

1972

A Four-County Plan for Occupational Education

Donald R. Mullaney
Walden University

Follow this and additional works at: <https://scholarworks.waldenu.edu/dissertations>

 Part of the [Other Education Commons](#)

This Dissertation is brought to you for free and open access by the Walden Dissertations and Doctoral Studies Collection at ScholarWorks. It has been accepted for inclusion in Walden Dissertations and Doctoral Studies by an authorized administrator of ScholarWorks. For more information, please contact ScholarWorks@waldenu.edu.

A FOUR-COUNTY PLAN FOR OCCUPATIONAL EDUCATION

by

Donald R. Mullaney

B. S., New York University, 1953

M. S., Hunter College, 1964



Joseph Carol, Ed.D., Advisor
Superintendent of Schools
The Rye Neck Public Schools

A Dissertation submitted in Partial Fulfillment of
The Requirements for the Degree of
Doctor of Philosophy

Walden University
July, 1972

ABSTRACT

A FOUR-COUNTY PLAN FOR OCCUPATIONAL EDUCATION

Donald R. Mullaney

The Region 4 Study, a four-county research project completed in July 1971 for the New York State Education Department under the direction and organization of the author, was approved by Walden University as the outline for this dissertation.

The statistical data and committees' recommendations were adapted for this thesis without altering, hopefully, the substance or intent of the documented findings. The dissertation has been footnoted to indicate the use of Region 4 data in Chapters V, VI, and VII.

The Study was undertaken to seek methods of improving programs in occupational education and of coordinating those programs among the school districts to open up many more opportunities for students to learn about the world of work. Such an investigation involved many specialists, as well as the executives of business and the administrators of governmental agencies.

In the process, communication between educators and the men responsible for running the businesses of the four

counties was greatly enhanced. A start in this direction, made five years before the Study by the author in his capacity as county coordinator of occupational education for Westchester-Putnam Counties, served as an opening wedge for this cooperation.

Over one hundred individuals participated in the gathering of statistical data during the eight months of the Study, all of which had to be summarized for the report to the State Education Department. The charts and graphs were made by gleaning data from other statistical sources as well as doing original research. The organization and editing of the Study were directly controlled by the author.

Chapter I of the dissertation covers the problems in occupational education from a four-county perspective. Chapter II gives the author's view of 'what ought to be' in occupational education generally, and what he knows is feasible for the four counties particularly. Chapter III sets the geographical and historical background of the counties.

Population growth and economic development are given in Chapter IV, and Chapter V deals with the numbers of students in the schools and the need for manpower.

Occupational education courses, offered presently on all educational levels, are listed in Chapter IV, with a summation indicating how far short we fall in meeting our

goals.

Chapter VII reflects specific and general views of the participating committees in the summing up of conclusions and recommendations. Projections are made for enlarging programs and improving curricula; the considerations of area-wide needs encompass the hopes and aims of men and women concerned with pragmatic goals and the ideals of a good society.

A very significant recommendation is the one expressing the need for continual planning and for improving regional coordination through the resources of active advisory committees.

ACKNOWLEDGMENTS

The author is especially indebted to his advisor, Dr. Joseph Carol, and to Dr. Donn Billings and Dr. Thomas V. Russo for their guidance and encouragement during the planning and conduct of this study.

Sincere appreciation is also expressed to the many persons, especially my secretary, Dorothy Jasper, who gave of their time to participate in the questionnaire and interview surveys.

TABLE OF CONTENTS

	Page
ACKNOWLEDGMENTS	ii
LIST OF TABLES, CHARTS, AND GRAPHS	vi
Chapter	
I. STATEMENT OF THE PROBLEM	1
Purpose	1
Definition	2
Significance of the Study	2
State Education Department's Objectives for Regional Plans	5
Boards of Cooperative Educational Services as Regional Agencies	8
Procedures	8
II. AN OCCUPATIONAL EDUCATION PHILOSOPHY	10
Introduction	10
An Overview	11
Regional Perspective	21
Notes on the Literature	26
III. DESCRIPTION AND HISTORY OF REGION	29
Orange County - Description	29
Putnam County - Description	31
Rockland County - Description	34
Westchester County - Description	36
Region 4 - Description	39
Orange County - History	42
Putnam County - History	45
Rockland County - History	49
Westchester County - History	54
IV. POPULATION GROWTH AND ECONOMIC DEVELOPMENT	58
Introduction	58
Summary	67

Chapter	Page
V. SCHOOL STATISTICS AND MANPOWER DATA	79
Introduction	79
Summary	97
VI. CURRENT OCCUPATIONAL EDUCATION COURSES	99
Introduction	99
Local School Districts	100
Adult Course Offerings	106
Summation of "BEDS" Reports	110
Occupational Programs in Prisons and Institutional Training Schools	112
Post-Secondary - Community Colleges	113
Active Apprentice Programs	121
Region 4 - Rehabilitation Programs	122
Adult Education - Public Schools	123
Business's and Industry's Programs for the Disadvantaged	125
Training the Disadvantaged	126
Summary	129
VII. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS	131
Region 4 Committee Recommendations and Conclusions	132
One-Year Course Projections by Area Centers	135
Five-Year Course Projections by Area Centers	136
Center Development and Projections	138
Curriculum Committees - Projections and Recommendations	140
Region 4 - Evaluation of Objectives of Each Educational Level	144
Region 4 Director - Special Needs Recommendations	146
Board of Education Requirements for All High School Students	150
Career Ladder Recommendations - Introduction	153
Summary	158

	Page
APPENDICES	159
BIBLIOGRAPHY	180
BIOGRAPHICAL DATA	189

LIST OF TABLES, CHARTS, AND GRAPHS

Figure	Page
1. Map of southern New York State, with Region 4 outlined	28
2. Region 4 Committee Organizational Chart	59
3. Region 4 Population Data	60
4. Characteristics of the Population	61
5. Comparative Population Growth Rates	62
6. Population Projections by Age, Sex, and Ethnic Group by County - 1970	63
7. Region 4 Economic Levels	64
8. Region 4 Population, Income, Household Growth - 1960-1970	65
9. Region 4 Average First Quarter Gross Earnings by County - 1964	66
10. Region 4 Summary of Projected Public School Enrollment	80
11. Summary of Enrollments in Occupational Education Courses in Secondary Schools - Region 4	81
12. Region 4 - School Enrollment Data	82
13. Interest of Prospective Enrollees in Occupational Education - Region 4	83
14. Private Occupational Training Schools or Programs by County	84
15. Health Occupation Needs	88
16. Comparison of Economic Indicators - Region 4	89

Figure	Page
17. Numbers of Industries According to Numbers of Employees	90
18. Plan of Service Manpower Data - Summary by County - FY 1969, Projected to FY 1971	91
19. Jobs by Occupation - FY 1969 to FY 1971 - Percent Change	93
20. Three Industries Ranking Highest in Reported Employment - 1964	94
21. Percent Distribution of Employment by County	95
22. Manpower Development Training Programs	96
23. Community Action Referrals	127
24. Consortia in Training the Disadvantaged	128
25. Region 4 - Focus on Occupational Education for K - 12	151
26. Region 4 - Occupational Education Flowchart	152
27. Educational Ladder - Career Ladder	154
28. Educational Ladder - Career Ladder	155
29. Region 4 - Health Career Ladder	157
30. Region 4 - Industry Distribution Data by Size	174
31. Region 4 - Occupational Programs with Enrollment - 1970-71	175

CHAPTER I

STATEMENT OF THE PROBLEM

Purpose

This study was undertaken in order to determine what programs in occupational education exist presently in the four counties of Westchester, Rockland, Putnam, and Orange (constituting Region 4 of New York State--the area under study) and what occupational education programs are needed. To justify the development of any new program, projections were needed regarding job opportunities over the next five years on a regional basis.

Answers to the following questions were also sought:

1. How can a partnership of the state's and the federal government's resources improve and extend opportunities in occupational education?
2. What broad guidelines can be laid out for the region which will allow for the anticipated growth over the next five years?
3. How does the forecast on regional employment correspond to the projected training programs?
4. What changes in occupational education must be made over the next five years in order to keep

abreast of employment needs?

5. Based on committee findings, what recommendations for occupational education should be made?

Definition

Occupational education can be defined as "that part of the educational process which prepares people for employment in occupations requiring less than the baccalaureate degree. However, occupational education, in its broadest sense, should be seen as an aspect of the total educational process."¹

Significance of the Study

That there has been concern about the lack of vocational training programs has been evidenced over the past forty-five years by acts of federal legislation since the days of the Smith-Hughes and George Barden Acts. These have been upgraded significantly by the Vocational Education Act of 1963, which has been amended several times through 1972, making federal resources available to the states for the implementation of secondary and post-secondary training programs.

For the purposes of this study, the four counties,

¹Division of Occupational Education, Position Paper No. 11, Occupational Education (New York: New York State Education Department, 1971), p. 6.

Westchester, Rockland, Putnam, and Orange, seemed a natural grouping because of their proximity to each other and to New York City, which has such impact on suburban areas. The data of the study not only lent support to their homogeneity, but similarities became more evident as the study developed, particularly with respect to the projections.

"Iffy" areas show up when any projections of growth are made. If there is a development of a rapid transit system, if more housing is built, if there is emphasis on regional planning supplementing local control, then the solutions to educational needs will evolve and will be correlated with those achievements. We can assume, perhaps, that they will come to pass "if" the economic health of the country is good.

While it is almost too obvious to say, growth rate and economic stability relate to employment projections. Job opportunities fluctuate with economic conditions and the availability of human resources. If the labor source is inaccessible to employers and the job market is stagnant, growth will not occur. Business and industry must be able to obtain a ready supply of workers, from the top of the career ladder to the bottom; otherwise, mobility of industries results and stability does not prevail.

Another caveat relates to changing technology with its ensuing alteration of job skills. The rapidity of this influence can change appreciably many job opportunities and,

at one and the same time, inaugurate entirely new fields of employment. To some degree, this is occurring now, particularly in the paraprofessional areas, and has been due to the high degree of specialization in all careers. The generalist, as against the specialist, flounders (rather precariously in some areas) before identifying his niche.

In brief, no longer is the projection of employment needs a symptomatic appraisal alone; socio-economic factors have added other variables. There is an interrelationship of community problems which is influential to the degree that projections cannot be made in isolation, one from the other. Such projections must, of necessity, be adapted to large areas if they are to remain valid for very long.

As the study progressed, the need for utilizing existing regional resources more effectively became clear. The inefficient luxury of institutions and agencies with common concerns operating instead of cooperating cannot continue if manpower problems are to be resolved both for social and for economic reasons. Business and industry, to a greater degree and more actively, must become oriented to educational needs, not only through their statements of policy, but by making direct commitments of funds as well.

Governmental agencies must be an advisory resource to education with dedication; social agencies need to be consultants to the schools. Multi-funding policies have to be broadened if effective manpower program development is to

result. In short, all levels of education--government, industry, and concerned agencies--must establish unanimity of purpose if manpower needs are to be met.

It is the researcher's hope, and the hope of the committees which constituted the resource personnel, that he has adequately assessed the needs in occupational education for the four counties. The intent was not to "re-invent the wheel," nor to accumulate data without giving meaning to their portent. The supportive information was documented to give substance to the attainment of an innovative and pragmatic plan--a plan from which occupational education students at all levels will benefit, and a plan which will contribute to the socio-economic needs of the region.

State Education Department's Objectives
for Regional Plans

In compliance with the Plan for Vocational Education² approved by the Regents of the University of the State of New York, the combining of Orange, Putnam, Rockland, and Westchester Counties into Region 4 (one of the nineteen study areas designated by the State Education Department) was accomplished at a Regional Planning Session, called by the State Education Department, at Dutchess Community College on June 1, 1970.

²New York, "A State Plan for the Administration of Vocational Education under the Vocational Education Amendments of 1968." New York, 1969 (mimeographed).

The committees of the newly-created region were charged with the responsibility of establishing an administrative body of representative officials in the region in order to:

- A) Designate a regional coordinator.
- B) Organize regional committees.
- C) React to accumulated information
- D) Approve the final plan.

Within the operational framework, the following purposes and objectives were pursued:

- A) Accumulate occupational data to support existing and future program development.
- B) Make recommendations for one-year and five-year occupational projections on the basis of above documentation.
- C) Establish coordinated goals for occupational education which will inhibit unnecessary duplication of programs while aiding in the establishment of programs which would work toward filling unmet occupational needs.

The following occupational goals were outlined by the Resource Committee of Region 4 and were unanimously approved by the Executive Committee.³

³D. R. Mullaney, "Region 4 Study" (unpublished survey for New York State Education Department, February, 1971), p. 4a.

1. The improvement of existing programs in occupational education and the extension of them.

2. The development of new programs in occupational education.

3. The establishment of programs of high quality for

(a) all high school students.

(b) all people of all ages in all communities, whether or not they have completed their formal education, who want to enter the labor market.

(c) those who are in the labor market but who need to upgrade their skills or learn new ones.

(d) the handicapped, to help them to be employable.

4. The pursuit of an "open-ended" policy which would provide the articulation of graduates of occupational education programs on the secondary level into post-high school institutions of their choice.

5. The provision of programs which are realistic for actual or anticipated employment in our society, which means occupational education programs must be at least three or four years ahead of the needs of industry.

6. The establishment of programs suited to the needs of the students; interests and abilities are factors to be taken into primary consideration in order to set up successful

training for those in the program. (Guidance of a perceptive nature would be needed toward this end.)

Boards of Cooperative Educational Services
as Regional Agencies

In 1948, the New York State Legislature created the Boards of Cooperative Educational Services (BOCES) to assist in the development and implementation of cooperative educational programs for public schools. There are fifty-three BOCES in the state, which have emerged as agencies for coordinative roles.

BOCES provides instruction and offers administrative support to component school districts and to non-component districts which request it. Some of the services offered are the establishment of area occupational education centers; educational information systems founded on existing BOCES data processing centers; certification of handicapped youngsters; aiding in planning and in offering workshops; acting in an administrative capacity for federal agencies, such as ESEA Title III Centers; leadership in special education and in instructional materials centers.

Procedures

Six major avenues were used in the research:

1. A review of the current occupational programs in the region, ascertaining the areas served and the needs of employers.

2. An organizational structure (see Committee Organizational Chart) drawing its committees' members from the four counties comprising Region 4 of the State of New York, with the exception of the advisers from the State Education Department, Division of Occupational Education Supervision.
3. A questionnaire to all of the schools in the area, requesting data and future projections in occupational education.
4. Interviews with administrators of selected school systems, as a committee, to elicit their priorities in occupational education and their recommendations for improvement in programming.
5. Interviews with advisory committee members, representing industry and labor, to obtain their recommendations on present and projected occupational programs.

CHAPTER II

AN OCCUPATIONAL EDUCATION PHILOSOPHY

Introduction

Is not every man a student, and do not all things exist for the student's behoof?

Not he is great who can alter matter, but he who can alter my state of mind.

We will walk on our own feet; we will work with our own hands; we will speak our own minds.

This is my music; this is myself. Free should the scholar be.

There is virtue yet in the hoe and spade-- and labor is everywhere welcome; always we are invited to work.¹

In making a statement of personal philosophy, the need arises to offer credentials to establish credibility in the particular area of study.

The author has outlined, in an item in the appendix, his thirty years in occupational education as a student and teacher, and his practical experiences in business, industry, and a number of military establishments.

The diversification and depth of the practical experiences gave a perception of the "real world" which was in-

¹Ralph Waldo Emerson, The American Scholar, in The Works of Emerson, (Roslyn, New York: Black Readers Service Company, 1928), pp. 562-568.

valuable in the years of study and during the years as an instructor in the classroom.

An Overview

Formulating a plan for occupational education for the counties of Orange, Putnam, Rockland, and Westchester makes the establishment of a philosophical perspective essential. Attitudes toward education bear heavily on present-day results and future directions. Those attitudes, which are formed by the aspirations of the community in social and educational terms, dictate some acceptable and some unacceptable educational goals. "Vocational education is oriented toward social, educational, and manpower considerations."² They also predetermine the status of school curricula and its implementation.

From the beginning of the thirties through the decade of the fifties, the Region was primarily geared to the objectives of basic education, which encompassed common branch skills based on the three "R" principles--skills which would maintain students as literate members of society while placing a large percentage of its suburban-rural school population in academic college-bound programs. "The schools of yesterday were essentially narrow, selective, and rigid

²Report of the Advisory Council on Vocational Education to the Secretary of Health, Education and Welfare, Martin W. Essex, Chairman (Washington, D. C.: U. S. Government Printing Office, 1968), p. 156.

because man's society and environment were narrow, selective, and rigid."³

Until twenty years ago, with the exception of the cities of Yonkers, New Rochelle, and Mount Vernon, few vocational courses were offered to high school students. The area school systems grew on the basis of strong college-bound objectives. There were some specialized courses in shop, homemaking, and business education, mainly exploratory, which resulted in the semi-skilled. To a large degree, business and industry encouraged a rather superficial exposure to the conduct of their operations. The prerequisites for employment were a high school diploma and a cursory knowledge of basic academic skills, leaving specialization to apprenticeship, post-high school on-the-job training, or continued education. In sum, the concept was one in which liberal arts courses in high school would produce well-rounded individuals. Orientation and adjustment to the world of work was, mainly, the function of the employer.

Many more unskilled and semi-skilled job opportunities, for which high school youth could apply, existed. The educational role for supplying craftsmen could be relegated to on-the-job training. Even the drop-out from school could compete, with a modest degree of success, in such an

³Grant Venn, Man, Education, and Manpower (Washington, D. C.: The American Association of School Administrators, 1970), p. 89.

open, non-technical, unskilled market. In the rural areas, agricultural labor was a means of earning a livelihood at a low-entry educational level. The more academically-oriented positions could be attained with post-high school credentials, when the economy of the area was sound, which it was after World War II.

Vocational education, inadequate as it was, was shaped and adjusted to the academically deprived. It had educational barriers which precluded continuing education. Terms such as "dumping ground" and "blackboard jungle" became synonymous with vocational courses, usually located in basements. "There even evolved the belief that education that was too practical or too oriented toward problem solving was inferior."⁴

Separatism was obvious in this "either/or" programming. Early vocational decisions were detrimental to a student's academic program and extremely difficult to alter once the choice had been made. To a large degree, colleges by virtue of their entrance requirements, excluded vocational students from enrollment. The veterans of World War II were the exceptions, since preferential policies did allow for conditional acceptance. But vocational graduates from the high schools still found obstacles to post-high school education almost insurmountable. A college education was still

⁴Ibid., p. 87.

regarded as a reward for those youth who met major and minor regents requirements in academic areas. Credits for vocational sequences were excluded from the evaluations toward college entrance.

It is little wonder that the problems of "image" plagued vocational programs when, for the most part, academic "misfits" were enrolled. Restrictive college entrance requirements gave vocational programs the added connotation of a "terminal" education. Because schools within the Region used vocational programming as a punitive device to maintain problem youth, parents frowned upon such programs. Support was given by the community to those courses which did not limit post-high school options and no thought was given to the advantages a vocational program could bring.

In Westchester County, preparation for college was a way of life; to the majority it was the only way. "Good schools" were evaluated as such by the numbers of graduates they got into colleges, especially the colleges and universities which were difficult for a student to enter unless he was in the top of his graduating class in high school. In many communities, it was common to flaunt (in the news media) the numbers of acceptances, which were as high as 95 per cent at times. Even today, Westchester "produces" conservatively 70 per cent of its graduates for college campuses. To a somewhat lesser degree, Rockland and Putnam graduates are also college-bound. Orange County, with the fewest

college-bound of the four counties, is still significantly over the national average.

Valid questions arise from this pursuit of highly college-oriented school programs. Is this priority unreal or culturally wrong? Why should college aspirations not be a primary goal? Such questions have no simplistic or singular answers, but there are aspects of the "why not" which need airing ethically and socially, ideally and pragmatically.

If school curricula are based mainly on a social commitment to education (and in this region there is a great deal of evidence to support this), then the system is unjust, inadequate, and comprehensively suspect. If educational leadership fosters the idea that the major goal of a system should be based on aspirations toward college entrance, regardless of the clientele served, then quality public education becomes a sham. If the schools' aims encourage and actively pursue separatism, leaving the academic student unfamiliar with the world-of-work, then cloistered products must result.

The development of pseudo-intellectuals, who have been conditioned to live in an ideal world, is contrary to the social realities. If community pressures dictate a methodology oriented to college board examinations, at the expense of adaptation to actual conditions of life, then students suffer. The value judgments are an unrealistic assessment of present-day situations. Such judgments per-

petuate an illusory concept based on the erroneous premise that recognition from society comes only from the credentials of college degrees.

A college education is a desirable goal and not a system-conditioned process. Continuing education should be a goal pursued through a diversity of exposures, not limited to rigid sequences. Man's maturation is not fixed by a mathematical equation relating to age. The proof was recorded years ago that social and academic maturity do not occur simultaneously, nor are they as predictable as the physical cycle of growth. The assumptions that educational development must be equated with numerical age, despite the contrary evidence compiled by veterans of World War II in their successful pursuit of continued education, still prevail.

Veterans in their late twenties, in their thirties, and even forties, finished college with considerable success. In many instances, this was accomplished despite poor academic achievement in high school. Notwithstanding this record, many educators still maintain that competency is predictable and that the levels are based on some mythical equation of age and academic achievement. The fallacy, no matter how disproved, is applied to the student with vocational goals.

Great concern is expressed that identification too early with a trade is harmful. However, students in the

same school cannot identify with aspirations toward some college early enough. In both instances, realistic assessments should dictate that educators ought to capitalize on interests and aspirations of all kinds, at all age levels.

The educational pendulum is now swinging toward different priorities. Vocational education, called "occupational education" in New York State (a more inclusive term which includes not only trade and industrial courses, but all programs leading to employment below the baccalaureate degree), is being fostered, particularly by the federal government. Occupational programming is acquiring status, as the notion that it is "terminal education" is being eliminated. "The time is past when any secondary educational program could be regarded or designed as terminal."⁵ The primary objective of occupational education programs still remains making students employable. A strong secondary objective has been to make it possible for them to further their education.

In practice, the stereotyped educational limits are disappearing, although school systems and communities still have problems with the "image." Unreal assessments, now almost totally without substance, continue to limit the acceptance of occupational education. Such attitudes do not allow for greater growth in occupational education than already exists in the Region. Many schools limit occupational

⁵Albany, New York, Occupational Education (1971), a Position Paper, No. 11 of a Series, p. 10.

education to the "non-academic" student so that the deterrent is the separatism which exists in the three schools within some of the high schools, i.e., the school for the college-bound; the school for the vocational student; and the school with a "general track", the last-named being the program from which students drop out. A merger of such schools is essential and is occurring to some degree, although much too slowly for the needs of the school population. "Mr. Pucinski, a member of the House Committee on Education and Labor, stated that if every youngster got some vocational education it might help remove the stigma and isolation that are associated with such courses."⁶

Much encouragement can be taken from the movement toward "career education." In a memorandum to the fifty state departments of education in January, 1972, Commissioner Sidney P. Marland, Jr., U. S. Office of Education, endorsed the establishment of courses in fifteen to twenty identifiable major career clusters as an integral part of the curriculum in kindergarten through twelfth grade. Dr. Marland reaffirmed his memo in an address at a conference of educators and businessmen on May 12, 1972, in which he said, "Our best priority and the key to reform in American education lies in career education."

Career education is not for a segment of the school

⁶Gene I. Maeroff, "Career Schooling Backed at Parley," New York Times, May 13, 1972, p. 21.

population, but for all students. A comprehensive approach bridges the gap between academic and vocational programs. At the very least, it will make the world of work more comprehensible to the academic community. "Every teacher must teach for transfer of his student into the world of work. Teachers cannot assume that the students will make the relevant interpretation on their own."⁷

The thinking which established a separate system for occupational students assumes that only those who do not achieve academically should be para-professionals and craftsmen. Does this mean that those who can achieve academically have no place as licensed practical nurses, draftsmen, electricians, builders, plumbers, service personnel? The fallacy becomes evident as soon as it is stated. That point is still to be made in educational circles.

Should a social order of "thinkers" separate from "doers" evolve because only academic credentials are considered prestigious? If the answer is "yes," then our past directions have been correct. Should we assume that only "underachievers" need maintain our automobiles? If so, we deserve the poor quality of service such a stigma implies. New attitudes and more flexible ones are needed if craftsmanship is to be furthered and pride in workmanship is to return.

⁷Kenneth G. Genret, "Career Education Stressed," The Sunday Star-Bulletin and Advertiser, April 30, 1972, p. 4.

Too much importance is attributed to career pursuits which are too limiting. There should be some evidence, in the values of a free people, that there is appropriate respect for the contributions of citizens from whatever walk of life they make those contributions. "For occupational education to be a continuum, completely free of built-in limitations on student aspirations, every qualified student must be guaranteed the opportunity to enroll in a post-secondary educational program consistent with his talents and interests."⁸

This is an era calling for new directions, new goals, and new mergers. An amalgamation of educational resources is imperative if quality education is to be maintained in a crucial period in our history. All disciplines must help in a major thrust toward change. Coalitions must be made which will deter further proliferation of narrow interests. In the region being studied, there is an abundance of talent in need of direction. Education can no longer assume an isolated position which places its institutions and goals outside the sphere of community needs. Isolationism of any major component of our system is destructive to the whole system. "The essence of the schools of yesterday was contained in the concept that the order of things was stable, that God or nature prescribed the woes of the world and they

⁸ Albany, New York, Occupational Education, p. 11.

were unchangeable. Neither that concept nor the schools that were designed to support it will work today."⁹ An ever greater leadership must be assumed by the schools in solving pragmatic problems. Rethinking educational goals and objectives corresponding with socio-economic changes is necessary. School systems should foster the productivity of "doers" and "thinkers" as individuals, or hopefully to assist in making them a composite of both. A rededication to providing man with the basic equipment which will maintain him as a responsible and responsive citizen of his community is a national priority to which educators should lend their best efforts, minimizing the present schism between the academic and the occupational.

Regional Perspective

Significant growth, quantitatively and qualitatively, has occurred in occupational education within the past five years in the State and the Region. The State has designated six area centers for occupational education in the Region. Monies have been provided for building programs, equipment, and staff salaries for each approved center up to 25 per cent of total cost. There is a new BOCES complex in Orange County; a new complex in Mid-Westchester; and a new complex in northern Westchester, which also serves all

⁹Venn, Man, Education, and Manpower, p. 90.

of Putnam County. Occupational programming has been merged for New Rochelle and Mount Vernon school systems for which new occupational wings have been built onto each high school. Rockland BOCES Area Center is a modern facility still being expanded. The City of Yonkers, with Saunders Vocational High School and Commerce High School, has the oldest established vocational and business education facility in the Region. These six centers serve, in varying degrees, the high schools within their vicinity. Six of the larger high schools offer what is known as "satellite courses" within their own facilities. Although these courses are not funded by the State, they do provide limited programming for some of their students.

The six regional centers cover geographically the school systems of the four counties. Four of the six centers are half-day facilities which are an extension of the school districts they serve (BOCES programs). Each high school in the BOCES' areas sends its occupational students for half a school day, either in the morning or the afternoon, for specialized courses in as many as thirty different programs. Depending upon the depth of specialization, the students may go for one, two, or three years. Students are registered in their home schools where they take the common branch subjects and participate in home school activities in extracurricular programs. Such a cooperative system affords the smaller school districts many

more occupational options, at a more reasonable cost, than they could support within their own districts. The Saunders and Commerce High Schools in Yonkers and the New Rochelle and Mount Vernon High Schools are comprehensive occupational schools. As large city school systems, they have sufficient enrollment to warrant specialized programming.

A great deal of time and effort is expended by directors of occupational education in attempting to dispel misconceptions based on past attitudes about occupational education. It is difficult to convince the community that employers prefer graduates of the six area centers over those who graduate from local schools with no special skills. This is a change which has developed over the past five years. Employers look for competency in special skills in graduates, not only for a knowledge of basic academic subjects as was the case years ago. "Technological advances have created a demand for workers possessing higher levels of educational skills and an attendant reduction in demand for the lesser skilled."¹⁰ Employers are learning that occupational students are not low in intelligence. They find, too, that occupational education produces a better motivated employee, disciplined by his training and the work orientation which is an integral part of the program. Since busi-

¹⁰ Report of the Advisory Council on Vocational Education to the Secretary of H.E.W., Essex, p. 181.

ness and industry are playing a greater advisory and consultative role in curricular development, students are graduating with up-to-date skills.

The occupational student has a new perspective on his future. He is secure in the knowledge that occupational education in the regional schools does not have to be terminal. But if he decides to go to work, he knows the training he has received was given because indicators showed potential employment opportunities. The decision can be the graduate's to continue his education by seeking further specialized training in compatible community college courses, or changing his career field entirely through other educational pursuits. In many instances, he finds his successes in occupational education instrumental in developing heretofore latent academic interests and talents. Occupational graduates are finding the world of work a vehicle for education through the career ladder approach offered in business and industry, which presents limitless options in employment and in opportunities.

All is not ideal, however, for the student who pursues occupational education, improved though it is. In some communities, there is still a very real problem of "image." Some capable students find fixed-hour requirements restrictive and employment credentials wholly archaic, especially in labor unions. A few students find some employment underutilizing their skills. However difficult the skilled

training and the employment realities might be, the trend is toward improvement in job opportunities for occupational graduates.

Within the schools, there are deficiencies which handicap the growth of quality programs. Occupational programs are not offered early enough to catch those students who are potential dropouts, largely because vocational orientation is not part of the curriculum in the grade schools. Many students, who drop out, are those who are not in good standing when they reach the tenth grade. They are not eligible for occupational programs.

Area centers do not afford high school graduates occupational training and do not offer adults education in basic skills or retraining.

Programs could be open-ended to allow for more individual rates of achievement if they were on a twelve-month school year (see infra, p. 133).

In the Region, there is not enough planning done on a coordinated basis with industrial training programs; institutional programs under the egis of governmental and social agencies; and private and public post-graduate educational organizations.

Special needs courses for the handicapped and deprived are offered on a token basis.

Despite the many shortcomings of existing occupational resources, great strides have been made over the past

five years to build quality and dignity into occupational courses and to enlarge training options. Much is left to be done regionally in the area of creating greater receptivity in the community toward making occupational education a primary endeavor.

Notes on the Literature

The author derived a philosophical base for the direction in which occupational education should go from his own experiences as an employee, as a teacher, and as a student. As an administrator in a technology center, some new approaches were used with some success; others were voiced and "noted for the record."

The literature in the field of careers, manpower and education before 1960 was limited to publications adhering to the status quo in vocational education which was the guild system of apprenticeship. Innovation or modification was not "rampant."

Most of the texts in occupational education were published in the sixties, with Grant Venn's Man, Education, and Work¹¹ as an almost revolutionary forerunner. Since then, there have been several authors who have developed cogently the need for expansion of occupational education. They have given recognition to the interrelationship of the

¹¹Grant Venn, Man, Education, and Work (Washington, D. C.: American Council on Education, 1964), 222 pp.

educational system with community needs.

Some drew from the historical perspective that old methods were not working. They were able to make some specific recommendations on how to achieve a continuum in occupational education curricula. Other authors took their points of departure from a view of general education and developed vocational goals. Individually and collectively, the following authors reinforced or contributed to the thinking expressed in this chapter: Gardaw Bowman and Gordon Klopf,¹² Lee Dubridge,¹³ Jacob J. Kaufman and Morgan V. Lewis,¹⁴ Garth L. Mangum,¹⁵ Frederick Mayer,¹⁶ and Grant Venn.¹⁷

¹²Gardaw Bowman and Gordon Klopf, New Careers and Roles in the American School (New York: Bank Street College of Education Press, 1968) 262 pp.

¹³Lee Dubridge, Educational and Social Consequences (Englewood Cliffs, New Jersey: Prentice-Hall, 1962) 195 pp.

¹⁴Jacob J. Kaufman and Morgan V. Lewis, The Potential of Vocational Education (Pennsylvania: University Park Press, 1968) 206 pp.

¹⁵Garth L. Mangum, The Manpower Revolution (Garden City, N. Y.: Doubleday and Co., 1965) 297 pp.

¹⁶Frederick Mayer, A History of Educational Thought (Columbus, Ohio: Charles E. Merrill Books, 1960) 381 pp.

¹⁷Grant Venn, Man, Education, and Work (Washington, D. C.: American Council on Education, 1964) 222 pp. and Man, Education, and Manpower (Washington, D. C.: American Association of School Administrators, 1970) 265 pp.

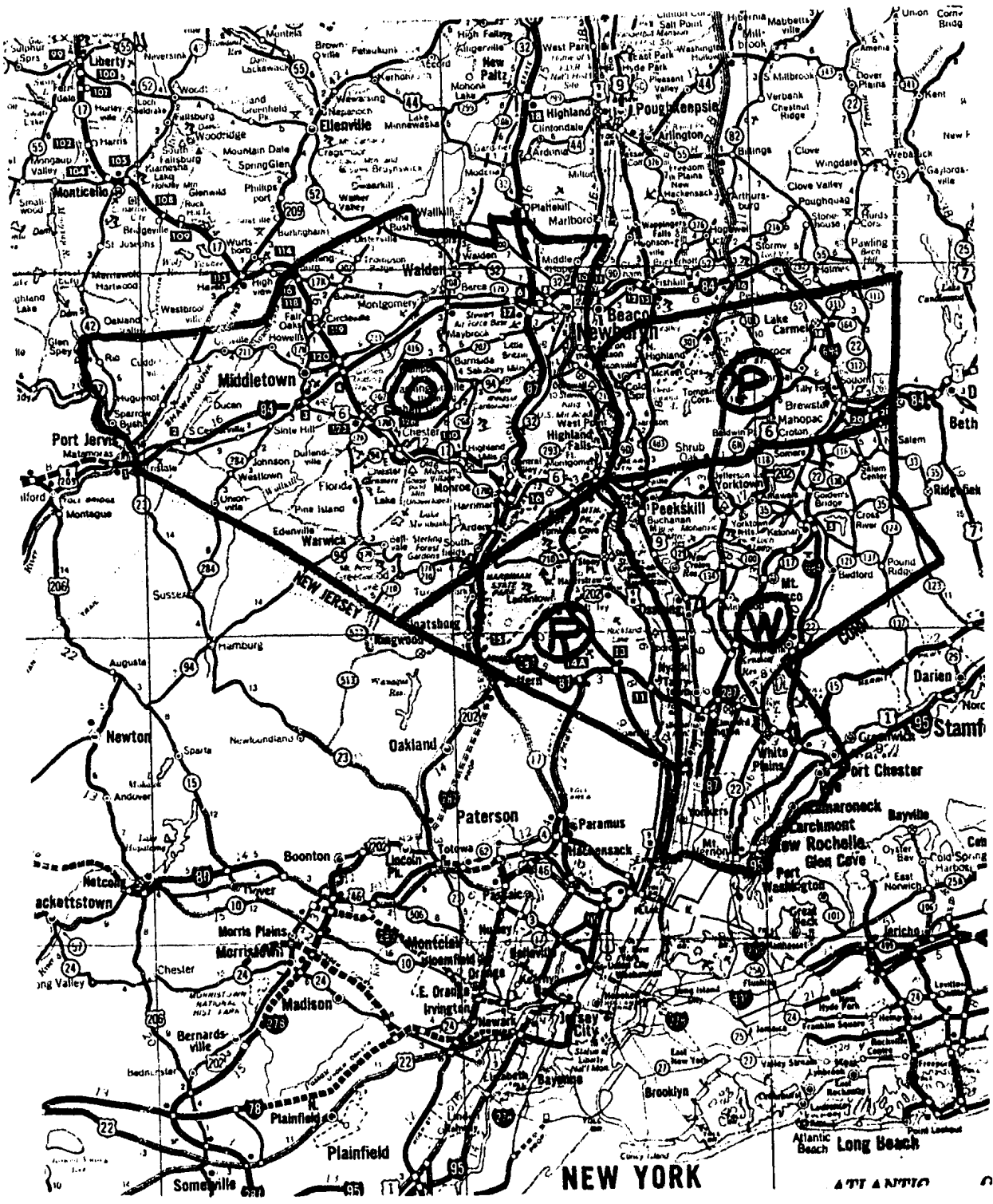


Fig. 1.--Map of southern New York State, with Region 4 outlined.

CHAPTER III
DESCRIPTION OF AREA

Orange County

Orange County, with a land area of 838 square miles, spans the thirty-eight miles between the Hudson River to the east and the Delaware River to the west. These rivers and their major tributaries serve to give natural definition to the County's extreme eastern and western boundaries.

The land ranges in elevation from sea level to 1664 feet. It is varied and beautiful with a countryside dotted with numerous lakes and ponds, of which 122 are ten acres or more in size. It is traversed by 1,227 miles of rivers and streams.

Two mountain ranges dominate the County's landscape, extending in a northeast-southwest direction. The Highlands of the Hudson and the Ramapo Mountains, which form a single range, extend across the southeastern border of the County. Until recently, it stood as a formidable natural barrier to the outward urban expansion of the New York Metropolitan Region into the County. The building of the New York State Thruway, through the Ramapos, on the bottom lands of the Ramapo River Valley, removed this barrier and with it, the isolation of the past. Historically, the Hudson

River served as the only tie with New York. It was along this first "thruway" that the County's early settlements were made.

The Shawangunk Mountains to the west, the second of the County's two mountain ranges, are an extension of the Kittatinny Mountains in New Jersey and connect with the Catskill Mountains in New York. This single range forms the divide between the Hudson and Delaware drainage systems.

Unlike the navigable, tidal Hudson, the Delaware is a fast-flowing, shallow, rock-strewn river. Its major tributary in Orange County is the Neversink River, which parallels the Shawangunk range and separates it from the Deer Park plateau.

Between the two ranges of mountains lie the gently rolling farms and woodlands of the Wallkill River Valley. The Wallkill River, at its center, is one of the few northward flowing rivers in North America. It enters the County from Sussex County, New Jersey, emptying into the Hudson River at Kingston in Ulster County. At the southwestern end of this valley are deposits of fertile land, the remains of vegetation which grew in shallow lakes formed by action of the continental glaciers. Celery, lettuce, and sod are some of the crops of the area.

The County has three cities - Newburgh, Middletown, and Port Jervis. Located sixty-to-seventy miles north of New York City, the region is served by a good system of

roads, railroads, water transportation, and small general airports, plus the newly acquired Stewart Air Field.

The economy of the County is quite diversified, ranging from industry to agriculture, with the normal amount of service industries, including those needed for recreational and resort areas. In December, 1969, Orange County had a work force of 79.3 thousands and had an unemployment rate of 4.7 per cent. The total population (1970 census) was 218,350.

There are approximately 2,200 workers employed year-round in agriculture. Two crop activities, fruit and vegetables, create a large demand for seasonal workers. The current technological changes within these crop activities and future trends in mechanization of production will dictate the continued use of large numbers of seasonal workers. The main portion of the seasonal work force are migrant workers, of whom there were 1,500 employed during this past year. This number is not expected to change radically during the next five years.

Putnam County

Putnam County, an area of 232 square miles, in which there are six towns, is one of the most rapidly growing regions in the Mid-Atlantic area. The 1970 census showed a 74 per cent increase in the last decade, as compared with a 30 per cent increase for the Mid-Hudson area

generally (1970 - 54,411; 1960 - 31,722). During the summer, there is a 40 per cent increase in population due to vacationing residents in the many recreational areas.

The New York State Department of Commerce considers Putnam part of the Mid-Hudson Economic Area, which encompasses Dutchess and Orange Counties and the cities of Beacon, Newburgh and Poughkeepsie. Putnam County is located between Dutchess County on the North and Westchester County on the south.

Residents commute from Putnam into New York City; into Westchester, Dutchess and Orange Counties; and into Connecticut and New Jersey. The greatest number commute into Westchester.

The County has been characterized as a middle-income, residential community. It has an interesting topography of rugged hills, rolling plains, valleys, endless streams and lakes. The Hudson Highlands and the Hudson River form the westernmost boundary.

Transportation, north to south, is provided by train and bus service; however, public transportation, east to west, is almost non-existent. The arterial highways, north and south, provide high-speed, limited-access roads.

Expansion of industry in Westchester County (particularly White Plains, Armonk and Yorktown Heights) has opened new employment opportunities to skilled and professional workers.

Building industries are booming in the County because of its fast growth. Demand exists for all types of construction workers. Those who are employees in the construction industry belong to unions in Westchester and Dutchess Counties.

An inadequate sewer system has deterred industry from moving in.

In planning curricula for students, the manpower requirements of a large geographical area must be taken into account, since eight persons commute out of the County for every one who commutes into the County.

Local employment opportunities are limited due to the lack of manufacturing and industrial plants. The few Putnam County has are located on the perimeter of the County. There are, however, large industrial complexes located in Danbury, Connecticut; Fishkill and Poughkeepsie in Dutchess County; and White Plains in Westchester County.

Putnam is sixty miles from New York City. With the continued building of a network of roads, it will cut the drive from the present one and a half hours to one hour.

The lack of public transportation from east to west inhibits placement of occupational education graduates.

The greatest shortage in personnel in Putnam, as in other parts of Region 4, is in office skills.

Rockland County

Rockland County (208 square miles) was formed from a triangle of the southern portion of Orange County in 1798. The Hudson River is its eastern boundary and New Jersey is on the southwest. The smallest county in the state lies across the Hudson River from Westchester County.

The Ramapo Mountains, extending along the northwest, are the connecting link between the Blue Ridge of Eastern Pennsylvania and New Jersey and the Matteawan Mountains of Putnam County, east of the Hudson. They are separated into numerous and distinct spurs, ridges and peaks. Generally steep, rocky and barren, they occupy more than one-third of the surface of the County. The valleys between them are narrow, rocky ravines.

The Palisades Range from New Jersey enters the extreme southern corner of the County and terminates abruptly south of Piermont. A broken ridge, known as the Nyack Hills, forms a northern spur of this range and extends along the river to the northern part of Clarkstown, where it unites with Verdrietege Hook, an eastern spur of the Ramapo Range. The surface of the central and southwestern portions of the County, lying between these ranges, is rolling or moderately hilly.

The principal streams are the Hackensack River, flowing south through Clarkstown and Orangetown; the Ramapo River, in the western angle of Ramapo; and the Minisceorgo

Creek, Minas Fall Creek, and Spar Kill tributaries of the Hudson.

The mountains, containing granite, gneiss, limestone, and red sandstone, yield an abundance of excellent building materials.

The population is engaged, largely, in fruit-growing. Milk is sent from some parts of the County into the New York City market. The manufacture of lime and brick and the exportation of ice are important branches of the County's industry. Large quantities of red sandstone are quarried and exported for building purposes.

The Westchester-Rockland area is one of the most rapidly growing in New York State. Good transportation and an excellent location in the huge market of the New York-Northeastern New Jersey Metropolitan Area have combined to create a thriving business community and attractive residential settings. The district stands astride the main rail lines and highways connecting New York with New England, the Midwest, and Canada.

Rockland County has no one principal economic center and no incorporated areas with a population of over 10,000. Spring Valley and Nyack are its leading trading centers. Another village, Pearl River, is the site of one of the nation's leading pharmaceutical concerns. Other manufacturers in the County produce organic chemicals, metal specialties, cosmetics and toilet preparations, and paper products.

State parks occupy about one-sixth of the County's land area.

Westchester County

Westchester (450 square miles) is part of the New York Standard Metropolitan Statistical Area. As such, it is related in many ways to the other parts of the metropolitan labor area. However, the County differs from the remainder of SMSA in a number of factors affecting manpower problems, including population rates of growth and composition, employment distribution by industry and occupation, recent and projected industrial development, nature and extent of transportation facilities, availability of industrial sites, etc.

It is both relevant and convenient to look at Westchester as being composed of three geographic sub-areas for purposes of labor market analysis. Each of the sub-areas exhibits significantly different characteristics.

The southern tier, comprising Yonkers, Mount Vernon, and New Rochelle, is the most densely populated portion of the County. It contains the bulk of the County's minority population and, by far, the most significant concentrations of disadvantaged persons.

Industries range from the low-paying needle trades and electronics to the higher-paying industries such as Otis Elevator, Anaconda Wire and Cable, Phelps Dodge, and Refined Syrups and Sugars. There is a heavy concentration of retail trade establishments in large shopping centers

and along Central Avenue in Yonkers, as well as in New Rochelle and other areas.

The fact that a large portion of the southern area of the County borders on New York City, coupled with its well-developed roads and public transportation facilities, results in a very close identification with the New York City labor market. Many employers are able to attract workers from the Bronx and Manhattan.

Public transportation to the north of the County is prohibitively long and expensive. Thus, although there is some mobility of unskilled and semi-skilled labor between the southern and central portions of the County, there is virtually no flow of such workers to or from the northern third of the County.

Future development of the southern portion will be somewhat limited by a relative scarcity of space. More recent construction of housing has been of the high-rise type. There is almost no land available for development of industrial facilities. The expansion of retail trade along Central Avenue is, however, continuing north toward the White Plains area.

A section of Mount Vernon was recently approved for a planning grant under the Model Cities program. Firms in or near the city have become eligible for certification under Defense Manpower Policy Number 4. Yonkers has also applied for a Model Cities grant but has not, as yet, received approval.

The central part of the County extends from the southern tier to an approximate line running just north of the White Plains area from Tarrytown on the west to Port Chester on the east. This area is less densely populated than the southern tier but has been growing at a more rapid rate. There are concentrations of disadvantaged persons in White Plains, the Town of Greenburgh, and Port Chester.

Manufacturing establishments have begun to play an increasingly important role in this part of the County; but, with the exception of the Chevrolet assembly plant at Tarrytown, the impact upon the area's manpower situation has been the rising demand for white collar workers.

Important industries, which maintain production facilities in the area, include electronics, instruments, medical equipment, and chemicals. Most of the firms are in the small to medium-sized range.

North-south roads are good and improving. On the negative side, east-west arterial highways are poor, which is due in some measure to resistance from local residents. There is an almost complete absence of public sewers and treatment centers for garbage.

The northern third of the County stretches from the Hudson River on the west to the Connecticut border on the east and north to Putnam County. This is the most sparsely populated portion of the County, but it has experienced a much more rapid growth in population than any other section

of the County in recent years.

There is only one city, Peekskill, in this upper third of the County, as compared with six in the southern and central sections. Peekskill has the only significant concentration of minority groups and disadvantaged persons.

The total population of Westchester County, as of the 1970 census, was 886,450.

Region 4

As can be seen by the foregoing descriptions of the individual counties, Region 4, totalling 1,693 square miles, is a varied and complex geographical area.

It is comprised of urban, suburban, and rural communities, with economic levels ranging from the most impoverished (migrant workers and hard-core unemployed) to some of the highest per capita incomes in the nation. The economy of the area is relatively stable due to the diversity of the labor market and to the fact that it is not dependent upon heavy industry or defense contracts.

The Region encompasses some of the most rapidly growing areas in the State, both in population and in manpower opportunities, due to its geographic location. It is bordered on the southeast by New York City and New Jersey, on the southwest by Pennsylvania (Delaware River), on the west by Sullivan County, on the north by Ulster and Dutchess Counties, and on the east by Connecticut and Long Island

Sound. The Hudson River runs north-south through the middle of the Region.

A network of highways traverses the Region, with Route 9 running north-south, linking upper New York State, Connecticut, and New England with New York City, New Jersey, and points south and west. Two major east-west highways are located in southern Westchester--U. S. Route 287 and the Cross County Parkway. A third major highway, U. S. 84, links Danbury, Connecticut, the New England Thruway, and points north with the New York State Thruway, Route 17, and the Pennsylvania state line at Port Jervis. The lack of east-west highways, due to the north-south mountain ranges, hampered internal industrial growth of the northern parts of the Region and led to the "bedroom community" and seasonal resort development of this section. With the advent of Route 84, industries, banks, and large shopping areas are moving into the area.

Recreational parks, lakes, and streams are located throughout the Region affording many opportunities for rest and relaxation in addition to supporting employment.

There are two airports, one in Westchester County and one in Orange County. Stewart Air Force Base, a new acquisition of the Metropolitan Transit Authority, is presently planned as a general aviation airport, with some talk of its becoming a fourth jetport.

Public transportation is available but inadequate;

most of it is designed to serve commuters into New York City. There is intra-city bus service in varying degrees of adequacy, depending upon the size of the city. There is limited inter-city-town-village bus service. In the more suburban and rural areas, this presents a great obstacle to employment opportunities within the Region and forces employees to commute into New York City, or other cities, where internal public transportation is more adequate. In many areas one must have a car to be employable.

It is obvious that volumes could be written about the economy of the Region; but it is clear that the prevailing economic winds of the last few years have favored expansion, so that this Region has maintained a good rate of growth. It is possible that, due to the national administration's concern regarding inflation, we can expect some retardation of this expansion. In the long run, however, it appears that the Region can expect a continued economic growth, benefitting from the saturation of the economy to the south.¹

An economic downturn would have only a limited effect on employment in the area for the reason that heavy industry and consumer-oriented production facilities are, normally, the first manufacturing segments to feel the impact of adverse economic conditions. Neither segment accounts for a substantial part of manufacturing employment in this Region. Employment cutbacks would be reflected in slower growth rates rather than overall reductions in the employment level. Some firms, whose competitive position is

¹ New York State Department of Labor, Cooperative Area Manpower Planning Systems (CAMPS), Report of Fiscal Year 1971

not strong, might be forced to cut payrolls. Those firms whose production is directly related to government contracts are relatively few.

To sum up, the Region's economy is not particularly vulnerable to cyclical fluctuations; large-scale layoffs are not expected since, as indicated, defense spending is scarce in the areas, as is heavy industry. Lower demand for consumer goods would have only a limited effect on manufacturing employment, since a high percentage of the area's jobs related to manufacturing are in administrative or research fields rather than in production facilities. Some cutback in construction trades and service trades can be expected if the current inflationary trend continues.

HISTORY OF AREA

Orange County

The County's name is derived from William, Prince of Orange, husband of England's Princess Mary, who, following the Glorious Revolution in 1689, became co-monarchs as King William III and Queen Mary II.

The County's boundaries were vague, loosely outlined as running from the Hudson River to the Delaware River, bounded on the south by a disputed New Jersey line, and on the north by the Ulster County line. In 1798, the administrative problems caused by the physical barrier of the Ramapo Mountains were resolved by the creation of Rockland County

from the southeast portion of Orange County. Six weeks later the Towns of Deerpark, Montgomery, Newburgh, New Windsor, and Wallkill were joined to Orange from Ulster County, with the provision that Goshen and Newburgh would be joint county seats. The area of Orange County has remained the same since then.

Orange County's importance during the Revolutionary War derived from its key geographical position. The Americans, commanding the heights along the Hudson River, could keep the British from linking their army in New York City with the forces in Canada, thus preventing a split of the thirteen colonies' united action.

A plan of the commander at West Point, General Benedict Arnold, to sell the plans of West Point's fortifications was, fortunately, unsuccessful. West Point is the oldest continuously-occupied military fortification in North America, having been occupied ever since 1775. The United States Military Academy, the first institution of higher learning in Orange County, was opened at West Point in 1802.

General George Washington spent nearly seventeen months in command of his troops at New Windsor, living much of the time in the Jonathan Hasbrouck House in Newburgh. This house became the first historic site to be opened to the public in the United States in 1850.

Although the colonists were restricted by law in the making of manufactured articles of iron, the iron ores

of southeastern Orange County provided both pig iron for shipment to England and raw material for necessary manufacturing on the site. Iron mining and manufacturing appears to have been conducted intermittently from 1737 until after World War I; but the zenith seems to have been reached during the Revolutionary War and the War of 1812, when vast quantities of iron products were needed quickly. Other wars, throughout the nation's history, also resulted in boom conditions in this vital industry.

It was the Southfields Furnace which produced the iron for the manufacture of the first cannon successfully made in New York State in 1817. It was cast at Peter Townsend Foundry in the Town of New Windsor, Orange County.

Powderworks were also part of the nation's arsenal to be found in Orange County, with those at Craigville and Gardnertown being the largest. Peace brought depression to these communities. The Craigville Works were replaced by a leather industry, which was later converted into the nation's first oatmeal factory in 1880.

Another type of factory had its origins in Orange County--the butter factory. Up to that time, butter was churned in individual farm kitchens; but in 1856, the first commercial butter factory was opened in Campbell Hall, across the road from the present post office.

The first railroad to reach the County was the New York and Lake Erie Railroad, which opened from Piermont to

Woshen in 1841, to Middletown in 1843, and to Port Jervis and Binghamton in 1848. There were spurs to other communities which often built their own lines to link them with the nearest station on the Erie.

The advent of intensive use of motor transport brought about the creation of a network of state, county, and local roads which linked the County ever closer to the urban areas to the south (New York City). Orange County provides one of the largest reservoirs of land for the expansion of the New York-New Jersey metropolitan region.

Recent proposals for additional construction of express highways and the inclusion of the County in the metropolitan rapid transit plan have tended to raise the barriers to intensive development. The growth in population of the post-war period is evidence of this.

The County is experiencing an expansion unprecedented in its long history. From all indications, the trend will continue, at an ever-increasing rate, for the next twenty years, paralleling the expansion of urban areas throughout the United States.

Putnam County

Major General Israel Putnam, who was stationed in Putnam County during part of the Revolutionary War, gave the County its name. Originally part of Dutchess County, Putnam became a county in 1812 when New York State set up many new counties.

In the scramble for land ownership along the Hudson, which began in the 1680's, nine-tenths of what is now Putnam County went to Adolph, son of the Dutch millionaire, Frederick Philipse. In 1765, the Wappinger Indians claimed, fruitlessly, that they had never sold over 200,000 acres of the land. The following year, 2,000 armed settlers broke into open revolt against their landlords, the Philipses. A regiment of British soldiers was sent into the area. When two soldiers were killed, the army in retaliation burned the settlers' homes, slaughtered or drove off the cattle, and destroyed crops. A blockhouse was built to intimidate the tenants.

When the Revolutionary War compelled decision, the two sons-in-law of the Philipse family became Tories. One, Colonel Beverly Robinson, raised a Tory Regiment. When the British breached the Highlands, Robinson shared in the victory. Three years later Robinson came "up river" with the spy Andre, but missed being an active party to Benedict Arnold's plot to surrender West Point to the British. The other son-in-law, Colonel Roger Morris, moved to England during the war.

The State seized these lands from the two brothers-in-law, nearly two-thirds of Putnam County, and sold them to tenants, servicemen, and speculators. At the end of the war, the Morris family raised the question of its children's rights. John Jacob Astor bought the children's claim and

brought suit for the recovery of the property. The suit became known as one of the great legal trials of the United States Supreme Court. Daniel Webster defended the purchasers, but the verdict went to John Jacob Astor. The State settled for more than five times what the Astors had paid for the claim. The one-third of the land belonging to Philip Philipse was sold by his family after Putnam became a county in 1812.

The Highlands (Putnam County) became the "hot spot" of American defense during the Revolution. Many leaders were stationed here with large bodies of troops held in reserve. The British plans were to take the Hudson and divide the colonies in half. They breached the defense, after many feints, in 1777, but the victory was blunted by the surrender of Burgoyne at Saratoga.

Forty of the sixty years between 1755 and 1815 were dominated by a war economy. Meat and bread were in demand beyond the ability to supply them. The valleys had a few excellent farms, one of which was rated at one time as the finest in the State. This farm and others of the very best farmlands now lie under water. Eastern Putnam County became a highway for stock being driven to market. Drover taverns became centers of influence.

The headwaters of many streams began in the Highlands, giving every resident along these streams an eye for a mill site. One hundred mills dotted the streams. One

census listed eighteen millwrights who made the building and care of mills their life's work. Red Mills is, perhaps, the best known. The first spinning mill in America was located in Putnam. After New York City took the water supply, the Red Mills post office became Mahopac Falls.

"The Big Woods" had fine stands of hard wood--oak, walnut, chestnut, ash--which were used for shipbuilding, furniture, and for making charcoal for smelting. The hills were a magnet for prospectors; iron ore was plentiful. After the war, more than a dozen iron foundries were opened, most of which prospered for fifty years.

With the close of the Revolutionary War, about half the Putnamites moved west, primarily into western New York. Population increased slowly; occupations changed; population centers began to shift, which brought Brewster into being. Within a few years production of milk became the major industry and continued as the basic industry for seventy-five years, supplying New York City with 10 per cent of its needs.

After the Civil War, railroad projects came into the County, and three survived the Panic of 1873. About 1920, New York's metropolitan outreach began to draw Putnam County into its orbit. Within a decade its influence had become marked. After the Depression of the 30's and World War II, the remaking of the County has been much in evidence.

Rockland County

The great outcroppings of rock which overhang the Hudson gave Rockland County its name. Known as Shatemuc to the Indians (the river that flows two ways), this region became a county in 1798 when it was officially separated from the County of Orange.

Long before, however, the County was historically important. In 1609, Henry Hudson sailed his vessel, the Half Moon, up the river which came to bear his name. It dropped anchor in the Tappan Zee, off the area later called Piermont.

The river swarmed with fish and shellfish, and the woods were full of game. Since the soil was fertile, the Indians farmed with very little effort. What the first settlers found was not an unbroken forest but many open spaces in the woods left by the Indians.

Most of the early settlers were Dutch, with a sprinkling of Huguenot families. Later, the English began to colonize. In 1702, there were less than 300 people in the County of Orange. Relations with the Indians, except for a few instances, were friendly, but, as the European settlement grew, the Indians moved to wilder land.

Sloops made regular trips up and down the river. It was often less arduous to go by water than by land. The natural barrier of the Ramapos and the large size of Orange County made it difficult to carry on governmental activities.

For this reason, in 1798, Rockland split off from Orange to form its own county. At one point, there were twin county seats--a courthouse and a "gaol" at the southeast corner of the green at Tappan Village for settlers south-of-the-mountain, and similar facilities erected in Goshen for the people residing in the northern region.

The Tappan courthouse and "gaol" were destroyed by fire in 1773. A decision was made to abandon the old site and purchase land in a more central location for the new edifice. The selection of New City was by no means unanimous with the southern settlers, but finally, after numerous petitions, an act was passed in 1774 authorizing a tax levy for the building of a new courthouse and jail at a place commonly called the "City" (New City). Thus, the present central location of Rockland's County Seat came about.

The region became a battleground for Colonial and British soldiers. It was appropriate that so much of the Revolution was fought on its soil, for the famous Orangetown Resolutions, which contained the seeds of the Declaration of Independence, were passed by the people of the Town of Orange in 1774 in Mabie's Tavern, the very house in which the spy, Andre, was later imprisoned.

Quarries in and around Nyack and in other parts of the County provided stone for many structures outside Rockland, as well as in it. Building stone from the quarries went into the old Capitol at Albany, Fort Lafayette, the old

Trinity Church in New York, and the first buildings of Rutgers College.

Brick had been produced at Haverstraw in the early days of the colony, since the vast clay deposits of North Rockland came to the very surface of the wilderness. James Wood, an English brickmaker, came to Haverstraw in 1815, leased land from the deNoyelles family, and put North Rockland on the way to prosperity for the next century. Haverstraw became the brickmaking center of the east when Wood aided the production of brick by mixing coal dust in the brick, thus cutting the burning time of the kiln in half--from fourteen days to seven--and reducing the price of the bricks. His innovation of putting a vent in the brick molds was, also, a major contribution to Haverstraw's giant industry which utilized the high-quality clay dredged up from a 200-foot deep bed in the Hudson River.

The greatest impetus given to brick production came in 1852 when Richard A. VerValen, a native of Rockland County, invented a practical brick machine, a great modern step after centuries of laborious brickmaking by hand. North Rockland was for the next seventy-five years the source of building materials for the colossal growth of metropolitan New York. At one time, the Town of Haverstraw had over forty-two brickyards.

In January, 1906, the excavation of clay for the brickyards led to a tragic accident when an entire area,

undermined by tunneling below the surface, was engulfed in a landslide of clay which took twenty lives. It did much property damage and destroyed part of the business section. The use of steel and concrete in construction, rather than brick, further contributed to the decline of the industry. The depression of the 1930's struck the final blow.

Rockland was also once rich in high-grade iron ore, though it was embedded in solid rock and difficult to extract. Largest of all the many workings was the Hassenclaver Mine, on land now covered by the Palisades Interstate Park. The Harriman section of the Park is, even now, dotted with small abandoned mines. For a while, the mines and the industries connected with them (foundries and metal works) provided employment for many people. When the great fields around the Great Lakes were opened, operation of the local mines was no longer profitable.

West of Pearl River was a soft coal mine, opened about 1820. Worked by pick and shovel or by hand, it prospered until the modernly-equipped Pennsylvania coal fields put it out of business.

Shipbuilding was Nyack's leading industry for many years. Famous racing yachts came out of the Village's shipyards. Hundreds of sloops sailed the Hudson between 1820 and 1880, serving as the principal means of carrying freight and passengers. At the peak of the steamboat's popularity, some of the best known of these ships originated

in Nyack's boatyards. These became obsolete when railroads were built in the valley between New York and Albany.

Because of the proximity of iron mines, numerous products were made--plows, hoes, railings, machinery, nails, even cannonballs. Outside the towns and villages, prosperous farms and orchards were operated year after year, generation after generation. Although not in the same proportions, the balance of agriculture and manufacturing is still apparent. Through the nineteenth century and the first half of the twentieth, the people of the County carried on their affairs--farming, working in factories, operating small businesses.

Population declined somewhat between 1910 and 1920 because farming did not offer sufficient reward to the young people for the hard work required. There were not enough jobs in local business and industry to keep them. The trend was reversed, however, when automobiles became numerous; better highways were built; the George Washington Bridge was opened. Another factor in population growth was the establishment of large industries such as Lederle at Pearl River, Avon at Suffern, Robert Gair at Piermont, and Ford and American Brake Shoe across the state line at Mahwah.

Today, Rockland County, growing rapidly and drawing closer to New York City in terms of travel time, is still far from being a dormitory suburb. It is true that there are more and more commuters among its residents, due to the

population increase and the opening of new arterial highways, but a large proportion of its people work less than half an hour's distance from their homes.

Westchester County

For two tumultuous summer days in 1776, Westchester County was the scene of major events in the birth of our nation and state. July ninth was the meeting date of the Fourth Provincial Congress of the Colony of New York, which met in White Plains to adopt the Declaration of Independence. The following day the same body voted to change New York's status from colony to state.

These two days marked the beginning of a new role for Westchester, but the County's history was already long. The first European to set eyes on its rolling land, according to record, was the Italian explorer, Verrazzano, who sailed up the Mohegan River, now the Hudson, in 1524. Hudson, himself, arrived in 1609.

Both England and Holland purchased land from the Indians during the 1600's, with colonists from both countries establishing large manors. It was in 1683, after the English had emerged as sole owners, that Westchester became a county. Its first government took the form of a delegation to the provincial legislative assembly of New York in 1691.

The early history of Westchester is peopled with great Americans--John Peter Zenger, who began the first

battle for freedom of the press in a section of Eastchester which is now Mount Vernon; and Alexander Hamilton, who led an artillery battery in the Battle of White Plains; and John Jay of Bedford, who was the first Chief Justice of the United States; and Washington Irving, who immortalized the Sleepy Hollow country; and James Fenimore Cooper, who wrote "The Spy" in Scarsdale; and many more.

When the Revolution had been won, Westchester's 20,000 residents turned to the task of rebuilding their way of life, concentrating on farming, fishing, and home manufacturing.

Public education became a fact in Westchester as early as 1795 when the State Legislature appropriated funds for a five-year school program.

Transportation to and from New York City had an important influence on County development even then. By the early 1800's, Hudson River sloops and steamships were playing a vital role in the transport of produce and manufactured products, and good north-south roads made it possible for New York-to-Boston stagecoaches to make regular stops in the County. Westchester's cities began to grow along the primary waterways and road arteries, with distinctive rural communities developing around them.

The doors to growth were opened in the 1840's when the New York and Harlem (now the Central) and the New Haven Railroads arrived in the County. With them came an accelera-

tion of Westchester's commercial life, new industries, and a major population growth in the southern portion of the County. In 1820, only 35 per cent of the population lived in this section. By 1900, the percentage had grown to 73.7, and commutation to New York City had become an important factor.

In the 1920's, the emergence of the automobile allowed growth to spread beyond the major rails, waterways, and north-south roads. The communities of Westchester began to take on their present-day form as individual cities, towns, and villages.

Growth accelerated after World War I, making local government increasingly complex and difficult. While town supervisors had been elected since 1703 and had met regularly since the end of the Revolution, they still lacked complete countywide legislative authority. The county seat was permanently established in White Plains in 1870. Parts of the County were ceded to the City of New York between 1873 and 1895, and the inroads on County territory did not stop until 1910.

The County Government Commission set up the charter in 1914. It was not until 1937 that Westchester gained the right to govern itself more fully, in addition to being an agency of the State. This right was granted by the County Charter, which is the basis of today's system of government. The measure was approved by the Board of Supervisors, passed

by the State Legislature, signed by the governor, and approved by the voters of the County in the same year of 1937.

The forty-five-member Board of Supervisors was replaced by a seventeen-member Board of Legislators, when, in 1970, Westchester was divided into seventeen districts under the "one man, one vote" rule.

CHAPTER IV

POPULATION GROWTH AND ECONOMIC DEVELOPMENT

Introduction

This chapter deals with population profiles and general economic development for the area. The projections, in the form of charts, are summarized by a concluding assessment of the statistical information which projects growth and economic trends.

There were eighty-one specialists (as indicated on the Region 4 Committee Organizational Chart which follows) directly involved in obtaining regional statistics and data which resulted in more than 10,000 pages of occupational education figures, which were then abridged and compiled in the form of charts. As a part of this dissertation, the organizational process, which involved so many experts, is worthy of documentation. Therefore, the organizational chart is submitted in the body of the plan, and supportive information is included in the appendix.

REGION 4 COMMITTEE ORGANIZATIONAL
CHART

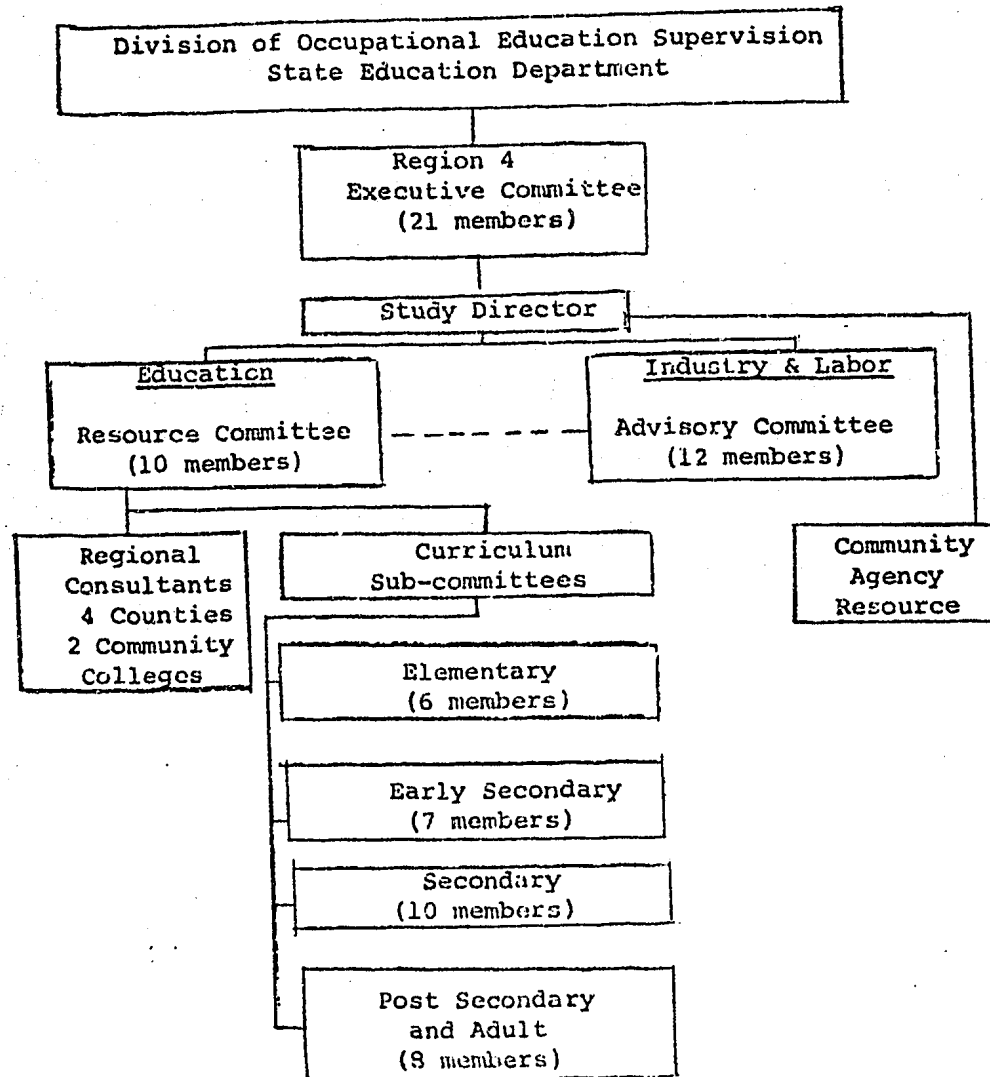


Fig. 2

REGION 4 POPULATION DATA

	Population April 1970	1960-1970 Census Gain	Percent Gain	State Rank in Growth	1985 Projected Population	Density per Sq. Mile
WESTCHESTER	888,143	79,423	9.8	8th	1,250,000	1,974
PUTNAM	54,571	22,789	71.5	1st	90,000	235
ROCKLAND	228,897	92,094	67.3	2nd	370,000	1,323
ORANGE	218,343	34,609	15.6	5th	480,000	256
TOTALS	1,389,894	228,915	16.5		2,190,000	815

	Female as a percent of the total population	Male as a percent of the total population	Non-white Female as a percent of non-white population	Non-white Male as a percent of non-white population
WESTCHESTER	52.3	47.7	53.4	46.6
PUTNAM	50.-	50.-	100.-	- 0 -
ROCKLAND	51.-	49.-	50.-	50.-
ORANGE	51.-	49.-	47.-	53.-

Fig. 3

CHARACTERISTICS OF THE POPULATION

A community reflects the demographic characteristics of its population. Of particular importance are the percentages of non-white and retired persons, as well as the numbers of pre-school children.

The table below indicates the percentage of population by age groups; and is compared to the national distribution. It also gives an implication of the present and future school population, and the working population for whom occupational education might be made available.

DISTRIBUTION OF POPULATION BY AGE GROUPS FOR 1966
(in percentages)

<u>Age in Years</u>	<u>0-5</u>	<u>6-11</u>	<u>12-17</u>	<u>18-24</u>	<u>25-34</u>	<u>35-49</u>	<u>50-64</u>	<u>65 & over</u>	<u>Median Age</u>	<u>Percent Non-White</u>
Orange	12%	12%	10%	10%	11%	18%	15%	12%	30.3	6.4%
Putnam	13%	12%	11%	9%	9%	18%	16%	11%	29.6	.5%
Rockland	13%	13%	12%	9%	10%	21%	14%	9%	28.5	6.1%
Westchester	11%	11%	10%	10%	10%	20%	18%	10%	33.5	9.1%
U.S. Total	10%	14%	13%	10%	11%	17%	16%	10%		

Fig. 4

COMPARATIVE POPULATION
GROWTH RATES

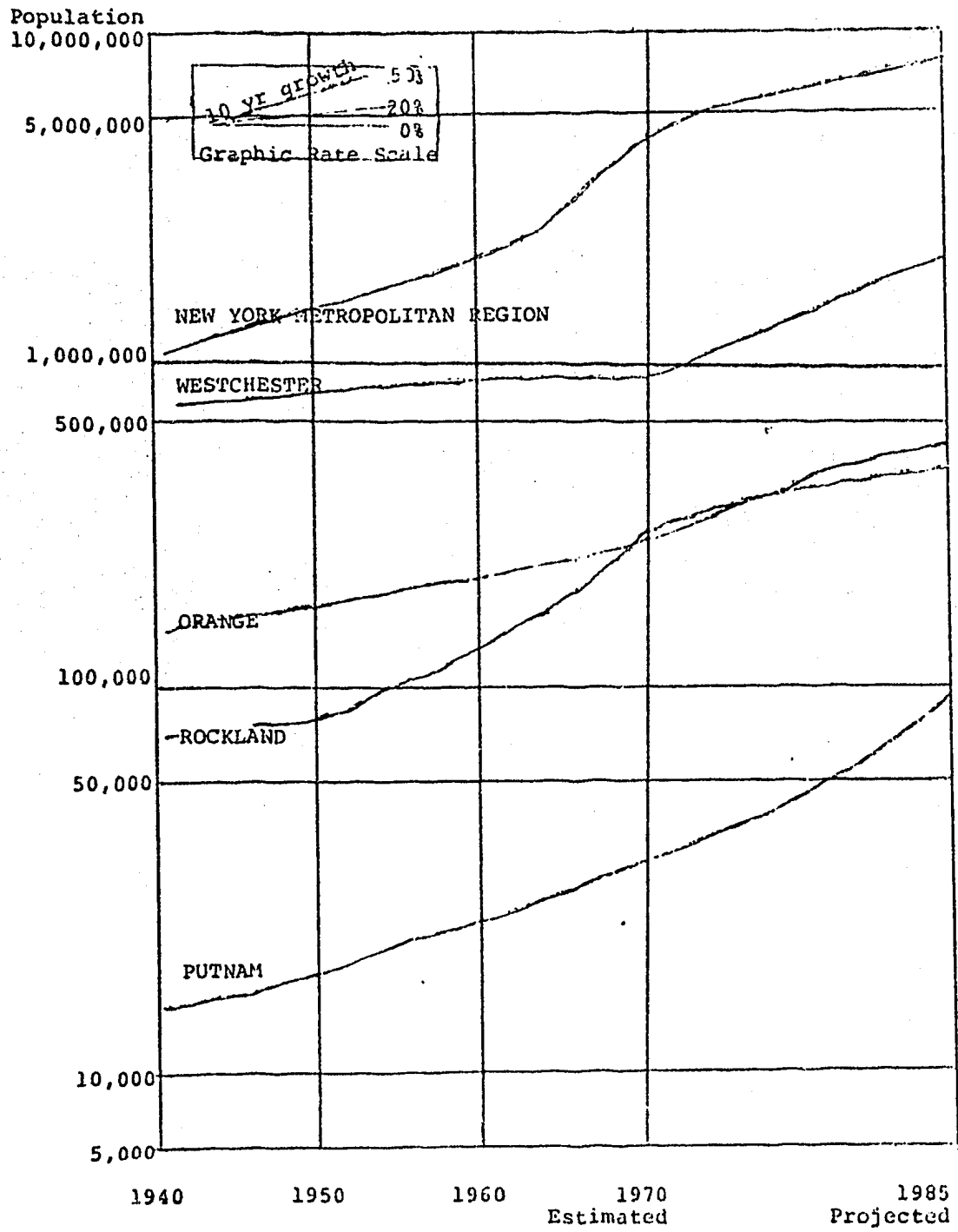


Fig. 5

POPULATION PROJECTIONS BY AGE,
SEX AND ETHNIC GROUP
BY COUNTY - 1970
(in thousands)

Age and Ethnic GROUP	<u>ORANGE</u>			<u>PUTNAM</u>			<u>ROCKLAND</u>			<u>WESTCHESTER</u>		
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE
TOTAL												
All ages <u>A1</u>	268.5 (1)	132.7	135.7				231.3	113.4	117.9	946.9 (2)	452.0	494.9
16-21	28.2	14.8	13.4				29.2	15.0	14.2	97.9	49.6	48.3
22-44	70.6	39.4	39.2				68.0	32.7	35.4	256.6	119.7	137.0
45-64	54.9	26.2	28.8				42.0	20.6	21.9	235.6	110.3	125.3
65 and over	27.7	12.1	15.6				15.9	6.6	9.3	105.9	45.6	60.2
Non-White												
All ages <u>B1</u>	15.0	8.0	7.0				12.8	6.4	6.4	85.2	39.5	45.7
16-21	1.4	0.7	0.7				1.4	0.8	0.7	8.8	4.5	4.4
22-44	5.2	3.0	2.2				5.0	2.5	2.4	27.3	12.4	14.8
45-64	1.8	1.0	0.9				1.9	0.9	1.0	18.9	8.0	10.9
65 and over	0.7	0.3	0.3				0.5	0.2	0.3	6.1	2.4	3.6

Source:

- a/ Demographic Projections for New York State Counties to 2020 A.D., Office of Planning Coordination, State of New York, June 1968.
- b/ Demographic Projections for Nonwhite Population in Twenty Counties to 1995 A.D., Office of Planning Coordination, State of New York, March 1969.

(1) Actual Count April 1970 Census 218,343
 (2) " " " " " 688,143

Fig. 6

REGION 4
Economic Levels

	Per Capita Income	Rank Income 1967	Median Family Income	# of Households 1970
WESTCHESTER	5,772	1	15,300	334,000 (1968)
PUTNAM	3,121 (1967)	12	11,900	13,700
ROCKLAND	2,989	19	12,080 (1968 Est.)	51,020
ORANGE	3,692 (1969)	22	9,895	65,000

Unemployment Rate

	1969 Average Unemployment	Oct. 70 Unemploy- ment Rate
WESTCHESTER	2.6%	4.1%
PUTNAM		4.6%
ROCKLAND	3.1%	4.0%
ORANGE	4.7%	4.2%

Fig. 7

REGION 4 POPULATION, INCOME, HOUSEHOLD GROWTH - 1960-1970

	POPULATION		TOTAL PERSONAL INCOME		HOUSEHOLDS	
	1960 US Census	E & P* Estimate Jan. 1, 1971	E & P 60 Estimate (add 000)	E & P 69 Estimate (add 000)	Number of Households	E & P 69 Estimate Income per household
NEW YORK CITY	7,698,281	1,445,237	6,755,300	8,356,306	592,101	14,112
ORANGE	183,734	219,195	414,200	704,140	64,325	10,946
Middletown	23,475	20,799	52,600	71,589	5,869	12,197
Newburgh	30,979	25,651	69,585	81,623	8,551	9,545
Port Jervis	9,268	8,341	20,160	24,313	2,814	8,640
PUTNAM	31,722	52,595	87,600	187,814	15,398	12,197
ROCKLAND	136,803	226,956	320,400	757,746	57,566	13,163
Nyack	6,062	5,135	15,155	14,943	1,651	9,051
WESTCHESTER	808,891	901,914	3,298,300	5,560,934	269,028	20,670
Kamaronneck	17,673	20,200	54,090	126,216	6,098	20,702
Mount Vernon	76,010	77,150	223,625	382,816	24,324	15,360
New Rochelle	76,812	79,424	234,180	508,639	23,621	21,533
North Tarrytown	8,818	9,109	25,395	37,762	2,391	13,062
Ossining	18,662	22,450	47,495	98,980	6,183	16,008
Peekskill	18,737	19,580	46,175	75,542	5,688	13,281
Port Chester	24,960	26,158	62,335	106,032	7,774	13,639
Tarrytown	11,109	11,909	35,620	51,970	3,701	14,042
White Plains	50,485	52,959	170,190	344,975	16,964	20,335
Yonkers	190,634	213,129	540,920	1,100,772	67,043	16,418

* Estimated & Projected

Fig. 8

REGION 4 1964 AVERAGE FIRST QUARTER GROSS EARNINGS BY COUNTY

Industry Div.	Agric. Serv. Forestry Fisheries	Mining	Construction	Manufac- turing	Transpor- tation Utilities Sanitation	Wholesale Trade	Retail Trade	Finance Insurance Real Estate	Services
<u>Grance County</u>									
First Quarter Earnings 1964	\$806	\$1,788	\$1,356	\$1,123	\$1,532	\$1,367	\$922	\$1,346	\$318
Percent of Total County Employment	*	*	4%	40%	8%	6%	20%	5%	16%
<u>Putnam County</u>									
First Quarter Earnings 1964	\$795	NA	\$1,306	\$1,251	NA	\$1,493	\$1,028	\$1,087	\$735
Percent of Total County Employment	*	*	12%	25%	5%	4%	26%	4%	23%
<u>Rockland County</u>									
First Quarter Earnings of 1964	\$1,286	\$1,873	\$1,585	\$1,829	\$1,546	\$1,698	\$938	\$1,263	\$859
Percent of Total County Employment	*	1%	6%	40%	7%	4%	15%	5%	18%
<u>Westchester County</u>									
First Quarter Earnings of 1964	\$1,083	\$1,570	\$1,746	\$1,598	\$1,636	\$1,734	\$1,036	\$1,304	\$1,000
Percent of Total County Employment	*	*	6%	31%	7%	8%	20%	6%	21%
<u>U.S.</u>									
First Quarter Earnings of 1964	\$826	\$1,535	\$1,439	\$1,472	\$1,514	\$1,512	\$868	\$1,264	\$947

Fig. 9

Summary

The four counties of the Region comprise one of the most rapidly growing and developing areas in New York State. The development of southern Westchester during the last two decades (and parts of Rockland during the past decade) from 'bedroom' communities and summer residences for inhabitants of New York City into a booming, self-sustaining economic area is continuing and expanding into northern Westchester, Putnam, and Orange Counties.

Although most of the Region is looked upon as an upper middle income and wealthy residential area, southern Westchester is largely an urban industrial center with a great deal of minimal-wage industry, which employs, primarily, unskilled workers. As in all areas with this type of employment, large pockets of poverty have developed. Little opportunity exists for underemployed workers within their own localities (even for those with some training). They cannot commute to the north, where jobs needing more skills have opened up and will continue to grow, because public transportation is so inadequate. Improvement of mass transportation can solve some of this problem, and retraining will be needed to solve more of it.

A continuing influx of administrative and technical

facilities brings with it many new professional, managerial, and technical positions, opening up opportunities for many skilled personnel. The demand for clerical and service staffs have been correspondingly increased. The entire area has been hard-pressed to keep up with the need for employees. What labor force is available comes from the high school graduates, from members of minority groups, and from unskilled labor of southern Westchester, Newburgh, Port Chester, northwest and west central Westchester, Middletown, southwest Orange County, and parts of Rockland County. In Rockland, most of the demand is for white collar and service employees and for workers in the many health occupations.

In 1969, 509,200 persons were employed in the Region. This figure will increase to 533,000, a growth of 4.5 per cent. The most rapid growth will occur in Rockland with a projection of 9 per cent; Putnam and Orange are expected to have a growth of 8 per cent. Over the next five years, the occupational categories which will grow at the fastest pace will be the professional, technical, and kindred workers; clerical workers; service workers; and health service workers. The largest increase of 5.5 per cent is expected in service occupations. This reflects the changing industrial growth of the Region, which is moving more and more in the direction of services, trades, and governmental agencies.

The professional and managerial shortages are mainly among technical staff and nurses, both registered and practical. Institutional training courses and high school programs have been established for medical occupations. However, the need is so great that little dent has been made in filling all the positions up to this time.

Administrative offices moving into the four counties continue to find it difficult to fill clerical openings; and training resources are not able to keep up with the demand for office staff.

The supply of qualified workers in the machine trades cannot be offset easily by on-the-job training or apprenticeship programs. The larger production shop operators can train new entrants to the trade, but their "graduates" are, usually, "specialists" on one or two machines. The smaller job-shop operations require all-around men and are too small to be able to train or supervise trainees.

The Builders Institute of Westchester County* has asserted that the shortage of qualified personnel in the building trades will strangle most private small contractors doing construction in the Region.

The sophisticated nature of the Region's economy is reflected in the high proportion of professional and technical

*conversation with George Frank, President of Builders Institute

workers expected in the area in 1973. The total of such personnel needed will surpass that of any other occupational category, with clerical workers a close second.

The need for employees in the retail trade will show marked growth as new shopping complexes, some being built and more on the drawing boards, are needed for the increasing population moving into apartment houses on which construction has already begun. Retail trade in White Plains, New Rochelle, Paramus, and Middletown has been growing at a brisk pace.. Major department stores and such outlets as Sears Roebuck, which has built the largest facility of its chain east of the Mississippi, have branches in White Plains. There are plans to construct additional branches of large chain stores in the Region.

Major industries and research centers such as Geigy, Union Carbide, General Foods, Avon, etc. are expanding their existing facilities. Urban renewal projects are under way in White Plains, Newburgh, and Yonkers.

According to the New York State Employment Service,¹ the following occupational opportunities will show major and

¹New York State Department of Labor, Manpower Directions for New York State, 1965-75, Volume II (Division of Research and Statistics), March 1968

persistent shortages of personnel over the next five years:

(The list is alphabetical and not in order of priority of need.)

Auto Body Repairmen

Automobile Mechanics

Bookkeepers - full charge

Construction Workers - skilled

Cooks and Chefs

Domestic Workers - household

Engineers

Factory Workers - male

Farmhands

Key Punch Operators

Machine Tool Operators

Machinists

Nurses' Aides

Practical Nurses

Registered Nurses

Retail Sales Clerks

Salesmen

Sewing Machine Operators

Sheet Metal Workers

Stenographers

Technicians

Tool and Die Makers

Truck Drivers

Waiters and Waitresses

While there is a shortage of labor for the jobs listed, some are not being filled because wages are low, working conditions are poor, and the hours of some shifts are not agreeable. Lack of public transportation makes some locations hard to reach and plays a major role in the difficulty of filling some of the openings.

Jobs for craftsmen and foremen, especially in the mechanical and repair trades, will multiply, but the ranks of the lower-skilled will probably shrink as a result of changes in technology.

The most vulnerable non-manufacturing industrial group is construction. The scarcity and high cost of mortgage money may continue to limit construction activity for some time. The ever-present demand for new housing, commercial facilities, and public works projects still exists. Plans have already been approved which will double the total construction of housing units of 1970.

Telephone, gas, and electric companies will expand their staffs in order to meet increasing demands. Employment in this group is expected to advance over 1969.

Minor employment gains in finance, insurance, and

real estate will occur mainly through banks, which are adding branches throughout the Region.

Despite the first indication of a drop in the birth rate, enrollments in school systems will require larger staffs, particularly in special services. This would include more programs for training handicapped children and adults. More guidance and expanded programs are needed in post-high school institutions. Most governmental agencies will record gains in employment, especially those in health services.

Industrial expansion in the Region can be forecast because new roads, those being built now and those being planned, will open new areas which had been inaccessible in the past.

Some Comparative Figures

Jobs in the Westchester-Rockland area are going to expand in most occupational categories as a result of growth in population and growth of new and existing businesses. Rockland County will have a greater share of the growth than Westchester because it has the land to accommodate the population and the businesses.

Of the additional 20,700 jobs expected between 1972 and 1972, Westchester should gain 14,600 and Rockland, 6,100.

The employment figures would then be 388,000 in Westchester and 73,700 in Rockland, making the gain in Rockland greater, relatively speaking.

The number of professional and technical workers (principally accountants, auditors, educators, and others concerned with youth) is expected to increase by 4,500 by 1972, a total of 85000, remaining the largest single group of employees in the Region. In medical and health occupations, many opportunities will present themselves through the mental health hospitals in Rockland and the Veterans' and Grasslands Hospitals in Westchester. Professional and technical workers would total 71,600 in Westchester and 13,800 in Rockland in the fiscal year 1973.

The proportion of managers to total employment should remain constant over the 1972 to 1972 period with a possible gain of 900, making the total 48,800, split almost evenly between Westchester and Rockland.

The number of clerical positions will increase to a total of 80,600 over the two-year period, a rise of 3,800, making it the second largest working group. An estimated 1,100 of the increase will be in positions for secretaries, stenographers, and typists, if measures (such as higher salaries and a relaxing of requirements by employers) are

sufficient to overcome the already existing shortages. Westchester and Rockland will add 2,900 and 900 clerical workers respectively over the two-year period to levels of 68,900 and 11,700.

The number of people employed in sales positions will rise by 1,000, making a total of 32,400 in 1973. Rockland County, because of the population increases and the corresponding development of retail stores, anticipates a one-third share of the increase to bring sales jobs to 5,300. The more relatively stabilized County of Westchester expects the number of retail jobs to rise only 700 between 1972 and 1974, making a total in that category of 27,100. As sales jobs become less attractive as permanent positions because other opportunities will open up, a labor shortage in this field is expected to hamper growth of retailing in both counties.

The service occupations, the fastest-growing classification, will call for 3,400 more employees in the Westchester-Rockland area, constituting a total of 73,000. Westchester has a large, well-developed group of service personnel, population growth in Rockland has outdistanced its service sector. Therefore, the projection for Rockland in the service-worker group is a large increase. Employment in

service occupations should increase by 1,000 in Rockland to 10,700 (or 15 per cent of total employment) while the increase in Westchester should be 2,400 to a total of 62,400 (or 16 per cent of total employment). The gains will occur in most of the services, but the largest number of employees will be needed as restaurant workers and household workers.

Additional jobs will be available in the industrial field through 1974. The number of opportunities for craftsmen should increase by 2,800 to a total of 58,200, with the greatest gain in all types of repairmen and mechanics. These groups, the largest group in the category of craftsmen, will fail to show an expansion of employment only if there is a lack of qualified jobseekers. Westchester County will need most of the increase, adding 1,800, while Rockland is expected to have openings for 1,000 jobs.

An expansion of utilities, which will employ such operatives as bus and truck drivers and kindred workers, will increase their openings to 2,900 from an estimated number of 68,000 for 1972. Rockland County's need will be for 800 operatives, for a total of 10,600. Westchester will need 2,100 employees in this category for a total of 57,400.

The three occupational groups expected to show the least growth are laborers, farmers, and farm laborers. Comprising only a minor part of the area's total employment, laborers will increase only 400 to a total of 12,500. Farmers and farm laborers will remain constant at 2,800. The laborer groups, by far the more important to Westchester and Rockland, will have opportunities as long as there continues to be major construction in the counties.

Long-Term Outlook

A return to an expansionary economy, similar to conditions which existed during the late sixties, will magnify current job market problems during the decade of the seventies. There should be no shortage of jobs, but matching the supply of qualified workers to the growing demands of employers will become an ever more difficult task. The area's industrial community will become even more oriented toward administrative and technical operations and away from production facilities. Highly skilled workers, even now in short supply, will be more in demand. Job seekers with less marketable skills will find employment opportunities increasingly scarce.

Job market problems of this decade will be twofold:

- 1) inducing qualified workers into the local labor market,

and 2) upgrading the skills of potential jobseekers.

Industry must endeavor to draw non-residents into the area and to make jobs attractive to those not now in the work force. Public transportation facilities must be improved to enable would-be jobseekers to reach areas of available employment. Increasingly important will be the training of the unskilled or of the worker whose skills have become obsolete.

CHAPTER V

SCHOOL STATISTICS AND MANPOWER DATA

Introduction

The first three charts in this chapter (Figures 10, 11, and 12 on pages 80-82) give projected school enrollments and enrollment figures in occupational education courses in secondary schools.

Figure 13 (pages 83-84) gives the interest of prospective enrollees in occupational education. Lists of private trade schools and the programs in occupational education offered in the colleges in the Region are given in Figure 14 (pages 84-87).

Figure 15 (pages 88-89) is a chart on health occupation needs.

Figures 16 through 22 (pages 89-95) are manpower indicators by career field, trades, number of employees, and major occupational groups.

Figure 23 (page 96) lists the Manpower Development Training Program for the four counties.

REGION 4 SUMMARY OF STATISTICS
PROJECTED PUBLIC SCHOOL ENROLLMENT

	1971-72	1972-73	1973-74	1974-75	1975-76		
WESTCHESTER	196,280	201,652	204,500	209,661	212,777		
PUTNAM	12,800	13,116	13,649	14,170	14,682		
ROCKLAND	65,392	69,747	73,601	77,198	80,059		
ORANGE	55,126	57,367	59,633	61,608	63,748		
TOTALS	319,598	341,882	351,383	362,637	371,266		

OCC. ED. ENROLLMENT PROJECTIONS

	CURRENT	1971-72	1972-73	1973-74	1974-75	1975-76	
WESTCHESTER	5,976	6,460	6,750	7,420	8,145	8,635	
PUTNAM	200	250	291	360	500	700	
ROCKLAND	812	900	1,022	1,170	1,250	1,390	
ORANGE	1,016	1,189	1,300	1,470	1,600	1,750	
TOTALS	8,004	8,799	9,363	10,420	11,495	12,475	

Fig. 10

REGION 4 SUMMARY OF STATISTICS

Summary of Enrollments in Occupational Education Courses
in Secondary Schools in Region #4

	Agriculture	Distributive	Health	Home Ec.	Office	Technical	Trade & Industry	TOTAL
WESTCHESTER	48	991	144	31	2093	246	2423	5976
PUTNAM	3	3	22	12	16	2	139	197
ROCKLAND	26	95	48	21	215	22	578	1005
ORANGE	57	186	144	7	142	23	861	1418
TOTAL	134	1275	358	71	2466	293	4001	9596

Senior Profile

	# of HS Grads. 1967-68	# of HS Grads. June '70	# of Seniors Enrolled in Occ. Educa.	1970 Percent Seniors in Occ. Educa.	Percent Seniors Coll. bound
WESTCHESTER	10,260	11,372	963	8.4	70.0
PUTNAM	476	526	38	7.2	42.0
ROCKLAND	2,371	3,024	315	15.0	65.0
ORANGE	2,419	2,898	321	11.1	56.8
TOTAL	6,526	17,820	1,637	9.1	68.0

Fig. 11

REGION 4 SUMMARY OF STATISTICS

SCHOOL ENROLLMENT DATA

	No. School Age Youth	No. Attend Pub. Sch	No. Attend Priv. S.	No. Stud. 14-19	No. Pub. Sch. 9th-12th	1968 Grads as % 1964-65 Enrolmt	... Percent College Bound	Percent Occupat. Enrol- ment	Percent Non-Col & Non-Voc	Percent Seniors Occupat. Enrolmt
WESTCHESTER	228,082	167,966	71,320	79,731	57,133	90 (1)	70%	7.6%	26%	3.5%
PUTNAM	12,687	12,687	2,160	4,729	4,163	71 (1)	42%	7.5%	50%	3.0%
ROCKLAND	71,320	57,500	13,820	16,497	15,274	91 (1)	65%	8.0%	22%	6.0%
ORANGE	58,491	51,631	6,860	15,543	13,678	77 (1)	56.8%	11.06%	32.1%	11.1%

(1) NYS Dept. of Education,
Information Center on Education

REGION 4
TOTAL 88.08%

Fig. 12

INTEREST OF PROSPECTIVE ENROLLEES
IN OCCUPATIONAL EDUCATION
IN REGION 4

COUNTY	YEAR OF SURVEY	GRADE LEVEL	ON FILE AT	NO. STUDENTS INTERESTED	NO. STUDENTS SURVEYED	NO. SCHOOL DISTRICTS
WESTCHESTER	1967/68	9, 10	BOCES II	5,036	13,900	43
PUTNAM	1970/71	9, 10, 11	BOCES I	300	1,400	6
ROCKLAND	1970/71	10	BOCES CENTER	850	2,400	8
ORANGE	1969/70 1970/71	Primarily 10	BOCES CENTER	1,000	3,400	18
TOTALS				7,186	21,200*	

*A survey of the 9th grades in the non-component districts of White Plains, Mamaroneck, and Port Chester (all Westchester County) revealed that 2,100 were given questionnaires by the Guidance Offices; 240 students were interested in having occupational education courses.

COUNTY	TYPE OF SURVEY
WESTCHESTER	Cornell Study N.Y.U. (Miller Report)
PUTNAM	Schools' Surveys (after assemblies & tours)
ROCKLAND	Schools' Questionnaire
ORANGE	Guidance Office's Questionnaire

Fig. 13

REGION 4

PRIVATE OCCUPATIONAL TRAINING SCHOOLS OR PROGRAMS BY COUNTY

ORANGE

<u>SCHOOL</u>	<u>AREA OF TRAINING</u>
Beauty School of Middletown Middletown, New York 10940	Cosmetology
Shedden's Beauty School of Newburgh South Robinson Avenue Newburgh, New York 12550	Cosmetology
Central Academy of Beauty Culture 291 Liberty Street Newburgh, New York 12550	Cosmetology
New Windsor Auto Driving School New Windsor, New York 12550	Auto and Truck Driving
Davis Auto Driving School 11 Arlington Place Newburgh, New York 12550	Auto and Truck Driving
Interstate Trucking Newburgh, New York 12550	Truck Driving and Heavy Equipment Operation
Card, Harold J. Associates VanBurenville Road Middletown, New York 10940	Salesmanship and Sales Management
Spencerian Business College Newburgh, New York 12550	Secretarial Sciences, Accounting
Harriman College Harriman, New York 19926	Secretarial Sciences, Merchandising
Computer Careers Union Avenue Newburgh, New York 12550	Keypunch, Machine Operation, Programming
Occupations, Inc. 46 Linden Avenue Middletown, New York 10940	206 Related Repetitive Tasks for the Handicapped

PUTNAM

Putnam Auto Driving School	Truck Driving
----------------------------	---------------

Fig. 14 .

<u>SCHOOL</u>	<u>ROCKLAND</u>	<u>AREA OF TRAINING</u>
Capri-Pivot-Point School of Hair Design 3 South Main Street Spring Valley, New York		Cosmetology
Computer Skills Institute 40 Robert Pitt Drive Monsey, New York 01952		Computer Programming, Computer Operations
School For Health Technology Studies 94 Main Street Nyack, New York 10960		Lab Technologist
National Learning Center 94 Main Street Nyack, New York 10960		Typing and Stenotype
	<u>WESTCHESTER</u>	
Westair Flying School Westair-Westchester Aeronautical School Westchester County Airport White Plains, New York		Aviation
The Berkley School West Oak Lane White Plains, New York 10604		Intensive programs, secretarial, professional secretarial programs
Programming & Systems Institute One North Broadway White Plains, New York 10601		Business
Westchester Business School 10 Depot Plaza White Plains, New York 10606		Accounting, Management, Data Processing, Business Administration, Secretarial
Westchester Business Institute 16 Bank Street White Plains, New York 10606		Accounting, Business Admin., Mgm't, Data Processing, Secretarial, Business Data Specialist
Cochran School of Nursing Andrus Pavilion, St. John's Riverside Hospital 967 North Broadway Yonkers, New York		Registered Nursing

Fig. 14--Continued

<u>SCHOOL</u>	<u>AREA OF TRAINING</u>
Mt. Vernon Hospital School of Nursing North Seventh Avenue Mt. Vernon, New York	Registered Nursing
New Rochelle Hospital School of Nursing New Rochelle, New York 10802	Registered Nursing
Pace College Westchester 861 Bedford Road Pleasantville, N. Y.	Registered Nursing
United Hospital School of Nursing Port Chester, New York 10574	Registered Nursing
Westchester School of Nursing Grasslands Hospital Valhalla, New York 10595	Registered Nursing
Grasslands School of Practical Nursing Grasslands Hospital Valhalla, New York 10595	Practical Nursing
Phelps Memorial Hospital School of Practical Nursing North Tarrytown, New York	Practical Nursing
Westchester School for Medical and Dental Assistants 183 South Central Avenue Hartsdale, New York 10530	Medical Assistant Dental Assistant

Fig. 14--Continued

COLLEGES (Other than Community Colleges)

To some degree, all of the following colleges provide some special certificated occupational education programming:

IONA COLLEGE, New Rochelle, N.Y.

Business courses - certificated

PACE COLLEGE, Pleasantville, N.Y.

Business courses - certificated
2-year R. N. course
Para-Professional (Teacher Aide) course

MANHATTANVILLE, Purchase, N.Y.)

SARAH LAWRENCE, Bronxville, N.Y.)

SUNY, Purchase, N.Y.)

) These three colleges,
) and the Westchester
) Community College,
) coordinate the operation
of the Cooperative College
Centers of Westchester

COOPERATIVE COLLEGE CENTERS OF WESTCHESTER

In locations in Mt. Vernon and Yonkers, pre-college courses for deprived and for those with latent abilities for learning are given. There is an urban center affiliation, as well, with some multi-skill occupational development.

HARRIMAN COLLEGE, Harriman, N.Y.

Business courses - certificated
Pre-Kindergarten

HEALTH OCCUPATION NEEDS

There are 36 hospitals in Region 4. An analysis of the New York State Statistical Yearbook indicates a growth in jobs in the health occupation field in the next five years (1970-1975) that will exceed 100,000.¹

In addition to the normal need to replace workers who die or retire, estimated at approximately 27.9% of the 1965 job market, there will be varied and new job opportunities. During the next five years, 200 new dietitians will be needed, 13,000 nurses, 11,200 technicians, 29,500 attendants, and 7,200 practical nurses.²

The following is the total number of jobs to be filled in N.Y.S. in health Occupations for all reasons from 1965 to 1975.³

Dietitians	2,200
Nurses - RN	63,000
LPN	26,100
Technicians	31,600
(Dental Technicians)	
* (Dental Assistants) .	2,500
(Dental Laboratory Technicians)	
Attendants	90,200

* In Region 4

- 1) 1970 New York State Statistical Yearbook; Table 1C
- 2) *ibid*; Table 1E
- 3) *Ibid*; Table 1G

* * * * *

MEDICAL FACILITIES IN REGION 4

	No. of Hospitals	No. Nurses Homes	No. Medical Centers	Med.Trn. Facilit.	No. of Employees
WESTCHESTER	16	82	126	8	17,238
PUTNAM	2	12	4	1	238
ROCKLAND	8	4	12	3	5,147
ORANGE	10	36	17	11	3,275
TOTALS	36	134	159	23	9,888

Fig. 15

REGION 4 SUMMARY OF STATISTICS

COMPARISON OF ECONOMIC INDICATORS

Sales in Millions of Dollars	Retail Sales Volume 1963	Retail Sales Volume 1967	Percent Change	Wholesale Trade Volume 1958	Wholesale Trade Volume 1963	Percent Change	Selected Services 1958	Selected Services 1963	Percent Change
WESTCHESTER	1,452.5	1,751.6	20.6	1,045.0	2,218.2	112.2	162.0	227.3	40.3
PUTNAM	48.7	55.9	14.8	4.4	7.9	80.8	4.0	5.0	25.4
ROCKLAND	198.3	287.9	45.2	91.0	79.3	-12.8	16.5	25.8	56.5
ORANGE	282.5	360.1	27.9	138.0	175.2	26.9	25.9	33.3	28.6

FARMS

CITIES, TOWNS, VILLAGES

	# of Farms 1969	Crop Value 1969	Livestock Value 1969	Size of County	No. of Cities	No. of Towns	No. Incorp. Villages
WESTCHESTER	231	3,326,000	1,632,000	450 sq. mi.	6	18	22
PUTNAM	122	212,000	1,042,000	232	0	6	0
ROCKLAND	97	1,112,000	526,000	173	0	5	13
ORANGE	1,537	9,469,000	20,425,000	850	3	20	16
TOTAL					9	49	51

Fig. 16

REGION 4 - SUMMARY OF STATISTICS

NUMBERS OF INDUSTRIES ACCORDING TO NUMBERS OF EMPLOYEES

County	1,000 + Employees	100-999 Employees	51-99 Employees	10-50 Employees	Under 10 Employees
WESTCHESTER	14	286	1,100	1,876	18,252
PUTNAM	0	0	12	23	1,500
ROCKLAND	4	40	31	58	2,852
ORANGE	0	63	58	128	3,282

NUMBERS OF EMPLOYEES IN THE THREE LARGEST OCCUPATIONAL GROUPS

County	Type	Number	Type	Number	Type	Number	TOTAL 1969	TOTAL 1970
	Largest		2nd Largest		3rd largest			
WESTCHESTER	Service	82,900	Prof. & Tech	69,400	Clerical	66,100	361,700	372,200
PUTNAM	Prof. & Tech.	1,500	Clerical & Crafts	1,300	Manufac- turing	1,200	8,100	8,800
ROCKLAND	Chemicals & Allied	6,026	Metals Mfg.	2,336	Paper * Allied	1,759	64,900	71,400
ORANGE	Manufac- turing	21,175	Services	14,707	Wholesale & Ret.Trade	13,783	74,500	80,900

Fig. 17

PLAN OF SERVICE MANPOWER DATA SUMMARY
BY COUNTY

Base Period, Fiscal Year 1969 and Projected Period, Fiscal Year 1971

	Total	Westchester	Rockland	Putnam	Orange
Total Civilian Population (as of 1970/1)	1,499,800	946,900	231,300	53,150	268,500*
Age distribution					
16 through 21 years	163,200	97,900	29,200	7,900	28,200
22 through 44 years	417,000	256,600	68,000	13,800	78,600
45 through 64 years	344,600	235,600	42,400	11,800	54,900
65 years and over	153,700	105,900	15,900	4,200	27,700
Members of Minority (Black & Puerto Rican)	133,900	97,200	16,200	300	20,200
Total Civilian Work Force (12-month average for Fiscal Year 1969)	523,700	371,200	66,800	8,300	77,400
Employed, total (12 month average)	509,200	361,700	64,900	8,100	74,500
Non-farm wage and salary workers	423,900	297,000	55,800	6,800	64,300
Unemployed, (12-month average)	14,600	9,500	2,000	200	2,900
Unemployed rate	2.9%	2.6%	2.9%	2.4%	3.8%
Universe of Need for Manpower Services for Fiscal Year Ending 1971 (Number of Different Individuals in Year)	111,100	73,700	13,900	3,000	20,500
Poor	57,400	38,200	7,000	2,000	10,200
Disadvantaged	46,900	31,200	5,700	1,600	8,400
Other poor	10,500	7,000	1,300	400	1,800
Non-Poor	53,800	35,600	6,900	1,000	10,300
Near Poverty	27,400	18,200	3,500	700	5,000
All other non-poor	26,300	17,300	3,400	300	5,300
Unemployed and Underutilized Disadvantaged by Category (12-month average)	46,900	31,200	5,700	1,600	8,400
Employed full-time but with family income at or below poverty level	28,900	18,500	3,700	1,000	5,700
Individuals not in labor force but who should be	9,500	6,900	900	500	1,200

Fig. 18

PLAN OF SERVICE MANPOWER DATA SUMMARY
BY COUNTY

Base Period, Fiscal Year 1969 and Projected Period, Fiscal Year 1971

	Total	Westchester	Rockland	Putnam	Orange
Welfare Recipients in need of Manpower service	4,300	3,200	500	100	500
School Dropouts	3,300	1,900	300	200	900
Veterans Needing Manpower Services	600	300	100	-	200

*Actual Count April 1970 census 218,313

/1 State of New York, Office of Planning Coordination, Demographic Projections for New York State Counties to 2020 A.D., June 1968.

Source: Mid-Hudson Region CAMPS Report, FY 1971, Page 65

Fig. 18--Continued

REGION 4 SUMMARY OF STATICS
JOBS BY OCCUPATION FY 1969/FY 1971/Percent Change

	Professional Technical & Kindred Workers	Managers Officials Propriators	Clerical & Kindred Workers	Sales Workers	Craftmen Formen & Kindred Workers	Operatives and Kindred W Workers	Service Workers	Farmers & Farm Workers	Labors except Farm and Mind	TOTALS
ORANGE										
FY 1969	13,600	7,300	11,500	5,300	12,300	11,200	10,000	500	2,800	74,500
FY 1971	15,300	7,600	13,300	5,900	12,500	11,300	12,000	300	2,700	80,900
Percent Change	+ 11.11	+ 3.95	+ 13.72	+10.16	+ 1.6	+ .83	+ 16.66	- 40	- 3.57	+ 7.91
PUTNAM										
FY 1969	1,500	800	1,300	600	1,300	1,200	1,100	100	300	8,100
FY 1971	1,700	800	1,400	600	1,400	1,200	1,300	100	300	8,300
Percent Change	+11.76	0	+ 9.14	0	+ 7.14	0	+15.38	0	0	+ 7.95
ROCKLAND										
FY 1969	11,800	6,300	10,100	4,600	10,700	9,800	8,700	400	2,400	64,900
FY 1971	13,500	6,700	11,500	5,200	11,100	10,000	10,700	200	2,500	71,400
Percent Change	+ 12.59	+ 6.97	+ 12.17	+11.53	+ 3.6	+ 2.0	+ 18.69	-50.0	+ 4.0	+ 9.10
WESTCHESTER										
FY 1969	66,400	38,700	63,200	25,600	45,400	53,400	56,600	2,200	10,400	361,700
FY 1971	69,400	38,900	66,100	26,300	46,100	53,900	59,400	2,000	10,100	372,200
Percent Change	4.32	+ .51	+ 4.33	+ 2.66	+ 1.51	+ 4.12	+ 4.71	-9.09	- 2.88	+ 2.82
Region 4 Total										
FY 1969	93,300	53,100	36,100	36,100	69,700	75,600	76,400	3,200	15,900	509,200
FY 1971	99,900	54,000	42,300	38,000	71,100	76,400	83,400	2,600	16,600	533,300
Percent Change	+ 6.60	+ 1.66	+ 6.71	+ 5.0	+ 1.96	+ 1.04	+ 8.39	-18.75	- 1.88	+ 4.51

Fig. 19

THE THREE INDUSTRIES RANKING HIGHEST IN REPORTED EMPLOYMENT IN 1964

Where a particular industry alone accounts for the majority of employment in a community, it is likely that a recession in this industry will create an economic problem that both disadvantages the poor and adds to their ranks.

For a closer examination of the distribution of employment in Region 4, the ninety-seven major classifications have been searched to discover the three industries ranking highest in reported employment and are listed below by county.

County	Industry	# of Employees	% of total Employment	% of total payroll	Total Payroll in thousand
<u>Orange</u>					
Largest	Apparel Production	3,455	8.7%	6.0%	
2nd Largest	Leather Products	2,488	6.2%	4.9%	
3rd Largest	Health Services	2,372	6.0%	4.0%	
Total of 3		8,315	20.9%	14.9%	\$6,600
<u>Putnam</u>					
Largest	Electrical Machinery Production	440	10.8%	NA	
2nd Largest	Health Services	282	6.9%	4.2%	
3rd Largest	Retail Trade (eating and drinking places)	227	5.6%	2.9%	
Total of 3		949	23.3%	NA	NA
<u>Rockland</u>					
Largest	Chemical Products	3,170	10.8%	NA	
2nd Largest	Health Services	1,931	6.6%	3.9%	
3rd Largest	Utilities and Sanitation	1,729	5.9%	NA	
Total of 3		6,830	23.3%	NA	NA
<u>Westchester</u>					
Largest	Health Services	12,120	5.8%	4.0%	
2nd Largest	Retail Trade (General Merchandise)	8,427	4.0%	2.4%	
3rd Largest	Construction	8,339	4.0%	5.0%	
Total of 3		28,886	13.8%	11.4%	\$32,178

Fig. 20

PERCENT DISTRIBUTION OF EMPLOYMENT BY COUNTY

Industry Div.	Agric. Serv. Forestry Fisheries	Mining	Construction	Manufac- turing	Transportation Utilities Sanitation	Wholesale Trade	Retail Trade	Finance Insurance Real Estate	Services
<u>Orange</u>									
1964	*	*	4%	45%	8%	6%	20%	5%	16%
1962	*	*	4%	48%	7%	6%	20%	5%	15%
<u>Putnam</u>									
1964	*	*	12%	25%	5%	4%	26%	4%	23%
1962	1%	*	10%	26%	6%	3%	28%	5%	18%
<u>Rockland</u>									
1964	*	1%	6%	40%	7%	4%	19%	5%	18%
1962	*	2%	5%	42%	7%	3%	20%	5%	15%
<u>Westchester</u>									
1964	*	*	6%	31%	7%	8%	20%	6%	21%
1962	*	*	7%	32%	7%	8%	20%	6%	20%
<u>U.S.</u>									
1964	*	1%	6%	37%	7%	7%	19%	6%	16%
1962	*	1%	6%	38%	7%	7%	18%	6%	15%

* Between zero and 1%

Fig. 21

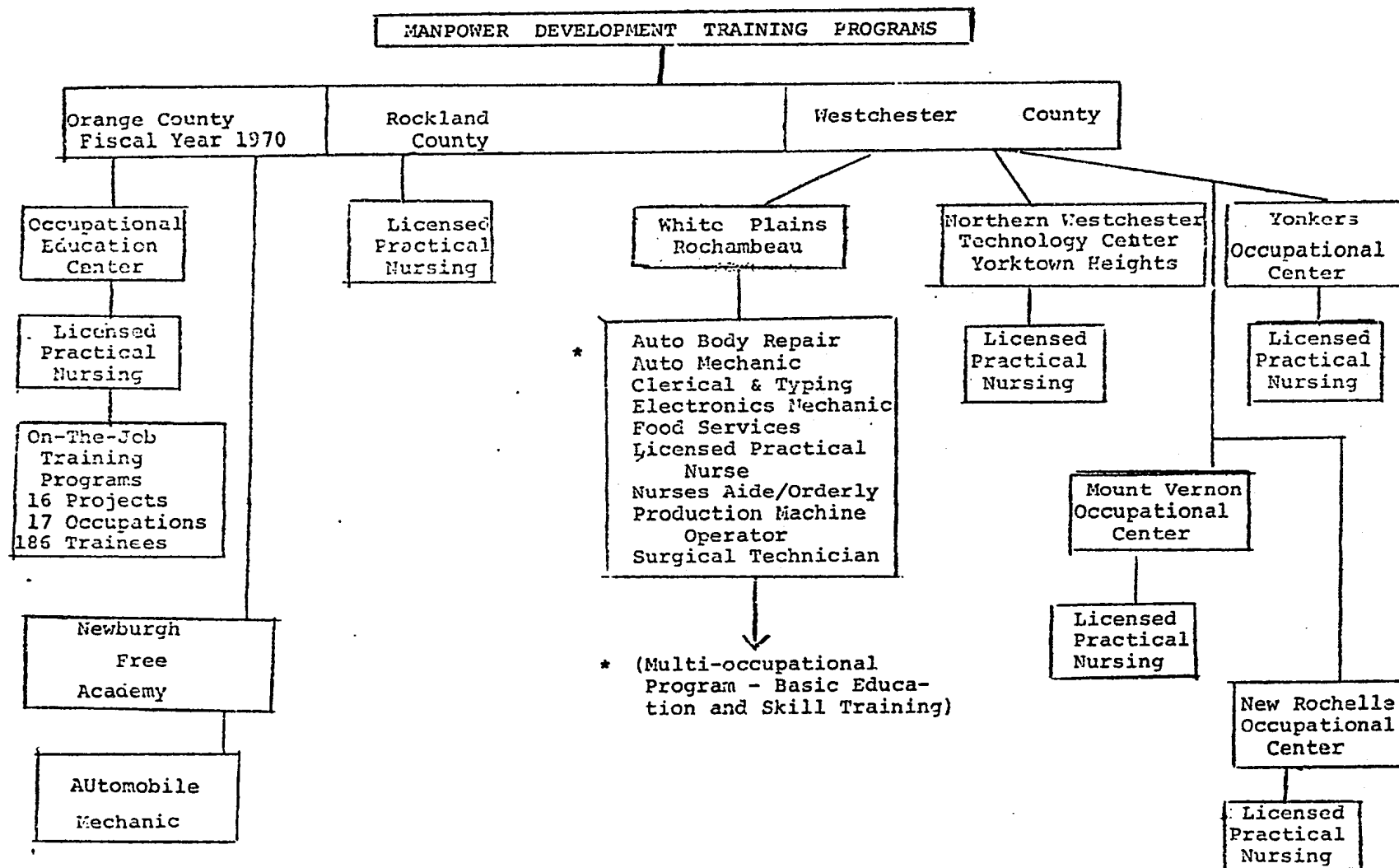


Fig. 22

Summary

It is evident from the statistical materials presented that, with the possible exception of agriculture and mining, considerable employment opportunities exist within the four counties. Manpower needs are varied and run the gamut from self-employment to employment in firms with over 1,000 employees. It is also evident from the data that occupational education enrollment cannot begin to meet the vacancies in jobs which must, obviously, be made up from outside labor sources, particularly in the skilled and technical occupations.

The most important conclusion to be drawn from this data is that secondary students in occupational education could more than double in numbers without beginning to make a dent in the potential labor market, almost across the career field spectrum. Also, one can conclude that a greatly expanded variation in occupational specialized training courses is needed to keep abreast of the many-faceted career employment options. Occupational programming does not appear to be keeping up with employment needs. Vastly expanded training in skilled areas is needed which would present a healthy future training-employment relationship for the entire area.

Of significance is the low percentage of high school students enrolled in occupational programs, as indicated in the "School Enrollment Data" chart. The statistics show

that, on the average, less than 10 per cent of the total school enrollment in the Region is involved in occupational education. There is a potential of tripling that percentage of high school students who could benefit from occupational scheduling. There is additional support for much larger programs in the chart, "Interest of Prospective Enrollees in Occupational Education," even though the survey was only a sampling of the school population.

CHAPTER VI

CURRENT OCCUPATIONAL EDUCATION COURSES¹

Introduction

The training programs available regionally, from local school offerings through the options in the community colleges, are listed by general course titles.

The diversity of the offerings is impressive, as is the potential for consortia in program planning. There is variety, but there is a need to develop vastly expanded programs, quantitatively and qualitatively. The programs seem comprehensive, at first reading, but little cooperative endeavor is evident. On the contrary, a need for more coordination of programs became obvious in doing the research on options in training.

¹D. R. Mullaney, "Region 4 Study" (unpublished survey for New York State Education Department, February, 1971), pp. 104-119, 170-202

1971-72 ORANGE COUNTY OCCUPATIONAL EDUCATION

LOCAL SCHOOL DISTRICTSAREA
CENTERSORANGE COUNTY
OCCUPATIONAL EDUCATION CENTER
(Part I of Chart)LENGTH OF
DAYHalf-Day
AM or PMHIGH
SCHOOL
COURSES

Agriculture I & II, III & IV
 Auto Body I & II
 Auto Mechanics I & II
 Building Construction I & II
 Building Maintenance
 Commercial Art I & II
 Cooperative Education
 Cosmetology I & II
 Data Processing I & II
 Advanced Typing Machines
 Bookkeeping
 Bookkeeping Machines
 Computer Operations
 Computer Programming
 Introduction to Data Processing
 Keypunch Operation
 Electronics I & II
 Health Services I & II
 Home and Institutional Services
 Horticulture I & II
 Licensed Practical Nursing I & II
 Service Station Attendant
 Trade Electricity I & II

1971-72 ROCKLAND COUNTY OCCUPATIONAL EDUCATION

(Part I of Chart)

LOCAL SCHOOL DISTRICTSAREA
CENTERROCKLAND COUNTY
OCCUPATIONAL EDUCATION CENTERLENGTH
OF DAYHALF-DAY
AM or PMHIGH
SCHOOL
COURSES

Air Conditioning & Refrigeration I & II
 Auto Body and Fender Repair I & II
 Auto Mechanics I & II
 Business Machines (Seniors)
 Business Machines (Juniors)
 Construction - Carpentry
 Cosmetology I & II
 Data Processing - Programmed Wiring
 Drafting and Design
 Electricity I & II
 Electronics I & II
 Food Services
 Machine Shop I & II
 Ornamental Horticulture
 Licensed Practical Nursing I & II
 Welding
 Instrumentation Technology
 Occupational Services

REGION 4 STUDY1970-71 NORTHERN WESTCHESTER and PUTNAM COUNTIES OCCUPATIONAL EDUCATION

NORTHERN WESTCHESTER TECHNOLOGY
and EDUCATION CENTER
(Part I of Chart)

PUTNAM AREA VOCATIONAL
CENTER

Half-Day - AM or PM

Advanced Business Machines
Architectural Drafting
Auto Body Repair
Auto Mechanics
Automatic Heating
Carpentry
Cosmetology
Data Processing Operations
Data Processing Systems
Computer Programming/Operations
Conservation
Dental Assisting
Floriculture
Diversified Health Occups.
Masonry/Bricklaying
Licensed Practical Nursing
Nursery Mgmt.-Landscape Design
Offset Lithography
Refrigeration/Air Conditioning
Technical Electronics
Trade Electricity

Exploratory Occup. Education

Auto Metal Trades
Building Trades
Health/Medical Occups.
Food/Fashion Industries
Office/Distributive Ed. Occups.

Half-Day - AM or PM

Auto Body Repair
Auto Mechanics
Carpentry
Cosmetology
Culinary Arts
Health Services
Licensed Practical Nursing
Machine Industries
Painting/Decorating

EXPLORATORY OCCUP. EDUCATION

Auto/Metal Trades
Building Trades
Health/Medical Occupations
Food/Fashion Industries

REGION 4 STUDY - AREA CENTERS

1970-71 MID-WESTCHESTER CENTER FOR OCCUPATIONAL EDUCATION
BOCES II (Part I of Chart)

Half-Day

AM or PM

Advanced Business Machines
Air Conditioning/Heating/Refrigeration
Auto Body Repair
Auto Mechanics
Carpentry
Commercial Art
Cosmetology
Data Processing
Dental Assisting
Industrial & Architectural Drafting
Licensed Practical Nursing
Nurses' Aides
Office Skills
Offset Lithography
Ornamental Horticulture
Secretarial Practice
Trade Electricity
Trade Electronics
Vocational-Cooperative Education

REGION 4 STUDY - AREA CENTERSMT. VERNON-NEW ROCHELLE AREA CENTER (Southeastern Westchester)

MT. VERNON - Half-Day
AM or PM

Auto Mechanics
Commercial Art
Commercial Photography
Cosmetology
Dental Assisting
Distributive Education
Dressmaking
Electrical Trades
Food Trades
Mechanical Drafting
Offset Lithography

Office Skills
Bookkeeping
Data Processing
Office Practice
Secretarial Practice
Stenography
Typing

EVENING

Bookkeeping
Business Machines
Stenography
Typing
Auto Mechanics/Basic
Carpentry Apprentice
Electricity Apprentice
Machine Shop Apprentice
Radio & Basic Electronics
for Beginners

NEW ROCHELLE - Half-Day
AM or PM

Auto Body & Fender Repair
Auto Mechanics
Carpentry
Commercial Art
Cosmetology
Dressmaking
Electrical Trades
Machine Trades
Metal Auto Shop
Mechanical Drafting
Licensed Practical Nursing
Radio & TV
Technical Electronics
Trade Drafting

Office Skills

Bookkeeping
Distributive Education
Duplicating & Reproducing
Office Practice
Secretarial Practice
Stenography
Typing

EVENING

Numerical Control in the
Machine Shop (for machinists)
Machine Shop/Basic (for
machinists & metal workers

1970-71 LOCAL HIGH SCHOOL OCCUPATIONAL COURSES
(Part I of Chart)

(10 Hours/Week or More)

COUNTY	WESTCHESTER-PUTNAM		ROCKLAND	ORANGE
HIGH SCHOOL	PORT CHESTER	WHITE PLAINS		NEWBURG
COURSES	Offset Printing Auto Mechanics Cosmetology Drafting Machine Shop	Data Processing Distributive Edu.	NONE	Auto Mechanics I & II Electronics I & II Printing I & II Machine Shop I & II Cosmetology I & II Licensed Practical Nursing I & II Health Services Cooperative Education Drafting-Architectural Drafting-Machine Commercial Art Data Processing Distributive Education I & II Keypunch
		EVENING		
ADULT & OUT-OF-SCHOOL YOUTH		Bricklaying-Apprentice Electric-Apprentice Refrigeration Air conditioning Controls Auto Mechanics-Drafting T.V. Repair Welding Electronics Small Engine Repair		

ORANGE COUNTY BOCES ADULT COURSE OFFERINGS
FALL 1971

COURSE TITLECOSMETOLOGY

Personal Development
Wig Styling
Fashion Hairstyling
Hair Coloring
Men's Hairstyling

DATA PROCESSING

Keypunch Operation
Data Processing Machine
Operation (Basic)
Data Processing Machine
Operation (Advanced)
Business Machine Operation

OCCUPATIONAL EXTENSIONS

Small Gas Engine Repair
Custodial Training Program
Commercial & School Bus
Driving Preparation
Blueprint Reading
Industrial and Architectural
Drafting
Air Conditioning & Refrigeration (7:00-9:30p.m.)
(27 Sessions)
Floral Design and Arrangements

COURSE TITLEELECTRONIC

Basic Electronics for Radio
and T.V.
Assembly and Troubleshooting
for Radio and T.V.
Basic Semi-conductors for
Radio and T.V.
Alternating Current (House-
wiring basic)
Alternating Current
(Industrial Wiring Advanced)

WELDING

Acetylene Welding
Electric Arc Welding
Pipe Welding
(27 sessions, 7:00-9:40p.m.)

AUTOMOTIVE

General Auto Body Repair
Automotive Repair
Electronic Tune-Up
Ignition System Repair

NEWBURGH CITY SCHOOL DISTRICT ADULT COURSE OFFERINGS
1971-72

(Part II of Chart)

BUSINESS

Bookkeeping
Business Machines
Card Punch Data Processing
Civil Service Clerk Exam. Prep.
Computer Programming I
Computer Programming II
General Business Law
Insurance for Agents & Brokers
Investments
Key Punch Training
Real Estate Law & Fundamentals
Shorthand I
Shorthand II
Stenoscript
Typing I
Typing II

VOCATIONAL

Auto Mechanics
Electronics I
Electronics II
Slide Rule
Television Maint. & Repair I
Television Maint. & Repair II
Vocational Guidance
Welding

OTHER

HEALTH

First Aid (C.D.)
Drugs & Narcotics
Safe Boating

CIVIC & COMMUNITY

Americanization
Driver Education
Great Decisions - 1970
Law Everyone Should Know
Radioactive Fallout
Substitute Teacher Training
Voting Machine Demonstrations

HOME ECONOMICS EDUCATION

Clothing I
Clothing II
Clothing III
Expectant Parents
Floral Arrangements
Income Tax Procedures
Interior Decorating
Lawns & Landscaping
Needlecraft

MISCELLANEOUS

Private Pilot's Ground
Course

BOCES I, NORTHERN WESTCHESTER & PUTNAM COUNTIES
ADULT COURSE OFFERINGS

1971-72

COURSE TITLE

Auto Mechanics - Basic
Auto Mechanics - Inter.
Auto Transmission Repair
Auto Body I
Oxyacetalene Welding (Incl. material)
Arc Welding (Including material)
Carpentry Apprentice (Level I & II)
Bricklaying
Construction Layout-Transit (9:00-12:00a.m.)
Blueprint Reading
Architectural Drafting
Construction Contracts & Specifications
Bldg. Maintenance, Heating Plant Operation (9:00-12:00a.m.)
Basic Electricity
National Electrical Code
Basic Oil Burner Service (72 hours)
Domestic Heating Controls
Refrigeration
Machine Shop
Machine Trades Blueprint Reading
Offset Printing I (Including Material)
Intro. to Data Processing (7:30-9:30p.m.)
Unit Record Operations
Computer Programming I
Computer Programming II
Intro. to System 360 (7:30-9:30p.m.)
Programming System 360 with R.P.G.
Programming System 360 with Cobol
Key Punch Operations
Programming System 360 with Fortran IV
Typewriting-Basic (72 hours)
Office Machines
Dictation and Transcription
Driver Training-Motor Vehicle Bureau
Practical Nurse Exam Review - Starts October 29
(4 sessions, 8 hours)

REGION 4 - ADULT EDUCATIONMID-WESTCHESTER CENTER FOR OCCUPATIONAL EDUCATION (Part II
of Chart) EVENING COURSESFall Term - October 6, 1971 - December 19, 1971

Basic Oil Burner Repair & Service
 Introduction to Data Processing
 Key Punch Operations - Basic
 Oxacetylene Welding
 Hair Design & Fashion
 Carpentry Apprentice
 Electricity/Basic Home Wiring
 Electronics/Basic Radio & T.V. Repair
 Automotive Repair/Basic & Intermediate
 Refrigeration & Air Conditioning
 Computer Programming/Basic
 Dental Assisting/Introduction

Winter Term - January 11, 1972 - March 9, 1972

Air Conditioning/Refrigeration - Basic, Intermediate, Advanced
 Basic Oil Burner Repair & Service
 Auto Body & Fender Repair/Basic
 Automotive Repairs
 Office Machines/Basic
 Data Processing
 Introduction to Data Processing
 Unit Record Equipment/Basic
 Key Punch Operations/Basic, Intermediate, Advanced
 Computer Programming/Basic
 Secretarial Practice
 Vocational Carpentry & Cabinet Making
 Hair Design & Fashion
 Dental Assisting/Introduction
 Industrial & Architectural Drafting/Basic
 Printing-Basic Offset & Pre-Press Operations
 Electricity/Basic Home & Industrial Wiring
 Electronics/Basic Radio & T.V. Repair
 Oxacetylene Welding
 Carpentry Apprentice
 Color Slide Photography
 Introduction to Computer System 360
 Survey and Layout
 Soldering of Refrigerator & Air Conditioning Units

REGION 4 - SUMMATION OF THE "BEDS" REPORTSAgricultural

Conservation - Northern Westchester & Mid-Westchester BOCES
 Landscaping - Northern Westchester & Rockland County BOCES
 Floriculture - Northern Westchester BOCES
 Ornamental Horticulture - Northern Westchester, Mid-
 Westchester, and Orange County BOCES
 Agriculture - Orange County BOCES

Distributive Education

DE/Sales - some schools in all four counties

Health

Practical Nursing - Northern Westchester, Rockland, Orange,
 Mid-Westchester BOCES, and Mt. Vernon-
 New Rochelle Area Center
 Dental Assisting - Northern Westchester, Mid-Westchester
 BOCES, and Mt. Vernon-New Rochelle A.C.
 Pre-Nurses' Aides - Rockland BOCES
 Nurses' Aides - Mid-Westchester & Northern Westchester
 Health Services - Orange County BOCES

Home Economics

Practical Aides - Northern Westchester, Rockland, Orange BOCES

Office Skills

Data Processing - Northern Westchester, Mid-Westchester, Yonkers
 Mt. Vernon-New Rochelle, Rockland, Orange
 Business Machines - Northern Westchester, Rockland,
 Mid-Westchester
 Banking - Northern Westchester, Rockland
 Computers - Northern Westchester, Rockland
 Gen. Office Ser. - Rockland, Mid-Westchester, Port Chester
 Secretarial Practice - Mid-Westchester, Yonkers, Mt. Vernon,
 New Rochelle, Port Chester

Technical

Mechanical & Electronics - Rockland
 Architectural Technology - Yonkers
 Electrical Technology - Northern Westchester, Orange,
 Yonkers, New Rochelle-Mt. Vernon
 Mechanical Technology - Yonkers
 Chemical - Yonkers

Region 4 - Summation of "Bed" Reports (cont.)

Trade and Industrial

Air Conditioning, Refrigerator Pipefitting - Westchester
BOCES (both Northern & Mid-Westchester), Rockland,
Orange

Auto Body & Fender - Rockland, Northern Westchester, Mid-
Westchester, Orange

Automotive Repair - Northern Westchester, Mid-Westchester,
Yonkers, Mt. Vernon-New Rochelle, Rockland, Orange,
Port Chester

Building Maintenance - Rockland, Orange

Business Machines Repair - Rockland

Carpentry - Rockland, Northern Westchester, Mid-Westchester,
Yonkers, Mt. Vernon-New Rochelle, Orange, Port Chester

Cosmetology - Rockland, Port Chester, Orange, Northern
Westchester, Mid-Westchester

Drafting - Rockland, New Rochelle-Mt. Vernon, Orange,
Northern Westchester, Mid-Westchester

Electrical Trades - Rockland, Northern and Mid-Westchester,
Yonkers, Orange

Food Services - Rockland, Yonkers, Orange, Mt. Vernon-
New Rochelle

Machine Trades - Rockland, Yonkers, Orange, Mt. Vernon-
New Rochelle

Printing - Rockland, Northern Westchester, Mid-Westchester,
Yonkers, New Rochelle-Mt. Vernon, Orange

Radio & T.V. Repair - Northern Westchester, Mid-Westchester,
Mt. Vernon-New Rochelle, Rockland, Orange

Service Station Attendant - Rockland, Orange

Welding - Rockland

Commercial Art - Mid-Westchester, Yonkers, New Rochelle-
Mt. Vernon, Orange

Automatic Heating - Yonkers

Dressmaking & Design - Yonkers, Mt. Vernon-New Rochelle

*Pre-Vocational - Yonkers, New Rochelle-Mt. Vernon,
Mid-Westchester, Northern Westchester

Electro-Mechanical - Mt. Vernon-New Rochelle

Personal Services - Mt. Vernon-New Rochelle

(Northern Westchester BOCES includes Putnam County; Mid-
Westchester BOCES is BOCES II; Orange & Rockland indicates
the county BOCES.)

*Special Education students

OCCUPATIONAL PROGRAMS IN PRISONS AND
INSTITUTIONAL TRAINING SCHOOLS

ORANGE

New Hampton Training School
Auto Body
Auto Mechanics
Architectural Drafting
Carpentry
Electricity-Electronics
Heating
Masonry
Plumbing
Welding
Goshen Annex
Carpentry
Otisville Training School
Carpentry
Warwick Training School
Carpentry
Mechanical Drawing
Printing
Trade Electricity

ROCKLAND

Rockland State Hospital
Pre-Vocational
Occupational Therapy
Letchworth Village
Pre-Vocational (Retarded)
(incomplete)

PUTNAM

None

WESTCHESTER

Westchester County Penitentiary
Cooking
Horticulture
Laundry Service
Maintainance Man
Meatcutting
Tailoring
Lincoln Hall
Auto Body
Auto Mechanics
Barbering
Carpentry
Electricity
Plumbing
Printing
Childrens Village
Pre-Vocational Training
Hillcrest
Pre-Vocational Training
Hawthorne Cedar Knolls
Pre-Vocational Training
Pleasantville Cottage School
Pre-Vocational Training
Wiltwyck
Pre-Vocational Training
Burke Foundation
Pre-Vocational Handicapped
A.R.C. Westchester
Sheltered Workshop
Villa Loretta
Cosmetology
Den+al Assistant
Food Services
Needle Trades
Westfield

POST SECONDARY - COMMUNITY COLLEGES

(Orange-Rockland-Westchester)

The community colleges located in Region IV (Orange, Rockland and Westchester County Community Colleges) subscribe without reservation to the concepts of community education as offered by the Board of Regents, the State Education Department, and the State University. The breadth of concern, the responsiveness to emerging individual and social needs, and the commitment to institutional freedom within a framework of commonality which is found in the Board of Regents platform is consonant with the institutional mission of these colleges.

The thrust toward universal post-secondary education reveals the role of a community college must play in the university ensemble. Present trends extrapolated suggest that the other institutions of State University will become increasingly selective and rigorous as they reach for excellence. Those young people denied access to the other colleges will increasingly turn to the community college, and the logic of our society suggests that they must be admitted and served. Inevitably, then, larger proportions of the high-school graduating class will be in our institutions, and their diversity of ability, temperament, and need will test our institutional readiness and ability to respond with appropriate curricula and instructional techniques. The community college must prepare to become the vehicle that guides the majority of our post-secondary youth into further education, toward work, or to other agencies of society.

Each of these community colleges has exhibited interest in occupational education and each has for many years been involved in programs for the work-oriented student. In fact one of these institutions (Westchester) was originally founded (1947) as an Institute of Applied Arts and Sciences and was totally involved with occupationally oriented programs. Today a variety of occupational courses and programs are available in these community colleges.

The three community colleges of Region IV present a variety of programs, courses, and schedules. Attempts are made to measure the vocational and avocational needs of the communities, and to present day, evening, Saturday, and summer schedules and programs consistent with these needs.

Orange County Community College offers day, evening, and some Saturday classes during the academic year. It offers two six-week summer sessions with classes scheduled during day and evening hours. Both credit and non-credit programs are available year-round.

Rockland Community College offers a full range of credit courses, day and evening; a summer session of approximately six weeks duration during day and evening hours; and extension courses as community needs indicate. The College Foundation Program is year-round, and the Summer Drama Workshop and Summer Youth Theater are appropriately scheduled.

Westchester Community College presents a variety of credit courses during day and evening hours for the academic year, in addition to the non-credit offerings in the evening division programs. A six week summer session provides needed credit courses for community consumption.

All Region IV community colleges recognize the need for proper and adequate counseling and guidance for students and for the community as a whole. Each has a staff devoted to providing admissions counseling, continuous guidance for both day and evening students, and vocational guidance for full-time and part-time students. Facilities are available for vocational testing. Many of these facilities are available to the community as a whole, as evidenced by the Robert J. Minor Counseling Center at Orange County Community College. All of these counseling staffs work closely with local school and BOCES staffs where the nature of the programs would make this advisable.

Another vital consideration in the implementation of a forward-looking plan for educational progress must involve the development of an innovative and imaginative instructional plan. In this respect the Region IV community colleges all

have extensive plans for the development of special instructional media involving the use of computers and computer assisted instruction, closed circuit and commercial T.V., individualized instruction media, expansive library facilities, and other newly developed and/or soon to be developed equipment.

PLANNED AND ANTICIPATED OFFERINGS

The community colleges of Orange, Rockland, and Westchester Counties are prepared to implement the development of courses, programs, seminars, workshops, etc., which might be required over the coming decade to meet the occupational and avocational needs of their service areas. Those needs which are clearly defined at this time have already received the impetus of planning which will eventually lead to in-service activities. Needless to say, many more opportunities which are today hidden in the depths of unspoken need will appear in future months and years, and these colleges profess their intention to plan and implement as necessary. Additionally they realize their responsibilities in anticipating these needs, and in providing research information to uncover them.

OCCC - In addition to the number of programs already offered, the college is projecting for 1972 the following new curricula:

Dental Assisting	Dental Hygiene
X-ray Technology	Physical Therapy
Electron Microscopy	

The college will also investigate the possibilities of programs in the general area of the human services, and expand its thinking in the health services.

Also to be included are the one-year vocational programs not leading to a degree, but tailor made to prepare the student for immediate job entry on the level below the degree holder. The following are projected by 1972:

- Data Processing - Key Punch and Related Skills
- Professional Typist
- Business Office Skills; Retail Training Programs
- Small Business Operator
- T.V. Repair

Needless to say there are a multitude of fields in which similiar needs might develop. The college will be responsive to them.

- RCC - The College will continue and intensify its efforts designed to properly identify, reach, and recruit important student clientele, including the culturally, educationally, and economically disadvantaged - students who can benefit from vocational education as well as conventional college curricula. This will require the development of a suitable range of educational and training programs that will include guidance, single courses, certificate programs, and full degree programs with sufficient flexibility built into them so that students may easily shift from one type of training to another.

Existing occupational curricula will be strengthened and new occupational programs introduced in response to demonstrated community and student needs. Possibilities now under study include a cluster of curricula to prepare students for health service occupations; for service in social welfare and mental health agencies; as teacher aides; etc. The implications of data-processing technology and the computer for present curricula and for new programs are being seriously studied. Interest has been expressed in cooperative work experience as an avenue toward the improvement of occupational education, and this too is being investigated. Services and programs for the adults of the community are expected to continue to expand markedly in the years ahead. The College expects to see many more occupationally oriented conferences, clinics, workshops and courses designed for special interest groups. Further development of the approach exemplified by the agencies described above is expected, as is the development of other agencies that will work on educational and guidance programs for certain segments of the community. The College hopes to see an increase in the number of opportunities for adults for informal education in the arts and sciences.

Planned innovations in the curricula include proposals for increased use of audio-visual instruction, experiments with large and small group instruction, new

relationships between the library and instruction, use of the community for learning, new relationships between extracurricular and curricular affairs, cooperative work experience in business, team teaching in nursing, advanced courses for honor students, international studies, and a "regional Supplementary Center" that would provide research, library, and production services for all area teachers. There is also a proposal to expand the remedial College Foundation Program by intensive recruitment of the culturally deprived, which could lead to a more dynamically heterogeneous student body and might awaken interest in the community to the new demands upon the State for occupational and vocational training.

The Management Training Institute, operational on campus since 1965, will provide a continuous flow of information from industry, business, and service agencies on the needs for skilled manpower useful for College planning of new vocational programs. The New York State Guidance Center for Women, closely affiliated with the College, will help women of all types of social, economic, and educational backgrounds discover vocational opportunities and find educational and training programs appropriate to their vocational goals.

An expansion of the present program and facilities is anticipated for the years 1971 through 1975. The expansion will take place in the area of increased services for professional groups, the training of para-professionals in the social service fields and increased service to the business and industrial community. There will be increases in all aspects of the continuing education program as the population of the County grows and the community agencies and individuals increasingly look to the College for educational leadership and assistance.

WCC - Beginning in September, 1971, a Human Services program will be offered at W.C.C. affording an opportunity for full time training for para-professionals in a variety of social service areas. There is a "bridge building" concept incorporated into this program that has an articulation concern involving eight grade equivalency, high school equivalency certification and the two-year degree. It is anticipated that the program would involve not only students who would be directly enrolled in the

Community College, but also those apprentice para-professionals who have need of remediation preparatory to meeting any stipulated Community College entrance requirements. Articulation with Rochambeau School in White Plains, BOCES I & II, and the Cooperative College in Yonkers is being planned. Once the candidate enrolls in the community college, the program will provide for the granting of a certificate at the end of one year and the A.A.S. degree at the end of the total course of study. Mercy College has already agreed to participate in upward articulation beyond the two year level.

In the development and planning of such programs it is the intention of the college to incorporate the type of community agency cooperation which has marked the development and planning of the proposed Human Services programs. A county-wide committee representing 35 social agencies shared in planning the project and it is the intention of the college that this type of cooperation shall continue. A similar but more limited type of community cooperation between the Day Care Council of Westchester and Westchester Community College resulted in the Early Childhood Development Program which began in September, 1970 in three off-campus locations and which was designed to upgrade in service professional and para-professional personnel in Early Childhood Education.

In another direction the college has formulated a proposal for funds under the 1968 Vocational Education Act to establish a pilot study to examine the need for an Environmental Science Technology in this area. Faculty members are being encouraged to develop proposals to broaden the spectrum of career programs extent at Westchester Community College.

Presently a good deal of planning is being done in the Civil, Mechanical, Electrical and Industrial Chemical Technologies to initiate certificate and diploma programs in the fall of 1971 which will articulate with the present programs in these areas. A one year certificate program in Engineering Drawing has been developed by a committee representing Civil, Electrical and Mechanical Technologies for introduction in the fall of 1971 and which will enable successful students to achieve a certificate and upward mobility into the present programs. The Chemical Technology faculty is formulating a proposal with similar characteristics for introduction in the fall of 1971.

WCC - The Business Department is developing proposals for both a certificate and diploma program in Personnel Administration which will incorporate several courses presently taught in the Evening Division with several new offerings planned for Fall, 1971. Intentions are to expand programs of this kind manyfold as additional facilities become available. The introduction of a course in English as a second language, specifically geared for the needs of the considerable number of foreign students in the college, is also planned for the Fall of 1971.

A number of new programs are expected to be initiated between 1972 and 1975. Introduction of a Nursing curriculum was postponed to 1972 since Middle States accreditation is required for accreditation acceptance of such a program by the National League of Nursing. The College received accreditation in 1969.

Hotel Management in the Business area is under consideration for the mid-1970's. A banking major in the Business area is scheduled for 1973, and a curriculum in Environmental Health by 1974, if not sooner.

A number of plans are in progress for the development of co-curricular programs, very briefly these are listed below:

1. Public Service Activities:
 - a. Dramatic productions - requires construction of a Fine Arts Building equipped with suitable auditorium and stage.
 - b. Instrumental music - requires construction of music facility as part of new building.
 - c. Visual Arts - requires capital renovation.
 - d. Recreational activities - require construction of additional facilities.
 - e. Extended community service use of college facilities for seminars, lectures and short term instructional series - requires additional personnel.

2. Professional Institute Programs:
 - a. Real Estate
 - b. Banking & Finance
 - c. Insurance
 - d. Brokerage
 - e. Teacher Training
 - f. C. P. A.
 - g. Architectural
 - h. Prof. Engineers

3. Avocational:
 - a. Investment (Personal Finance) Course
 - b. Dietetics for the Layman
 - c. Physical Education Programs
 - d. Art History and Appreciation
 - Oil painting and water color
 - Sculpture
 - Design
 - e. Expanded Music Appreciateion & Additional Courses
 - Vocal
 - instrumental

4. Cultural Programs:
 - a. Dramas - plays and theatre productions
 - b. Music - concerts
 - c. Art - exhibits, displays and lectures

One of the keys to college attendance for many students is the possibility of financial aid. The college supports a growing program of financial aid from federal, state and local sources.

The college participates in (or will participate by the Fall semester 1971) the following programs of financial aid:

- New York State Regents Scholarship, Scholar Incentive and State University Special Programs assistance
- NYHEAC Loan Program
- National Defense Student Loan Program
- College Work Study Program (Federal)
- Educational Opportunity Grants (Federal)
- Law Enforcement Education Program (Federal)
- Veterans' Benefits
- Social Security Benefits
- Vocational Rehabilitation Benefits
- Tuition scholarships (Local)
- Short-term loan and emergency cash funds (Local)

REGION IV STUDYACTIVE APPRENTICE PROGRAMSORANGE COUNTYJoint Apprenticeship Council Programs

Carpenters #574, Middletown	Newspaper Pressmen, Newburgh
Carpenters #301, Newburgh	Painters, Decorators and
Carpenters, Port Jervis	Paperhangers, Newburgh
Electricians #631, Newburgh	Compositor #305, Newburgh
Bricklayers	Plumbers - Steamfitters, Newburgh

ROCKLAND COUNTY

Carpenters #964	Electricians #363
Masons #29	Plumbers & Steamfitters #373

WESTCHESTER - PUTNAM COUNTIESJoint Apprenticeship Council Programs

Bricklaying	Plumbers
Carpentry	Steamfitters
Electricians	Sheet Metal
Machine Shop	Welding (under egis of
Oil Burner	Workers Defense League
Painting & Decorating	

REGION 4 - REHABILITATIONAGENCIES & SERVICES

NEW YORK STATE DIVISION OF VOCATIONAL REHABILITATION (DVR)
202 Mamaroneck Avenue, White Plains (WH6-1313)

A Division of the State Education Department providing vocational rehabilitative services to those with employment handicaps resulting from diseases, accidents, or congenital defects. Services include vocational services such as testing, guidance, physical restoration, vocational training, placement, and such other services as are needed to return the handicapped to employment or homemaking activities. For handicapped people over fourteen (14) years of age. There is no fee.

NEW YORK STATE ASSOCIATION FOR RETARDED CHILDREN

Westchester Chapter, Sheltered Workshop & Training Center
3 Hillside Avenue, White Plains (WH 9-3008)

A sheltered training center for mentally retarded adults who can be gainfully employed in a structured environment.

BURKE REHABILITATION CENTER

Mamaroneck Avenue, White Plains (WH 8-0050)

In-patient and out-patient services for those with neuro-muscular-skeletal and cardiovascular diseases, blindness, and mental illness. A psychiatric rehabilitation program is given, especially to those on convalescent leave from hospitals.

The main facility is a workshop program with associated resources which include vocational counseling, psychological testing, psycho-therapy, and case work services for relatives. The hospital itself is used as a training medium with diagnostic work evaluation, adjustment to working environment, and job exploration.

Fee: from \$155.00 per week for private patients; DVR and Community Health Board sponsor some people on an ability-to-pay basis.

ROCKLAND STATE HOSPITAL - Orangeburg

Rehabilitation

OCCUPATIONS, INC., Middletown

A non-profit, private organization designed to train handicapped people over the age of fourteen to do simple repetitive tasks. It is a sheltered workshop.

MIDDLETOWN STATE HOSPITAL - Monhagen Avenue, Middletown

A psychiatric rehabilitative program with in-patient and out-patient services. A newly equipped vocational training wing was completed in the fall of 1970. It is operated by the New York State Department of Mental Hygiene.

ROCKLAND COUNTY CENTER FOR THE PHYSICALLY HANDICAPPED, New City

A sheltered workshop for handicapped people over the age of fourteen; a non-profit, private organization which trains the handicapped to do simple repetitive tasks.

YONKERS REHABILITATION CENTER, INC., Central Park Ave., Yonkers

A sheltered workshop.

ADULT EDUCATIONPUBLIC SCHOOLS

In addition to the Manpower Development Training, Apprenticeship Training, and Adult Education programs given during the day in Mount Vernon, White Plains, Yonkers, BOCES #1 in Yorktown Heights, and BOCES #2, Mid-Westchester Area Center (mentioned in other pages of this directory), there are evening courses given by the public schools in Westchester County.

The courses are both avocational and vocational. Many of the schools have programs leading to a high school equivalency diploma; courses in Americanization for the foreign born; basic education; speed reading; and language courses.

There are, usually, two semesters, one beginning late in September and the other beginning in February. Most Boards of Education will start a course if fifteen (15) or more people indicate an interest in such a course.

ADULT EDUCATION - ORANGE COUNTY

Monroe Woodbury Central School
Central Valley, N.Y. 10917

Middletown High School
Grand Ave., Middletown, N.Y.

Senior High School
Port Jervis, N.Y. 12771

Minisink Valley Central School
Slate Hill, N.Y.

Senior High School
Washingtonville, N.Y. 10992

Newburgh Free Academy
Newburgh, N.Y. 12550

High School
Pine Bush, N.Y. 12566

Middle School
Goshen, N.Y. 10924

Central School
Cornwall, N.Y. 12518

Tuxedo High School
Tuxedo Park, N.Y. 10987

Warwick Valley Central School
Warwick, N.Y. 10990

Valley Central School
Montgomery, N.Y. 12549

Marlboro Central School
Marlboro, N.Y.

ADULT EDUCATION - ROCKLAND COUNTY

Clarkstown High School
New City, N.Y.

Nanuet High School
Nanuet, N.Y.

North Rockland High School
Thiells, N.Y.

Pearl River High School
Pearl River, N.Y.

Ramapo #1 High School
Suffern, N.Y.

Ramapo #2 High School
Spring Valley, N.Y.

ADULT EDUCATION - WESTCHESTER COUNTY
1969-1970

Ardsley Public Schools
500 Farm Road
Ardsley, New York 10502

Bedford Public Schools
P.O. Box 180
Mount Kisco, N.Y. 10549

Bronxville Public Schools
Pondfield Road
Bronxville, N.Y. 10708

Chappaqua Public Schools
650 King Street
Chappaqua, N.Y. 10514

Croton-Harmon High School
Croton, N.Y. 10520

Eastchester Public Schools
Eastchester, N.Y. 10707

Harrison Public Schools
Harrison, N.Y. 10528

John Jay Jr. High School
Katonah, New York 10536

Lakeland High School
Peekskill, N.Y.

Mamaroneck Public Schools
Mamaroneck Avenue
Mamaroneck, N.Y. 10543

Mount Vernon Public Schools
165 North Columbus Avenue
Mt. Vernon, N.Y. 10550

New Rochelle Public Schools
515 North Avenue
New Rochelle, N.Y. 10801

North Salem Central School
North Salem, N.Y. 10560

Ossining Public Schools
89 Broadway
Ossining, N.Y. 10562

Pleasantville Public Schools
325 Manville Road
Pleasantville, N.Y. 10570

Peekskill High School
Peekskill, N. Y.

Port Chester Public Schools
Box 246
Port Chester, N.Y. 10573

ADULT EDUCATION - WESTCHESTER COUNTY (cont.)

Rye High School
Rye, N.Y. 10580

Somers Central Schools
Somers, N.Y.

Tarrytown Public Schools
200 North Broadway
North Tarrytown, N.Y. 10591

White Plains Public Schools
(Rochambeau School)
228 Fisher Avenue
White Plains, N.Y. 10605

Yonkers Public Schools
138 South Broadway
Yonkers, N.Y. 10701

Yonkers Community Education
Center - Office Skills
One Highland Avenue
Yonkers, N.Y. 10707

Yorktown Heights Central School
Yorktown Heights, N.Y. 10598

BUSINESS' & INDUSTRY'S PROGRAMS FOR THE DISADVANTAGED

Most major industries in the Region provide in-service, apprenticeship, or specialized upgrading courses. Some provide incentives for pursuing career opportunities, such as the General Motors Corporation, Tarrytown, which affords their eligible employees access to an "Educational Plan", in a variety of full and part-time training sites throughout the world. In addition, they operate the General Motors Institute in Flint, Michigan, for 3,000 students, under the sponsorship of 125 participating units. The Institute is accredited to grant the Bachelor's degree.

Basic training, re-training, and upgrading is an integral part of large employers' policies and practices.

Contracts for the Federal MA program have been made in the Westchester-Rockland area by 18 firms, who have obligated themselves to take 360 trainees; and under the State-funded On-the-Job Training program, 21 firms have obligated themselves for 155 'slots'.

Out of the 155 trainees in the OJT program, the following percentages indicate the areas in which they are being trained:

Medical Training	10%
Clerical Training	20%
Factory Training	50%
General Services	20%

On a voluntary basis, with no governmental aid, Geigy Chemical Company has 12 persons whom they are training in Chemical Laboratory Technology; and Pepsico is training 30 people in general clerical work.

Under the MA contracts, banks in Westchester have form consortia to train personnel in banking procedures and companies with large headquarters buildings in White Plains have trained the disadvantaged for various rungs of the career ladder of office staff.

*reimbursement by the federal government for expenses in training the disadvantaged beyond the ordinary expenses the firm would incur in training employees.

TRAINING THE "DISADVANTAGED"

Major industries such as IBM, General Foods, Geigy Chemical, and others offer specialized training programs for the culturally deprived. Some are operated as a result of projections of personnel needs made by:

National Alliance of Businessmen
County Coalitions
Community Action Programs
Federal and State Agencies
Equal Employment Opportunity Commission

The planning of consortia associates governmental agencies, business and industry, educational institutions, and private social service agencies in the effort to combine the existing resources for common training objectives. Token pilot projects have been undertaken to test the feasibility of administering programs cooperatively in areas which have a high concentration of deprived citizens.

Much greater involvement of consortia is needed if manpower training goals for mutual benefit are to be met, as well as meeting the goal of development of basic skills and upgrading the disadvantaged.

To put it more graphically, the following charts could be a guide to implementation of such consortia and the use of their resources.

COMMUNITY ACTION REFERRALS

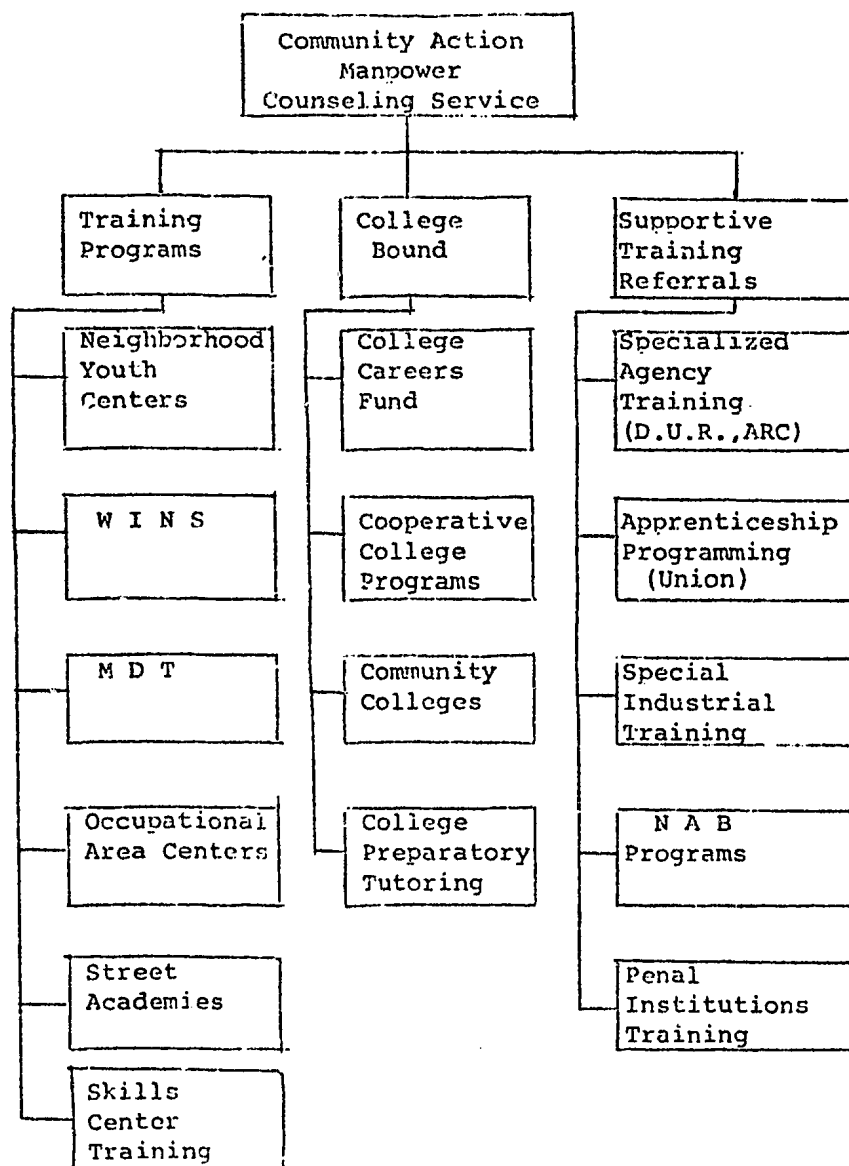


Fig. 23

CHART FOR CONSORTIA IN TRAINING THE DISADVANTAGED

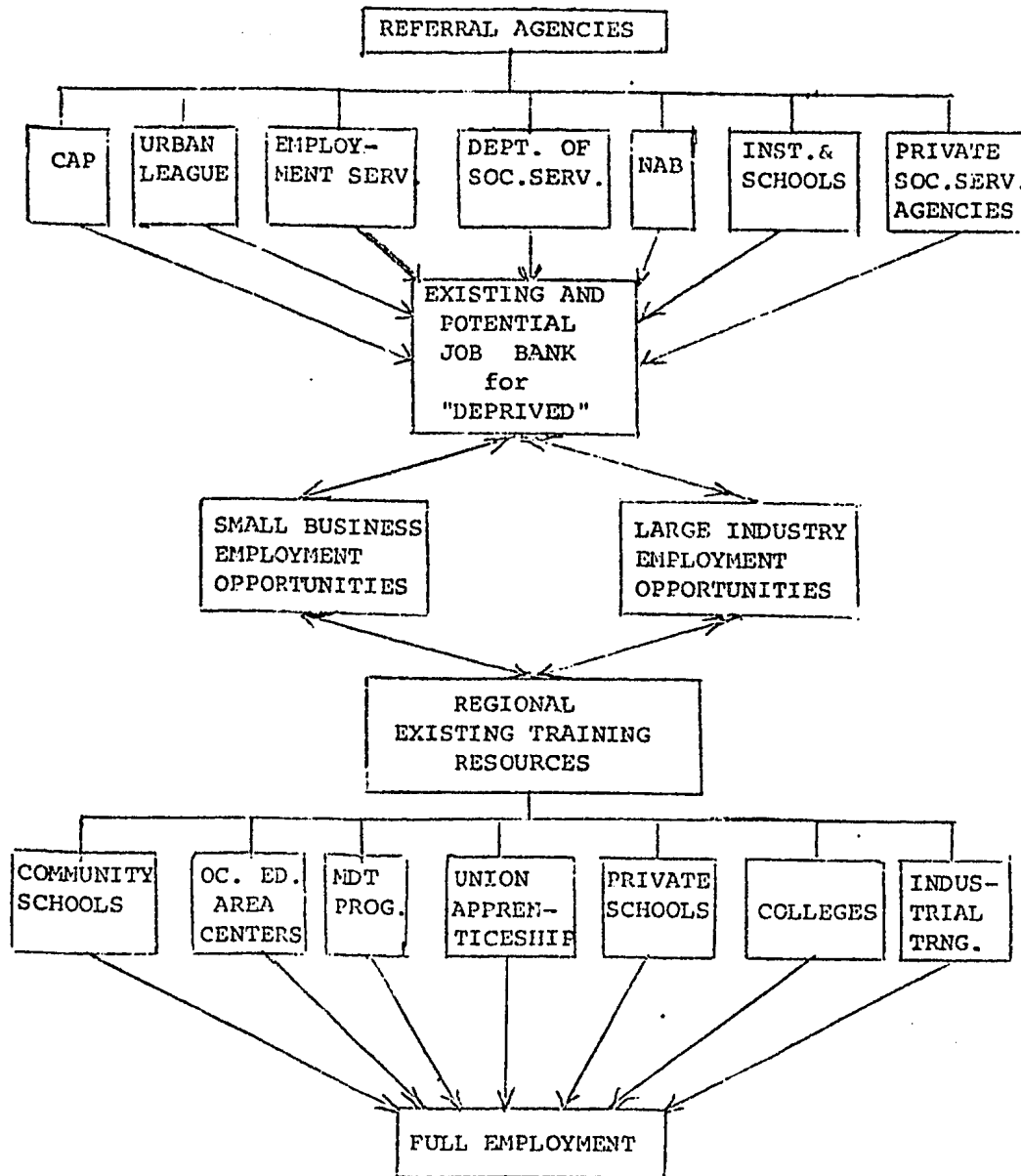


Fig. 24

Summary

There are 116,500 students in grades 9-12 in both public and private schools located in Region 4. Of these only 8,596 avail themselves of an occupational education. The occupational education facilities in the fall of 1971 could have accommodated 10,600 students, plus an unrestricted number in cooperative, industrial, and distributive education.

The Region's high schools had 18,070 graduates in 1970. Of this number 68% or 11,754 went on to college; of the remaining 6,316 only 1,803 received any occupational education through the public schools. It is apparent that 4,513 graduates, plus a large number of high school drop-outs, are placed on the labor market with no formal occupational training. Of this number, some may have moved out of the area; some may have married and will stay off the job market temporarily; some have gone into the military and will receive some kind of training there. Others may go to a private trade school. Therefore, a large number, swelled by those who drop out of college, will not possess saleable skills and must enter the employment market as unskilled workers or trainees.

Although occupational education programs have doubled in the past two years, there is sufficient classroom space to accommodate many more students who need to be prepared for work.

The projected number of new workers with occupational training needed annually (during 1971-75) in Region 4 is 12,700. The most critical shortages are in health occupations and in office occupations. All the skilled trades have many openings. The need for competent and efficient personnel in the service industries are increasing at a geometric rate. Figures for all of these fields of work are shown in the statistical charts included in this report.

New programs will be needed in Region 4 to meet the need for skilled employees, to capture the interests and the abilities of those students heretofore unapproachable. More programs are needed for handicapped students.

Based on the information in this survey, the directors of occupational education evaluated the needs of their areas, and their projections are included.

CHAPTER VII

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The Problem

The purpose of this study was to project the employment needs of the Region in relation to anticipated changing technology, while projecting statistically the job opportunities for the next five years. In addition, an attempt was made to match occupational programs with the job markets by county. A determination was made as to which occupational curricula were area priorities preparatory to establishing general occupational planning criteria for the Region.

Procedures

In order to resolve these problems, it was necessary to make a survey of existing area-wide programs, to talk with persons who administered courses, to review the literature in occupational education, and to obtain recommendations and conclusions of the members of the resource committee (shown on Region 4 Organizational Chart, page 59).

Region 4 Committee Recommendations and Conclusions¹Resource CommitteeProjected Area Career Developments²

- I. The forecast for change for the next decade, which will affect programming in occupational education, is anticipated to be the following:
 - A. Dramatic expansion and development in communications:
 1. Video telephone
 2. Closed circuit T.V. systems
 3. Teaching machines programmed for remedial work
 4. Multi-media explosion
 5. Miniaturization in automation
 6. Increased application of computers
 - B. More emphasis on careers in personal service:
 1. Recreation
 2. Leisure time
 3. Programs for aged
 4. Personal care
 - C. Demand for more technicians:
 1. Medical
 2. Chemical
 3. Environmental control
 4. Instrumentation
 - D. Vast changes in transportation
 1. Community transit networks
 2. Rapid transits (local and regional)
 3. Revolutionary changes in automotive industry
 4. Rapid transit via waterways
 5. Boom in air transportation
 - (a) Individual
 - (b) Short-range
 - (c) Long-range
 - (d) Space

¹D. R. Mullaney, "Region 4 Study" (Unpublished survey, February, 1971, for State of New York Education Department.

²Ibid., p. 116.

- E. Agricultural development of the seas
- F. "Explosion" in office staff needs
- G. Para-professional (and sub-professional) job development:
 1. Uniformed services
 2. Recreational aides
 3. School aides
 4. Social service aides
 5. Mental health aides
 6. Counseling aides
 7. Community aides (many types)
- H. Community planning occupations
- I. Population control specialists
- J. Governmental specialists
- K. Pollution and sanitation control

Projected Area School Changes (long-range)³

- I. School structure and operation: Within the next decade, significant alteration will be made in schools throughout the Region which will bear largely on the functioning of Occupational Education programs. A few of the projections include:
 - A. Extending the existing school year to a twelve-month continuous school year, providing more occupational education opportunities for more students by community-school consortia. (12-Month School Year, D. R. Mullaney, June, 1967)
 - B. Improved centralized dissemination of career data in computerized retrievable form, utilizing sophisticated auditory and visual multimedia equipment; a regional communication link. (Regional Career Information Center Proposal, Westchester-Putnam County Coordinator, Occupational Education, January, 1971)
 - C. "Umbrella" Occupational Education Area Center for Yonkers, providing central programs to meet the city's growing occupational needs. (N.Y.U. Occupational Education Study - City of Yonkers, John Miller, 1967)

³Ibid., p. 117-119.

- D. Regional special needs occupational center for handicapped, of the type proposed by "Project OPEN." (SED-sponsored 2-year Special Needs Study for Westchester County, County Coordinator, Occupational Education, 1969)
 - E. Vastly altered short-range occupational orientation programs for penal institutions with satellite training, which will not be impeded by archaic security limitations and which will set a priority on rehabilitation. (SED-sponsored Penitentiary Project Report to Division of Occupational Education Supervision, Superintendent of Schools, BOCES II, Westchester)
 - F. Career syllabus, articulated for the Region, covering a range from pre-school to the B.A. degree, with sufficient flexibility for programming individual careers. (Region 4 Curriculum Committee recommendations in this study.)
 - G. Modifications of job descriptions, detailed for changing needs, with qualifications regarding time in hours rather than in months. (N.Y.S. Employment Service, computerized regional data bank scheduled to become fully operational in 71-72.)
 - H. Multi-funded occupational education programs with operational involvement directly with concerned agencies, government, business, industry, and education. (Regional Career Information Center approval anticipated on a multi-funded base.)
 - I. Realistic utilization of area center programs by non-component school districts; modification of the BOCES law which will encourage expanded enrollment of students (Westchester and Orange BOCES presently investigating feasibility of non-component membership).
- II. Priorities for education generally, which have direct or indirect relevance to occupational programs, are these concerns, expressed by many chief school ad-

ministrators of the Region, either privately or publicly, which follow:

- A. The establishment of a more equitable tax base for school support; modification of the property tax is a "must."
- B. Improved utilization of existing facilities by developing continuous learning systems, modular schedules, and expanded cooperative programs.
- C. Continuous review of school purposes and objectives, modifying goals when necessary, with greater emphasis on expanding educational involvement of the community through students' exposure to life-experience processes of learning.
- D. Speeding the implementation of valid innovative programs. The existing lag is frequently disastrous.
- E. Provide relief to school administrators by developing areal priorities, while minimizing clerical responsibilities.
- F. Increased regional planning with the underlying basic premise that "education is everyone's business"; i.e., all of society has a contribution to make to a youngster's learning.

One Year Course Projections by Area Centers⁴

- I. 1972-73 Course Projections, identified by area, and outlined in each center's SED-approved five-year plan:
 - A. Orange County
 1. Beauty Salon Assistant
 2. Care and Training of the Standard Bred Horse
 3. Dental Assistant
 4. Distributive Education
 5. Food Services
 6. Offset Lithography
 7. Welding
 - B. Rockland County
 1. Building Services
 2. Drafting and Surveying
 3. General Automotive Services
 4. General Office Services
 5. Masonry

⁴Ibid., p. 120-121.

- C. Westchester-Putnam Counties
 - 1. Accounting and Banking
 - 2. Air Conditioning and Refrigeration
 - 3. Architectural Drafting
 - 4. Automatic Heating
 - 5. Commercial Art
 - 6. Conservation
 - 7. Food Trades
 - 8. Industrial Electricity
 - 9. Machine Industries
 - 10. Mechanical Drafting
 - 11. Painting and Decorating
 - 12. Retail Merchandising
 - 13. Secretarial Practices
- D. Mid-Westchester Center for Occup. Educ. (BOCES II)
 - 1. Audio-Visual Technician
 - 2. Distributive Education
 - 3. Machine Steno
 - 4. Office Practice
 - 5. Television Production
 - 6. Welding
- E. New Rochelle-Mount Vernon Area Center
 - 1. Auto Mechanics III
 - 2. Industrial Wiring
 - 3. Machine Shop
 - 4. Photo Offset Printing
 - 5. Sheet Metal and Welding
- F. Yonkers
 - 1. Commercial Art
 - 2. Health Services I
 - 3. Multi-Skill Development Program - Enterprise Systems
 - 4. Office Skills

Five-Year Course Projections by Area Centers⁵

- I. 1973-76 Course Projections by Area Centers:
 - A. Orange County (BOCES)
 - Ecology
 - Animal Science
 - Conservation
 - Agricultural Mechanization
 - Agricultural Business
 - Landscaping
 - Floriculture
 - Diesel Engine Mechanic

⁵Ibid., p. 132-133.

Transmission Technician
Service Station Management
Marine Engine Repair
Aircraft Mechanic
Power Frame and Air Frame
Pilot Training
Small Engine Training
Truck Driving
Driver Education
Automotive Technology
Heavy Equipment Mechanic
Banking
Steno-Typist
Machine Bookkeeping
Key Punch Operation
Medical Assistant
Dental Laboratory Technician
Medical Laboratory Technician
Stationary Engineer
Surveying
Heating and Air Conditioning
Heavy Equipment Operation
Barbering
Appliance Repair
Child Care Services
Custodial Preparation
Office Machine Repair
Photography
Graphics Technician
Metal Fabrication
Mechanical Drafting
Industrial Electronics
Technical Electronics
TV Production
Baking
Short Order Cook
Chef
Butcher
Caterer
Waiter - Waitress
Food Services
Professional Registered Nurse
Multi-Media Specialist
Policeman
Social Worker
Fireman
Recreation
Teacher Aide
Mental Health Aide

CENTER DEVELOPMENT AND PROJECTIONS

1. Vertical articulation with Community College Programs
 2. Manpower Programs in all levels of occupations
 3. Full utilization of facilities twelve months a year
 4. Adult Programs in all occupations offered
 5. Occupational enrichment program for college-bound students
 6. Use of mobile teaching units for occupational orientation
 7. Building program for eastern end of County
- B. Westchester County
(BOCES I - N. W. - Put.)
- Animal Science
 - Soc. Science
 - Plumbing
 - Ind. & Medical Lab. Tech.#
 - *Child Care Services
 - Diesel Mechanics#
 - Small Boat Repair
 - Aircraft Mechanic#
 - *Aircraft Service Industries#
 - Building Maintenance#
 - *Appliance Repair
 - *Baking
 - *Fashion Design and Fabrication#
 - *Multi-Media Specialist#
 - *T.V. Production
 - *T.V. Radio Repair
 - Agriculture
 - Dist. Education
 - Food Services
 - *Housekeeping Services
 - *Para-Prof. Services
 - *Related Academic Programs
(BOCES II - Mid-West)
 - T.V. Radio Repair
 - Appliance Repair
 - Para-Prof. Service Occupations#
Fire, Police, Rec., Soc., Medical
 - Food Services
 - Baking
 - Retail Merchandising
 - Plumbing and Pipe Trades
 - Welding
 - Dental Technician
 - *Medical Lab. Technician#

*EEG Technician

Aircraft Engine Repair
 Aircraft Ground Services
 Child Care Services#

*Instrumentation and Controls

Technical Electronics

*Industrial Chemistry

Mech. Design Technology
 Commercial Photography
 Service Station Operation
 Masonry

*Painting and Decorating

Commercial Clothing Services
 Institutional Housekeeping
 (New Rochelle - Mt. Vernon)
 Plus those with *
 Comprehensive Coop. Program
 (Yonkers)

Plus those with #

Health Services II
 Commercial Art II
 Automotive Servicing II
 Food Service II
 Health Service II
 Electro-Mechanical Systems

C. Rockland County

Marine Service Occupations

Inboard-Outboard Eng. Repair

Aeronautical Service Occupations

Fabrication and Air Mech.

WINS Program

Advanced D. E. Courses

Retailing - Merchandising

Photography

Commercial Art

Dental Assisting

Plumbing and Pipefitting

Air Conditioning

Inc. and Med. Lab. Tech.

Chem. Lab. Tech.

Conservation

Stationary Engineering

Surveying

Occupational Exploratory Programs

Remediation Center

Para-Prof. Services

Police, Fire, Rec., Soc., Med.

Small Gas Eng. Repair

Appliance Repair

Power Sewing

Diversified Service Occ.

Heavy Equipment Operators
 Painting and Decorating
 Baking
 Culinary Arts
 Upholstering
 Sheet Metal

Curriculum Committee

Projections and Recommendations⁶

INTRODUCTION

Curriculum Committees were established for those areas designated under Section A, Page 2, of the Guidelines from the Division of Occupational Education, dated November, 1970.

The Committees' recommendations are the result of at least one three-hour brainstorming session on points listed in the structured outlines included in this report.

The members felt strongly that one of the recommendations should be the continuation of their advisory function for Region 4, as an ongoing responsibility, with the endorsement of the Division of Occupational Education Supervision of the State Education Department.

ELEMENTARY SCHOOLS
 (Meeting held December 2, 1970)

1. Introduction of new curriculum (Mid-Hudson Career Development Center - Mr. Robert Schreiber) to principals throughout Region 4 in order to make the world of work an integral part of the elementary school learning process.
2. Encourage teachers to familiarize themselves with new curriculum material available involving the world of work for elementary schools.
3. Visits to area centers by elementary students and staff.
4. In-service courses and workshops to acquaint teachers with the world of work.
5. Development of a speakers' bureau as a resource team to speak with teachers, students, and parents.
6. Develop new audio-visual materials related to our present-day world of work.

⁶Ibid., p. 122-131.

7. Teacher training programs covering new curriculum of vocational development in elementary schools, giving options and mandating specific numbers of credits in this area.
8. More exploratory courses, such as industrial arts, general shop and homemaking classes in 4th and 5th grades.
9. Explore the possibility of bringing students into planning committees to represent themselves.
10. Integration of liberal arts into vocational education.
11. A full-time staff person to work in Region 4 elementary schools to introduce the world of work into the curriculum.
12. Develop elementary occupational education goals, which could be applied to all of Region 4, to change attitudes of teachers and parents with regard to occupational education by introduction of curriculum materials oriented toward the dignity of work.

MIDDLE SCHOOL AND JUNIOR HIGH SCHOOL
(Meeting held January 2, 1971)

1. Establish a regional career information service as a central resource for all schools, with a mobile unit to bring consultants and specialized referral services to those schools requesting aid.
2. Work-experience programs should be afforded 7th, 8th, and 9th grade students as a "STEP" program or a community-supported youth placement service, with a school staff member designated as a work-study coordinator for each middle school and junior high school in the region.
3. In order to expose more staff members to the world of work, a master plan of released time should be developed so that staff members may schedule affiliation with the business and industrial world. Such affiliation should be given in-service credit or, if directly affiliated through college courses, college credit.
4. Community-sponsored career seminars, utilizing local experts as resource teachers, should be planned for staff and students.
5. Parent organizations and service organizations should operate ongoing career days, as the community's supplement to the schools' programming.
6. There is need for more career counseling, both in the schools and as support in a continuing role. A staff career resource coordinator might be designated as an itinerant counselor.

7. Social studies teachers could incorporate more learning-by-doing career projects in their syllabus, using community resources to greater advantage.

8. Visits to area centers in an effort to expand and to provide ongoing exploratory programs which will enhance group and individual interests.

9. Particularly applicable to cities are the community work projects, such as the filmmaking project at Longfellow Junior High School in Yonkers, which use the weekends to good effect.

10. Encourage and utilize the world of work as an ongoing process in education, supported on the local level, and expanded by regional planning.

HIGH SCHOOL

(Meeting held on December 10, 1970)

1. Central administration of a Distributive Education Program, through Area Centers, is needed for some high school districts in the region.

2. The establishment of ongoing communications between high school principals and the area center administrative staff is essential for coordinating their programs.

3. A vastly improved public relations system needs to be implemented among area centers' staff, high school administration and faculty, students and parents, in order to disseminate the availability and value of occupational education programs.

4. More programs for the potential drop-out are needed in area centers, based on the BOCES II "Project GROW" which identifies the students' abilities and provides remediation according to need in preparation for occupational education programs.

5. Schedules in area centers flexible enough to permit involving all students in occupational education, since there are established goals which provide educational direction applicable to life's experience. College-bound students, pursuing the liberal arts, would benefit from pragmatic occupational education exposures. (See Grant Venn's article, "Occupational Education for Everyone," THE BULLETIN, Nat'l Assn. of Secondary School Principals.

6. Industrial Arts and Home Economics in the local schools, as pre-vocational programs, could be expanded to include more students in a cluster-organized curriculum. A common core of art, industrial arts, health and home economics should be explored.

7. Since a goodly percentage of occupational students is continuing education after high school,

the term "college-bound" should be broadened in concept and definition.

8. Some high schools still have to resolve the different roles which industrial arts and trade and industrial courses have in the comprehensive high schools.

9. Some thought should be given to short-range occupational courses for students who are not able, because of scheduling difficulties, to take advantage of ten hours or more per week of specialized instruction.

10. Credit should be given for community service as, for example, is given in some work-study programs, to give recognition to such experience as an integral part of school, as well as it is an integral part of life.

11. Mandate, as is done in other subjects, that all high school students be required to have a semester's exposure to public service, either as a form of work-experience in social service or as an affiliation with a governmental agency.

12. The possibility of scheduling adults in day-time programs with secondary students in occupational education courses should be explored. There is evidence, in other states, to support the validity of such thinking in occupational education programs.

POST-HIGH SCHOOL AND ADULT EDUCATION (Meeting held on January 6, 1971)

1. Programs should be within a reasonable distance from students' homes, with public transportation available to them.

2. The community colleges should use the public school facilities, as an extension of their programs, which would justify the thousands of dollars which are invested in them.

3. The costly error of putting a new program into an area should be avoided; at the same time it should be kept in mind the places where that area might get the program (s) it needs even for a few students.

4. Manpower and WIN programs ought to be operated in Ossining or Peekskill; and something of the same type for Rockland Orange.

5. Plans must be made to make every high school and college program available for returning veterans; while it would include and benefit the disadvantaged, it should not be specifically for them.

6. The program, which Prof. Goodman at Westchester Community College suggested in cooperation

with the Geigy Corporation, the Chemical Laboratory Technicians Program, should be fully explored and implemented.

7. Greater cooperation with the private schools which have established programs and have equipment to provide programs where they do not exist in public education; private schools have majored in specialties which could supplement public education.

8. Think of the area's industrial needs in planning programs so that students would have job opportunities when they graduate and which would give them the advantage of work close to home, at the same time, fulfilling counties' promises of a work force when industries moved in.

9. Greater articulation between BOCES programs and community college programs; in particular, non-degree programs, as for example, those students who might profit from mechanical drawing courses.

10. Four directors of the Area Centers will sit down with the community college faculties to work out the 1972 program which is now being worked on by the faculty of the community college in Westchester.

11. Investigation of all para-professional possibilities; even pre-para-professional programs, for which there is a population.

12. High schools and community colleges should meet periodically to keep the articulation of programs up to date.

13. A Regional Career Information Center would be of inestimable value in avoiding duplication of programs and in aiding the implementation of all the foregoing recommendations because it would have all the necessary data in easily retrievable form at short notice.

Note: As a result of this meeting of the post-high school and adult occupational education curriculum committee, under the Region 4 Study, a three-day seminar was held at the Westchester Community College from January 25th through January 27, 1971.

Summary Evaluation of Education Level⁷

REGION 4 - EVALUATION IN TERMS OF OBJECTIVES OF EACH EDUCATIONAL LEVEL

ELEMENTARY: A great deal of effort must be expended in developing "world of work" concepts as an

⁷Ibid., p. 182-183.

ongoing portion of the syllabus. (See Elementary Curriculum Committee's recommendations and chart re: articulation.)

MIDDLE SCHOOL AND JUNIOR HIGH SCHOOL: This area, regionally, needs curriculum development if objectives are to be achieved. (See Curriculum Committee's recommendations and charts re: articulation.)

HIGH SCHOOL: Current and projected offerings seem to follow growth needs. However, quantitatively and qualitatively, expansion in all listed areas must continue. (See General Recommendations and High School Curriculum Committee's recommendations; charts re: articulation, and White Plains Model Satellite Graph.)

PRIVATE TRADES SCHOOLS: A working regional advisory relationship should be continuously operative with Region 4 Area Centers and community colleges, if coordinated programming is to be the result. Mutual program planning, to a great degree, would lessen appreciably unnecessary duplication of efforts.

POST-HIGH SCHOOLS: The growth of new jobs within the region and changing times dictate the need for broadening programs and increasing enrollments to meet the following regional needs:

- (a) Initial skills development for adults
- (b) Re-training of the unemployed
- (c) Upgrading training of employed
- (d) Increasing apprenticeship programs
- (e) Programs for women returning to the world of work

Certificated courses, on all levels, need to be expanded in all of Region 4:
Skill Centers (MDT, OEO, etc.)

Area Center Programs

Private School Offerings

Community College Courses

Industry and Business Training Programs

Presently, where duplication of offerings exist (in the above-mentioned programs), there is a negligible loss of effort, since the training needs are so critical. However, future programs should be instituted through coordinated planning and should be maintained in such a manner as to prevent costly competition in utilization of resources.

In brief, as a region, we cannot afford economically, socially, nor educationally, the luxury of training independently; coordinated planning will produce, obviously, better results.

COMMUNITY COLLEGES: It is essential that the region's community training resources be articulated

with the community colleges' present and projected programs. (See Post-High School Curriculum Committee's recommendations and community college report and chart re: articulation.)

Additionally, the three community colleges in Region 4 need to improve college level planning with each other, as well as with other colleges in the region.

Region 4 Director

Special Needs Recommendations⁸

The Westchester-Putnam Special Needs Study for Handicapped and Disadvantaged Secondary School Youth has application for the four counties in Region 4. The conclusions and recommendations of the Study follow:

CONCLUSIONS

In a land where compulsory education for all has become the keystone, one of the most perplexing problems facing American education is the "disadvantaged" child. It would, indeed, be naive of anyone to submit that all of the answers are known, when, in fact, there is not even consensus on all of the questions.

The potential of disadvantaged youth will be released when an educational program is developed which provides for the broad spectrum of human needs. In looking at the needs of the individual, we find, with few exceptions, that he must tailor himself to the organization if he is to succeed. If success is the goal, then success, not failure, must be demonstrated in a program predicated upon a progression of successes.

The term "underdeveloped" is not inappropriate in describing the disadvantaged. It should bring to mind countries rich in untapped resources; and the need for means of releasing and utilizing them. "Underdeveloped" implies possibilities which have evaded the nurture of educational systems. The task of the school must be to lead the way in creating and designing those opportunities, avenues, and channels through which untapped resources may be brought to usefulness.

RECOMMENDATION #1: A Task Force on Educational Opportunity should be formed in each school district, made up of concerned members of the community and school personnel to explore educational problems. A

⁸Ibid., p. 184-187.

willingness to yield to reasonable and legitimate requests is a prerequisite on the part of school personnel.

Chief School administrators should consider establishing an "Office of Community Relations" in each district, oriented toward bridging the communications gap between school and community which is apparent in all parts of our country.

RECOMMENDATION #2: The diagnostic services of "Project OPEN" should be provided to aid in differentiating between disadvantage and organic retardation. Such an assessment program, established on a regional basis, will permit increased understanding of students' potential and of the appropriate educational and occupational solutions for their needs. Prerequisite to effective educational planning is the use of the best diagnostic techniques presently available; and the addition of those which will be developed and prove to be useful.

RECOMMENDATION #3: The occupational education opportunities in the Area Center programs should be brought to the attention of more high school students. In order to accomplish this, a large part of the high school curriculum should be "occupationalized." Departments such as Home Economics, Industrial Arts, and Business Education should relate subject matter more specifically to occupational needs. Industrial Arts, for example, should serve, basically, three purposes:

1. To provide for the "discovery of technology" (tools, materials, and processes) as a part of the student's general education
2. To provide for the technical orientation of pre-technical and pre-engineering students (this course would be geared to the 2-year or 4-year college student)
3. To help pre-occupational skills and attitudes to be developed in those students who need marketable skills upon graduation from high school

Number 3 above is particularly applicable to the findings of this study. It is, therefore, recommended that proposals be developed to permit instructional and counseling personnel from the Area Occupational Education Centers to work closely with the Industrial Arts staffs in district high schools to:

1. Aid the counselors, the instructors, and the students in understanding occupational needs, and in developing pre-occupational skills prior to student involvement in the Area Center programs

2. Aid in the identification of students who can benefit from the offerings available at the Area Centers
3. Permit the Area Centers to play a more effective role as extensions of the high school, rather than programs in competition with the high school

Studies, similar to the pilot study conducted by Dr. Bruce Tuckman at the Woodlands High School, are suggested to determine how the staff and the students perceive the programs offered at the Area Occupational Education Centers. Directors of occupational education are encouraged to analyze these findings and to work with district high school administrators to develop effective articulation between the two areas.

RECOMMENDATION #4: School districts should have training programs in human relations for all staff members. The programs should focus on developing a better understanding of the student-teacher relationship with particular emphasis on techniques for modifying student behavior. Regional planning for the implementation of this recommendation is suggested.

The Special Needs Study recommends the continuation and expansion of the concept of the "Five Urban Systems Staff Development Center." The need for the expansion of such services is reinforced by the findings of this Study. Information obtained from the staff of a new center should be made available to the entire county, with particular emphasis on continuous communication with the educational communities of Ossining and Peekskill.

RECOMMENDATION #5: A Career Information Center should be established for the county. The purpose of such a center would be:

1. To have immediately retrievable information on occupational needs, trends, and employment opportunities county-wide
2. To provide career counseling for youth and adults with special needs
3. To aid school personnel in knowing what the employment needs and opportunities in the county are, which would assist in educational planning

The New York State Employment Service should be actively involved in such a center.

RECOMMENDATION #6: Evaluation reports on the successes and failures of existing programs (for the disadvantaged) should be compiled and made available to other districts, so there may be mutual benefit from such experiences. Such information should be centrally located for easily obtainable reference;

and/or circulated to those for whom it will have application.

RECOMMENDATION #7: "Tracking" students, using "ability" as the criterion, is questionable, if one wants to attain equality of educational opportunity. An increase in heterogeneous grouping is recommended, if a form of team teaching is used, with supportive services, which will then provide the capability of dealing with individual differences.

In order to deal effectively with the diversity created by non-grouping techniques, instructional strategies will need to be developed through new uses of instructional team members, audio-visual media, and programmed instruction. These represent an abundance of instructional possibilities.

RECOMMENDATION #8: Pre-school diagnostic services, outlined in Phase I, should be expanded so that learning disorders may be identified early and appropriate steps taken to assure maximum benefit from school experiences. It is recommended that these services be provided in cooperation with existing community agencies.

RECOMMENDATION #9: The characteristics of model educational programs, outlined in foregoing pages, should be given consideration with a view to their application in future educational planning.

Any of the recommendations, suggested as a county-wide or regional undertaking, could be implemented through the Office of the County Coordinator of Occupational Education.

Region 4 Model⁹

Regional Career Information Center for Westchester, Rockland, Putnam and Orange Counties:

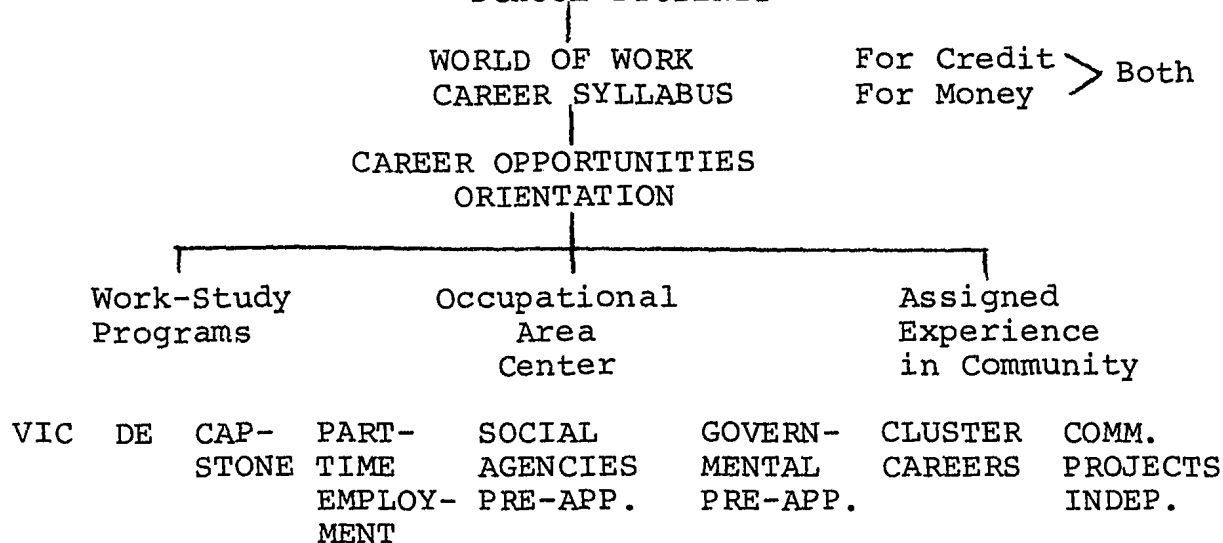
- a. A data bank of current, regional career information in brief and detailed form, easily retrievable, using the most expeditious multi-media sources, and disseminated from a central point;
- b. Mobile units (provided by the State Labor Dept.) which would take specialists in counseling to schools, institutions, concerned agencies, and business with applicable, supportive information;
- c. In-service programs to keep professionals abreast of current data; to enlist their active affiliation beyond the job level by

⁹Ibid., p. 181.

- d. A speakers' bureau, covering all listed occupations, for a wide variety of audiences;
- e. A center, diversified in staffing, which would include active participation of volunteers from all community resources;
- f. A component for research and development in occupational education curriculum to assist manpower centers in establishing updated course information on all levels;
- g. Ongoing consultative resources to bring industrial know-how into the schools upon request, resulting in the ancillary benefits of mutual involvement;
- h. An occupational library service, which includes publications, multi-media resources, and expertise in referral;
- i. An industrial research component to implement modifications in program and to apply technological advances more effectively; this to be an integral part of the center's operation, the staff of which would be oriented in guidance and research; and which would have the active participation of industries, out of which might grow an industrial co-op laboratory.

Requirements for Graduation¹⁰

BOARD OF EDUCATION REQUIREMENTS FOR GRADUATION FOR ALL HIGH SCHOOL STUDENTS



¹⁰ Ibid., p. 136

Resource Committee - Projections and Recommendations

REGION 4

FOCUS ON OCCUPATIONAL EDUCATION FOR K - 12

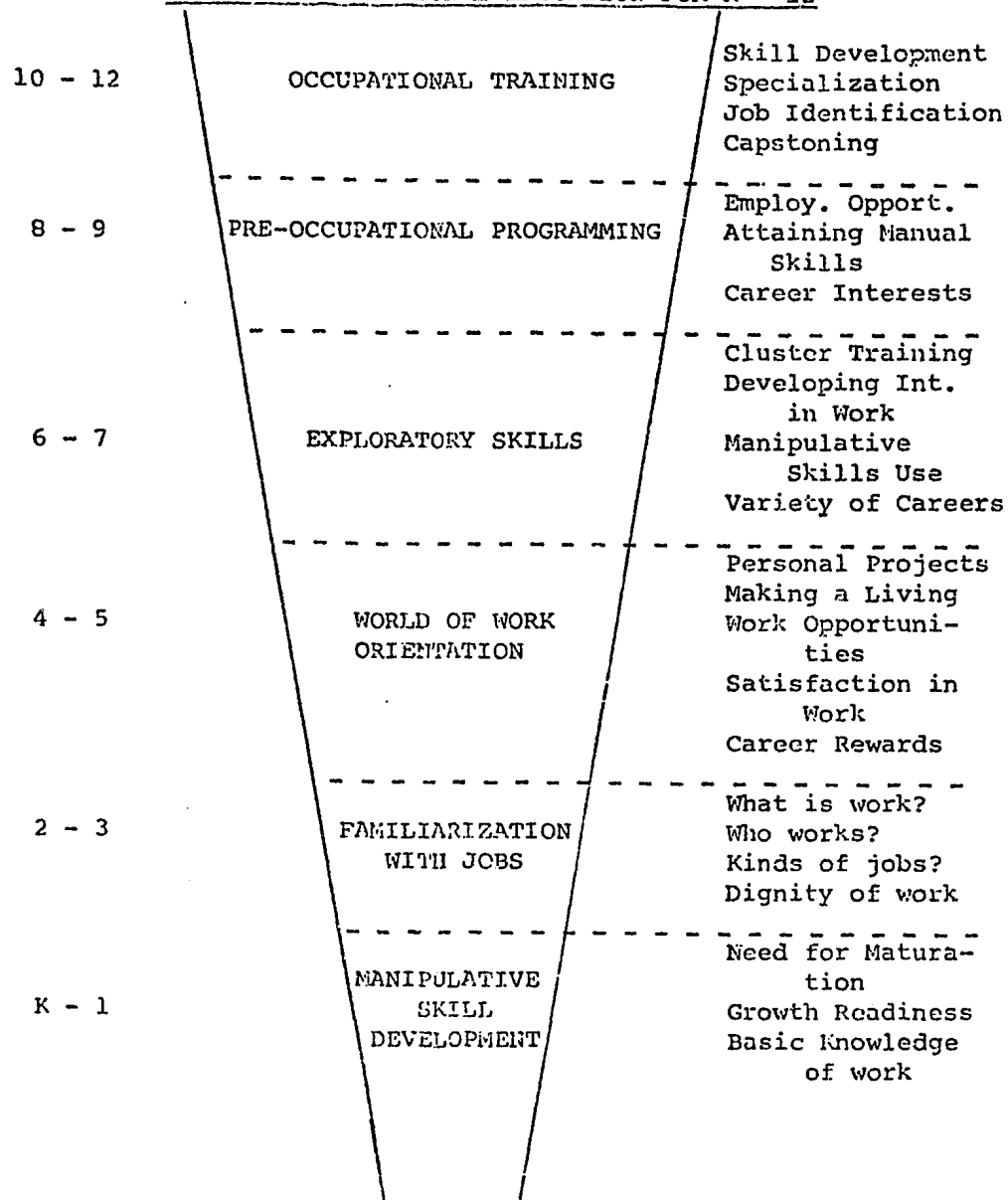


Fig. 25

REGION 4
OCCUPATIONAL EDUCATION FLOWCHART

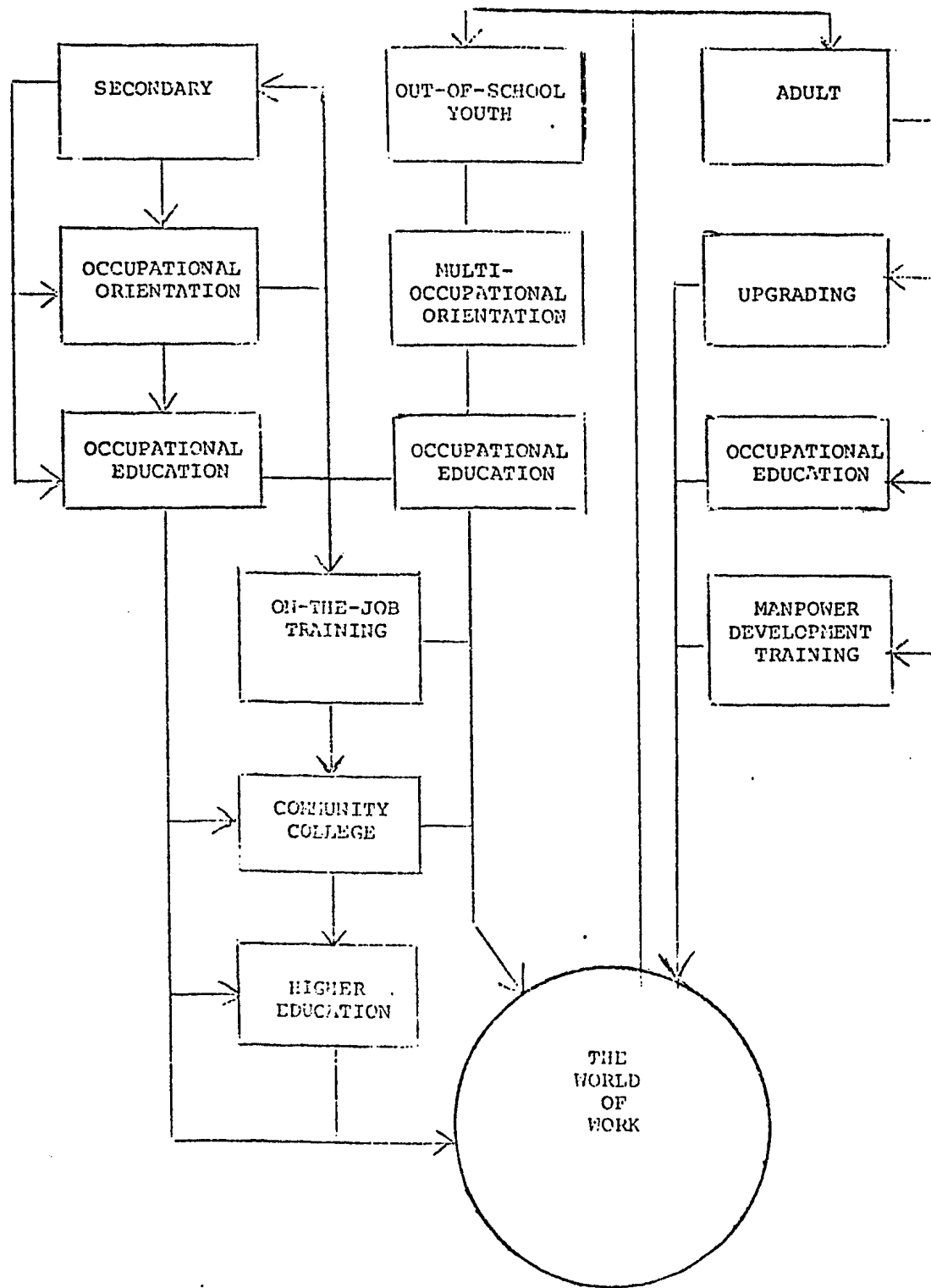


Fig. 26

Career Ladder Recommendation¹¹INTRODUCTION

A system of parallel levels of competency with plateaus for education and compatible apprenticeship needs development.

A model chart for para-professionals was made for and used by the New Careers Organizational Conference in Detroit, Michigan (D. R. Mullaney, 1967).

With the aid of Mr. David Lucas, Supervisor of Employment, General Motors Plant, Tarrytown, an adaptation of the model was done, covering the plant's series of steps for advancement.

Similar ladders could be drawn for most employers in the region. The National Alliance of Businessmen has been requested to explore the feasibility of doing charts of this type for the entire employment area of Region 4, with the help of the State Employment Service.

¹¹Ibid., p. 175-179.

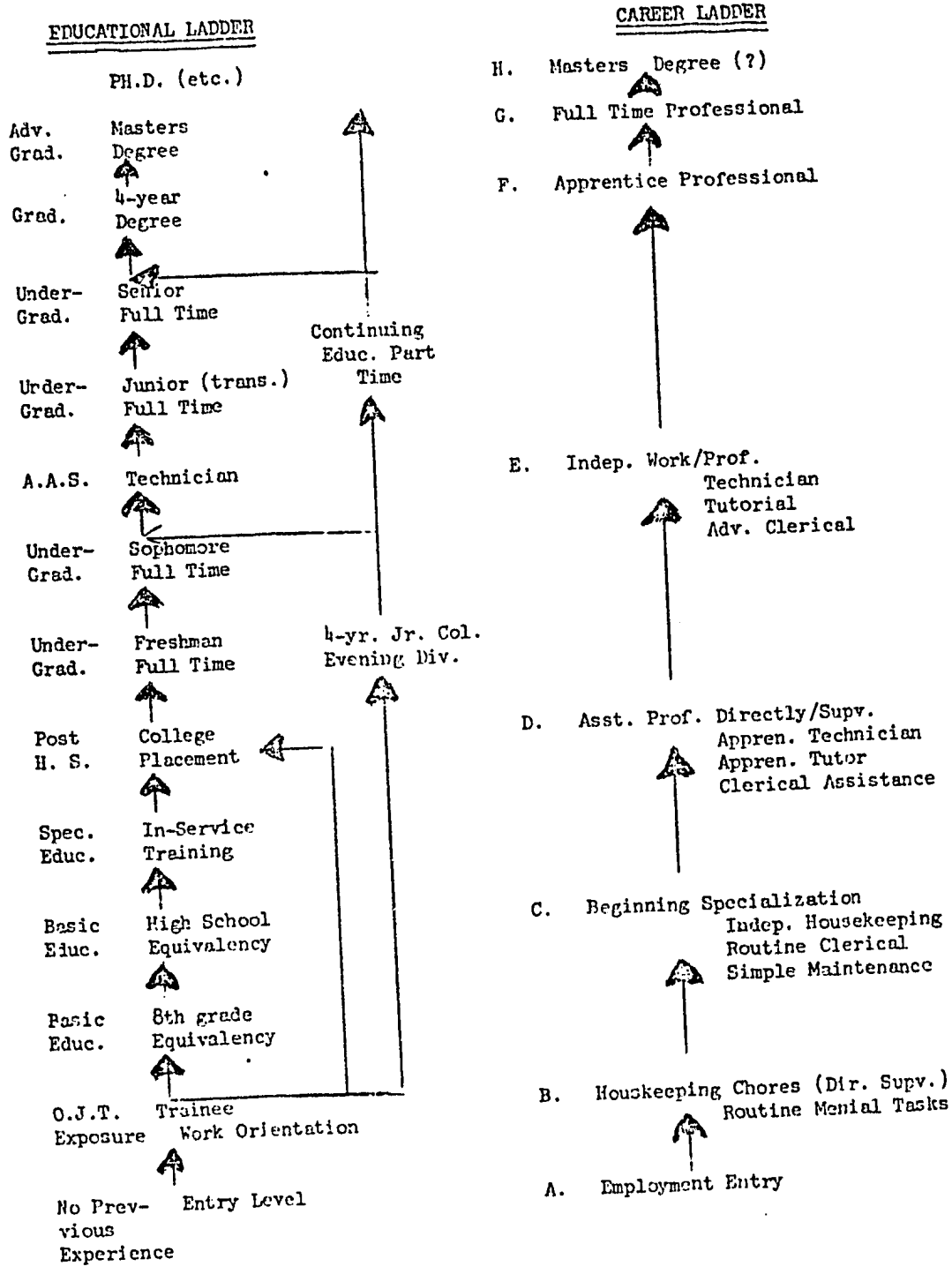


Fig. 27

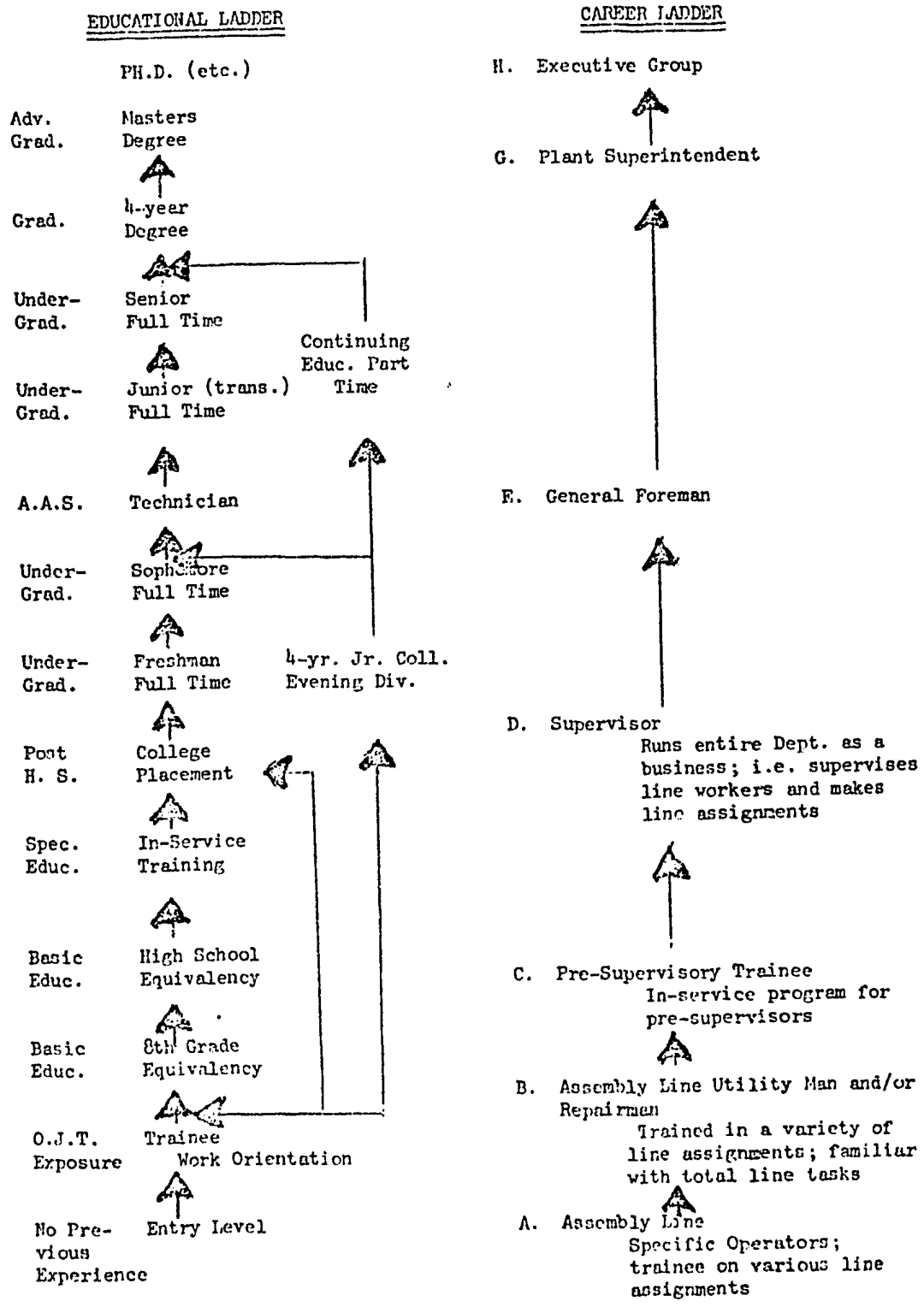


Fig. 28

Health Career Ladder¹²

We believe that, in a democratic society, the social need for establishing paths for advancement in employment--"Novice to President"--must be available as projected routes. Such a premise is based on the possibility of focusing on each rung of a step-by-step advance in all business pursuits, whether or not the ultimate achievement is predictable. There should be no entry position which is a dead end. Horizontal and vertical mobility must be evident. An illustrative example follows:

¹²Ibid., p. 180.

Resource Committee - Projections and RecommendationsREGION 4

We believe that, in a democratic society, the social need for establishing paths for advancement in employment - - "Novice to President" - - must be available as projected routes. Such a premise is based on the possibility of focusing on each rung of a step-by-step advance in all business pursuits, whether or not the ultimate achievement is predictable. There should be no entry position which is a dead-end. Horizontal and vertical mobility must be evident. An illustrative example follows:

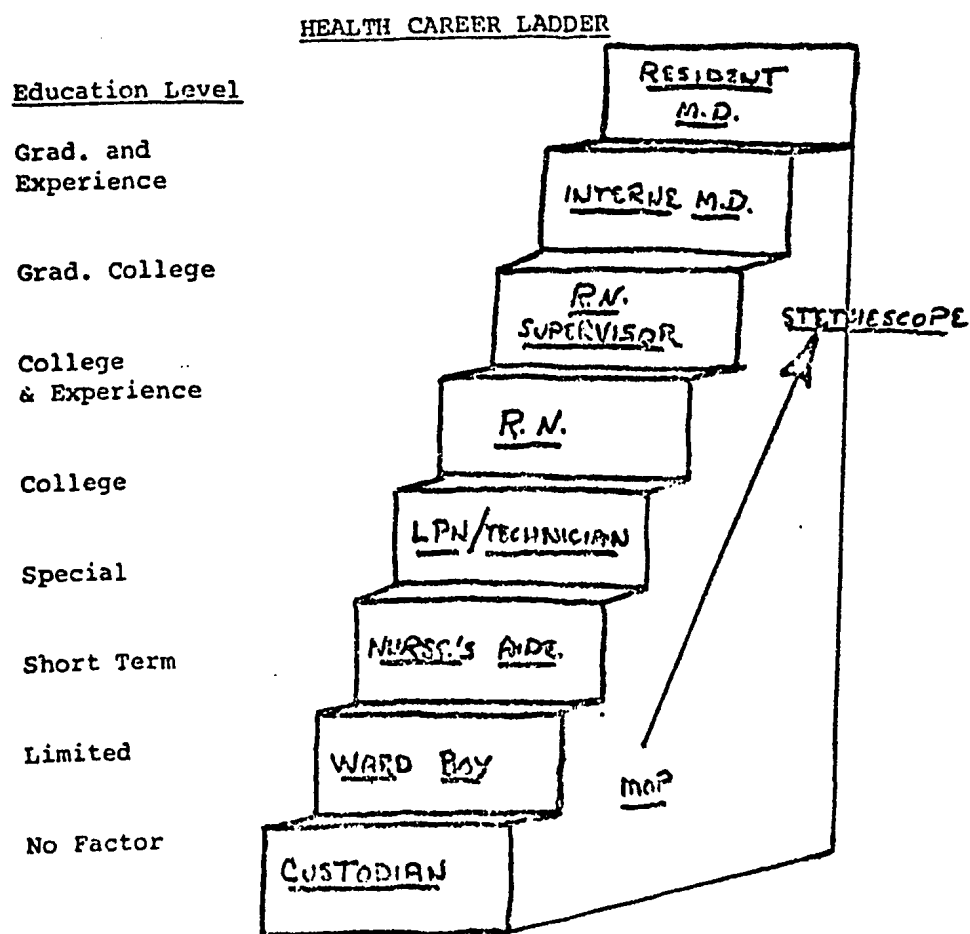


Fig. 29

Summary

The preceding recommendations and conclusions constitute the combined effort of eighty-two resource personnel, under the direction of the author of this dissertation.

The expression of the needs and of the desirable goals represents considerable 'mind-searching' and 'soul-searching' to bring about qualitative occupational education programs for all citizens in the communities within the area, and, hopefully, to suggest what might be useful to communities in other areas.

Further, the projections which were made reflect a concerted attempt toward providing more specialized courses for more people at all occupational levels, based on the anticipated manpower needs for the Region over the next five years.

It is the sincere hope of the author that quality occupational education will result for more citizens in the four counties through implementation of these recommendations and conclusions. The hope that a model will be erected which will contain all the ingredients necessary for establishing "An Exemplary National Demonstration Region" is also implicit.

APPENDICES

APPENDIX A

EVIDENCE OF CONSULTATION FOR REGION 4

We, the undersigned, have been informed of the Region 4 study and have been apprised of its intent. Additionally, we have expressed opinions and, in some instances, contributed to the documentation and findings:

NAME	ORGANIZATION
Carl Johnson	N. Y. State Elect. & Gas Co.
Carl Lapere	N. Y. State Elect. & Gas Co.
Geo. Olear	Rock. Co. Planning Ed.
Don Shore	N. Y. State Employ. Office
Jos. Stessel	N. Y. State Employ. Office
Hen. Ducharme	N. Y. State Employ. Office
Ely Davidson	N. Y. State Employ. Office
Wm. Collins	N. Y. State Employ. Office
Thom. Castelli	Rock. Co. BOCES
Gert. Cotter	Dir. Capri School Hair Design
Gilbert Murray	Comp. Skills Inst. Monsey, N. Y.
Frank Molinari	Dir. Capri School Hair Design
Jos. Schlimer	Nat. Learning Ctr. Nyack
M. Mareno	Mahopac Chamber of Commerce
M. Thorne	Controlex Corp. No. Salem
Emil Santelli	A. LeMay Optical Co.
J. Heyman	F. P. Clark Planning Assoc.
A. Loomis	Supervisor Town of Somers
D. Spadaccia	Supervisor Town of Yorktown
Wm. Molle	Bldg. Official Town of Carmel
Stephen Estrin	County Planner Putnam Co.
Jack Marr	Dept. of N. Y. S. Employ. Ser.
A. Lahm	Dept. of State, Labor Dept.
Carl Schaad	N. Y. Board Fire Und.
John Anderson	N. Y. Board Fire Und. Insp.
B. D'Allesandro	Coun. Brewster H. S.
H. P. Quinn	Asst. Comm. of Labor
R. Eschweiler	West. Co. Planning Bd.
George Frank	Vice Pres. Builders Inst.
Carl Kamhi	Vice Pres. Builders Inst.
Wm. Novak	FMC, Westchester County Airport
Wm. Foley	West. County Park Comm.
Henry Faldermeyer	Consolidated Edison Co.
F. Del Duca	N. Y. Air National Guard Westchester County Airport

APPENDIX B

AGENDA FOR CURRICULA MEETINGS

Region 4 meeting on Elementary Curriculum in Occupational Education, December 2, 1970, 9:30 a.m.

- (1) Introduce committee members.
 - (2) Explain briefly purpose of Region 4 Study.
(Westchester, Putnam, Rockland and Orange make up 1 region of the 19 regions in New York State, which must report to SED by Feb. 1, 1971, on its findings for the purpose of a long-range plan for occupational education, mandated by recent VEA amendments)
 - (3) Plan must be developed to acquaint all students with the world of work as concomitant learning.
 - (a) What has been done in the region to familiarize elementary students and staff members with the world of work?
 - (b) What pilot programs have been undertaken which might be used as a Region 4 model?
 - (c) What new projects should be undertaken for making the world of work an integral part of the elementary school learning process?
 - (4) List ideas of the committee and their recommendations, making note of minority viewpoints.
 - (5) In general terms, develop elementary occupational education goals, which could be applied to all of Region 4.
-

Region 4 meeting on Middle and Junior High School Curriculum, December 11, 1970.

- (1) Introduction of members of committee.
- (2) Explain briefly purpose of Region 4 Study.
(Orange, Putnam, Rockland, and Westchester make up one of the 19 regions in New York State, which must report to the SED by Feb. 1, 1971, on its findings for the purpose of a long-range plan for occupational education--a plan mandated by recent VEA Amendments)

APPENDIX B--Continued

- (3) Plan must be developed which will acquaint all students with the world of work as concomitant learning:
 - (a) What has been done in the region to familiarize middle school and junior high school students and staff members with the world of work?
 - (b) What pilot programs have been undertaken which might be used as a Region 4 model?
 - (c) What new projects should be undertaken for making the world of work an integral part of the middle school and junior high school learning process?
- (4) Determine the need for:
 - (a) work-orientation programs
 - (b) pre-vocational courses
 - (c) pilot projects in occupational education for special education students
 - (d) career information counseling
- (5) List ideas of the committee and their recommendations, making note of minority viewpoints.
- (6) In general terms, develop middle school and junior high school goals for occupational education which could be applied to all of Region 4.

Region 4 meeting on High School Curriculum, December 10, 1970.

- (1) Introduction of members of committee.
- (2) Explain briefly purpose of Region 4 Study.
(Orange, Putnam, Rockland, and Westchester make up one region of the 19 regions in New York State which must report to the SED by Feb. 1, 1971, on its findings for the purpose of a long-range plan for occupational education-- a plan mandated by recent VEA Amendments)
- (3) Under Part III of the SED's study outline, Item 3 suggests a list of the types of local high school courses including:

(a) work orientation	(c) pre-vocational
(b) work-study	(d) occupational

 Courses operated in local high schools, whether secon-

APPENDIX B--Continued

dary or adult, are to be considered separate from the area center programs.

Determine the role of the local high schools in occupational education programming as it compensates for real needs and supplements or complements area center programs; include the regular, secondary, and adult programs in thinking about this. (i.e., What can and should be done locally vs. what the role of the area center should be?)

- (4) List local high school pilot projects which would have relevance to the plan for Region 4.
- (5) Under Part III, Item 4., list present and future opportunities in occupational education for:
 - (a) regular general students
 - (b) disadvantaged and handicapped students
- (6) Form consensus on feasibility of including some adults in regular secondary programs.
- (7) Make a list of committee's ideas on the development of local programs and area center courses in general terms, making note of minority opinions.
- (8) In general terms, develop high school goals in occupational education which could be applied to all of Region 4.

Region 4 meeting on Occupational Education Curriculum for Post-High School and Adult Educational Institutions, December 9, 1970, 9:30 a.m.

- (1) General Instruction
 - (a) Introduction of members of committee
 - (b) Explain briefly purpose of Region 4 Study. (Westchester, Putnam, Rockland and Orange make up one region of the 19 regions in New York State which must report to SED by Feb. 1, 1971, on its findings for the purpose of a long-range plan for occupational education, mandated by recent VEA Amendments)

APPENDIX B--Continued

- (2) The committee's charge
- (a) The intent of this phase of the study is to determine:
 - I. What is available presently?
 - II. What are the shortcomings?
 - III. What is now in the planning stage?
 - IV. What, ideally, should exist?
 - (b) Diagrammatically, in general terms, what are the cooperative roles in post-high school occupational education for:
 - I. special agency training
 - II. industrial training
 - III. manpower centers
 - IV. area centers
 - V. manpower centers
 - VI. community colleges

How are these goals best integrated into filling needs without duplicating the efforts nor creating undue competition? How does the administration of each program tie in to other programs; who is served; how open-ended are the goals?
 - (c) Document by listing (general)
 - I. existing, on-going programs
 - II. special programs
 - III. planned and projected programs

- NOTE: Special concern should be shown for
- (a) Programs for disadvantaged (occupational programs) both institutional and agency-based, present and future, pragmatic and ideal
 - (b) Articulation of secondary and post-secondary programs, presently employed and ideally projected
 - (c) Certificated programs for adults on all levels
 - (d) Existing and potential cooperative training programs involving agencies, MDT, Area Centers, and Community Colleges (and industry, where applicable)
 - (e) Projected post-high school curriculum offerings both expanded existing courses and pilot programs
 - (f) Existing programs (degree and non-degree) and adult day and evening division offerings, both special and regular
 - (g) Special manpower programs not already covered

APPENDIX C

THE FOLLOWING ORGANIZATIONS HAVE CONTRIBUTED AS A RESOURCE SOURCE DIRECTLY OR INDIRECTLY TO THE FINDING IN THE REGION 4 STUDY:

National Alliance Business
New York State Employment Service
New York State Labor Department
County Planning Commissions
County Community Action Programs
County Welfare Departments
County Chambers of Commerce
Regional Office of Economic Opportunity
County Councils of Social Agencies
Human Rights Commission
County Youth Services
Bureau of Apprenticeship and Training
Westchester-Putnam Occupational Advisory Committee
Joint Electrical Apprenticeship Training Program
The County Trust Company Westchester
Bureau of Census
Economic Consultants Organization, Inc.
United States Office of Education
National Industrial Conference Board
United States Office of Economic Opportunity
Division of Occupational Education (New York)

APPENDIX D

COMMITTEES FOR STUDY OF REGION 4
(Orange, Putnam, Rockland, Westchester)Executive Committee

Arthur Antin, Supt. of Schools, White Plains
 Emanuel Axelrod, Asst. Supt., Orange BOCES
 Amy Bull Crist, Dist. Supt., Orange County
 Joseph Carol, Supt. of Schools, Rye Neck
 Seymour Eskow, Pres., Rockland Comm. College
 Allen Fales, Dr. Evening Div., Westchester C.C.
 Felix Festa, Supt. of Schools, Clarkstown
 Noble Gividen, Dist. Supt., West.-Putnam BOCES
 Chairman - Burdette Gleason, Assoc. Supt., BOCES II, West.
 Thomas Jenkins, Dist. Principal, Montrose
 George Joachum, Principal, No. Rockland H. S.
 Reginald Kierstead, Dist. Princ., Minisink Valley
 John Krause, Supt. of Schools, Middletown
 Merritt H. Lindsey, Princ., Lakeland H. S.
 Resource - Donald R. Mullaney, Coord., West.-Putnam Counties
 Robert Novak, Pres., Orange County Comm. College
 Angelo Paradiso, Princ., Saunders H. S.
 Justus Prentice, Supt., Rockland County BOCES
 Thomas V. Russo, Dist. Supt., BOCES II, West.
 Joan Shedden, Dir., Central Academy, Newburgh
 Alan Sugarman, Asst. Supt., Ramapo #2
 Leslie Tourville, Asst. Supt., Newburgh
 Ethel C. Townsend, Director, Berkeley School

Resource Committee

Emanuel Axelrod (Orange)
 Donald Barbieri (Westchester)
 Pat Carlo (West.-Putnam)
 Tom Castelli (Rockland)
 Sterling Goplerud (W. P. Adult Ed.)
 Peter Hare (Rockland Title III)
 George Kleitz (Yonkers)
 John MacGregor (West. Title III)
 Donald Mullaney (Study Director)
 Leon Rathbun (Newburgh)

Consultants

Ruth Bullwinkel (Westchester)
 William Calabrese (Orange)
 Ronald Carlson (Rockland)
 Allen Fales (West. Com. Coll.)
 William Fleischhauer (Putnam)

APPENDIX D--ContinuedAdvisory Committee

Louis Bozzone (Offset Print.)
J. Moreau Brown (G. E. Exec.)
John Castaldi (NYSE-Orange)
Harold B. Desnoyers (W.C.C.)
Doris D'Italia (Hosp. Admin.)
Herbert Howe (Supv. Emp. Ser.)
C. Walton Koock (IBM Exec.)
Robert Popper (West. Manpower)
Harry Quinn (Asst. Comm. Labor)
Don Schuil (Empire Nat'l Bank)
Henry J. Scully (Plumbers Un.)
John Wemmlinger (County Trust)

APPENDIX E

OCCUPATIONAL EDUCATION CURRICULUM COMMITTEES

Elementary Schools

Chairman: Donald Barbieri, BOCES II, Westchester County
Thomas Castelli, BOCES, Rockland County
Louis Krane, Katonah-Lewisboro Schools
Robert Schreiber, Mid-Hudson Career Study
Frank Tota, New Rochelle Public Schools
Joseph Ventura, Tuckahoe Public Schools
Recorder: Roberta Franck

Middle and Junior High Schools

Chairman: Paul Greene, White Plains Public Schools
LeRoy Conklin, Clarkstown Jr. High School
Herman Goodyear, White Plains High School
Irving Mahl, John Jay High School
Malcolm Rizzuto, Fox Lane Middle School
George Starke, Longfellow Jr. High School
Recorder: Dorothy Jasper

High Schools

Chairman: Thomas Castelli, BOCES, Rockland County
Donald Barbieri, BOCES II, Westchester County
James Gaddy, New Rochelle High School
Walter Goodman, BOCES, Northern Westchester-Putnam
George Gould, Scarsdale High School
George Joachim, North Rockland High School
John Nealon, Regional Education Center, Rockland
Gene Ridenour, Mt. Vernon High School
Leslie Tourville, Newburgh Free Academy
Angelo Paradiso, Saunders High School, Yonkers
Kelly Smith, Valhalla High School

Post-High School and Adult Education

Chairman: Pat Carlo, BOCES, Northern Westchester-Putnam
Allen Fales, Westchester Community College
Sterling Goplerud, White Plains Public Schools
Philip Fey, Rockland Community College
George Kleitz, Yonkers Public Schools
Don Mahoney, Westchester Community College
Herman Pollack, Orange Community College
Joseph Schleimer, Rockland Business School

APPENDIX F

AD HOC
RESOURCE COMMITTEE OF REGION 4

Mr. Emanuel Axelrod Assistant Superintendent BOCES, Orange & Ulster Counties Gibson Road Goshen, New York 10924	Mr. John MacGregor, Director Regional Education Center Westchester County 5 Westchester Plaza Elmsford, New York 10523
Mr. Donald Barbieri, Director Occupational Education BOCES II, Westchester County 14 Legion Drive Valhalla, New York 10595	Mr. Leon Rathbun, Director Occupational Education Newburgh Free Academy Newburgh, New York 12550
Mr. Pat Carlo, Director Technology & Education Center Northern Westchester-Putnam BOCES 845 Fox Meadow Road Yorktown Heights, New York 10598	Mr. Burdette Gleason Associate Superintendent BOCES II, Westchester 17 Berkley Drive Port Chester, New York 10573
Mr. Thomas Castelli, Director Center of Occupational Education BOCES, Rockland County 61 Parrott Road West Nyack, New York 10994	Mr. Donald R. Mullaney County Coordinator Occupational Education Westchester-Putnam Counties 17 Berkley Drive Port Chester, New York 10573
Mr. Sterling Goplerud, Director Adult Education Center 228 Fisher Avenue White Plains, New York 10606	
Mr. Peter Hare, Director Regional Education Center Rockland County 145 College Road Suffern, New York 10901	
Mr. George Kleitz Assistant Superintendent Yonkers Public Schools 145 Palmer Road Yonkers, New York 10701	

APPENDIX G

THE FOLLOWING COMMITTEE MEMBERS WERE USED AS AN ADVISORY RESOURCE IN APPROVING THE REGION 4 PLAN:

Westchester-Putnam

C. Walton Koock, Assistant for
Special Programs - IBM
1000 Westchester Avenue
White Plains, New York 10604
Phone: 696-6006

Harold B. Desnoyers, Chairman
Division of Technical Sciences
Westchester Community College
75 Grasslands Road
Valhalla, New York 10595
Phone: WH 6-1616

Herbert Howe, Employment Security
Superintendent
New York State Employment Service
30 Glenn Street
White Plains, New York 10603
Phone: RO 1-1090

Robert Popper, Chairman
Westchester County Manpower Panel
240 Rosedale Avenue
White Plains, New York 10605
Phone: WH 6-9325

Harry Quinn, Asst. Industrial
Commissioner
State of New York Dept. of Labor
30 Glenn Street
White Plains, New York 10603
Phone: WH 8-1616

John D. Wemmlinger
Personnel Department
The County Trust Company
55 Church Street
White Plains, New York 10602
Phone: WH 6-4000, Ext. 2581

APPENDIX G--ContinuedRockland

Jay Moreau Brown, Assoc. Secretary
General Electric Foundation
P. O. Box 151
Ossining, New York 10562
Phone: 941-5600

Henry J. Scully, Bus. Representative
Plumbers and Steamfitters Local #373
2 James Street
Suffern, New York 10901
Phone: EL 7-1669

Don Schuil, Vice President
Empire National Bank
New Hempstead Road
New City, New York 10956
Phone: 634-4931

Orange

Mrs. Doris D'Italia, Administrator
Arden Hill Hospital
Harriman Drive
Goshen, New York 10924

Louis Bozzone
Commercial Offset Printers
222 MacArthur Avenue
New Windsor, New York 12550

John Castaldi, Manager
New York State Employment Service
41 Dolson Avenue
Middletown, New York 10940
Phone: 914-342-2515

APPENDIX H

DATA REGARDING EDUCATION AND EXPERIENCES IN
BUSINESS, INDUSTRY, AND THE MILITARY

1942-45
(Military) Graduate of five technical training schools,
ranging from aircraft mechanics to flight
training

Completed twenty-six combat flight missions
over Germany

Taught courses in aeronautical instruments
in the Technical Training Command

1946-51 New York State Institute of Applied Arts
and Sciences for two years, major in
mechanical technology; worked as a time
and motion technician after school and
on week ends

New York University, B.S. in Education,
major in Industrial Arts, while holding a
fulltime position as design draftsman for
Schick Electric Shaver

1951-53
(Military) Recalled to duty as a training officer in
the Northeast Air Command

Established and operated aircraft control
and warning school in Newfoundland

Assisted in the development of career
ladders for military technical personnel

Attended schools for classification and
assignment and for air intelligence

1953-63
(Civilian) Taught industrial arts in junior and senior
high schools, and in adult education classes

Worked as quality control engineer during
summers

Guidance counselor for three years for
junior and senior high school students

Acting junior high school principal for
two years

APPENDIX H--Continued

1963-66
(Civilian)

Assistant Director of a vocational school
Building Principal of a vocational school

1966-to
present

County Coordinator, Occupational Education,
Westchester-Putnam Counties, New York

Project Director, in addition to regular
duties of coordinating occupational edu-
cation for the school districts of the
two counties, for the following studies:

Special Needs Study (two-year
study for the New York State
Education Department)

Penitentiary Training Program
(one-year study directed toward
prison inmates' skills)

Region 4 Study (six-month project,
New York State Education Depart-
ment)

Consultant to:

The State Education Department of
Connecticut

New York University

Westchester Community College

June, 1972

APPENDIX I

REGION 4 INDUSTRY DISTRIBUTION DATA BY SIZE

	Total # Industries 1962	Total # Industries 1964	Percent of Total in NYS	1-19 Employees	20-99 Employees	100+ Employees	First Quarter Income Per Employee 1964
Orange	3,644	3,755	1.0%	91%	7%	2%	\$1,105
Putnam	615	688	0.2%	95%	4%	*	\$1,097
Rockland	2,205	2,553	0.6%	92%	6%	2%	\$1,302
Westchester	16,477	17,651	4.4%	91%	7%	2%	\$1,353
U.S.				90%	8%	2%	

*Less than 1%

Fig. 30

APPENDIX J

REGION 4 OCCUPATIONAL PROGRAMS WITH ENROLLMENT 1970-71

	ORANGE		ROCKLAND		WESTCHESTER - PUTNAM						
	BOCES	NFA			N. Westchester	S. Westchester	SE	SW	Port Chester	White Plains	
					Putnam	BOCES I	BOCES II	New Rochelle Mt. Vernon			Yonkers
AGRICULTURAL OCCUPATIONS	33		22		25	35					
Agriculture I, II, III, IV	23				13	15					
Conservation					12	20					
Floriculture			22								
Landscaping											
Ornamental Horticulture	10										
AUTOMOTIVE OCCUPATIONS	262	38	143		108	99	227		20		30
Auto Body	50		40		x	x					
Automotive Mechanics	186	38	71		x	x	x	x			
General Auto- motive Service*	26										
Service Station Attendant			32								
BUSINESS OCCUPATIONS	109				134	134					
Advanced Business Education						x					

Fig. 31

APPENDIX J--Continued

	ORANGE		ROCKLAND	WESTCHESTER - PUTNAM					
	BOCES	NFA		N. Westchester	S. Westchester	SE	SW	Port Chester	White Plains
				Putnam BOCES I	BOCES II	New Rochelle Mt. Vernon	Yonkers		
Advanced Business Machines				24					
Banking	x		x						
Bookkeeping						x	x		
Clerical Practice							x		
Computer Programming			37	33	22				
Data Processing	109		207	77	101	x			
Distributive Education						x			
Duplicating and Reproducing							x		
General Office Service*			17						
Retailing							x		
Secretarial Practice					8	x		28	
Stenography		x				x			
Typing						x			
Office Machines							x		
Office Practice		x				x	x		
Office Skills					4			22	
BUILDING TRADES	78			17	13	56			
Building Construction	71								
Building Maintenance*	8		30						
Building Service*			x						
Carpentry			36	x	x	x	x		
Handyman*				x					

Fig. 31--Continued

APPENDIX J--Continued

	ORANGE		ROCKLAND	WESTCHESTER - PUTNAM					
	BOCES	NFA		N. Westchester Putnam BOCES I	S. Westchester BOCES II	SE New Rochelle Mt. Vernon	SW Yonkers	Port Chester	White Plains
Masonry				x					
Painting and Decorating				x					
COOPERATIVE EDUCATION	30	7	x	x	x	x	x		
COSMETOLOGY	191	71	126	102	109	68		27	
DRAFTING									
Architectural Drafting				x					
Drafting and Surveying			10						
Industrial Drafting				x	x				
Mechanical Drafting						x			
Machine Design							x		
ELECTRICAL TRADES	66			20	48	53			
Electrical Wiring							x		
Electrical Trades						x			
Electricity Electronics						x			
Radio and TV Repair			27			x			
Technical Electronics	23			x					
Trade Electronics				x	x	12			

Fig. 31--Continued

APPENDIX J--Continued

	ORANGE		ROCKLAND	WESTCHESTER - PUTNAM					
	BOCES	NFA		N. Westchester Putnam BOCES I	S. Westchester BOCES II	SE New Rochelle Mt. Vernon	SW Yonkers	Fort Chester	White Plains
Trade						41			
Electricity	43		50	x	x				
Technical									x
Electricity									
ENVIRONMENTAL CONTROL									
Air Conditioning									
Heating and Refrigeration			30	x	x				
Automatic Heating				x		x		x	
Heating and Ventilating				x					
FOOD TRADES									
			33	x		36			
GRAPHICS	52	8		17	29	218			
Commercial Art	52				16	95		x	
Commercial Photo						67			
Offset Lithography		8	11	17	13	56		x	
HEALTH OCCUPATIONS									
Dental Assistant				21	19	24			
Home and Institutional Licensed		4							
Practical Nursing	83	25	36	18	14	20			
Nurse Aide	32		12		x				

Fig. 31--Continued

APPENDIX J--Continued

	ORANGE		ROCKLAND	WESTCHESTER - PUTNAM				
	BOCES	NFA		N. Westchester Putnam	S. Westchester	SE	SW	
				BOCES I	BOCES II	New Rochelle Mt. Vernon	Yonkers	Port Chester
Practical Aide*			13	x				
Health Occupations				x				
HOME ECONOMICS						x		x
Dressmaking								x
Dress Design						69		
Fashion Design								
METAL TRADES								
Machine Shop		16		x				
Machine Trades			22			x		
Welding			21					
OTHER								
Business								
Machine Repair			17					
Industrial Chemistry								x
Technical Chemistry						x		
Mech. and Elec. Tech.			22					

NOTE: x indicates course offered but enrollment figures were not obtained.

* indicates program for educationally Handicapped.

Fig. 31--Continued

BIBLIOGRAPHY

BOOKS ON OCCUPATIONAL EDUCATION

1. Baer, Max F. Occupational Information: The Dynamics of Its Nature and Use. Chicago: Science Research Associates, Inc., 1964.
2. Barlow, Melvin L. History of Industrial Education in the United States. Peoria, Ill.: Chas. A. Bennett Co., Inc., 1967.
3. Belitsky, Harvey A. Private Vocational Schools and Their Students. Cambridge, Mass.: Schenkman Publishing Co., 1969.
4. Bowman, Gardaw, and Klopff, Gordon J. New Careers and Roles in the American School. New York: Bank Street College Press, 1968.
5. DuBridge, Lee. Education and Social Consequences. Englewood Cliffs, N. J.: Prentice-Hall, 1962.
6. Feldman, Marvin J. Public Education and Manpower Development. New York: Ford Foundation, 1967.
7. Gleazer, Edmund J., Jr. This Is the Community College. Boston, Mass.: Houghton Mifflin Co., 1968.
8. Katz, Arnold. Planning and Programming of Vocational-Technical Education. Menlo Park, Calif.: Stanford Research Institute, 1967.
9. Kaufman, Jacob J., and Lewis, Morgan V. The Potential of Vocational Education. Pennsylvania: Pennsylvania University Park Press, 1968.
10. Lee, Edwin A. Objectives and Problems of Vocational Education. New York: McGraw-Hill Book Co., Inc., 1938.
11. Mangum, Garth L. The Development of Manpower Policy. Baltimore: The John Hopkins Press, 1966.
12. Mayer, Frederick. A History of Educational Thought. Columbus, Ohio: Charles E. Merrill Books, 1960.
13. Obermann, C. Esco. The History of Vocational Rehabilitation in America. Minneapolis, Minn.: T. S. Denison and Co., 1965.

14. Schaefer, Carl J., and Kaufman, Jacob J. Occupational Education for Massachusetts. Springfield, Mass.: Massachusetts Advisory Council on Education, 1968.
15. Transition from School to Work, The. A report based on the Princeton Manpower Symposium, May 9-10, 1968. Princeton, N. J.: Industrial Relations Section, Princeton University, 1968.
16. Venn, Grant. Man, Education, and Work. Washington, D. C.: American Council on Education, 1964.
17. Venn, Grant. Man, Education, and Manpower. Washington, D. C.: American Association of School Administrators, 1970.
18. Vocational Education: The Bridge Between Man and His Work. General Report of The Advisory Council on Vocational Education. Washington, D. C.: U. S. Department of Health, Education, and Welfare, Office of Education, 1968.
19. Whitehead, Alfred North. The Aims of Education. New York: New American Library of World Literature, 1949.
20. Zytowski, Donald G. Vocational Behavior: Reading in Theory and Research. New York: Hogt, Rinehart and Winston, 1968.

BOOKS FROM OTHER DISCIPLINES

21. Bolino, August C. Manpower and the City. Cambridge, Mass.: Schenkman Publishing Co., 1969.
22. Cervantes, Lucius F. The Dropout: Causes and Cures. Ann Arbor: University of Michigan Press, 1965.
23. Chamber of Commerce of the United States. The Concept of Poverty, Task Force on Economic Growth and Opportunity. Washington, D. C.: The Chamber, 1965.
24. Darcy, Robert L., and Powell, Philip E., Editors. Manpower Education in a Growing Economy. Athens: Center for Economic Education, College of Business Administration, Ohio University, 1968.

25. Hoffer, Eric. The True Believer. New York: Harper and Row, 1966.
26. Schrieber, Daniel, Editor. Profile of the School Dropout. New York: Random House, 1967.
27. Siegel, Irving H., Editor. Manpower Tomorrow: Prospects and Priorities. New York: Augustus M. Kelley, Publishers, 1967.
28. Theobald, Robert. The Challenge of Abundance. New York: Clarkson N. Potter, Publisher, 1961.
29. Whittemore, Robert C. Makers of the American Mind. New York: William Morrow and Co., 1964.

PERIODICALS

30. "Annual Business Review," New York Times, New York (January, 1971), 16-21.
31. "Annual Commerce and Industry Review," Journal News, Nyack, New York (January 19, 1971), 23-32.
32. "Annual Commerce and Industry Review," Reporter Dispatch, White Plains, New York (January 19, 1971), 32-48.
33. "Annual Commerce and Business Review," Times Herald Record, Newburgh, New York (February, 1971), 16-31.
34. "Annual Manpower Report, Orange County," New York State Department of Labor, Division of Employment, Research and Statistics, Newburgh, New York (June, 1969), 3-17.
35. "Annual Manpower Report, Westchester-Rockland Area," New York State Department of Labor, Division of Employment, Research and Statistics, White Plains, New York (June, 1969), 4-25.
36. "Area Development," Rockland County Planning Board, New City, New York (1969), 1-6.
37. "Business and Industrial Firms with Fifty or More Employees in Westchester," Westchester County Association, White Plains, New York (1968), 1-19.

38. "Business Fact Book, Mid-Hudson Area, Part I Business and Manufacturing," New York State Department of Commerce, Albany, New York (1967-68), 6-31.
39. "Business Fact Book, Mid-Hudson Area Part II Population and Housing," New York State Department of Commerce, Albany, New York (1963), 14-28.
40. "Business Fact Book Supplement," New York State Department of Commerce, Albany, New York (1969), 6-19.
41. "Business Fact Book, Westchester-Rockland District, Part I Business and Manufacturing," New York State Department of Commerce, Albany, New York (1967), 16-21.
42. "Business Fact Book, Westchester-Rockland District, Part II Population and Housing," New York State Department of Commerce, Albany, New York (1963), 31-38.
43. "Career Education," Department of Health, Education and Welfare, Publication No. (OE) 72-39, Washington, D. C. (1971), 19-31.
44. "Census of Business," U. S. Department of Commerce, New York State (1969), 19-31.
45. "Community Profiles," U. S. Department of Health, Education and Welfare, Office of Economic Opportunity, Washington, D. C. (1965), 27-41.
46. "Cooperative Area Manpower Program - Mid-Hudson Region," New York State, Division of Employment (February, 1971), 8-19.
47. "Cooperative Area Manpower Program - Putnam-Rockland-Westchester Region," New York State, Division of Employment (June, 1970), 4-12.
48. "Countdown," Patent Trader, Putnam County, New York (January 30, 1971), 8-14.
49. "County Business Patterns, 1967: New York," C B P - 67-34, U. S. Bureau of Census, U. S. Government Printing Office, Washington, D. C. (1968), 4-11.
50. "Data Book - Orange County," Orange County Planning Board (1970), 1-9.

51. "Data Book - Putnam County," Putnam County Chamber of Commerce (1965), 1-8.
52. "Demographic Projections for New York State Counties," New York State, Office of Planning Coordination (1966), 3-7.
53. "Directory of Industrial Establishments," Orange County, Department of Planning (1968), 1-7.
54. "Division of Economic Research and Statistics," New York State Department of Commerce (March 13, 1969), 14-32.
55. "Economic Development Administration," U. S. Department of Commerce, Amsterdam, New York (1968), 21-46.
56. "Expanding the Choices," U. S. Department of Health, Education and Welfare, Education and Training, 5th Annual Report of the Secretary of H. E. W. to Congress on Manpower Development and Training Act, U. S. Government Printing Office (1967), 51-64.
57. "Job Briefs," New York State Department of Labor, Division of Employment, Albany, New York (June, 1970), 6-31.
58. Katz, Arnold (Ed.). "Occupational Education: Planning and Programming," Vol. Two, Stanford Research Institute, Menlo Park, Calif. (1967), 81-96.
59. "Learning for Jobs," U. S. Department of Health, Education and Welfare, Education and Training, 5th Annual Report of the Secretary of H. E. W. to Congress on Manpower Development and Training Act, U. S. Government Printing Office (1967), 71-89.
60. "Manpower Development and Training in New York State," New York State Education Department, Division of Special Occupational Services, Annual Reports, Albany, New York (1968), 19-31.
61. "Manpower Directions, New York State 1965-1975, Job Requirements and Labor Force," Division of Research and Statistics, Albany, New York (1968), 62-71.
62. Mullaney, Donald R., and Gleason, Burdette. "Survey of Job Training, Norwalk School System," The Center for Field Research and School Services, New York, New York University Press (1969), 21-30.

63. Mullaney, Donald R. "Crash Programitis," American Vocational Journal (November, 1969), 94-96.
64. Mullaney, Donald R. "Special Needs Study for Westchester County," Unpublished, New York State Education Department (Two-year Study, 1966-68) mimeographed.
65. Mullaney, Donald R. "Region 4 Study," Unpublished, New York State Education Department, Division of Occupational Education (February, 1971), offset lithography.
66. Mullaney, Donald R. "Twelve-Month School Year," Westchester County Chief School Administrator Report (March, 1970), unpublished, mimeographed.
67. "New York State Electric and Gas Utility Industrial Directory," Area Development Department, Albany, New York (1969), 13-16.
68. "Operations," New York State Department of Labor, monthly publication of the Research and Statistics Office, Division of Employment, Albany, New York (January, 1967), 21-33.
69. "Orange County's Three Cities - Data," Editor and publisher Market Guide, Newburgh, New York (1970), 1-17.
70. "Personal Income Statistics in New York State," New York State Department of Commerce, Albany, New York (1968), 41-49.
71. "A Projection - Future of Orange County," Orange County, New York Regional Plan Association (1969), 4-18.
72. "Statistical Yearbook," New York State, Division of Budget, Office of Statistical Coordination (1969-1970), 20-26.

HISTORICAL PERIODICALS

73. "Historical Rockland County," Rockland County Historical Association, New City, New York (1960), 24-32

74. History of the Mid-Hudson Region," Mid-Hudson Regional Development Association, Newburgh, New York (May, 1970), 17-34.
75. "History of the Mid-Hudson Valley," New York State Chamber of Commerce, Albany, New York (1962), 26-44.
76. "History of Westchester County," Westchester County Historical Association, White Plains, New York (1958), 1-17.
77. "Orange County History," Orange County Historical Association, Middletown, New York (1964), 1-19.
78. "Putnam County Report," Special Project New York University Statistical Department, New York, New York (1965), 27-40.
79. "Westchester," The County Executive's Office of Westchester, White Plains, New York (1968), 8-16.

PUBLICATIONS: Crash Programitis, American Vocational Journal,
November, 1969

Survey of Job Training, Norwalk School System,
The Center for Field Research and School
Services, New York University Press, August,
1969

Special Needs Study for Westchester County,
Two-Year Study Grant from the State Education
Department, 1968

COMMUNITY
ACTIVITIES:

District Commissioner, Boy Scouts
President, Bedford Lions Club (1968-69)
St. Patrick's Board of Education
Trustee, Bedford Memorial Assn.
Board, Northern Westchester Mental Health
Assn.
Past President, Katonah PTA
Board, Taconic Girl Scouts

RESIDENCE:

Lincoln Avenue
Bedford, New York
10506