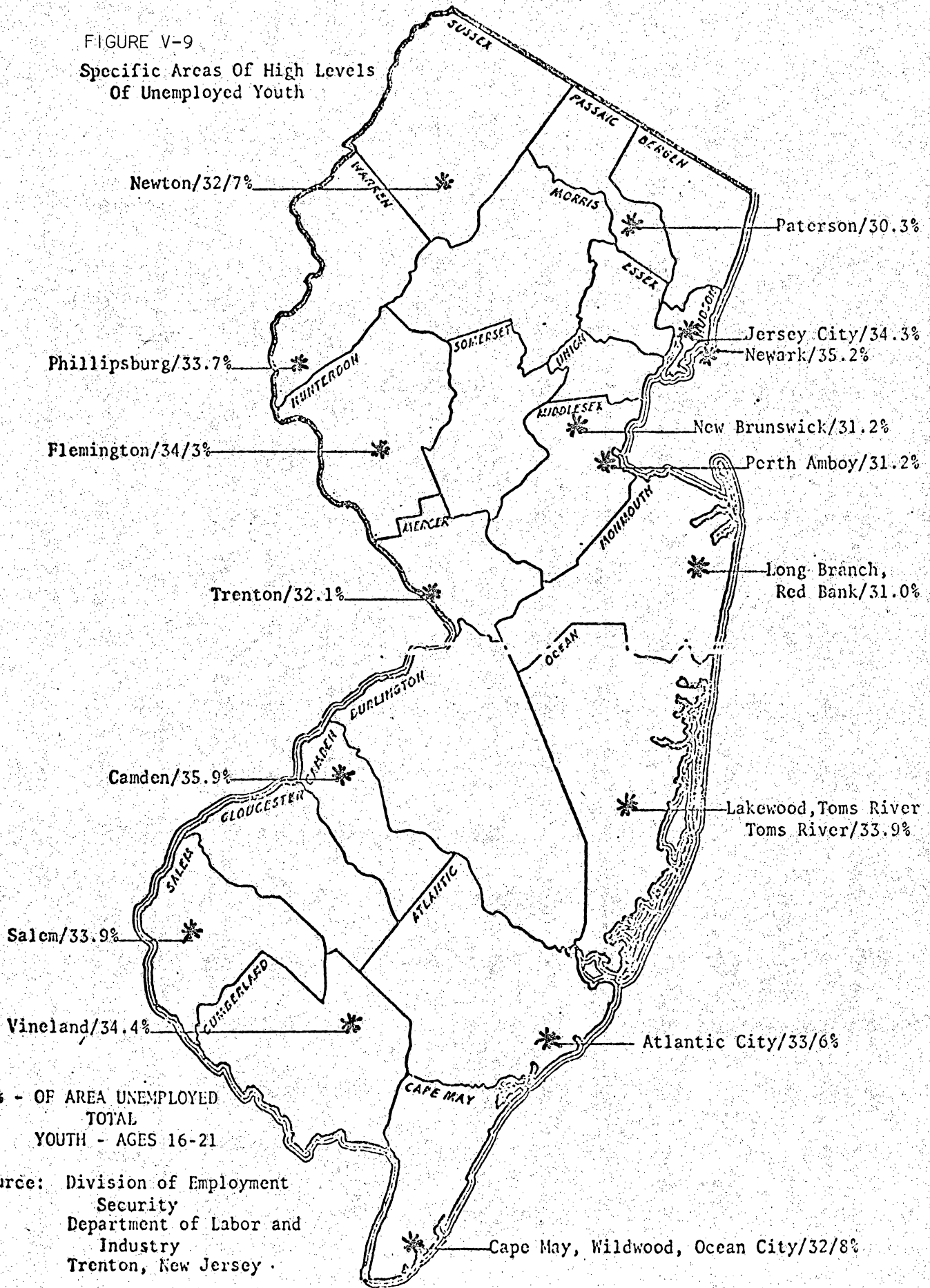


FIGURE V-9
Specific Areas Of High Levels
Of Unemployed Youth



* - OF AREA UNEMPLOYED
TOTAL
YOUTH - AGES 16-21

Source: Division of Employment
Security
Department of Labor and
Industry
Trenton, New Jersey

FOOTNOTES

CHAPTER V

1. U.S. News and World Report, "300,000 College Vacancies-Why," September 4, 1972, p. 36.
2. Time, "Wanted: More Students," April 30, 1973, p. 70.
3. Even though there has been a 4.2% decline in applications, this could be reflective of greater confidence by high school seniors about getting into their first-choice colleges. In this case, there would be fewer applications to second-choice schools than there were in the fiercely competitive 1960's, thereby causing an overall decline in applications. A prediction of an enrollment roughly equivalent to the 1972-73 school year takes this into account. Time, *ibid.*
4. U.S. News and World Report, *ibid.*
5. Time, "Wanted: More Students," *op. cit.*
6. U.S. News and World Report, "After Graduation-Then What?" August 28, 1972, p. 34.
7. Time, "Learning for Earning," July 31, 1972, p. 38.
8. Ibid.
9. Time, "Wanted: More Students," *op. cit.*
10. Richard J. Frankie and Eugene E. DuBoise, "Junior Colleges: The Community-Junior College in Historical and Cultural Perspective," School and Society, January 1971, p. 45.
11. Newsweek, "Learning to Earn," August 30, 1971, p. 75.
12. New Jersey Department of Higher Education, "New Jersey Master Plan for Higher Education-Number 2," December 1970-draft, Chapter 5, p.9.
13. Milton K. Reimer, "Areas of Concern for Comprehensive Community Colleges," School and Society, January, 1971, p. 47.
14. U.S. News and World Report, "Community Colleges-New Frontier in Education," May 5, 1969, p. 66.
15. Frankie and DuBois, op. cit., p. 47.

16. The Evening Times, "Rutgers Pondering Weak Enrollment," (Trenton, New Jersey, October 16, 1972), p. 7.
17. Sunday Times Advertiser, "New Jersey Shortchanging Rutgers," (Trenton, New Jersey, March 18, 1973), p. 3.
18. U.S. News and World Report, "300,000 College Vacancies-Why," op. cit., p. 36.
19. Ramona Smith, "Dungan Tells College Builders to Cool It," Evening Times, (Trenton, New Jersey, April 20, 1973), p. 36.
20. Ibid.
21. Ibid.
22. Mr. Harold Seltzer, Director, Bureau of Occupational Research Development, Division of Vocational Education, Department of Education, May 1973.
23. Elizabeth Duncan Koontz, "New Priorities and Old Prejudices," Today's Education-NEA Journal, March 1971, p. 25.
24. Milton K. Reimer, "Areas of Concern for Comprehensive Community Colleges," op. cit., p. 47.
25. New Jersey Department of Education, Division of Vocational Education, 1972-1973 State Plan for Vocational Education, Part II-Annual and Long Range Program Plan Provisions, p. 52.
26. Ibid., pp. 72-73.
27. National Advisory Council on Vocational Education, 1968.
28. Donald S. Rosser, "Vocational Education Seen Failing to Prepare Youth for Careers," Sunday Times Advertiser, (Trenton, New Jersey September 21, 1969), p. 7.
29. Elizabeth Duncan Koontz, op. cit., p. 25.
30. Ibid.
31. Maggie Clampitt, "Vocational Education is Defended," The Courier-News (Plainfield, New Jersey, May 2, 1973), p. B-7.
32. Ramona Smith, op. cit., p. 36.

VI

PROBLEMS OF VOCATIONAL EDUCATION
IN NEW JERSEY

Many problems are being experienced in the delivery of vocational education services to New Jersey residents, including (1) insufficient monies; (2) adaptation of equipment; (3) personnel and staffing; (4) demand vs. supply; and (5) services to the handicapped.

Insufficient monies. A major problem faced by Vocational Education as well as many other governmental agencies is the lack of sufficient funds to meet all the needs and requests of the State. For the 1972-1973 school year, the requested funds for operating vocational education programs -- in community colleges and secondary schools (which include county vocational education facilities as well as the regular high school programs) -- totaled \$56 million. Only about \$10 million was available to meet these requests -- a lowly 18 percent. The 1971-1972 school year saw requests totaling about \$30 million with approximately the same amount -- \$10 million -- available to meet the requests.

Each year the amount of funds requested has increased, due in part not only to inflationary costs, but also to an evolving awareness on the part of many that a college education is not necessary for, and often times is not even conducive to, satisfactory and rewarding employment.

Adaptation. An essential and important part of vocational education is its equipment, especially with regard to the technical, trade, and industry occupations. However, technological change is taking place so rapidly that it

is difficult to appropriately update the equipment when there are such limited funds available. This problem of adaptation becomes even more acute when considering that much of the equipment necessary for appropriate vocational training is very expensive.

Personnel and staffing. Personnel is a significant problem in several areas as described below.

(1) Technical, Trades, and Industry. Most people interested in vocational teaching in this area of specialization are coming directly from industry -- due, in part, to industrial cutbacks. Six years of experience are required before they can obtain a teaching certificate; however, emergency teaching certificates are available. The certificates are provided to those persons who do not have the required college education for a teacher's certificate, with the provision that the person take four credits per year until the education requirement is met.

FIGURE VI-1
TECHNICAL, TRADES, AND INDUSTRY NEW PERSONNEL
PROJECTED SUPPLY AND DEMAND

Category	Year	Number Needed ¹	Number Supplied ²	Net Difference	
				Number	Percent
(1) Technical	1972-1973	49	---	- 49	100% deficit
Trades and Industry...	1972-1973	187	136	- 51	27% deficit
(2) Technical	1973-1974	50	12	- 38	76% deficit
Trades and Industry...	1973-1974	192	151	- 41	21% deficit
(3) Technical.....	1974-1975	52	32	- 20	38% deficit
Trades and Industry...	1974-1975	196	176	- 20	10% deficit
(4) Technical.....	1975-1976	53	53	---	----
Trades and Industry...	1975-1976	200	200	---	----

In Figure VI-1, "number needed" includes personnel who will not be available from previous year due to attrition and who must be replaced (replacement) --The additional positions for which personnel are needed due to growth and expansion (new staff). "Number supplied" refers to new personnel, as opposed to those currently employed and those expected to be employed by a school system as of June 30 of the following school year, available from State teacher education programs for the entire year who are expected to enter the State system as well as those available from other sources (i.e., industry).

(2) Office Occupations. This specialization is the largest vocational education program in the State since virtually every school offers some type of office training. For this reason, it is difficult to keep the supply of teachers up to the complete demand. The deficits in personnel are projected to be as follows:

FIGURE VI-2
OFFICE OCCUPATIONS NEW PERSONNEL
PROJECTED SUPPLY AND DEMAND

School Year	Personnel Needed	Supply	Net Difference	
			Number	Percent
1972-1973	377	233	-144	38% deficit
1973-1974	386	269	-117	30% deficit
1974-1975	394	331	- 63	16% deficit
1975-1976	400	392	- 8	2% deficit

Source: New Jersey Department of Education, Division of Vocational Education, 1972-1973 State Plan, Part II, pp. 119-122; adapted.

(3) Cooperative, Disadvantaged, Handicapped Vocational Education.

Because the thrust of these programs is relatively new, few people have been trained to teach in these areas. This problem is especially acute when considering that all these areas are undergoing big expansions.

The term "disadvantaged" is defined primarily in an academic as opposed to a financial sense, although there is a close correlation between the two. The handicapped population served by vocational education programs is primarily the retarded.

The personnel deficits projected for each of these programs are:

FIGURE VI-3
NEW PERSONNEL FOR COOPERATIVE, DISADVANTAGED, HANDICAPPED PROGRAMS
PROJECTED SUPPLY AND DEMAND

Program/Purpose	School Year	Personnel Needed	Supply	Net Difference	
				Number	Percent
Cooperative	1972-1973	110	18	-92	84% deficit
Disadvantaged	1972-1973	50	32	-18	36% deficit
Handicapped	1972-1973	37	27	-10	27% deficit
Cooperative	1973-1974	113	49	-64	57% deficit
Disadvantaged	1973-1974	52	38	-14	27% deficit
Handicapped	1973-1974	38	30	-8	21% deficit
Cooperative	1974-1975	121	79	-42	35% deficit
Disadvantaged	1974-1975	54	49	-5	9% deficit
Handicapped	1974-1975	39	33	-6	15% deficit
Cooperative	1975-1976	119	110	-9	8% deficit
Disadvantaged	1975-1976	57	57	---	-----
Handicapped	1975-1976	40	40	---	-----

Source: New Jersey Department of Education, Division of Vocational Education, 1972-1973 State Plan, Part II, pp. 119-122, adapted.

In Figure VI-3, "personnel needed" refers to the same replacement personnel that were noted in reference to Figure VI-1; "supply" also refers to the same new personnel that were noted in reference to Figure VI-1.

Demand and Supply. A significant problem being faced by vocational education is the fact that the projected demand for the kinds of manpower produced by vocational education programs greatly exceeds the projected supply. This is especially distressing in light of the fact that the 1971 annual average employment rate for New Jersey was recorded at 7% of the work force -- a clear demonstration that there is need for some kind of employment-oriented programs which could in part be met by vocational education.

An analysis of New Jersey's employment opportunities as related to vocational education programs shows that in 1973 there will be 74,123 persons supplied by vocational education to fill the needs for 130,501 persons -- a 43% deficit in the labor supply. This total percentage takes into account a wide range of net differences between labor need and labor supply, from an 89% deficit in home economics occupations to a 29% excess in health occupations.

FIGURE VI-4
ESTIMATED EMPLOYMENT OPPORTUNITIES RELATED TO VOCATIONAL EDUCATION PROGRAMS, 1973

Institutional Program	YEAR 1973		Net Difference	
	Labor Need*	Labor Supply**	Number	Percent
(1) Agriculture	2,106	886	- 1,220	58% deficit
(2) Distribution and Marketing	15,796	7,681	- 8,115	49% deficit
(3) Health Occupations	4,353	5,612	+ 1,259	29% <u>excess</u>
(4) Home Economics	7,572	842	- 6,730	89% deficit
(5) Office Occupations	44,633	36,086	- 8,547	19% deficit
(6) Technical	5,532	6,501	+ 969	18% <u>excess</u>
(7) Trade and Industry	50,509	16,515	-33,994	67% deficit
TOTAL:	130,501	74,123	-56,378	43% deficit

*Includes total expansion and replacement need.

**Includes vocational education output from other sectors. The vocational education output takes into account the occupational output of community colleges.

Sources: New Jersey Department of Education, Division of Vocational Education, 1972-1973 State Plan, Part II, p. 4, adapted.

The Division of Vocational Education has projected that in 1977 there will be a supply of only 84,144 persons to meet a 137,846 person need -- a 39% deficit in the labor supply. This percentage takes into account the range of an 88% deficit in home economics occupations to a 32% excess in health occupations.

FIGURE VI-5
EMPLOYMENT OPPORTUNITIES RELATED TO VOCATIONAL EDUCATION PROGRAMS
PROJECTED YEAR 1977

Instructional Program	Labor Need*	Labor Supply**	Net Difference	
			Number	Percent
(1) Agriculture	2,095	940	- 1,155	55% deficit
(2) Distribution and Marketing	16,607	8,496	- 8,111	49% deficit
(3) Health Occupations	4,732	6,255	+ 1,523	32% <u>excess</u>
(4) Home Economics	8,145	958	- 7,187	88% deficit
(5) Office Occupations	47,533	39,917	- 7,616	16% deficit
(6) Technical	5,814	7,402	+ 1,588	27% <u>excess</u>
(7) Trade and Industry	<u>52,920</u>	<u>20,176</u>	<u>-32,744</u>	<u>62% deficit</u>
TOTAL:	137,846	84,144	-53,702	39% deficit

*Includes total expansion and replacement need.

**Includes vocational education output as well as output from other sectors.

Source: New Jersey Department of Education, Division of Vocational Education, 1972-1973 State Plan, Part II, p. 4, adapted.

Certain trends can be pointed out from these analyses of 1973 and 1977 projected labor needs vs. labor supply:

(1) Home economics occupations and trade and industry occupations are consistently in the greatest need of a larger labor supply, with only a slight decrease in the deficit from 1973 to 1977. In terms of trade and industry this can be partially explained by the slow adaptation of vocational education programs to rapidly changing technology as well as to the difficulty of obtaining certified teaching personnel due to the experience requirements. The deficit in home economics may be due in part to the fact that the term "home economics " includes many different types of jobs, a great number of which are low-paying and which are not traditionally included under that category -- i.e., waitress, food service, etc.

(2) The labor supply for health occupations and technical occupations is excessive for both 1973 and 1977, with an increase from 29% in 1973 to 32% in 1977 for health occupations and from 18% in 1973 to 27% in 1977 for technical occupations. In terms of health occupations, the excess can be largely attributed to the fact that an earlier expressed need for great numbers of health paramedicals never materialized into the many jobs that were expected; hence, an over-supply of people trained for the health occupations. The Division of Vocational Education has been unable to pinpoint the reason(s) for the excesses. However, it is possible that rising costs and prices have forced potential employers of technical personnel to cut back on the number of employees and/or slow down on expansions.

It is important that in those areas for which training has provided an over-supply of job seekers, many of the skills learned in the program are immediately transferrable to other vocations with a minimum of on-the-job training. As an attempt to combat the problem of producing those "excesses," the Division of Vocational Education has been advising the schools of those areas in which an excess labor supply is anticipated of the probability that programs in these "over-supplied" areas will most likely not be funded. However, the schools can, since they are autonomous, offer these programs anyway.

(3) The labor supply deficits for all other vocational education instructional programs are fairly constant. (See Figure VI-6, next page.)

Vocational Education for the Handicapped. Providing vocational education for the handicapped is a special problem for the Division of Vocational Education. As a federal requirement for funds, 10% of the appropriation allocated to Vocational Education must go to serve the handicapped. In New Jersey, how-

ever, the vocational programs for the handicapped are being run primarily for the mentally retarded because most school buildings have not been constructed to accommodate the physically handicapped. Moreover, the Division of Vocational Education does not presently have the expertise to deal with the severely physically handicapped.

FIGURE VI-6
AGRICULTURE, DISTRIBUTION AND MARKETING, OFFICE OCCUPATIONS
LABOR SUPPLY DEFICITS

Program	Percentage Deficit 1973	Percentage Deficit 1977	Net Difference
Agriculture	58%	55%	- 3%
Distribution and Marketing	49%	49%	----
Office Occupations	19%	16%	- 3%

Source: New Jersey Department of Education, Division of Vocational Education, 1972-1973 State Plan, Part II, p. 4, adapted.

The total handicapped school population represents some 14% of the kindergarten -- 12th grade (K-12) school population. Only 36,800, or about 18%, of the estimated 202,612 (K-12) handicapped population are currently being served in special education programs. Of the total in these special programs, 34% between the ages of 14 and 20 years are being served in vocational education.²

In FY 1972, vocational services were provided by the Division of Vocational Education to handicapped students in the following areas:

(1) special programs including Employment Orientation and Cooperative Employment Orientation which were operated by the Bureau of Special Needs;

(2) modified regular programs which were operated through other bureaus within the Division; and

(3) special projects which aimed at providing training for vocational teachers of handicapped students.³

A total of 4,547 handicapped students were served in these programs. The breakdown of enrollment by handicap can be seen in Figure VI-7.

To date, no applications for vocational education program funding have been received for the visually handicapped. The deaf are being well served through a comprehensive vocational program at the Marie H. Katzenbach School for the Deaf. The Katzenbach School is the only one of its kind with a vocational program approved by both state and federal governments. To the extent that a deaf individual may also be physically handicapped, the Katzenbach School also serves the physically handicapped, provided that the primary handicap is deafness.

Vocational rehabilitation programs are offered through the Rehabilitation Commission in the Department of Labor and Industry for several categories of the handicapped, including blind; visually impaired; deaf; hard of hearing; mentally retarded; epileptic; amputations and orthopedics; cerebral palsied; mentally ill; other character, personality, and behavioral disorders; alcoholism; drug addiction; heart disease; speech impairments; digestive system disorders; and the broad, unenumerated category of "all other disabilities."

The New Jersey Commission for the Blind has a very comprehensive program of vocational rehabilitation for the blind and visually impaired. The vocational rehabilitation department within the Commission makes available all services mandated under the federal Vocational Rehabilitation Act, which Act governs all vocational rehabilitation in the country.

The services provided by the Commission for the Blind include the following: counseling and guidance; physical restoration (not limited only to the eyes); diagnosis and evaluation; pre-vocational exploration; vocational training; work adjustment; on-the-job training; equipment and supplies for employment; appropriate training tools where indicated; orientation mobility (using public transportation and walking with a cane); job placement; and follow-up. The pre-vocational exploration deals with general areas and includes all forms of psychometric and psychological testing. Vocational training, however, is specific skill training. Included in this training are professional areas that would need two years or four years of college or more (i.e. law school), and the full range of "technical" areas -- clerical; industrial; service; menial; sheltered shops; and home-bound employment. All training is for jobs that are in accordance with the Dictionary of Occupational Titles. Services are provided to persons ages 16 and up with no upper limit. Extra efforts are expended each year to help people who are on public assistance. And, further, another effort is being made to help people receiving Social Security disability payments due to visual impairment; the Commission attempts to rehabilitate them so as to remove them from the Social Security rolls.

The New Jersey Commission for the Blind strongly emphasizes the fact that because a person is blind does not mean that that person is suited only to particular types of jobs. Virtually any kind of job is open to those who have the aptitude and who have acquired the proper skills.

FIGURE VI-7

ENROLLMENT OF HANDICAPPED BY TYPE OF HANDICAP

PROGRAM	TOTAL	CLASSIFICATION OF DISABILITY *												
		EMR	TMR	DEAF	HH	CD	PI	OH	ED	SM	D	NI	R	
TOTALS	4,547	2,896	705	55	65	13	25	9	228	106	290	195	10	
Employment Orientation	3,085	1,883	538	55	60	5	17	2	157	37	152	169	10	
Vocational Industrial Education	151	90	15	--	--	-	--	-	20	15	20	1	--	
Introduction to Vocations	316	180	60	--	5	-	--	6	15	15	20	15	--	
Health	23	18	5	--	--	-	--	-	--	--	--	--	--	
Distributive Education	15	10	--	--	--	-	--	-	--	--	5	--	--	
Agriculture	143	80	25	--	--	3	3	1	6	5	15	5	--	
Office Occupations	107	65	20	--	--	-	--	-	--	2	20	--	--	
Consumer Homemaking	15	10	2	--	--	-	--	-	--	--	3	--	--	
Technology for Children	132	90	20	--	--	5	5	-	2	5	5	--	--	

* CODE: EMR-Educable Mentally Retarded, TMR-Trainable Mentally Retarded, DEAF-deaf, HH-Hard of Hearing, CD-Communication Disorder, PI-Perceptually Impaired, OH-Orthopedically Handicapped, ED-Emotionally Disturbed, SM-Socially Maladjusted, D-Disadvantaged, NI-Neurologically Impaired, R-Regular (Non-Special Needs)

Source: N.J. Department of Education, Division of Vocational Education, New Jersey Annual Descriptive: Report of Program Activities in Vocational Education, Fiscal Year 1972, p.19

Because there are a significant number of children of school age in New Jersey who need special facilities -- for regular as well as for vocational education -- because of the severity of their handicaps, there is a great need for education facilities designed to serve the handicapped. In recognition of this need, and because of the financial, transportation, and other special problems involved in the education of such children, Governor William T. Cahill signed a bill in May, 1973,

.....authorizing the creation of a debt of the State of New Jersey by the issuance of bonds of the State in the sum of \$25,000,000.00 for facilities for the education ofseverely handicapped children,.....⁵

This bond issue was passed by the voters in the November, 1973 election. The resulting capital will be used to expand and renovate the Marie H. Katzenbach School for the Deaf and for the construction of up to five day-school facilities to be operated by the State for the education of severely handicapped children. The day-schools will provide regular education plus some vocational education curriculums.

FOOTNOTES

CHAPTER VI

¹ New Jersey Department of Education, Division of Vocational Education, 1972-1973 State Plan, Part II, p. 8.

² ibid., p. 21.

³ New Jersey Department of Education, Division of Vocational Education, New Jersey Annual Descriptive: Report of Program Activities in Vocational Education, Fiscal Year 1972, pp. 16-17.

⁴ New Jersey Senate Bill No. 180.

⁵ ibid., p. 1.

VII

EFFECT OF VOCATIONAL EDUCATION PROGRAMS
ON STATE EXPENDITURES

State Aid to Vocational Education

The amount of aid given by the State for vocational education depends on the specific program involved. Most programs have some requirement for the matching of federal funds by State and/or local funds.

State Programs, Part B. Part B of the Vocational Education Amendments of 1968, Public Law 90-576, is concerned with making education and training programs in career vocations available for all individuals, in all communities of the State, who desire and need such education and training. Regular vocational education programs are being offered in the areas of agricultural education, distributive education, health occupations education, occupational home economics, office occupations education, technical education, and vocational industrial education.¹

Under State Programs, Part B, -- the only section of the Vocational Education Act (P.L. 90-576) that is broken out by categories and percentages of funds required by categories -- matching is on a 50% federal, 50% State and/or local basis. Federal funds are allocated to local educational agencies in a manner which result in at least one dollar of State and local funds being expended, statewide, for each dollar of federal funds expended under the State Plan for vocational education programs, services, and activities under Part B of the Act.² Specific percentages of the allocations are designated as follows:

(1) At least 15% of the total allotment for any fiscal year of funds appropriated for Part B, Title I, of the Act, or 25% of that portion of the State's allotment which is in excess of its base allotment, whichever is greater, shall be used only for vocational education for disadvantaged persons (P.L. 90-576, Sec. 102(a)).

(2) At least 15% of the total allotment for any fiscal year of funds appropriated under Part B, Title I, of the Act, or 25% of that portion of the State's allotment which is in excess of its base allotment, whichever is greater, shall be used only for post-secondary vocational education (P.L. 90-576, Sec. 102(a)).

(3) At least 10% of the total allotment for any fiscal year of funds appropriated under Part B, Title I, of the Act shall be used only for vocational education for handicapped persons (P.L. 90-576, Sec. 102(a) and Sec. 122(a)(4)(B)).³

(4) An allocation of 25% of the funds is designated for facilities construction.

(5) The remaining 35% of the funds is for administration, supervision, and other regular programs.

The extent of Federal, State, and local funding for Part B, State Vocational Education Programs can be seen in Figure VII-1.

FIGURE VII-1
FEDERAL, STATE, AND LOCAL EXPENDITURES
STATE VOCATIONAL EDUCATION PROGRAMS
PART B

Year	Federal Funds	State/Local Funds	Total
1972	10,907,361	26,609,914	37,517,275
1973*	10,308,874	29,017,450	39,326,324
1974*	10,837,793	30,632,315	41,470,108
1978*	13,005,352	36,758,777	49,764,129

*Estimates

Source: (1) N.J. Department of Education, Division of Vocational Education, 1972 Annual Descriptive, p. 21

The following table, Figure VII-2, shows the amount of Federal and State and local expenditures for FY 1972 for Part B programs serving secondary, post-secondary, adult, disadvantaged, and handicapped students in vocational education.

TABLE VII-2

FEDERAL, STATE, AND LOCAL EXPENDITURES IN
STATE VOCATIONAL EDUCATION PROGRAMS FY 1972
PART B

	<u>Secondary</u>		<u>Post-secondary</u>		<u>Adult</u>	
	<u>Federal</u>	<u>State/Local</u>	<u>Federal</u>	<u>State/Local</u>	<u>Federal</u>	<u>State/Local</u>
TOTAL-Part B	8,961,000	22,919,000	1,811,000	2,176,000	136,000	1,514,000
Secondary	2,505,000	12,073,000				
Post-secondary			1,800,000	2,161,000		
Adult					124,000	1,514,000
Disadvantaged	1,781,000	1,158,000	11,000	15,000	7,000	
Handicapped	1,196,000	787,000			5,000	
Construction	3,479,000	8,901,000				
Guidance and Counseling	(192,000)	(409,000)			(3,000)	(25,000)
Ancillary Services	(2,182,000)	(1,859,000)	(66,000)	(60,000)		(154,000)

TOTAL EXPENDITURES

	<u>Total</u>	
	<u>Federal</u>	<u>State/Local</u>
TOTAL-Part B	10,907,361	26,609,914
Secondary	2,505,433	12,072,650
Post-secondary	1,800,000	2,160,810
Adult	124,127	1,514,399
Disadvantaged	1,798,204	1,173,361
Handicapped	1,200,000	787,289
Construction	3,478,907	8,901,405
Guidance and Counseling	(195,424)	(434,100)
Ancillary Services	(2,247,933)	(2,073,702)

Source: New Jersey Department of Education, Division of Vocational Education, New Jersey Annual Descriptive Report of Program Activities in Vocational Education, Fiscal Year 1972, p. 21.

In the next five years, the federal and State-designated areas of economic depression will be the key target areas for the State. Within these target areas are located many of the federal and State Model Cities which have also been a matter of concern for the Division. The school dropout rate, crime, welfare, and unemployment rates are high in all the target areas. There is a definite need for expanded and improved vocational education programs to help the people in these areas who need and can profit from the instruction.⁴ Figure VII-3 shows expenditures for vocational education for Jersey City and Newark; both these cities are, for funding purposes, economically depressed.

Section 102(b) State Programs Disadvantaged. This section contains the same kinds of programs for the disadvantaged that are included in Part B. The difference is that Section 102(b) requires no State matching, whereas Part B does.

The estimated extent of funding for this program is as follows:

FIGURE VII-4
ESTIMATED GOVERNMENT FUNDING
SECTION 102(b) - STATE PROGRAMS DISADVANTAGED

Year	Federal Funds	State/Local Funds	Total
1973	818,885	0	818,885
1974	864,448	0	864,448
1978	1,037,338	0	1,037,338

Source New Jersey Department of Education, Division of Vocational Education, 1973-1974 State Plan, Part II, Table 6.

FIGURE VII-3
FEDERAL, STATE, AND LOCAL EXPENDITURES IN
STATE VOCATIONAL EDUCATION PROGRAMS
PART B, FISCAL YEAR 1972

ECONOMICALLY DEPRESSED AREAS: JERSEY CITY AND NEWARK

(Jersey City)

	Secondary		Post-secondary		Adult	
	Federal	State/Local	Federal	State/Local	Federal	State/Local
TOTAL-Part B	124,000	64,000	---	-----	1,000	-----
Secondary		2,000	---	-----	---	-----
Post-secondary	----	----	---	-----	---	-----
Adult	----	----	---	-----	1,000	-----
Disadvantaged	58,000	62,000	---	-----	---	-----
Handicapped	66,000	----	---	-----	---	-----

(Newark)

	Secondary		Post-secondary		Adult	
	Federal	State/Local	Federal	State/Local	Federal	State/Local
TOTAL-Part B	221,000	781,000	167,000	76,000	15,000	74,000
Secondary	11,000	602,000	-----	-----	-----	-----
Post-secondary	-----	-----	167,000	76,000	-----	-----
Adult	-----	-----	-----	-----	15,000	74,000
Disadvantaged	140,000	119,000	-----	-----	-----	-----
Handicapped	70,000	60,000	-----	-----	-----	-----

TOTAL EXPENDITURES

	Jersey City		Newark	
	Federal	State/Local	Federal	State/Local
TOTAL-Part B	125,203	64,375	403,891	930,533
Secondary		2,262	11,382	602,038
Post-secondary			166,695	75,838
Adult	1,386		15,180	73,574
Disadvantaged	58,219	62,088	140,324	119,355
Handicapped	65,598	25	70,310	59,728

Source: New Jersey Department of Education, Division of Vocational Education, New Jersey Annual Descriptive: Report of Program Activities in Vocational Education, Fiscal Year 1972.

For the 1973/1974 school year, the distribution of funds is estimated to be as follows:

Federal	-----	\$564,448
State	-----	0
Local	-----	<u>300,000</u>
TOTAL		\$864,448

Research and Training, Part C. This program is concerned with vocational education research and the training of teachers and other vocational education personnel. The research projects are primarily concerned with the development of systems to improve the delivery, quality, and availability of vocational education to the residents of New Jersey.

Part C is funded by 90% federal, 10% State and/or local funds.

Figure VII-5 shows the estimated extent of funding at the government levels.

FIGURE VII-5
ESTIMATED GOVERNMENT EXPENDITURES
PART C - RESEARCH AND TRAINING

Year	Federal funds	State and Local	Total
1973	241,712	28,900	270,612
1974	254,114	221,000	475,114
1978	304,937	265,200	570,137

Source: New Jersey Department of Education, Division of Vocational Education, 1973-1974 State Plan, Part II, Table 6.

For the 1973/1974 school year, the distribution of funds is estimated as follows:

Federal	-----	\$254,114
State	-----	221,000
Local	-----	<u>0</u>
TOTAL:		\$475,114

Exemplary Programs, Part D. This section contains the Technology for Children project and some of the State's Career Education programs. Technology for Children is designed to aid learners in gaining a better self-awareness, while engaged in activities involving technology and the world of work. The Career Education programs have numerous objectives, designated as follows at each educational level:⁵

(1) Elementary level

- a. Expand elementary program components of Career Education;
- b. Increase the number of Career Education programs designed to serve the disadvantaged and handicapped in elementary schools;
- c. Improve the quantity and quality of counseling in elementary level Career Education programs;

(2) Secondary level

- a. Increase the number of secondary Career Education program components;
- b. Provide intensive entry level job preparation, including short-term skill development, counseling, and behavior modification for existing high school students;
- c. Develop model programs which provide direct hands-on experiences at area vocational-technical school sites for non-goal oriented students entering high school;

(3) Post-secondary level

- a. Develop model programs which would provide counseling, direct hands-on experiences;
- b. Placement at community college sites for non-goal oriented high school upperclassmen;

(4) Adult preparatory

- a. Develop programs which would assist those adults seeking to establish and maintain careers through guidance counseling, skill training, and placement.

Several objectives have also been developed for the entire continuum of Career Education in New Jersey:⁶

(1) Develop curriculum materials which can be infused into an inter-disciplinary basis into existing pre-K through Adult continuums;

(2) Implement LEA (Local Education Agency) self-evaluation of Career Education through use of guidelines developed by the Division of Vocational Education;

(3) Identify and review existing cognitive, effective, and psycho-motor instruments that are appropriate for all levels of Career Education;

(4) Utilize services of third-party evaluation contractors to determine Career Education program outcomes and assess transportability potential;

(5) Development of comprehensive Career Education options and models having transportability potential and coordinated planning for maximum utilization of Federal, State, and LEA fiscal resources required for expansion of comprehensive Career Education projects;

(6) Implement Career Guidance within all levels of existing comprehensive Career Education projects by 1973-1974 through cooperative State and LEA planning and to field test site selection initiated in FY 1972 and to be completed in FY 1973;

(7) Supplement instructional activities through effective strategies for use of multi-media at all levels of Career Education;

(8) Establish school linkages with business and industry, to identify available business-industry resources appropriate for Career Education, and to establish an economical and effective system for school-industry cooperation through a regional approach.

Exemplary programs, Part D, requires no matching. Figure VII-6 shows the estimated extent of funding at the government levels.

FIGURE VII-6
ESTIMATED GOVERNMENT EXPENDITURES
PART D - EXEMPLARY PROGRAMS

Year	Federal Funds	State and Local	Total
1973	185,340	843,705	1,029,045
1974	187,286	1,209,000	1,396,286
1978	224,743	1,450,800	1,675,543

Source: New Jersey Department of Education, Division of Vocational Education, 1973-1974 State Plan, Part II, Table 6.

For the 1973/1974 school year, the distribution of funds is estimated to be as follows:

Federal	-----	\$ 187,286
State	-----	1,184,000
Local	-----	25,000
TOTAL:		<u>\$1,396,286</u>

Consumer and Homemaking Education, Part F. Consumer and homemaking education refers to those programs designed to help individuals and families improve home environments and the quality of personal and family life. This educational category includes instruction in food and nutrition, child development, clothing, housing, family relations, and management of resources with emphasis on selection, use, and care of goods and services, budgeting, and other consumer responsibilities.⁷

Matching for Part F is on a 50% federal, 50% State and/or local funds basis for two-thirds of the allocation. Assurance must be provided that at least one-third of the federal funds allotted to the State under Part F of the Act shall be used for Consumer and Homemaking Education programs in economically depressed areas or areas with high rates of unemployment.⁸ Figure VII-7 shows the estimated extent of funding at the government levels.

FIGURE VII-7
ESTIMATED GOVERNMENT EXPENDITURES
PART F - CONSUMER AND HOMEMAKING EDUCATION

Year	Federal Funds	State and Local	Total
1973	688,031	505,000	1,193,031
1974	723,357	510,000	1,233,357
1978	868,028	612,000	1,480,028

Source: New Jersey Department of Education, Division of Vocational Education, 1973-1974 State Plan, Part II, Table 6.

For the 1973/1974 school year, the distribution of funds is estimated as follows:

Federal	-----	\$ 723,357
State	-----	10,000
Local	-----	500,000
TOTAL:	-----	<u>\$1,233,357</u>

Cooperative Education, Part G. Cooperative vocational education refers to a work-study program of vocational education for persons who, through a cooperative arrangement between the school and employers, receive instruction, including required academic courses and related vocational instruction by the alternation of study in school with a job in any occupational field, but these two experiences must be planned and supervised by the school and employers so

that each contributes to the student's education and to his employability.⁹ This program is to be distinguished from the Vocational Work Study program, Part H.

Part G requires no Statewide matching. Figure VII-8 shows the estimated extent of funding at the government levels.

FIGURE VII-8
ESTIMATED GOVERNMENT EXPENDITURES
PART G - COOPERATIVE EDUCATION

Year	Federal Funds	State and Local	Total
1973	479,602	1,004,943	1,484,545
1974	485,978	1,100,000	1,585,978
1978	583,174	1,320,000	1,903,174

Source: New Jersey Department of Education, Division of Vocational Education, 1973-1974 State Plan, Part II, Table 6.

For the 1973/1974 school year, the distribution of funds is estimated as follows:

Federal	-----	\$ 485,978
State	-----	700,000
Local	-----	400,000
TOTAL		<u>\$1,585,978</u>

Work-Study, Part H. The Vocational Work Study program provides wages for needy vocational students between the ages of 15 and 20 who work outside of school hours for public agencies only. No educational credits are awarded for participation in this program.¹⁰ The purpose of the program is to enable needy students to remain in school. Whenever possible, the job assigned to a pupil is related to the particular training being received.

Figure VII-9 shows the estimated extent of funding at the government levels.

FIGURE VII-9
ESTIMATED GOVERNMENT EXPENDITURES
PART H - WORK STUDY

Year	Federal Funds	State and Local	Total
1973	187,103	200,000	387,103
1974	183,756	400,000	583,756
1978	220,507	480,000	700,507

Source: New Jersey Department of Education, Division of Vocational Education, 1973-1974 State Plan, Part II, Table 6.

For the 1973/1974 school year, the distribution of funds is estimated as follows:

Federal	-----	\$ 193,756
State	-----	400,000
Local	-----	0
TOTAL:	-----	\$ 593,756

Summary, Parts B-H. Figure VII-10 shows the estimated extent of funding at the government levels for all programs. A complete breakdown can be seen in Appendix, Figure 4.

FIGURE VII-10
TOTAL ESTIMATED GOVERNMENT EXPENDITURES
ALL VOCATIONAL PROGRAMS

Year	Federal Funds	State and Local	Total
1973	12,627,545	31,882,000	44,509,545
1974	13,246,732	34,372,315	47,619,047
1978	15,896,000	41,234,856	57,130,856

Source: New Jersey Department of Education, Division of Vocational Education, 1973-1974 State Plan, Part II, Table 6.

For the 1973/1974 school year, the distribution of funds for all programs is estimated as follows:

Federal	-----	\$ 13,246,732
State	-----	12,172,315
Local	-----	22,200,000
	TOTAL:	<u>\$ 47,619,047</u>

A complete breakdown by program for the 1973/1974 school year is included in the Appendix, Figure 5.

The expenditures of vocational education funds by geographical location -- both general location and economically depressed areas -- can be seen in Figure VII-11.

State Aid to Community-Colleges. The State pays \$600 per FTE (full-time equated student) to the county community colleges. A full-time equated student is defined as the sum of all full-time students taking twelve or more credit hours per semester, plus all part-time students equated on the basis of 30 student credit hours per FTE.

Costs at the community colleges run about \$1500 per student. Tuition pays about one-third the cost, the State pays \$600 per FTE, and the County meets the rest of the needs through the County Board of Freeholders. As costs have increased, the State share -- limited by law to a maximum of \$600 per FTE -- has decreased on a percentage basis. The share of costs provided by the students in the form of tuition and fees has remained relatively constant, even though tuition rates at the community colleges have steadily crept upward. The most dramatic shift in costs has been in the county share, which, unlike the State and student shares, is not limited by an upper ceiling. The counties, which in 1968-1969 accounted for 25% of operating costs, will be providing about 30% of operating income in 1972-1973.¹¹

FIGURE VII-11
EXPENDITURES OF VOCATIONAL EDUCATION FUNDS
BY GENERAL LOCATION

<u>Location</u>	<u>Federal</u>	<u>State/Local</u>	<u>Total</u>
SMSA	\$ 7,993,833	\$17,886,513	\$25,880,346
Central City ¹	1,009,326	1,637,935	2,647,261
Non-SMSA	<u>5,580,647</u>	<u>11,081,037</u>	<u>16,661,684</u>
TOTAL: ²	\$ 13,574,480	\$28,967,550	\$42,542,030

EXPENDITURES OF VOCATIONAL EDUCATION FUNDS
ECONOMICALLY DEPRESSED AREAS

<u>Location</u>	<u>Federal</u>	<u>State/Local</u>	<u>Total</u>
SMSA	\$ 1,338,745	\$ 2,144,102	\$ 3,482,847
Central City ¹	953,435	1,548,508	2,501,943
Non-SMSA	<u>464,742</u>	<u>593,180</u>	<u>1,057,922</u>
TOTAL: ²	\$ 1,803,667	\$ 2,737,282	\$ 4,540,769

¹This is a duplicated count since the central city would of necessity be part of either the SMSA or non-SMSA; however, for federal funding purposes the "central city" breakdown has to be included.

²These totals are the sums of the SMSA funds and the non-SMSA funds only since the central city funds are duplicated counts.

Source: New Jersey Department of Education, Division of Vocational Education, 1972 Annual Descriptive, p. 20. The figures represent totals for all parts of the Vocational Education Amendments of 1968 (P.L. 90-576).

County colleges may receive state support for capital projects approved by the Board of Higher Education in amounts not to exceed one-half of the costs of the projects. Capital funds have been authorized for construction of facilities, including fixed and moveable equipment, initial acquisition of library books and miscellaneous office and instructional equipment in support of expanding enrollments and new instructional programs.¹²

County college projects totaling \$209 million have so far been authorized by the Board of Education. Further, a total of \$9,250,212 worth of capital projects have received Board of Higher Education approval, to be funded under the provisions of Chapter 12, P.L. 1971.

In FY 1973, the State expended \$28,747,484 in support to the county community colleges.¹³ This amount was based on the figures below.

(1) An FTE enrollment of 47,364. At \$600/FTE this amounts to a total of	\$28,207,200
(2) A prior year adjustment (FY 70-71) of \$540,284	<u>540,284</u>
TOTAL:	\$28,747,484

For the fiscal year ending June 30, 1974, the Department of Higher Education requested the following amounts for State Aid for County Colleges:

(1) Capital projects	\$ 1,539,000
(2) Operational costs	<u>31,006,408</u>
TOTAL:	\$32,545,408

This total amount was recommended by the State Bureau of the Budget for appropriation. The amount actually needed in FY 74 will be determined -- with the appropriate adjustment -- when the actual enrollment figures are obtained.

Although the fiscal information is available on the extent of State aid to county community colleges in general, no information is available on the amount of State funds that goes to career/occupational programs specifically. Therefore, it is not possible to determine the role that State expenditures to community colleges play in the overall State subsidization of vocational education.

At present, a bill is being developed for "differentiated funding," i.e., a different level of funding for liberal arts, one for health, and one for other occupational programs. Such levels of funding are needed to provide appropriate funds for the more expensive career programs because of lack of funds. This can be a particularly troublesome problem when considering that a liberal arts program is significantly less expensive to provide than are most health and occupational programs.

Aid to State-Operated Facilities. The Marie H. Katzenbach School for the Deaf is the only facility operated by the State that is totally State-funded. Both the New Jersey Residential Manpower Center and the Newark Manpower Training Skills Center receive their funds from the federal government.

The Katzenbach School has received the following adjusted appropriations from the State:

<u>Fiscal Year</u>	<u>Adjusted Appropriation</u>	<u>Numerical Change Over Preceding Year</u>	<u>Percentage Change Over Preceding Year</u>
1973	\$ 2,995,202	+ 148,154	+ 5.2%
1972	2,847,048	- 31,510	- 1.1%
1971	2,878,558	+ 647,194	+ 29.0%
1970	2,231,364	+ 251,916	+ 13.0%
1969	1,979,448	-----	

Aid to State facilities will be expanded, however, with the beginning of operation COED -- a totally State funded cooperative vocational education program run in cooperation with the Newark Board of Education.

Cost of Vocational Education Facilities

In the continuing effort to meet the occupational needs of students, their communities, and our current technological society, the Division of Vocational Education encourages the expansion of the area vocational-technical schools (AVTS). From 1965 through 1971, a total of 21 AVTS facilities -- full-time plus shared-time -- were constructed at a total cost of \$76,036,262; of this total, \$30,640,782 came from State and Federal reimbursement,¹⁴ including funds from the Economic Development Administration. (See Appendix, Figure 2, for a specific listing.)

FIGURE VII-12
AREA VOCATIONAL-TECHNICAL SCHOOL
FACILITY COSTS
(Separate Buildings)

Year Construction Began	Number of Facilities		Total Cost For All Facilities
	Full-time	Shared-time	
1965	1	1	\$ 6,484,918
1966	0	0	0
1967	2	1	10,978,249
1968	4	1	31,326,032
1969	0	4	3,704,602
1970	1	1	12,137,322
1971	1	4	11,405,139
	<u>9</u>	<u>12</u>	<u>\$76,036,262</u>

Source: New Jersey Department of Education, Division of Vocational Education, 1972 Annual Descriptive, pp. 28, 29 - adapted.

The total capacity of these facilities is 9,390 full-time and 4,760 shared-time students for a combined total of 14,150 students. In general, the full-time facilities are more expensive to construct than shared-time facilities. This is because the full-time facility includes such things as a gymnasium, cafeteria, etc., that are usually excluded from a shared-time facility. However, in certain instances where the shared-time facility provides training in a field where equipment is expensive, such a facility can cost more than a full-time facility.

In FY 1972, eight construction projects were started; the estimated completion date for most of them is 1973. The cost of these facilities totalled \$15,910,444.

FIGURE VII-13
CONSTRUCTION PROJECTS STARTED IN FY 1972

Facility	Estimated Completion Date	Eligible Total Cost	Type of Construction
(1) Atlantic County AVTS Mays Landing	1973	\$ 4,254,170	New Construction
(2) Cape May County AVTS Cape May Court House	1973	642,000	Expansion, alteration or remodeling
(3) Essex County AVTS East Orange	1973	-----	New construction
(4) Mercer County AVTS Trenton	1973	2,800,000	New Construction
(5) Middlesex County AVTS East Brunswick	1973	145,000	Expansion, alteration or remodeling
(6) Morris County AVTS Denville	?	1,541,400	Expansion, alteration or remodeling
(7) N.J. Skill Center (Project COED) - Newark	1974	4,446,825	Expansion, alteration or remodeling
(8) Passaic County AVTS Wayne	1973	<u>2,081,049</u>	Expansion, alteration or remodeling

TOTAL ELIGIBLE COST: \$15,910,444

The total capacity of these facilities will be 4,440 students (See Appendix, Figure 3, for a complete listing of the specifics for each project, including vocational programs offered and the level of the programs).

Progress in providing vocational education has been significant, but in an attempt to reach approximately 60% of the secondary school population who need occupational training, the Division must reach and assist a greater number of school districts. In response to this need, ten area vocational-technical schools are in varying stages of planning for future implementation. (Refer to Figure VII-14 on the following page.) The total estimated cost of these facilities is \$48,565,000. The total full-time capacity will be 2,500 students, and the total shared-time capacity will be 5,940 students.

At the present time, no more applications for construction of area vocational-technical schools are being accepted by the Division of Vocational Education because all the funds from previous bond issues are already fully committed. The facilities listed in Figure VII-14 will be the last area vocational-technical schools constructed until more funds are available although there is a need for additional facilities now.

Vocational Education Expenditures and College Space Construction

The monies expended for vocational education in New Jersey will affect college space construction only insofar as educational priorities are changed. That is, less money will be spent for the construction of college spaces in favor of construction of vocational education spaces only when it is apparent that more vocational than college spaces are needed and when it is fully accepted -- to the point of implementation -- that a four-year college education is not the only way to success.

FIGURE VII-14

FUTURE CONSTRUCTION PROJECTS - A.V.T.S.

District	Location	Estimated Cost	Estimated Construction To Begin	Capacity
Bergen County	Northeast Bergen	1,575,000	1973	270*
	South Bergen	1,575,000	1974	320*
	Northwest Bergen	1,575,000	1974	350*
	Central Bergen	1,575,000	1975	350*
Burlington County	Meadow Lakes	4,500,000	1973	1,000*
	Mt. Holly	4,500,000	1973	1,000*
Camden City (Special Needs)	Camden City	2,500,000	1974	500
Camden County (Special Needs)	Gloucester	6,000,000	1974	1,000
Gloucester County	Sewell	3,765,000	1973	1,150*
Mercer County	North Center	3,000,000	1975	500*
Middlesex	North West	10,000,000	1974	1,000
Morris County	Northern	3,500,000	1974	500*
Salem County	Salem	3,000,000		
Ocean County	Toms River	1,500,000	1975	500*

* Shared Time (Two Sessions)

Source: N.J. Department of Education, Division of Vocational Education, 1972 Annual Descriptive, p. 34

Operating Costs

After a facility is constructed, it is necessary to obtain funds to pay for the operating costs. For county vocational education systems, the funds are allocated by the County Board of Freeholders to be included in the programs at community colleges. For community colleges specifically, the State pays \$600/FTE (full-time equated student) towards operational costs. The area vocational-technical schools (AVTS) get their operating monies from their respective Boards of Education. The funds for State-operated facilities come from appropriations by the Legislature via the Department of Higher Education and the Department of Education--Division of Vocational Education.

FOOTNOTES

CHAPTER VII

¹ New Jersey Department of Education, Division of Vocational Education, 1972-1973 State Plan, Part I, p. 49.

² _____, 1972 Annual Descriptive, p. 1.

³ Ibid., p. 40 for items 1-3.

⁴ Division of Vocational Education, 1972-1973 State Plan, Part II, p. 21.

⁵ _____, 1972 Annual Descriptive, pp. 47-49.

⁶ Ibid., pp. 49-51.

⁷ New Jersey Department of Education, Division of Vocational Education, 1972-1973 State Plan, Part I, p. 5.

⁸ Ibid., p. 72.

⁹ Ibid., p. 6.

¹⁰ Ibid., p. 6.

¹¹ New Jersey Department of Higher Education, "Community College Finances, FY 1972-1973," (July, 1972), pp. 2-3.

¹² Ibid., p. 16.

¹³ Ibid., p. 25, Table I.

¹⁴ Reimbursement was distributed through approved vouchers submitted in the categories of construction, planning and development, site improvement, and equipment.

VIII

CONCLUSIONS AND RECOMMENDATIONS

New Jersey is conscientiously making effort to provide vocational education programs, services, and activities to as many of its citizens as possible. A wide variety of programs are already at the secondary, post-secondary, adult, and special needs (handicapped and disadvantaged) levels through area vocational-technical schools, comprehensive high schools, technical institutes, comprehensive community colleges, State-operated facilities, and private business, technical, and trade schools. In addition, the State's Division of Vocational Education is working towards:

- (1) increasing and maximizing the availability of vocational education services directed toward the urban and rural poor;
- (2) expanding the availability of vocational programs for the returning veteran;
- (3) increasing the number of vocational programs designed to serve the disadvantaged and the handicapped;
- (4) developing pre-school and elementary school programs in career awareness; and
- (5) developing new types of occupational courses in response to new needs of society.

However, there is still a great need for more vocational education "spaces" to meet present as well as future demand. Vocational programs presently being provided in New Jersey are oversubscribed in many cases, indicating that there are not enough spaces to meet even present demand. A trend being experienced in New Jersey -- as well as nationwide -- that indicates an apparent, gradual movement away from college and towards a more marketable vocational

education means that even more spaces are going to be needed in vocational/occupational education to accommodate the demand caused by this trend. New vocational facilities are being constructed and programs are being expanded at community colleges, but the Division of Vocational Education feels that the supply will still be much less than the demand.

In an attempt to further increase the availability of vocational education in New Jersey, the following recommendations should be considered:

(1) Pulling all education-oriented programs in the various government departments together for coordinated planning (the "program structure" element of PPB -- Planning, Programming, Budgeting). This may increase the chances for additional vocational programs -- as well as other types of educational programs -- by determining to what extent vocational training is needed by other State departments. Assuming that vocational training is needed in various areas, more programs will be made available.

(2) The idea of a joint-use facility with another department or departments. Perhaps a number of State education programs could be jointly housed in one or more buildings as opposed to separate buildings for each department. This would facilitate a greater availability of State services -- due to decreased costs -- in vocational as well as other types of education. A specific example here is the possibility of vocational education, vocational rehabilitation, and the N.J. Commission for the Blind working together.

(3) There is a need to coordinate county vocational school programs with those of the county colleges. This would insure a more comprehensive and complete offering of vocational programs. To this end, is the Education Coordinating Council established by 18A:5-1 functioning adequately with respect to its activities relating to the coordination of vocational education programs?

(4) Some thought and research should be devoted to determining whether or not the funding arrangements for State aid to the county colleges and county vocational schools is equitable, especially since there are two separate departments involved and the route by which the funds get to the institutions from the State is very different.

In order to better prepare for the future, it would be wise to further study the effect that the demand for vocational education is having on college construction. Limited information is available at this time, but it will be necessary to determine the extent to which funds used for college construction should be -- if at all -- transferred to the construction of more vocational facilities. Further study is needed to determine the effect that vocational education has on capital expenditures, especially since this is a difficult relationship to specifically determine. Nevertheless, such information is necessary for effective capital planning.

APPENDIX

APPENDIX
Figure 1
ENROLLMENT CHANGES
AT TWO-YEAR COLLEGES**

Change in College Enrollment

College	1969-1970		1970-1971		1971-1972	
	N.J. Residents	N.J. & O.O.S.*	N.J. Residents	N.J. & O.O.S.*	N.J. Residents	N.J. & O.O.S.*
<u>Public</u>						
Atlantic	+ 196	+ 198	+ 538	+ 536	+ 288	+ 290
Bergen	+ 779	+ 782	+ 449	+ 448	+1695	+1693
Brookdale	+1341	+1340	+1601	+1616	+ 338	+ 327
Burlington	+ 921	+ 921	+ 756	+ 756	+ 370	+ 370
Camden	+ 707	+ 623	+ 449	+ 562	+ 82	+ 63
Cumberland	+ 347	+ 348	- 60	- 58	- 54	- 53
Essex	+ 96	+ 85	- 54	- 50	+ 427	+ 428
Gloucester	+ 253	+ 253	+ 296	+ 297	+ 213	+ 224
Mercer	+ 338	+ 335	+ 589	+ 556	+ 275	+ 259
Middlesex	+1255	+1254	+ 695	+ 698	- 229	- 225
Morris	+1110	+1110	+ 599	+ 603	+ 494	+ 492
Ocean	+ 298	+ 299	+ 378	+ 378	- 12	- 12
Passaic	Not Open-----		+ 376	+ 376	+ 484	+ 484
Salem	Not Open-----				+ 601	+ 601
Somerset	- 109	- 109	+ 618	+ 618	+ 106	+ 109
Union	+ 755	+ 762	+ 745	+ 750	+ 222	+ 220
Union Tech.	+ 153	+ 153	- 389	- 389	- 229	- 230
NET TOTAL	+8440	+8354	+7586	+7697	+5071	+5040
<u>Independent</u>						
Alphonous	+ 86	+ 93	+ 16	+ 12	- 27	- 24
Assumption	+ 1	- 12	+ 3	- 5	+ 0	- 1
Centenary	- 31	- 48	+ 15	- 50	- 2	- 87
Ed. Williams	+ 74	+ 59	+ 60	+ 55	+ 74	+ 90
Englewood Cliffs	+ 284	+ 272	+ 175	+ 172	+ 172	+ 147
Luther	+ 24	+ 23	+ 30	+ 20	- 13	- 11
Mt. Saint Mary	Closed-----					
St. Joseph	Closed-----					
Salesian	+ 3	+ 3	- 2	- 2	+ 4	+ 4
Tombrock	+ 74	+ 74	- 64	- 64	- 136	- 136
Walsh	- 19	- 19	Closed-----			
NET TOTAL	+ 496	+ 445	+ 233	+ 138	- 251	- 312
GRAND NET TOTAL	+8936	+8799	+7819	+7835	+4820	+4728

APPENDIX

Figure 2

Area Vocational-Technical School Facility Costs
(Separate Buildings)

School	Con- struc- tion Began	Type of School	Grades	Capacity	Square Footage	State & Federal Reimburs- ment	Total Cost
Bergen Co. AVTS (Special Needs)	1971	Full Time	9-12	200	34,000	515,000	1,030,000
Burlington Co. AVTS	1965	Full Time	9-12	1,000	200,000	2,670,761	5,341,522
Camden Co. AVTS	1968	Full Time	9-12	2,000	279,895	4,490,000	8,980,000
Cape May Co. AVTS	1969	Shared Time	9-12	600*	67,207	811,496	1,622,992
Cumberland Co. AVTS	1971	Shared Time	11-12	650*	104,000	1,650,000	3,300,000
Elizabeth	1970	Shared Time	9-12	900*	137,000	1,903,620	4,037,322
Hunterdon Cen- tral AVTS	1969	Shared Time	11-12	240*	19,000	318,945	637,890
Linden AVTS	1971	Shared Time	11-12	240*	56,000	1,669,050	3,338,110
Lower Camden Co. Regional AVTS	1965	Shared Time	9-12	340*	84,300	571,698	1,143,396
Middlesex Co. AVTS	1968	Full Time	9-12	1,000	220,000	3,367,076	6,734,153
Monmouth Co. AVTS (Freehold)	1971	Shared Time	11-12	160*	17,600	262,346	524,693
Monmouth Co. AVTS (Keyport)	1968	Shared Time	9-12	160*	13,251	165,527	331,198
Monmouth Co. AVTS (Neptune)	1969	Shared Time	11-12	160*	15,672	189,660	379,320
North Hunterdon Regional AVTS	1969	Shared Time	9-10	200*	31,500	532,200	1,064,400
Ocean Co. AVTS (Three Buildings)	1971	Shared Time	11-12	920*	91,000	1,606,168	3,212,336

*Shared Time (Two Sections)

Area Vocational-Technical School Facility Costs
(Separate Buildings)

(Continued)

School	Con- struc- tion Began	Type of School	Grades	Capacity	Square Footage	State & Federal Reimburs- ment	Total Cost
Passaic Co. AVTS	1968	Full Time	9-12 9-12	2,000	296,477	(EDA)	12,380,681**
Somerset Co. AVTS	1970	Full Time	9-12	1,000	176,600	4,050,000	8,100,000
Sussex Co. AVTS (& Addition)	1967	Full Time	9-12	1,000	141,864	1,863,050	4,952,227
Union Co. AVTS	1967	Full Time	11-12	560	119,920	2,282,605	4,565,210
Union Township AVTS	1967	Shared Time	11-12	350*	44,653	271,580	1,460,812
Warren Co. AVTS	1968	Full Time	9-12	4 440*	86,301	1,450,000	2,900,000

* Shared-Time (Two Sections)

** Includes EDA Funds

Total capacity: 9,390 Full-time

4,760 Shared-time

APPENDIX

Figure 3

CONSTRUCTION PROJECTS STARTED IN FY 1972

Name & Address County & District	Type of School 1/	Vocational Programs (Ag., etc.)	Level of Program 2/	Estimated Beginning Const. Date	Estimated Completion Date	Eligible Total Cost	Building Capacity 3/	Type of Construction 4/
Atlantic County AVTS		Ag., H.O., O.O., T&I,	S, A, PS,			\$4,254,170	1,000	N
Mays Landing	SS	D.E., T.	D, H.	1972	1973	\$4,254,170	1,000	N
Cape May County AVTS		O.O., T&I						
Cape May Court House	ST	O.O., T&I	T, SS, SPS	1972	1973	642,000	200	E
Essex County AVTS 90 Washington St. East Orange, (11)	SS	T&I, D.E., O.O., T.	PS, S, A, D, H.	1972	1973	0	1,000	N
Mercer Co. AVTS Edinburg Road Trenton	SPS	H.O., T., T&I	PS, S. A, D, H	1972	1973	2,800,000	500	N
Middlesex Co. AVTS 112 Rues Lane East Brunswick	ST		S, P S, PS	1972	1973	145,000	40	E
Morris Co. AVTS E. Main Street Denville	SS	H.O., T., T&I, O.O., D.E.	PS, S, A, D, H	1972	197?	1,541,400	500	E
New Jersey Skill Cent. (Project COED) Newark	SS	H.O., T., T&I, O.O.	PS, S, A, D, H	1972	1974	4,446,825**	1,000	E
Passaic Co. AVTS Reinhardt Road Wayne	SS	T&I, H.O. O.O., H.E.	PS, A, S, D, H.	1972	1973	2,081,049	200	E

APPENDIX

Figure 3

CONSTRUCTION PROJECTS STARTED IN FY 1972
(Continued)

-
- 1/ CODE: SS-Specialized Secondary, ST-Secondary Voc-Tech, SPS-Secondary-Postsecondary Combination.
2/ CODE: S-Secondary, PS-Postsecondary, A-Audit, D-Disadvantaged, H-Handicapped.
3/ CODE: Vocational Student Capacity.
4/ CODE: E-Expansion, Alteration, or Remodeling, N-New Construction
* Total Project \$10,000,000 of 40% from Essex County and 60% from Economic Development Administration.
** Total Project \$3,995,500, 50% from Economic Development Administration and 50% from Special Act N.J. State
Legislature

Ag.-Agriculture;

H.O.- Health Occupations

OO Office Occupations

T&I Trade and Industry

D.E. Distribution and Marketing

T Technical

H.E. Home Economics

APPENDIX
Figure 4

ESTIMATES OF TOTAL FUNDS NEEDED FOR VOCATIONAL EDUCATION AND
ANNUAL ALLOCATION PLAN
(Federal, State and Local to Obtain State Plan Objectives
regardless of funding sources)

Program/Purpose	Funds	Current			Long Range Plan		
		1973	1974	1978	1973	1974	1978
State Programs Part B	Total	39,326,324	41,470,108	49,764,129			
	Federal	10,308,874	10,837,793	13,005,352			
	S & L	29,017,450	30,632,315	36,758,777			
1. Secondary	Total (F,S,L)	10,460,860	10,848,062	13,017,674			
2. Post Secondary	Total	3,786,906	3,849,310	4,619,172			
3. Adult	Total	1,479,442	1,917,290	2,300,748			
4. Disadvantaged	Total	2,523,035	2,735,115	3,282,138			
5. Handicapped	Total	1,798,190	1,931,654	2,317,985			
6. Construction	Total	15,234,664	15,988,677	19,186,412			
7. Guidance and Counseling	Total	150,000	150,000	180,000			
8. Contracted Instruction	Total						
9. Ancillary Services		xxx	xxx	xxx			
Administration and Supervision	Total	2,675,000	2,900,000	3,480,000			
Evaluation	Total	75,000	75,000	90,000			
Teacher Training	Total	1,093,227	1,000,000	1,200,000			
Research and Demonstration Proj.	Total						
Curriculum Development	Total	50,000	75,000	90,000			
Section 102(b) State Programs Disadvantaged	Total (F,S,L)	818,885	864,448	1,037,338			
Research and Training Part C	Total	270,612	475,114	570,137			
	Federal	241,712	254,114	304,937			
	S & L	28,900	221,000	265,200			
Exemplary Programs Part D	Total	1,029,045	1,396,286	1,675,543			
	Federal	185,340	187,286	224,743			
	S & L	843,705	1,209,000	1,450,800			
Consumer and Homemaking Education Part F	Total	1,193,031	1,233,357	1,480,028			
	Federal	688,031	723,357	868,028			
	S & L	505,000	510,000	612,000			
Cooperative Education Part G	Total	1,484,545	1,585,978	1,903,174			
	Federal	479,602	485,978	583,174			
	S & L	1,004,943	1,100,000	1,320,000			
Work Study Part H	Total	387,103	583,756	700,507			
	Federal	187,103	183,756	220,507			
	S & L	200,000	400,000	480,000			
Grand Total	Total	44,509,545	47,619,047	57,130,856			
	Federal	12,627,545	13,246,732	15,896,000			
	S & L	31,882,000	34,372,315	41,234,856			

APPENDIX
Figure 5
ESTIMATED ALLOCATION OF FUNDS
FOR STATE VOCATIONAL EDUCATION PROGRAMS
1973/74

Program/Purpose	Total Funds	Federal Funds	State Funds	Local Funds
Part B State Programs				
Secondary	10,848,062	179,062	2,069,000	8,600,000
Post-Secondary	3,849,310	1,649,310	200,000	2,000,000
Adult*	1,917,290	98,975	1,718,315	100,000
Disadvantaged	2,735,115	1,710,115	50,000	975,000
Handicapped	1,931,654	1,196,654	10,000	725,000
Contracted Instruction (Memo only)	--	--	--	--
Guidance and Counseling	150,000	50,000	50,000	50,000
Construction of Area Vocational Schools	15,988,677	3,988,677	4,000,000	8,000,000
Ancillary Services (Total)**	4,050,000	1,965,000	1,560,000	525,000
Administration and Supervision	2,900,000	1,300,000	1,100,000	500,000
Evaluation	75,000	25,000	25,000	25,000
Teacher Training	1,000,000	625,000	375,000	--
Research and Demonstration Proj. Curriculum Development	--	--	--	--
Leadership Development	--	--	--	--
Part B (State Programs) Total	\$41,470,108	10,837,793	9,657,315	20,975,000
Section 102(B) State Programs	864,448	564,448	--	300,000
Disadvantaged	864,448	564,448	--	300,000
Part C Research (Total)	375,114	254,114	121,000	--
RCU	75,000	75,000	--	--
Grants and Contracts	300,000	179,114	121,000	--
Part D Exemplary Programs (Total)	1,396,286	187,286	1,184,000	25,000
Planning	--	--	--	--
Operating	1,396,286	187,286	1,184,000	25,000
Part E Residential (State) (Total)	--	--	--	--
Planning	--	--	--	--
Construction	--	--	--	--
Operation	--	--	--	--
Part F Consumer & Homemaking (Total)	1,233,357	723,357	10,000	500,000
Instruction	1,183,357	673,357	10,000	500,000
Ancillary	50,000	50,000	--	--
Part G Cooperative Programs (Total)	1,585,978	485,978	700,000	400,000
Instruction	1,540,978	440,978	700,000	400,000
Ancillary	45,000	45,000	--	--
Part H Work-Study (Total)	593,765	193,756	400,000	--
Student Compensation	583,756	183,756	400,000	--
Administration	10,000	10,000	--	--
Grand Total	\$47,619,047	13,246,732	12,172,315	22,200,000

NOTE: Estimate of expenditures as projected in accordance with the policies and procedures in the State Plan.

* Because of mandated Federal funding in other cases, it appears that Federal funds will not be available in any substantial amount for adult vocational education programs in New Jersey. We will therefore have to rely upon State and local financing.

** State and local funds for ancillary services were not allocated on a line-item basis because the Federal Law (Vocational Education Amendments of 1968) requires State-wide matching rather than matching for each component of the ancillary services category. Table 1 shows the estimated allocation of State and local funds on a line-item basis.

