R E P O R T R E S U M E S

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MACOMB OCCUPATIONAL EDUCATION SURVEY, A CITIZENS REPORT, 1966--A BLUEPRINT FOR OCCUPATIONAL EDUCATION IN MACOMB COUNTY, MICHIGAN.

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DESCRIPTORS- *JUNIOR COLLEGES, VOCATIONAL EDUCATION, *OCCUPATIONAL SURVEYS, COMMUNITY SURVEYS, SCHOOL COMMUNITY RELATIONSHIP, PROGRAM COORDINATION, MANPOWER DEVELOPMENT, AREA VOCATIONAL SCHOOLS, EMPLOYMENT TRENDS, PROGRAM EVALUATION, PROGRAM IMPROVEMENT, MACOMB COUNTY, MICHIGAN,

THE MACOMB ASSOCIATION OF SCHOOL ADMINISTRATORS SPONSORED A COUNTY SURVEY BY EDUCATORS AND LAY CITIZENS TO DETERMINE THE CURRENT STATUS AND THE FUTURE NEED FOR OCCUPATIONAL EDUCATION. DATA WERE COLLECTED ON SUCH VARIABLES AS POPULATION TRENDS, CURRENT AND PROJECTED MANPOWER NEEDS, VOCATIONAL EDUCATION PROGRAMS, OCCUPATIONAL PLANS OF HIGH SCHOOL STUDENTS, AND TRAINING NEEDS FOR ENTRY JOBS. THE STUDY COMMITTEE CONCLUDED THAT THE COMMUNITY JUNIOR COLLEGE IS "SOCIETY'S ANSWER TO THE NEED FOR EXPANDED EDUCATIONAL OPPORTUNITY," AND MADE 30 DETAILED RECOMMENDATIONS INCLUDING--(1) UPGRADING AND EXPANSION OF OCCUPATIONAL EDUCATION IN PRESENTLY EXISTING INSTITUTIONS, (2) REGULAR FOLLOWUP STUDIES BY ALL EDUCATIONAL UNITS, (3) CONTINUING STUDY OF HIGH SCHOOL STUDENTS TO DETERMINE POST-HIGH SCHOOL EDUCATIONAL NEEDS, (4) CONTINUING STUDY OF EMPLOYMENT TRENDS, (5) HIGH SCHOOL-COMMUNITY COLLEGE ARTICULATION, (6) ESTABLISHMENT OF AREA OCCUPATIONAL EDUCATION CENTERS, (7) CONCENTRATION OF POST-HIGH SCHOOL VOCATIONAL EDUCATION IN THE COMMUNITY COLLEGE, (8) COORDINATION WITH OTHER COMMUNITY COLLEGES IN THE DETROIT AREA TO AVOID UNNECESSARY DUPLICATION, AND (9) INVOLVEMENT OF EMPLOYERS AND WORKERS IN EVALUATION OF VOCATIONAL EDUCATION PROGRAMS. (WO)

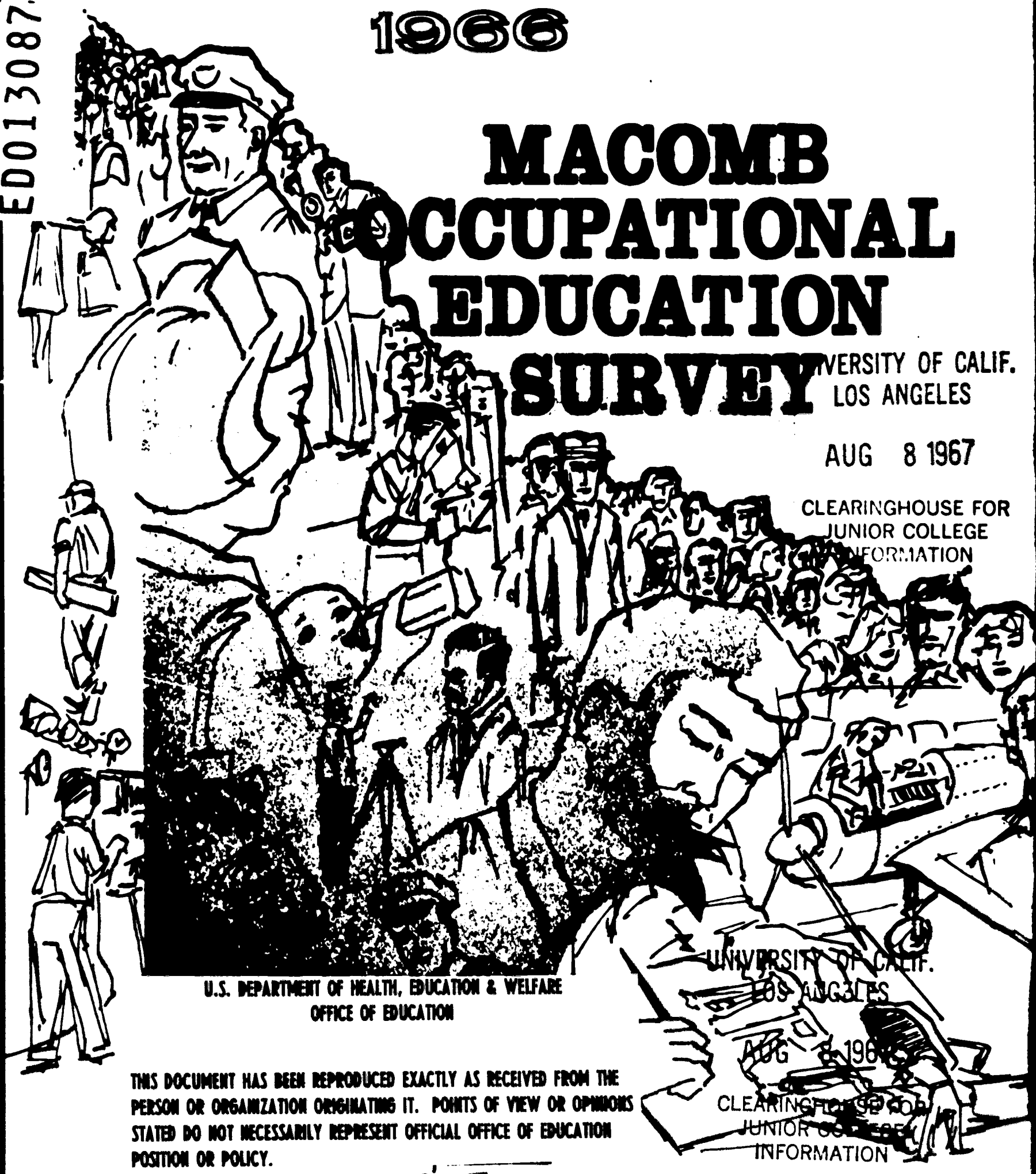
MACOMB COUNTY COMMUNITY COLLEGE

A BLUEPRINT FOR OCCUPATIONAL EDUCATION IN MACOMB COUNTY, MICHIGAN

ERIC

A CITIZENS REPORT

1966



MACOMB OCCUPATIONAL EDUCATION SURVEY

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

SPONSORED BY:

MACOMB ASSOCIATION OF SCHOOL ADMINISTRATORS

MICHIGAN DEPARTMENT OF EDUCATION
DIVISION OF VOCATIONAL EDUCATION

CALENDAR FOR THE IMPLEMENTATION OF THE SURVEY RECOMMENDATIONS

YEAR	ACTIVITY
1965	Investigate the status and needs for occupational education opportunities in Macomb County. Recommend ways to coordinate, upgrade, expand articulate occupational education efforts.
1966	Enter interim agreements for sharing high school vocational programs on an area basis. Develop pre-technical programs for Community College-bound students. Secure approval for a suitable means to finance and administer the Area Occupational Education Centers from: Local School Boards State Department of Education The State Legislature Macomb County citizens Institute county-wide follow-up study of high school graduates and drop-outs as basis of program evaluation and upgrading. Coordinate adult vocational education offerings of the school districts and the Community College.
1967	Implement the Area Occupational Education Centers. Engage chief administrator and staff nucleus Lease existing buildings for operation Enter construction contracts for new sites Commence limited operation in existing schools and leased buildings.
1968	Expanded operation of programs in three Area Occupational Education Centers. Assess the implementation of the 1965 Survey and program a study of the 1970-1980 needs in occupational education programs.
1969	Program, and if necessary, commence construction of fourth and fifth Area Centers.

IF YOU ARE ...

- A PARENT
- AN EMPLOYER
- INTERESTED IN YOUTH
- CONCERNED WITH PUBLIC EDUCATION
- INTERESTED IN YOUR COMMUNITY

---- you will want to read this report on the need for occupational preparation of youth and young adults in Macomb County.

CITIZENS ADVISORY COMMITTEE

"The society which scorns excellence in plumbing because plumbing is a humble activity and tolerates shoddiness in philosophy because it is an exalted activity will have neither good plumbing nor good philosophy. Neither its pipes nor its theories will hold water."

John W. Gardner
Secretary of Health,
Education
and Welfare

MACOMB OCCUPATIONAL EDUCATION SURVEY

A Cooperative Project By Macomb County Citizens and Educational Institutions

January 20, 1966

School Board Members, Educators, and other
Concerned Citizens of Macomb County:

This report of the findings, conclusions, and recommendations of the Citizens Committee concerning occupational education needs in Macomb County deserves your thoughtful consideration.

Executive Committee
Macomb Occupational Education Survey

William L. Berkhof, Chairman
Urey B. Arnold
T. C. Filppula
Max Thompson
Robert S. Tower

MACOMB OCCUPATIONAL EDUCATION SURVEY

to determine the needs for occupational education opportunities in Macomb County, Michigan

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THE CITIZENS COMMITTEE REPORT

R E C O M M E N D A T I O N S

1. It is recommended that greatly increased efforts be made to upgrade the quality and expand the types of occupational education opportunities offered by Macomb County secondary schools and Macomb County Community College.

2. It is recommended that the necessity of self-fulfilling work as essential to a satisfying life experience be stressed throughout all school grades. Schools should actively cooperate with the child in identifying his own career goals and students should be encouraged, as a part of their regular school experience, to "try on" occupational roles.

3. It is recommended that the exploratory function of the junior high grades be re-identified, broadened, and emphasized. Industrial arts, homemaking, music, art, and other programs which provide opportunities for vocational and career exploration, should be widely available, imaginatively developed, and creatively taught. Opportunity should be provided for the child to discover his own interests and aptitudes through school experiences.

4. It is recommended that intensive study of the most appropriate means of providing opportunities to develop occupational and social proficiency should be a continuing responsibility of all public education authorities in Macomb County.

5. It is recommended that every student should have the benefit of interest and aptitude testing and the interpretation of the results of such tests prior to the selection of his high school program. Every student should be fully informed of the nature and purposes of the high school programs which are available to him.

6. It is recommended that efforts be made to identify each potential early school-leaver and to provide testing, remedial, and counseling services which will improve the potential school-leaver's chances for retention and success in a school program appropriate to his abilities and interests.

7. It is recommended that the senior high schools, the Community College, and the Intermediate District cooperatively institute and conduct systematic follow-up studies of early school-leavers and graduates, preferably the first and fifth year following high school graduation. The primary purpose of these follow-up studies shall be the gathering of data, evaluations, and recommendations for the improvement of education programs in the County schools.

8. It is recommended that a continuing study of high school students should be conducted to determine the quantitative and selective demand for post-high school education and the students' perceptions and recommendations for improving the quality and nature of high school experiences.

9. It is recommended that the continuing study of employment needs in the Detroit Metropolitan Area be jointly undertaken by all public agencies responsible for providing occupational education in the County. Macomb County Community College, having the capacity and resources for such research, should provide the necessary leadership.

10. It is recommended that occupational programs should be flexible and broad enough to develop competence in a broad area of skills.

11. It is recommended that occupational programs be provided for the retarded, the slow-learner, and the handicapped, so that realizable, self-satisfying goals can be determined and achieved by these persons.

12. It is recommended that special tuition-free occupational programs be developed and conducted for the out-of-school unemployed, both adolescents and adults. Such programs should be offered on local resources if state or federal programs do not meet these needs.

13. It is recommended that every high school student should be informed annually of the programs which are available to him in the Macomb County Community College, the requirements for success in these programs, and the high school program which will fit him best for entry to the Community College program of his choice.

14. It is recommended that secondary and community college occupational educators jointly develop pre-technical high school programs which will provide entry into community college occupational programs at all levels and in as many curriculum areas as can be suitably developed for employment opportunities in the local economy.

15. It is recommended that a system of Area Occupational Education Centers be established to provide adequate occupational education opportunities for public and parochial high school students in all districts of Macomb County.

16. It is recommended that the Area Occupational Education Centers should be made available for Community College programs to the extent that these can be utilized after high school students' occupational education needs have been met.

17. It is recommended that each school district make the maximum possible effort to expand and upgrade its vocational offerings for the pressing needs of their students for the period during which the Area Centers are being implemented. Informal inter-district programs should be implemented where these can be utilized advantageously.

18. It is recommended that public schools make every effort to meet the occupational education needs of students enrolled in private high schools in Macomb County.

19. It is recommended that adult vocational or continuing vocational education in Macomb County be coordinated to offer more meaningful opportunities and to eliminate destructive competition.

20. It is recommended that every high school vocational student and every community college terminal occupational program student should have a supervised work study experience as an integral part of his occupational preparation.

21. It is recommended that formal job placement services be available, preferably in his own school, to every senior high and Community College student in Macomb County. The Michigan Employment Security Commission should be solicited in advising of job opportunities. Job placement should be related to the students training and the student referred should have reasonable expectation of success in the job situation.

22. It is recommended that, excepting for adult education programs offered by the K-12 school districts, all public vocational-technical education of a post-high school level in Macomb County be provided by Macomb County Community College.

23. It is recommended that the number of occupational programs under development in Macomb County Community College should not exceed the College's capacity to do so in an orderly manner and to insure the quality of each.

24. It is recommended that the College should study the advisibility of maintaining and expanding arrangements for the use of secondary vocational-technical laboratories both in the existing high schools and in the proposed Area Occupational Education Centers for those portions of the Community College programs for which secondary facilities are adequate and available.

25. It is recommended that Macomb County Community College should undertake cooperative study and planning with other Community Colleges in the Detroit metropolitan area to coordinate calendars and schedules and to avoid duplication of technical programs wherein high instructional costs and low potential enrollments would make such duplication unwise.

26. It is recommended that an annual inventory of vocational programs, faculty, facilities, and equipment should be compiled and disseminated for all vocational education agencies in the County in order to make the maximum utilization of these. The Vocational Consultant, Intermediate District should be responsible for the preparation and administration of instruments to gather this information.

27. It is recommended that all vocational educators in Macomb County high schools and the Community College organize associations along curriculum area lines for the coordination and upgrading of occupational programs and services. Because a major responsibility of the high school should be to identify and prepare high school students for success in the Community College occupational programs, leadership in the development of these organizations should be provided by the Community College.

28. It is recommended that all occupational educators should meet at least twice annually for the purpose of promoting the educational efficiency of their efforts. For this reason, an agenda should be prepared in advance and recognized educational, industrial, or business authorities should be engaged as resource persons when appropriate for such conferences.

29. It is recommended that the Macomb County Community College offer teacher-training experiences to assist in developing and upgrading the proficiency of the County teachers in occupational instruction. The more advanced laboratories of the College should be utilized for work-shops in the emerging practices and equipment used in commerce and government. The participation and sponsorship of a state university should be secured in order that teachers may elect to participate in such upgrading for academic credit.

30. It is recommended that the commitment and involvement of employers and skilled persons be secured for the development and evaluation of occupational programs. It is advisable that a single advisory committee be formed to serve the needs in each occupational specialty for all the schools in the County.

F O R E W O R D

The accompanying report of the Macomb Occupational Education Survey attempts to determine the present status and the future need for occupational education opportunities for the citizens of Macomb County within the public high schools and the Community College. The report presents a number of recommendations, the adoption of which would, in the opinion of the Citizens Committee, narrow the gap which now exists between the occupational skills needs of our population and economy and the capacity of public education to provide training in occupational skills.

The recommendations of this report do not make reference to the traditional compartmentalized programs of vocational education which have been employed since the 1917 passage of Smith-Hughes. It is the conviction of the study staff that new and fresh approaches to occupational training are needed if educational practice is to be brought into balance with technological changes. Such new approaches clearly are intended by the terms of the Vocational Education Act of 1963, which is expected to provide significant portions of the financial support required to upgrade public school efforts in occupational education.

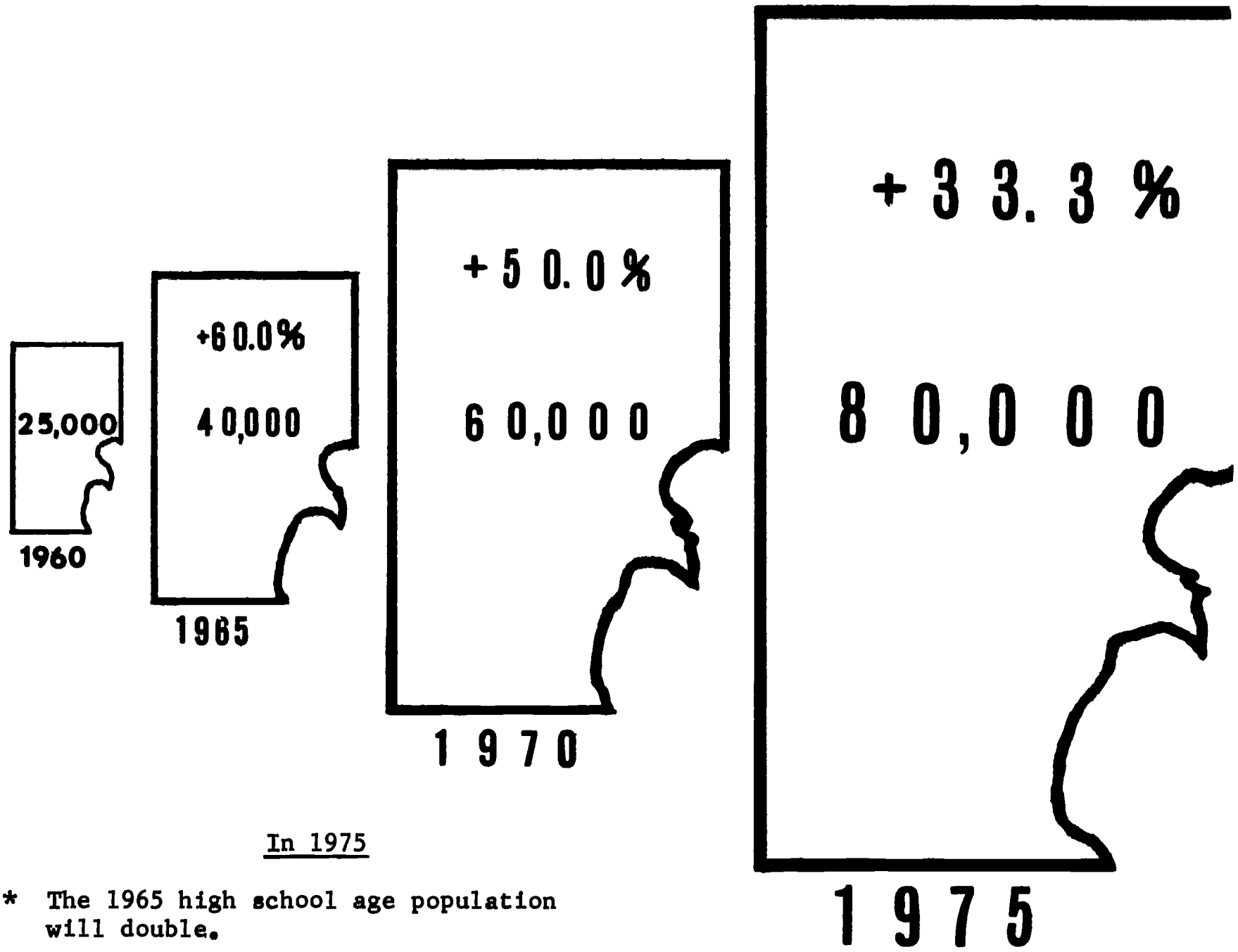
The report presents the survey's findings concerning occupational opportunities which are likely to exist during the coming decade, and the solicited opinions of concerned groups (students, parents, employers, counselors, administrators), as to the practicality or desirability of providing public training for particular occupations or groups of occupations. The report, however, purposely confines itself to suggestions concerning specific curriculum content and instructional methods. These matters are the heart of the required new approaches and must be determined by vocational and technical educators and persons expert and active in the occupational skills for which educational programs are being considered. Curriculum and method cannot be permitted to again atrophy as they have in the past, but must be fluid, experimental, and exploratory. It is for this reason that recommendations in these areas are generalized rather than specified. To secure this needed flexibility and responsiveness to technological changes in industry, commerce, and government which create demands for new occupational skills, a number of recommendations are offered which are designed to promote the continuation of occupational research, establish close articulation between high schools and the Community College, and coordinate program planning among all educational agencies in the County.

The Citizens Committee recommends a County-wide approach to meet the serious and rapidly growing need for expansion of occupational education opportunities in the County. The Committee examined the available statutory means for implementing area vocational-technical programs. In the opinion of the Committee, each of these available means has serious practical limitations. Consequently, the Committee has recommended a plan of organization and control not presently specified in State statutes. This will require either the approval of the Attorney General as to its legality, or more probably, action by the State Legislature to empower the Intermediate School District to delegate the control over the financing and operation of the proposed Area Occupational Education Centers to a special board

of control, and to authorize the encumbrance of a long-term millage issue for construction of area centers. Precedent for this latter course is found in the present statutes covering the financing of Michigan's community colleges.

At first inspection, the division of Macomb County's public educational effort among 21 local districts makes a coordination of effort seem unlikely. However, Macomb County educators have a long-standing record of cooperating to accomplish tasks which overmatch the resources of the individual districts. Joint study and planning, and where feasible, joint action have been undertaken to meet just such problems as we are now facing in vocational education.

POPULATION—AGES 15-19
MACOMB COUNTY, MICHIGAN



In 1975

* The 1965 high school age population will double.

* Twice as many high school classrooms will be needed.

* The need for employment skills will require new types of schools and the upgrading of existing schools.

* There will be a need for Community College facilities to serve more than 20,000 persons.

This Survey has attempted to determine the future Macomb County population in the high school and community college age group, and the geographic distribution of this population.

Data measuring the County population, its age-group composition, its rate of growth and geographic distribution, have been assembled. These data and their projections provide a basis for judgments concerning the extent of future need for occupational education programs in Macomb County, and in a generalized manner, the quantitative need for additional occupational education facilities and the most practical location for these.

A Committee for Population and Enrollments was formed from the Citizens' Advisory Committee. The Committee prepared a report which has provided guidance for the other studies undertaken in connection with this Survey. The Committee drew upon four main sources for the material of its report:

1. Macomb County Populations, 1960-1980, a study prepared by the Macomb County Planning Commission in 1961;

2. the Annual Expanded School Census, a joint activity of the local school districts and the Intermediate School District of Macomb;

3. the annual membership reports prepared by the local school districts; and

4. a questionnaire, prepared by the Committee, which requested each district superintendent's projection of the local district enrollments, by grade, for the 1965-1970 period. The questionnaire also measured the distribution of high school students by curriculum, and the superintendents' judgments concerning the desirability of separate vocational education facilities at the high school level in Macomb County.

The Report on Population and Enrollments has been distributed to the local school districts for their guidance. The accompanying information summarizes the Committee report and presents some additional information in support of the Committee's findings, and extends some of the pertinent data to 1975 and 1980. In addition to the previously identified resources, the United Community Services study, The Future Population of the Detroit Metropolitan Area 1965-1980, has provided age-group projections used in the study.

Significant Characteristics of the County Population.

Table P-1 compares certain features of Macomb County's population with the population characteristics of the larger communities of which Macomb County is a part. The data, extracted from the U. S. Census of Population for 1960, indicate that Macomb County is younger, more fertile, wealthier, more industrialized and urbanized than the larger parent communities. Youth, family size, and fertility ratio indicate that Macomb's population will continue to grow at higher than national rates. The relationship which exists within the Detroit area between the educational attainment of the adult population and family income differs significantly from the relationship which prevails state-wide and nationally.

Table P-1

CHARACTERISTICS OF POPULATION FOR SELECTED COMMUNITIES, 1960

	Macomb	DSMSA	Michigan	United States
Median age	24.8	29.4	28.3	29.5
Population per household	3.78	3.44	3.42	3.3
Fertility ratio	656	519	534	
Percent under age 5	15.9	12.4	12.4	11.3
Percent of persons 25 and older completed high school	41.8	40.9	40.9	41.1
Median school years completed, persons 25 years and older	11.0	10.8	10.8	10.6
Percent urban population	87.4	94.7	73.4	69.9
Median Family Income	$7,091	$6,825	$6,256	$5,660

Table P-2, which was prepared by the Macomb County Planning Commission, details the 1965 Macomb County population in the pre-school, school age, and adult groups for the cities, villages, and townships of Macomb County. The 0-4 age group contains 13% of the total population, 33% are in the 5-19 ages, and 54% are 20 or older. The 5-19 age group increased as a proportion of the total population from 28.8% in 1960 to 33% in 1965. Three of every four Macomb County residents live in a city, slightly fewer than a fourth of the total population resides in the townships, and the villages house fewer than one of every fifty County residents. Table P-2 indicates the accelerating building boom in Macomb County. The 1965 dwellings exceed the 1964 total by 8,254; an increase of 6.2%, compared to a 1964 increase of 4.2% over the 1963 total.

Table P-2

MACOMB COUNTY POPULATION & DWELLINGS MAY 31, 1965

	MUNICIPAL UNIT	NUMBER OF DWELLINGS				POPULATION											
		Occupied By Child. & Adults	Occupied By Adults Only	Unoccupied Exterior Complete	Total Number of Dwellings	Pre-School Age 0-4			School Age 5-19			Adults 20 or Over			Total Population of Unit of Government		
						M	F	Total	M	F	Total	M	F	Total	M	F	Total
CITIES	Center Line	1,705	1,169	22	2,896	523	524	1,047	1,647	1,684	3,331	2,946	3,121	6,067	5,116	5,329	10,445
	East Detroit	8,022	4,659	112	12,793	2,306	2,223	4,529	8,274	7,652	15,926	13,380	14,324	27,704	23,960	24,199	48,159
	Fraser	1,699	750	170	2,619	778	751	1,529	1,734	1,674	3,408	2,430	2,474	4,904	4,942	4,899	9,841
	Memphis*	100	81	14	195	40	43	83	112	99	211	169	182	351	321	324	645
	Mt. Clemens	2,869	2,307	36	5,212	981	951	1,932	2,939	2,804	5,743	4,828	5,455	10,283	8,748	9,210	17,958
	New Baltimore*	399	350	113	862	160	155	315	445	422	867	729	775	1,504	1,334	1,352	2,686
	Roseville	8,948	4,875	169	13,992	3,724	3,574	7,298	10,190	9,522	19,712	13,584	14,043	27,627	27,498	27,139	54,637
	St. Clair Shores	14,711	7,835	238	22,784	5,047	4,855	9,902	15,159	14,599	29,758	22,965	24,271	47,236	43,171	43,725	86,896
	Utica	395	417	10	822	115	115	230	372	348	720	771	895	1,666	1,258	1,358	2,616
	Warren	27,434	14,447	438	42,319	12,128	11,494	23,622	24,305	22,874	47,179	40,683	41,399	82,082	77,116	75,767	152,883
	Sub-Total	66,282	36,890	1,322	104,494	25,802	24,685	50,487	65,177	61,678	126,855	102,485	106,939	209,424	193,464	193,302	386,766
VILLAGES	Armada	191	154	29	374	53	47	100	208	206	414	323	349	672	584	602	1,186
	New Haven	270	167	49	486	100	118	218	294	284	578	450	430	880	844	832	1,676
	Richmond	470	405	9	884	170	154	324	515	456	971	772	867	1,639	1,457	1,477	2,934
	Romeo	556	474	38	1,068	189	198	387	568	592	1,160	1,004	1,129	2,133	1,761	1,919	3,680
	Grosse Pte. Shs.* (Lake Twp.)	16	20	0	36	1	3	4	10	18	28	40	36	76	51	57	108
	Sub-Total	1,503	1,220	125	2,848	513	520	1,033	1,595	1,556	3,151	2,589	2,811	5,400	4,697	4,887	9,584
TOWNSHIPS	Armada	420	297	56	773	78	74	152	272	265	537	451	387	838	801	726	1,527
	Bruce	259	180	34	473	82	85	167	313	273	586	445	484	929	840	842	1,682
	Chesterfield	1,198	1,047	272	2,517	501	462	963	1,222	1,168	2,390	2,156	2,178	4,334	3,879	3,808	7,687
	Clinton	5,534	2,578	539	8,651	2,259	2,154	4,413	5,659	5,219	10,878	8,048	8,294	16,342	15,966	15,667	31,633
	Harrison**	2,391	2,081	146	4,618	934	894	1,828	2,236	2,117	4,353	5,640	4,236	9,876	8,810	7,247	16,057
	Lenox	387	293	50	730	165	148	313	468	432	900	706	656	1,362	1,339	1,236	2,575
	Macomb	946	559	77	1,582	341	323	664	1,038	965	2,003	1,551	1,490	3,041	2,930	2,778	5,708
	Ray	350	259	39	648	104	137	241	405	396	801	659	641	1,300	1,168	1,174	2,342
	Richmond	206	163	20	389	67	67	134	289	249	538	417	363	780	773	679	1,452
	Shelby	3,513	2,004	28	5,545	1,540	1,442	2,982	3,997	3,642	7,639	5,568	5,638	11,206	11,105	10,722	21,827
	Sterling	4,814	1,969	18	6,801	2,289	2,110	4,399	4,573	4,324	8,897	6,710	6,753	13,463	13,572	13,187	26,759
	Washington	651	367	59	1,077	240	207	447	743	606	1,349	1,028	1,045	2,073	2,011	1,858	3,869
	Sub-Total	20,669	11,797	1,338	33,804	8,600	8,103	16,703	21,215	19,656	40,871	33,379	32,165	65,544	63,194	59,924	123,118
	TOTAL	88,454	49,907	2,785	141,146	34,915	33,308	68,223	87,987	82,890	170,877	138,453	141,915	280,368	261,355	258,113	519,468

** Selfridge Air Force Base included in Harrison Township totals. * Portions outside of Macomb County are not included in the tabulations.

The rate of increase for Macomb County is expected to continue to exceed the growth rate of the larger parent communities as illustrated in Table P-3.

Table P-3

POPULATION PROJECTIONS FOR SELECTED COMMUNITIES

Area	1960 Population	1970 Projection	Percent Increase 1960-70	1980 Projection	Percent Increase 1970-80
United States	179,323,175	203,800,000	13.6	232,000,000	13.8
Michigan	7,823,194	9,150,000	16.9	10,800,000	18.0
Detroit Area*	3,762,360	4,414,500	17.3	5,355,000	21.3
Macomb County	405,804	614,500	51.4	855,000	39.1

A comparison of available projections of Macomb County's population is presented in Table P-4. The high projection (Column 1), was prepared by David Goldberg for Michigan in the 1970's, An Economic Forecast, by William Haber, et al.[1] The low projection, (Column 2), is derived from the United Community Services study. Column 3 indicates the projections prepared by the Macomb County Planning Commission. The MCPC projection anticipates a County-wide population growth of 65% from 1965 to 1980.

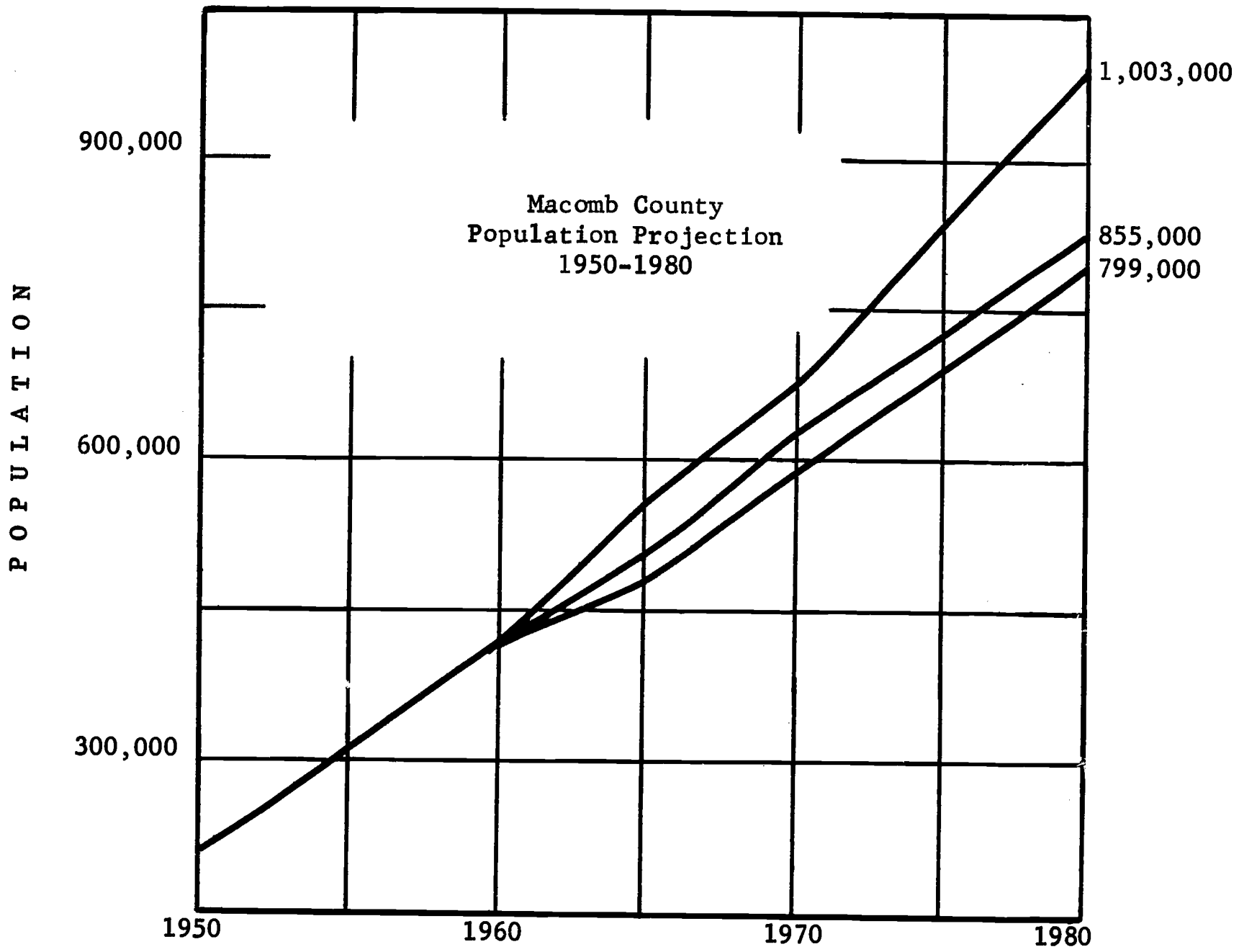
Table P-4

A COMPARISON OF POPULATION PROJECTIONS FOR MACOMB COUNTY FROM 1965 to 1980

Year	(1) High	(2) Low	(3) MCPC	Actual
1965	532,100	491,613	509,000	519,468
1970	669,300	590,000	614,500	
1975	829,800	693,148	732,500	
1980	1,003,900	799,205	855,000	

[1]Bureau of Business Research, Graduate School of Business Administration, The University of Michigan, Ann Arbor, Michigan, 1965.

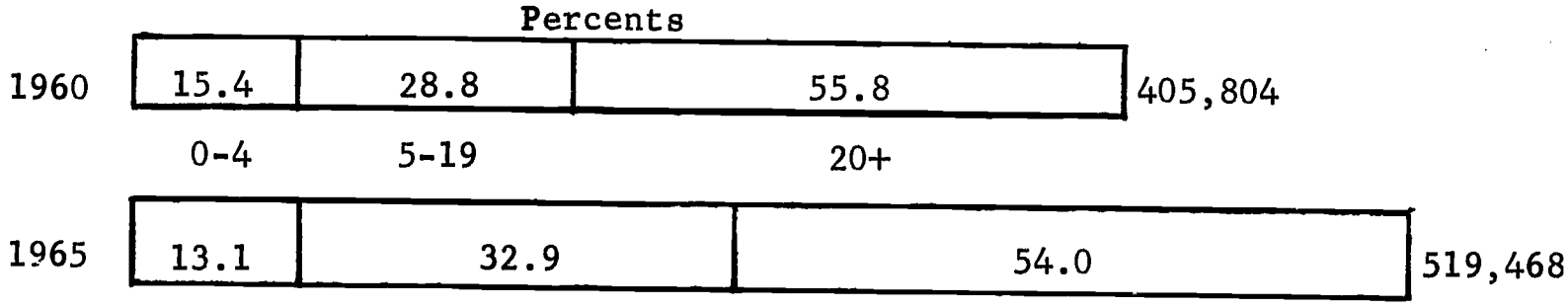
Table P-4 indicates that the actual 1960-65 increase has exceeded both the low and the middle projections, but is 12,632 less than the high projection for 1965. The projection prepared by the Planning Commission in 1961 is 10,468 short of the actual 1965 population. The Planning Commission projection appears to be the most realistic of those examined by this study, and is the only source of population projections for the political subdivisions of the County. The accompanying graph illustrates the comparative effect of each of the three population projections studied.



High projection: Michigan in the 1970's
Middle projection: Macomb County Population Projections 1960-1980
Low projection: The Future Population of the Detroit Metropolitan Area 1965-1980

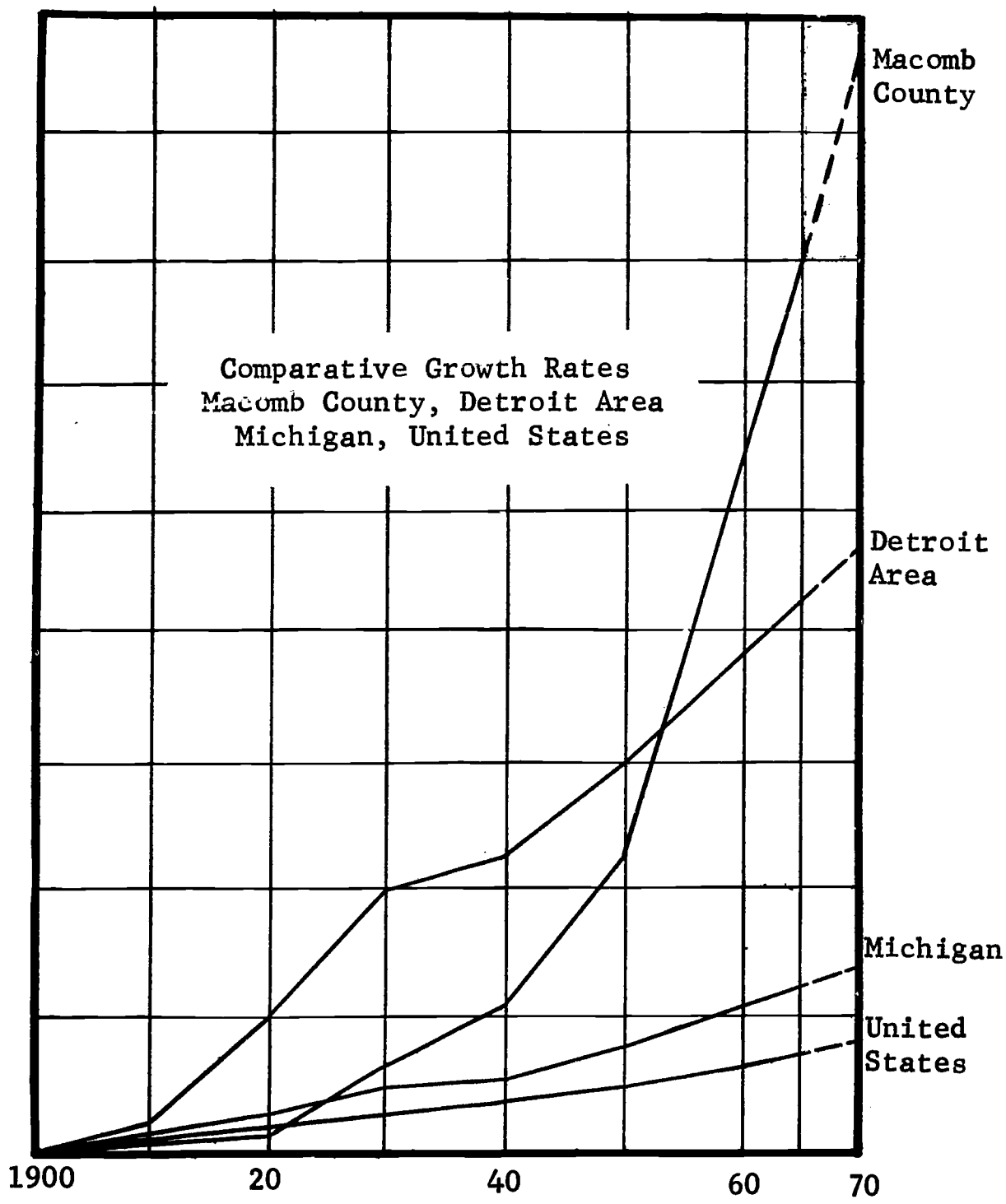
The school age population (5-19) will continue to increase as a percent of the total county population, at least until 1975.

Macomb County Population by Age Groups
Percents



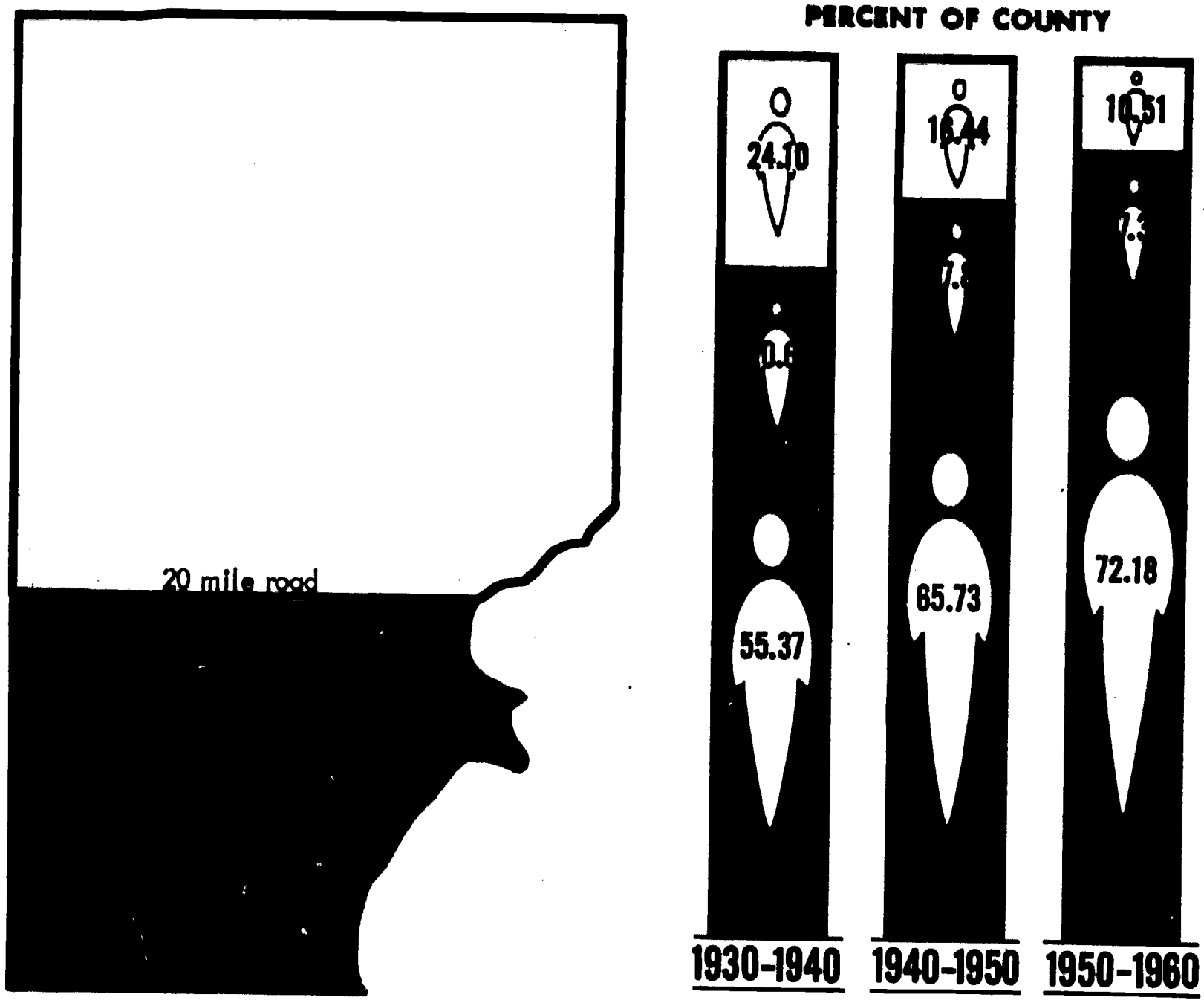
Population Growth.

The rate of population increase in Macomb County has been much greater than that of the larger communities of which the County is a part. The comparative rates of growth are indicated on the following graph. The acceleration of Macomb's population began during the 1920's; since the 1930's Macomb has been the fastest-growing county in the state.



Population Distribution.

A major activity of the Survey has been the determination of the effect of anticipated population growth upon the future need for vocational technical education facilities in Macomb County. An examination of the distribution of population by areas of the County provides an indication of the quantitative need for such facilities in various localities within the County. For this purpose, the County has been divided into three regions which are characterized by significant past and anticipated future growth patterns. The accompanying graph, prepared by the Planning Commission, illustrates past County growth by regions, and indicates that 72% of the 1950-60 total growth occured between 8 Mile and 14 Mile Roads.

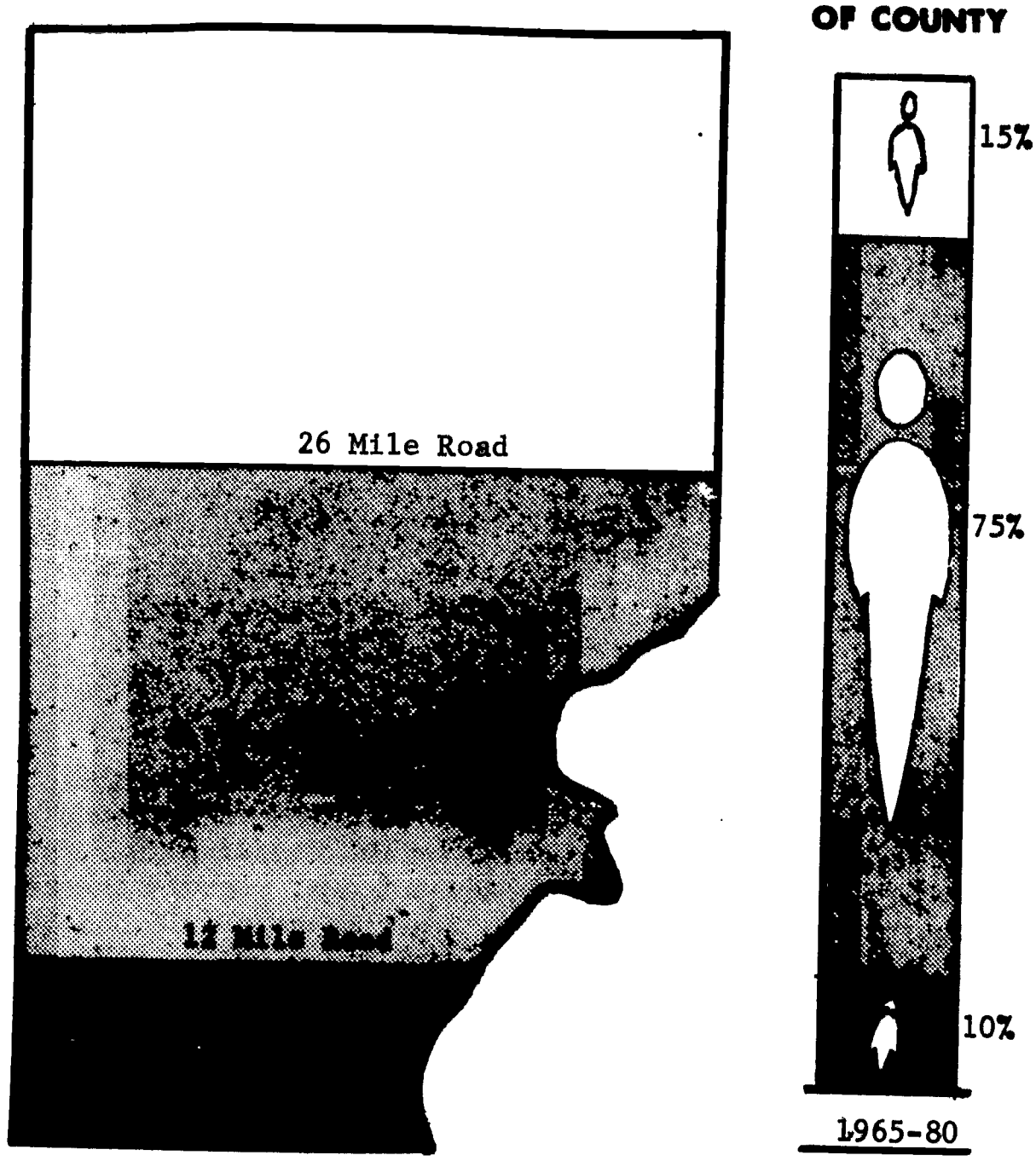


Macomb County Planning Commission

This projection of regional population growth is based upon the Macomb County Planning Commission projections to 1980 for all communities within the County, with subjective extrapolations to adjust for political boundaries which do not coincide with the 12 Mile and 26 Mile Roads.

MACOMB COUNTY GROWTH
by selected area

1965-1980



The southernmost area, extending County-wide from 8 Mile Road north to 12 Mile Road, has experienced the brunt of the post-World War II population growth. Relatively little land remains available for future residential development within this area.

The central area, extending from 12 Mile Road to 26 Mile Road, will continue to experience rapid urbanization. The major impact of the1965-1980 population growth in the County will be concentrated in this central area, which is expected to increase by about 260,000 persons. This is a gain of 135% for the fifteen year period. Population growth in the central area will account for about three-fourths of the total County increase from 1965 to 1980. The 26 Mile Road is a generalized northern limit of the area which will receive the major portion of the 1965-1980 population growth. Various expansionary factors could cause the outline of this central area to shift northward. Urbanization will not proceed evenly as a south-to-north movement, for the lack of utilities or the unsuitability for ready development of some land below the 26 Mile Road will result in relatively low growth for such areas.

Population growth in the six townships, and included cities and villages, which lie north of the 26 Mile Road is expected to account for only 15% of the County increase from 1965 to 1980. However, the rate of development of external factors could accelerate the urbanization of the north area. Some of these factors include:

the continuing economic expansion of the Detroit area

the extension of limited access highways

development of an adequate storm drainage system

extension of sewers and water lines

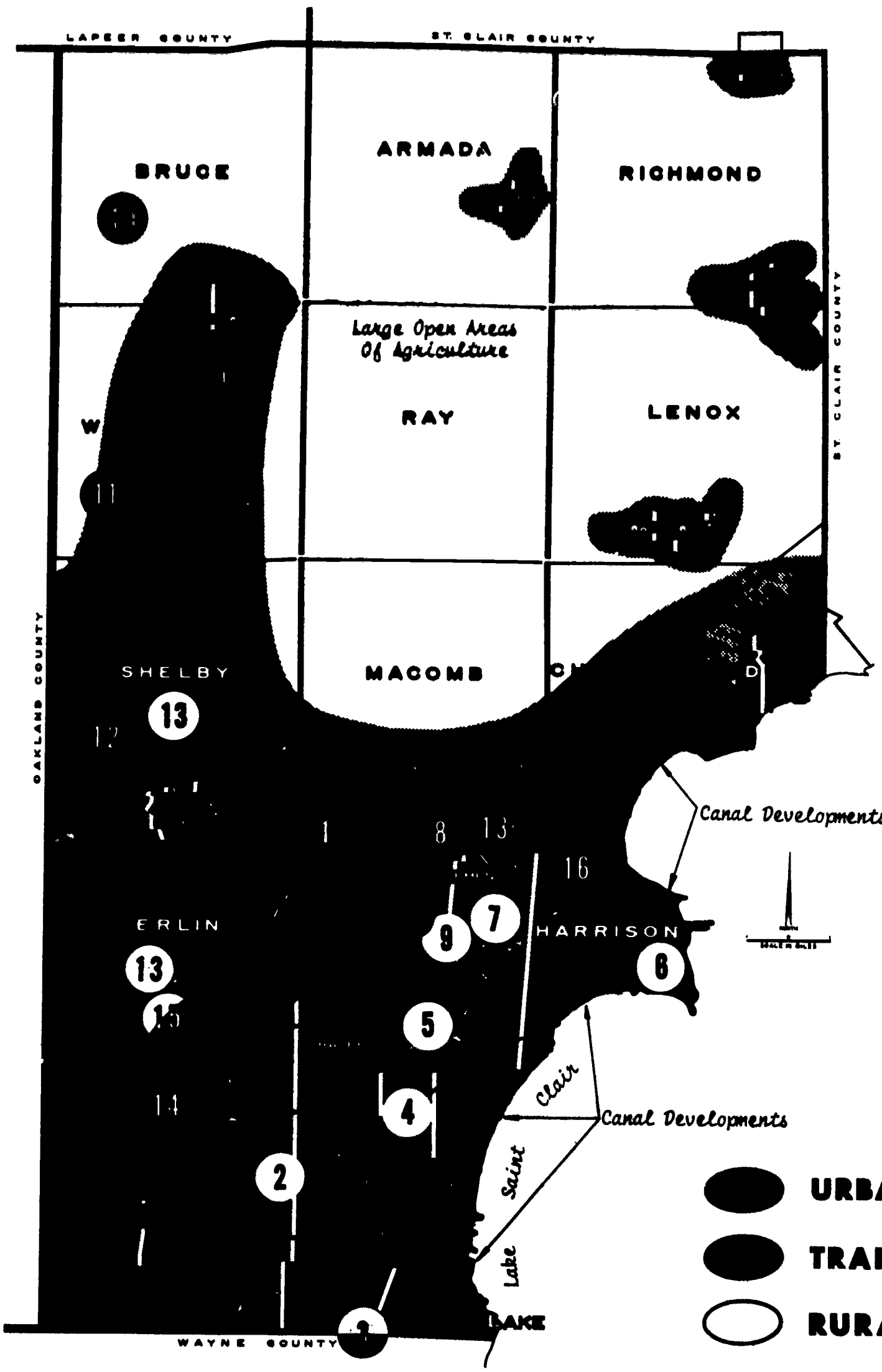
orderly land use management

cost of capital for land development and construction

property tax rates required to expand schools and other government services.

The accompanying Macomb County Profile indicates the urbanized area of the County in 1965, the rapidly urbanizing transitional area, and the rural area. This map, prepared by the Planning Commission, also identifies significant economic and cultural centers in the County. Urbanization of the central and north areas will develop most rapidly along the industrial corridors (M-53 and M-97), and major highways (US-23, M-53, M-94, M-97). Arterial road development and water line and sewer installations will cause some leap-frogging in the pattern of residential construction.

MACOMB PROFILE COUNTY



1. MACOMB COUNTY COMMUNITY COLLEGE CENTER CAMPUS
2. MACOMB COUNTY COMMUNITY COLLEGE SOUTH CAMPUS
3. EASTLAND SHOPPING CENTER
4. MACOMB MALL
5. REGIONAL SHOPPING CENTER
6. METROPOLITAN BEACH
7. COUNTY BUILDING
8. COUNTY SERVICE CENTER
9. COUNTY ENGINEERING BUILDING
10. FORD PROVING GROUNDS
11. STONY CREEK PARK
12. ROCHESTER-UTICA STATE PARK
13. FORD PLANT
14. GENERAL MOTORS TECH. CENTER
15. CHRYSLER STAMPING PLANT
16. SELFRIDGE AIR FORCE BASE

URBANIZED AREA

TRANSITIONAL AREA

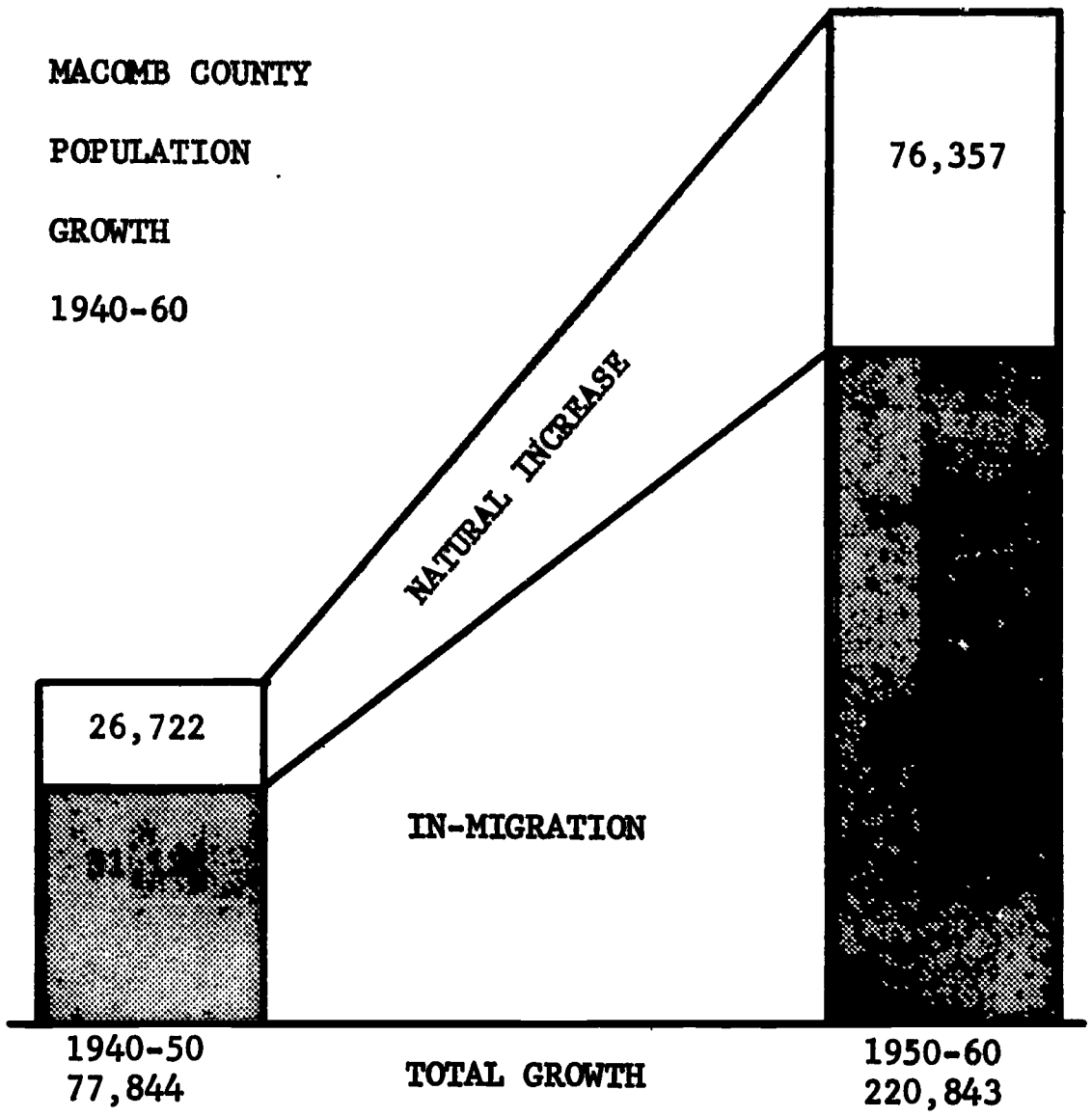
RURAL AREA

MACOMB COUNTY PLANNING COMMISSION

macomb county land use survey 1965

Natural Increase and In-migration.

The youthfulness of the County population and the large-scale increase in the number of its families indicate a continuing large number of births in the County. However, the 1964-65 decline in the birth rate nationally may be evident in the County census statistics. The 1964 population of 492,815 included 12,134 persons less than 1 year old, or 2.46% of the total population. The 1965 population of 519,468 includes 11,973 persons, or 2.30% of the total, in the under 1 year age group. Births account for slightly more than half of the net population increase of 113,664 persons from 1960 to 1965. This is in contrast to the 1940's and 1950's when in-migration brought twice the population growth which resulted from natural increase.

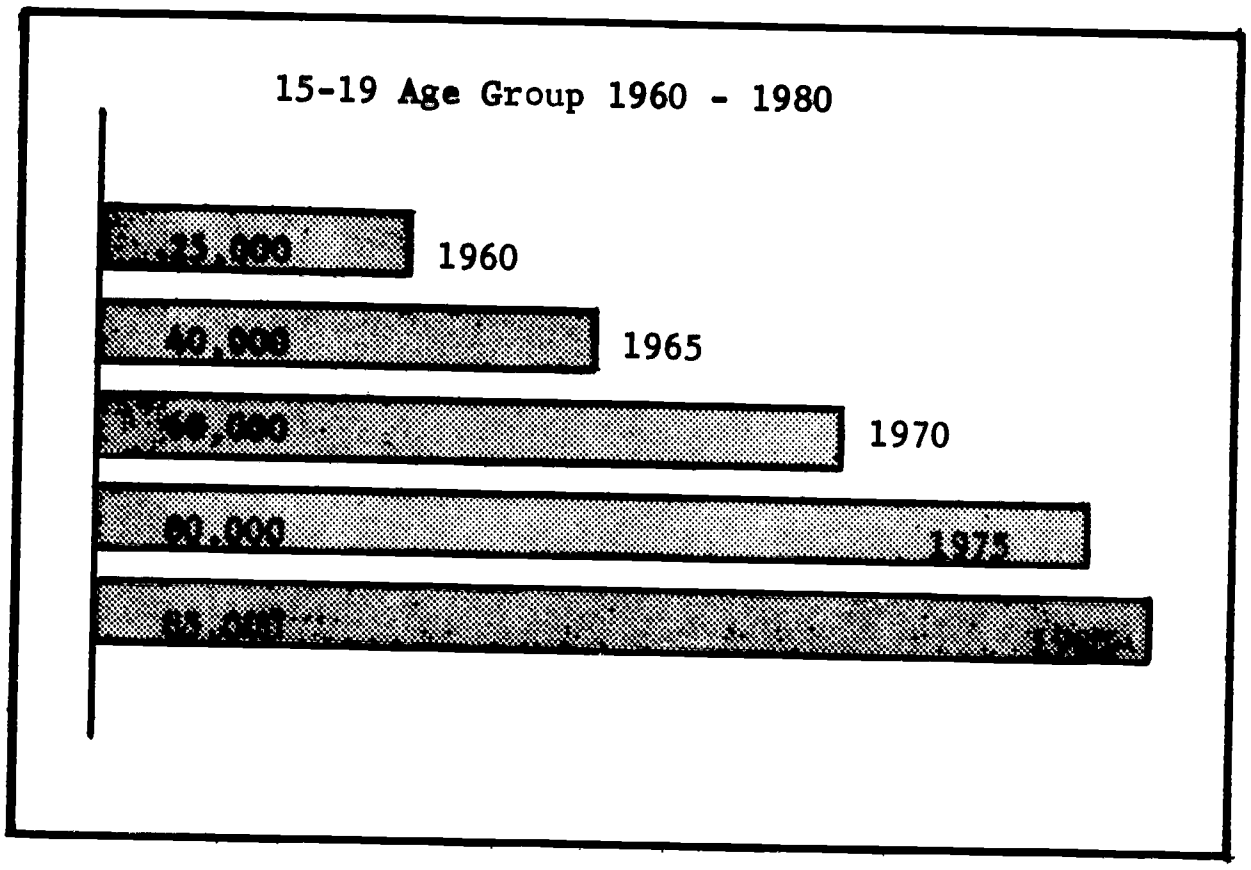


Planning Commission projections of population to 1980 assume continuing in-migration at a significant level. In-migration has added more than 10,000 persons annually to Macomb County's population for each of the past 20 years. In-migration has been high even in periods of relatively slow economic activity. The major portion of the Macomb in-migrants are received from neighboring counties.

Population in the 15 to 19 Age Group.

Identification of the age composition of the population is essential for determining the need for public services. The 15 to 19 age group, a grouping for which certain U. S. Census data is tabulated, has special significance because it contains virtually all persons enrolled in high school, the majority of all new work force entrants, new drivers of cars, and for many other such characteristics. This method of grouping has limitations; only about one fourth of all 18-19 year olds are enrolled in high school. Measurement of the age group does, however, provide the population of the largest group from which new Community College enrollments are drawn. The United Community Services study includes the projection of Macomb County populations by five-year age groups and offers a comparison for the age group projections made in this report. Further refinement of the 15-19 age group will be necessary to differentiate the high school population from the potential Community College population.

The exceptional growth of the 15-19 age group in the County population can be seen in the following graph.



Future populations in the 15-19 age group, and all similar projections in this report, have been derived by adding to each five-year age group (0-4, 5-9, 10-14), in the present resident population, the actual number of persons who migrated into the comparable age group during the 1960-65 period.

In-migration is predicted to continue numerically consistent with the 1960-65 experience for the succeeding five year periods from 1965 to 1980. Projections of migration are speculative. Fortunately, the Annual Expanded School Census identifies the 0-19 age population of the County by yearly age group and it is possible to re-assess migration projections annually.

Two sources are available for the estimation of the future size of the 15-19 age group in the County population. The United Community Services study projections are compared in Table P-5 with projections based upon the Annual Expanded School Census.

Table P-5

MACOMB COUNTY POPULATIONS IN THE 15-19 AGE GROUP, 1965-80

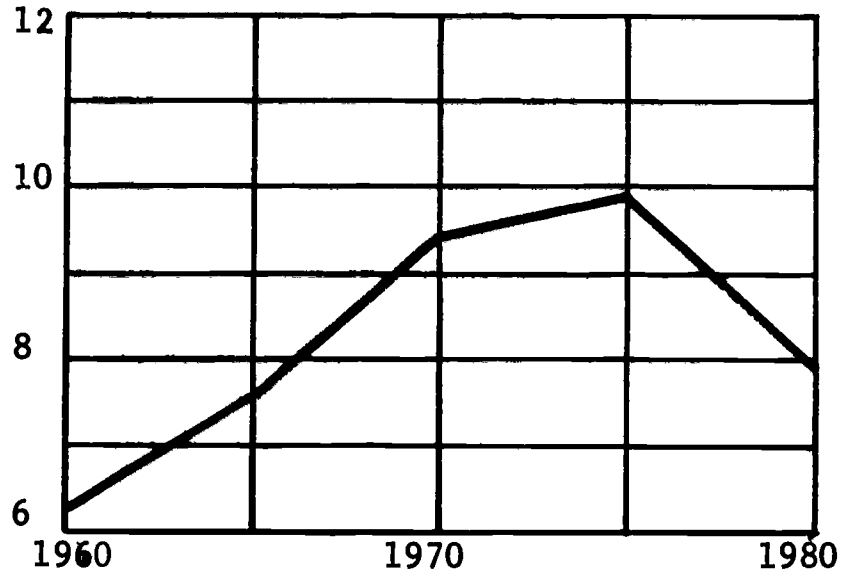
Year	UCS Projection	1965 Population	Projection based upon 1960-65 Migration
1965	44,707	39,877	------
1970	62,997	57,929 (10-14)	59,058
1975	74,838	72,771 (5-9)	78,495
1980	77,354*	68,223 (0-4)	84,298

*adjusted upward to reflect actual 1965 population in the under-5 age group.

The actual 1965 population in the 15-19 age group is 4,830 less than the UCS projection for 1965. However, the 1970 population in the age group could equal or exceed the UCS projection for that date. If in-migration continues at the 1960-65 rate for the 1965-75 and 1965-80 periods, populations in the 15-19 age group will be greater in 1975 and in 1980 than the projections of the UCS study. It seems a conservative assumption that the 15-19 age group will contain between 75,000 and 80,000 persons in 1975.

The proportion of 15-19 year olds to the total County population will increase significantly from 1965 to 1975 as indicated in this graph.

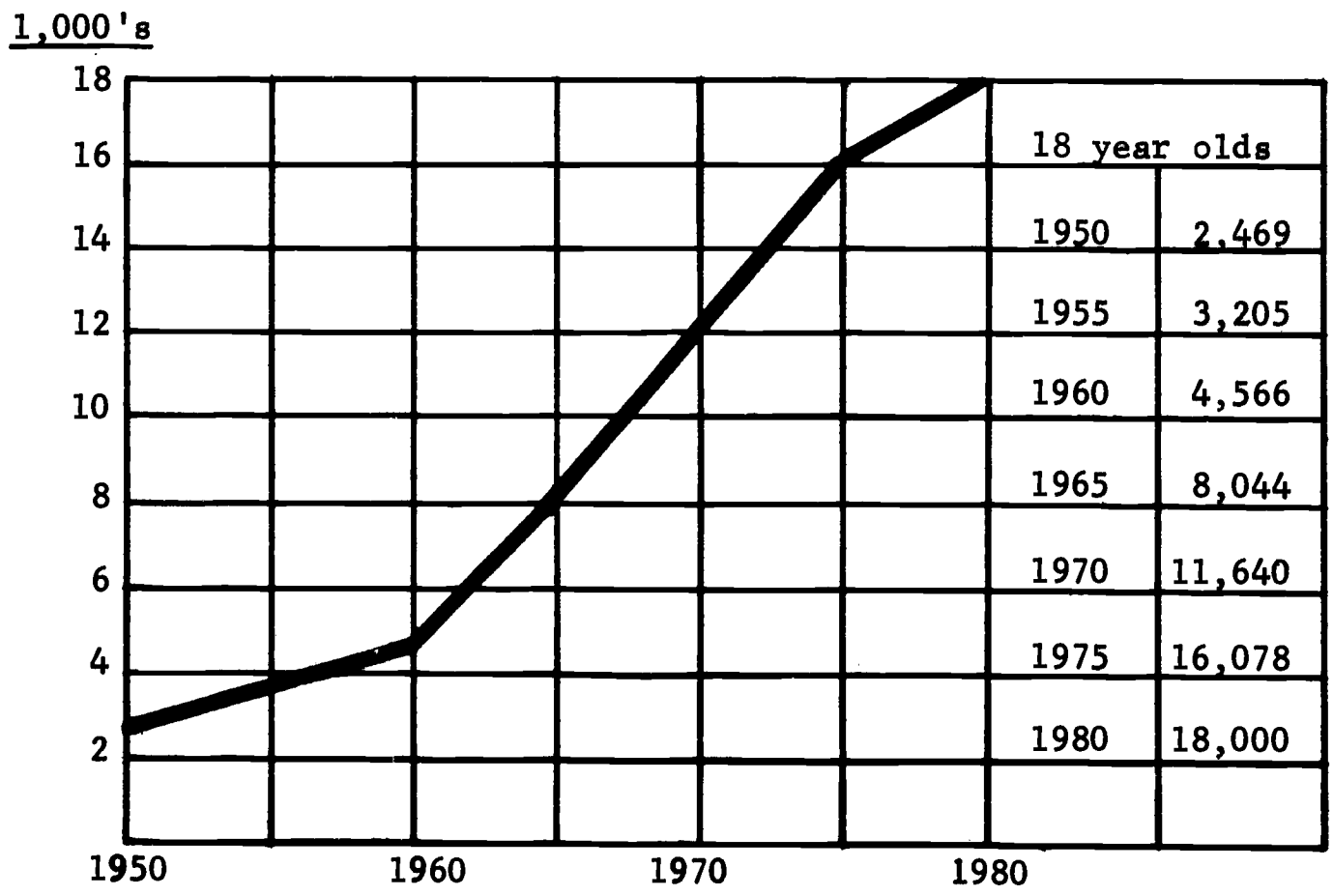
15-19 Age Group
Percent of County Population



Labor Force Entrants.

One measure of the potential increase in the labor force is determined by the number of persons reaching age 18 each year. Each year, for at least the next fifteen years, Macomb County will experience a new record in the number of persons reaching age 18. The rate of increase will be fairly regular and will average an additional 800 18 year olds annually from 1965 to 1975.

Number of 18 Year Old Persons
in Macomb County 1950 to 1980



18 year olds	
1950	2,469
1955	3,205
1960	4,566
1965	8,044
1970	11,640
1975	16,078
1980	18,000

Senior High School Enrollments, 1965-1980.

Measurement of the future senior high school enrollments cannot be made precisely. An examination of the school participation rate for age groups and judgments concerning changes in this participation rate can be coupled with present population and anticipated in-migrants to project the future enrollments in Macomb County senior high schools.

The majority of 12th grade students are 17 years old, 11th graders, 16 years old, and 10th graders, 15 years old. The greatest variation from this pattern occurs in grade 12, in which approximately one third of the 18 year olds and somewhat fewer than one fifth of the 19 year olds are enrolled. This older group is offset by a small number of persons who graduate before attaining age 17, and by a larger group of 17 year olds who are enrolled in grades lower than grade 12. Similarly, some 16 year olds have not attained grade 11. Significantly more persons require more than three years to complete grades 10-12 than complete these grades in less than three years. The consideration of these factors, and making some reservation for the numbers of 15-17 year olds in the County population who are institutionalized, in ungraded special education programs, attending schools outside the County, or have terminated school before high school completion, indicates that enrollments in grades 10-12 will be greater than the number of 15 to 17 year olds enrolled in school, but less than the total number of 15 to 17 year olds in the County population. The following table indicates the ratio of population by age to grade enrollments. No adjustment has been made for migration during the period from May, when the census was taken, to October, when school enrollments were counted.

Table P-6

COMPARISON OF POPULATION AGED 15-17 AND HIGH SCHOOL ENROLLMENTS

Age Group	Population May 31, 1965	Enrollments October 1, 1965	Ratio of Age Group to Grade Enrollments
15	9,308	10th- 9,153	98.3
16	9,182	11th- 8,247	89.8
17	8,565	12th- 7,163	83.6
15-17	27,055	24,563	90.8

While enrollments in grades 10-12 are equal to 90.8% of the County population in the 15-17 age group, the factors pointed out above indicate that the school participation rate of the group is significantly lower than this. The 1960 Census data for Macomb County reported the school participation rate for 16-17 year olds as 84.1%. Reports submitted by Macomb County high school principals indicate that 20% of the public high school student body terminate school before graduation. For every 100 Macomb County residents who entered 9th grade in September, 1960, only 81 persons graduated from high school in 1965, despite a gain of in-migrants over out-migrants in the age group.

The long range trend toward retaining in school a higher proportion of the school age population will continue, but at a decreasing rate. U. S. Census data reveals this trend for 16-17 year olds in Michigan.

Table P-7

ENROLLMENT OF 16-17 AGE GROUP IN SCHOOL, MICHIGAN - 1930-60

Year	1930	1940	1950	1960
Percent Enrolled	61.7	73.1	80.2	84.1
Increase Over Previous Period	----	11.4	7.1	3.9

Table P-8 indicates possible high school enrollments from 1965 to 1980. In addition to an increasing school participation of the 15-17 age group, a significantly higher proportion of 18-19 year olds are expected to remain in high school until graduation. Based upon these assumptions, high school enrollments in 1970 are expected to exceed the 1965 participation rate by five percent of the 15-17 age group, and by ten percent in 1975.

Table P-8

MACOMB COUNTY POPULATION AGED 15-17
AND POTENTIAL HIGH SCHOOL ENROLLMENTS

Year	Population	Grades 10-12 at 1965 Participation Rate	+5% of age Group	+10% of age Group
1965	27,055	24,545	----	----
1970	38,646	35,052	36,984	38,917
1975	49,818	45,185	47,676	50,167
1980	51,677	46,871	49,455	52,039

The high projection for 1970, 1975, and 1980 would probably be achieved with the participation of 90% of the 15-17 population. Participation rates well above this figure are being attained already by some school districts in the Detroit area.

Other factors which may increase future County high school enrollments include:

increasing migration into the County,

more rigid compulsory attendance statutes,

changing economic conditions,

effects of government social welfare programs, especially those designed to keep the potential dropout in school, or to re-enroll the early leaver,

school programs which are realistic to the interests and capacities of the majority of the school age group which is not identifiable as college-bound.

Superintendents' Estimates of Enrollments.

Estimates of September, 1969 enrollments in grades 10-12 were prepared by the superintendents of the 21 local school districts. Table P-9 presents these projections by districts.

Table P-9

ENROLLMENTS IN GRADES 10-12 MACOMB COUNTY SCHOOL DISTRICTS

North Area		Central Area	
Anchor Bay	575	Chippewa Valley	653
Armada	314	Clintondale	752
New Haven	295	Fraser	1,036
Richmond	373	L'Anse Creuse	1,343
Romeo	800	Mt. Clemens	1,445
		Utica	3,240
Total	2,357	Total	8,469
Southeast Area		Southwest Area	
East Detroit	2,820	Center Line	1,131
Lakeview	1,750	Fitzgerald	1,210
Roseville	3,094	Van Dyke	1,320
St. Clair Shores	1,940	Warren	4,734
South Lake	940	Warren Woods	1,370
Total	10,544	Total	9,765
Total Public Schools			31,135
Projected Parochial 10-12 Enrollments			2,500
Total all schools - grades 10-12			33,635

The addition of County parochial enrollments, including an increase based upon the past ten years' experience, indicates a County-wide enrollment in grades 10-12 of 33,635 in September, 1969, This is 585 students more than projected by this report if no reduction in the school dropout rate is achieved between 1965 and 1969. If an additional 1% of the 15-17 group participates in school each year, as predicted by this report, the September, 1969 enrollment will be 34,505, or 870 more students than the total of the district superintendents' projections. The differences between these projections do not seem extreme considering the wide array of criteria which may have been used in the 21 local district estimates and the conceded imprecision of population and enrollment projections such as those presented in this report.

Future Vocational Enrollments in Senior High School.

Data is not available which identifies the future quantitative need for particular high school programs of study. Some generalizations can be made from the existing enrollments coupled with judgments concerning future trends. Various activities of the Survey attempted to measure the present enrollments by program of Macomb County senior high school students.

Table P-10

ENROLLMENTS BY PROGRAMS MACOMB COUNTY HIGH SCHOOLS, 1965

Source	College Prep	Vocational	General
Students	42.5	33.4	24.1
Principals	37.4	32.0	30.6
Superintendents	40.0	37.0	23.0
Averages	40.0	34.	26.

The greatest variation in these identifications of student enrollments by programs exists between the principals' and superintendents' estimates of the proportion of high school students who are not enrolled in either the college preparatory or a vocational program of studies. Superintendents reported that 23% of the high school students are general program students; high school principals report one-third more students in this group.

The measurement of present enrollments in vocational programs have only limited value in determining future need for vocational programs. Enrollments may result from what is not available rather than what is available. Poor programs draw few students; non-existent programs enroll no students. The present high enrollments in college preparatory and general programs, (66 of every 100 Macomb County high school students) seem unrealistic in view of the numbers of students who intend to seek employment upon high school

graduation, (48 of every 100 seniors in 1965). Of Macomb County parochial high school seniors, 49.3% were enrolled in college preparatory programs compared to 41.9% in public high school. There is no evidence that more parochial students in the County continue on to college than do public school graduates. There is, however, ample evidence that parochial students have less opportunity to enroll in vocational programs. More pertinent indication of potential enrollments may be found in the reports of 1965's seniors. Sixty percent of all students, and three fourths of those enrolled in the general program, definitely or probably would have taken a vocational program if a wider choice of such programs had been available when they entered high school. Fewer than one tenth of the seniors rated the choice of courses now offered in high school as "excellent."

The Annual Fall Statistical Report (Form DS-A) submitted to the Michigan Department of Education provides an indication of the high school graduates' enrollment in college. These reports are, to some degree, prepared from high school students' indications of intent while still enrolled in high school.

Table P-11

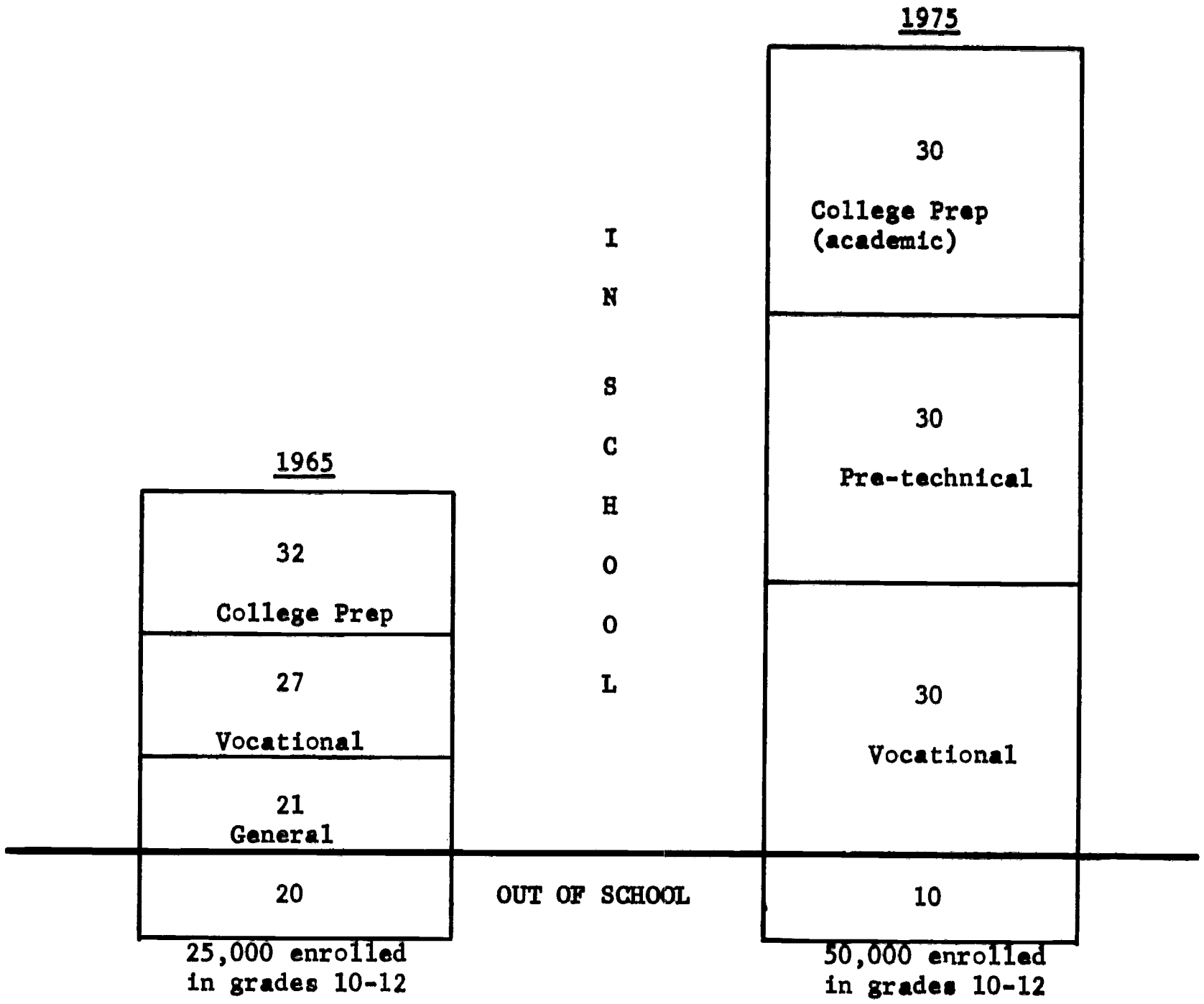
COLLEGE ENROLLMENTS OF MACOMB COUNTY HIGH SCHOOL GRADUATES
1962-64

Year	Percent enrolling Colleges, Junior Colleges, Universities	Percent enrolling Business Schools, Trade Schools, etc.	Percent not enrolling
1962	31.1	8.8	60.1
1963	32.4	7.4	60.2
1964	31.3	5.2	63.5

Comparison of Tables P-10 and P-11 indicates that, even if all persons enrolling in college had followed a college preparatory program in high school, only three of every four such persons actually proceeds to college upon high school graduation. Table P-10 indicates that 6 of every 10 high school graduates, at least for a time, enters the work force upon high school completion. An additional twenty percent of the high school age group have terminated school before high school completion, and are presumed to be in the work force.

A distribution of 1975's high school students in programs more realistic to their own and society's needs is presented in the following graph. Senior high school enrollments will be 50,000, double today's. While the projected participation by program may seem idealistic, actually these, or any more desirable distribution, can be achieved if suitable opportunities are made available. The most influential determinant in students' program choice is the quality and variety of the choices available.

1965 ACTUAL AND 1975 POTENTIAL DISTRIBUTION OF MACOMB COUNTY HIGH SCHOOL AGE GROUP BY ACADEMIC PROGRAMS



Of every 100 persons in the Macomb County high school age group today, 20 are school dropouts, and 21 are identified as general program students. Expanded high school vocational programs for employment-bound youth are predicted to cut the dropout rate in half by 1975. The development of high school pre-technical programs designed to prepare youth for occupational programs in the Community College should virtually eliminate the practice of classifying non-program students as "general program" students.

Under the grouping visualized for 1975, 16,000 students would be enrolled in each of the three major high school programs, college preparatory with academic emphasis, pre-technical as preparation for Community College occupational programs, and vocational for direct job entry.

Implications of the Population Growth and Increasing School Participation.

No attempt has been made to measure the adequacy quantitatively of existing senior high schools facilities in Macomb County. Assuming that present high schools are being utilized to capacity, a doubling of present facilities from a capacity of 25,000 students to 50,000 students in 1975 is indicated by the projected population growth alone. The trend toward retaining in school a larger proportion of the high school age population will likely add another 10% to the needed capacity by 1975.

The need for additional classrooms will not be a County-wide problem, but will be concentrated in the school districts serving the population residing between the 12 Mile and 26 Mile Roads, and to a lesser extent, north of the 26 Mile Road. If the adequacy of the vocational education facilities existing south of 12 Mile Road could be assumed, there would be little additional need for such facilities in this area. Examination of student enrollments by programs, the judgments of high school principals, and the Survey study of the existing facilities and programs in vocational education do not support this assumption. Vocational programs and facilities in the South Macomb area can only be evaluated as better than programs and facilities found in the central and north County regions. Measured against student needs and the nature of entry employment opportunities, the need for improved occupational programs and facilities is critical County-wide.

Each year will see a record number of 18 year olds in the Macomb County population, averaging an increase of 800 over the previous year. The adequacy of the preparation of these persons for employment or for further education is of concern to all.

This report raises the following questions:

What types of new school facilities will serve best the needs of the school age population in a changing economy?

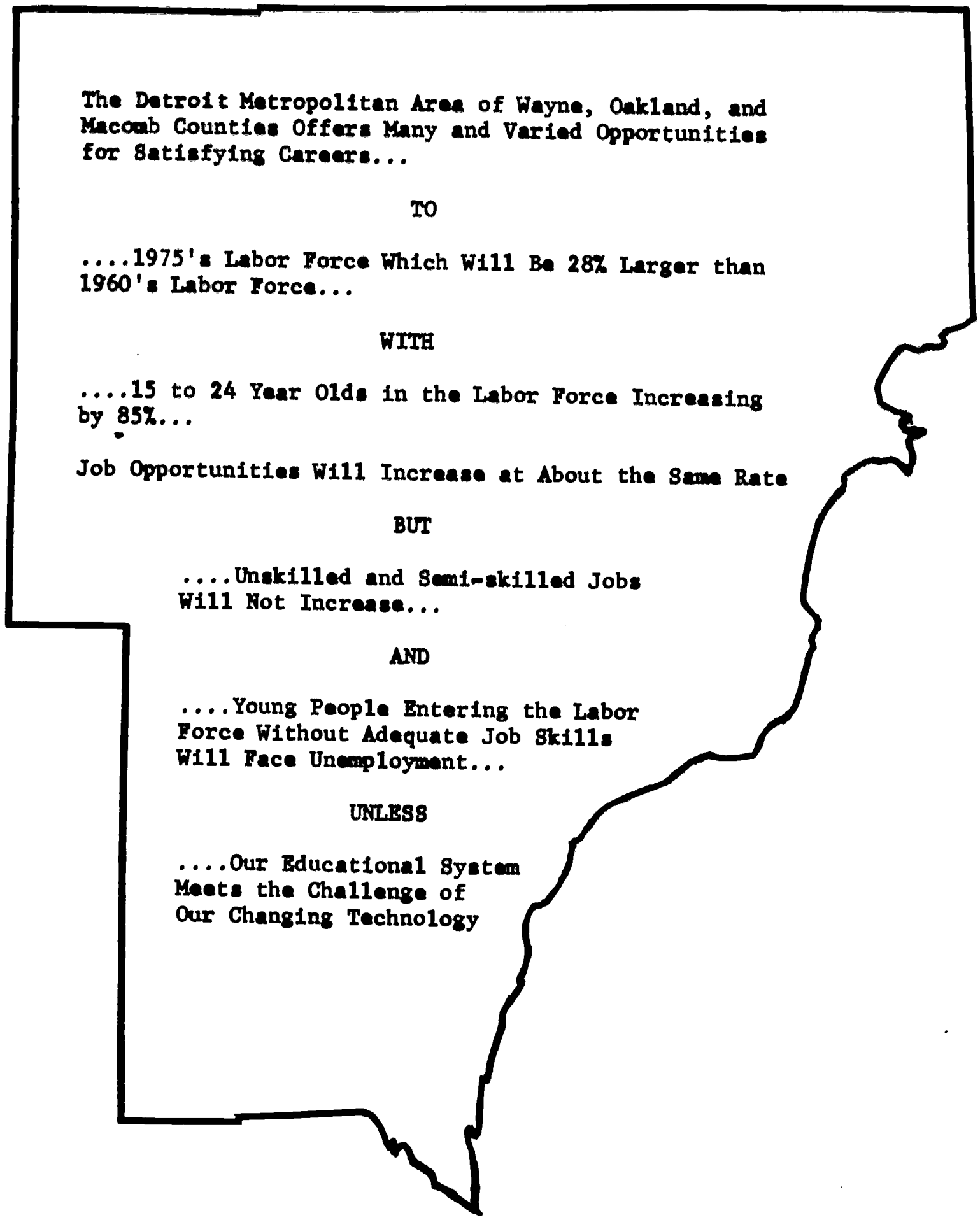
Where should these facilities be located for the greatest utility?

Will it be more practical to provide some types of education on bases larger than the individual school districts?

How can new facilities be most practically and equitably financed?

Subsequent chapters of this Survey report will attempt to provide guidance in determining the answers to these questions.

EMPLOYMENT OUTLOOK FOR MACOMB COUNTY YOUTH
1965 - 1975



The Detroit Metropolitan Area of Wayne, Oakland, and Macomb Counties Offers Many and Varied Opportunities for Satisfying Careers...

TO

....1975's Labor Force Which Will Be 28% Larger than 1960's Labor Force...

WITH

....15 to 24 Year Olds in the Labor Force Increasing by 85%...

Job Opportunities Will Increase at About the Same Rate

BUT

....Unskilled and Semi-skilled Jobs Will Not Increase...

AND

....Young People Entering the Labor Force Without Adequate Job Skills Will Face Unemployment...

UNLESS

....Our Educational System Meets the Challenge of Our Changing Technology

MANPOWER NEEDS 1965 - 1975

The Need for Analyzing Employment Trends.

Occupational education is effective to the degree that programs are developed and offered upon the study and analysis of present and emerging employment characteristics within an area which can be most effectively utilized for the placement of persons trained in such programs. Past occupational program planning essentially consisted of the expansion of existing programs to accommodate rising enrollments. Federal and state reimbursement policies have compelled a rigidity in programs which have ignored changing employment patterns. For example, reimbursement of school programs in agriculture and homemaking as vocational subjects have had little relationship to the employment opportunities in these fields; while office occupations, a major emerging job entry field, has not benefited from federal reimbursement until quite recently. The rapidity and breadth of technological changes in our productive processes have made further continuation of planning occupational programs for the past an untenable practice. The social costs for society and the individual are exorbitant. As a consequence of this failure to keep pedagogy abreast of technology, the once reasonably adequage, though non-directed, relationship between the skills requirements of our economy and the development of our educational institutions has been seriously dislocated. This dislocation has gone unattended as we have failed to reinvest a sufficient share of our capital increment in education.

The unrelatedness of public education to employment needs has been aggravated since 1957, when apparent deficiencies in the preparation of scientists gave impetus to a massive upgrading of the college preparatory function of the U. S. high school. As a consequence, high school students in 1964 reported by a seven to one margin that the high school favors the college-goer's needs over the needs of the employment-bound student. This is a 50% increase over the proportion of students registering the same opinion in 1953, four years before SPUTNIK triggered the adoption of the National Defense Education Act.[1]

One consequence of ignoring the educational needs of the non-college bound majority is that many opportunities for employment in highly skilled categories are not being exploited. At the same time, a significant number of persons are seeking employment at levels where there are insufficient jobs to meet their demands. This imbalance between jobs and job-seekers is most alarming at the low-skills level, but it is also experienced by college graduates who lack specific skills. Secretary of Labor, W. Willard Wirtz, has expressed the human aspect of the problem as it applies to the untrained: "There is no future in this country for the unskilled worker. What has been his job is going to be done by machine."

[1] Youth's Attitude Toward School, Teenage Employment Problems, and Women Working, Measurements and Research Center, Purdue University, Lafayette, Indiana, January, 1965. p.4.

There are risks inherent in attempting long-range projections of the employment characteristics of the national or local economy. Factors which cannot be measured precisely, such as new inventions, productive changes, changes in consumer demand, population migration, and domestic and international political developments, will unbalance the most carefully drawn projections. The need for the best available estimates of emerging economic trends and the consequent changing needs for labor is so vital to the planning of effective occupational education programs that the effort must be made despite the risks of error. Any errors made in venturing such projections are sure to be less costly than the certain consequences of avoiding this responsibility.

Sources of Data.

The most comprehensive source of information on employment by occupations and industries for the Detroit area has been data provided by the decennial population census. Between census years, estimates of employment are issued in the Monthly Report on the Labor Force which is based on a nation-wide sample survey of 35,000 households, and reports of the Michigan Employment Security Commission. Unfortunately, information on the details of the future demand for labor is not in proportion to the need for this information in educational planning. The needed information can only be derived from a continuing analysis of all factors affecting demand for workers in each occupation and industry, the assessment of how these factors may operate in the future, and the projection, based on judgment, of the combined effects of these factors on future skills requirement.

Some current research activities hold promise for planners of occupational programs. The Battelle Memorial Institute of Columbus, Ohio, is currently analyzing the future labor market in Michigan and the Detroit Metropolitan Area, under the sponsorship of the Michigan Employment Security Commission, the Michigan Department of Education and the Michigan Department of Economic Expansion. The U.S. Department of Labor has made grants to many universities throughout the country, for research of the complex of factors affecting the growth of occupations. This information will be available to schools as these studies are completed.

The U.S. Bureau of Labor Statistics' current revision of the Occupational Outlook Handbook, which will be available in 1966, is making occupational projections by industries identified to the three-digit level of the Standard Industrial Classification Code.

In addition to these sources, the following studies of the national, regional and local economies, populations, and work forces have been utilized in this analysis of the local employment outlook which has been prepared for the use of educators as a basis for the planning of effective programs of occupational education in Macomb County.

Michigan in the 1970's, An Economic Forecast,
William Haber, W. Allen Spivey, Martin R. Warshaw;

Manpower in Michigan, A Reappraisal of the 1960's,
Michigan Employment Security Commission;

Future Population of the Detroit Metropolitan Area, 1965-1980
United Community Services of Metropolitan Detroit

The Detroit Area Economic Fact Book, 1965
Detroit Area Economic Forum

Occupational Outlook Handbook, 1963-64 Edition,
United States Department of Labor

"Unemployment and the American Economy," a mimeo paper on the proceedings of a special conference at the Brookings Institute, June 25-26, 1964.

Identification of the Local Labor Market.

The labor market is the focus of attention for an analysis of occupational opportunities. The labor market is a recognizable area which provides a fixed number of persons within a given region, at a given time, with employment or potential employment. The three counties, Macomb, Oakland, and Wayne constitute the labor market which can be most usefully studied to identify the local needs for occupational education and which can be profitably exploited by such programs. The Bureau of the Census recognizes the economic unity of this region and much of the population and economic data of the Census is reported for the three counties as a unit identified as the Detroit Standard Metropolitan Statistical Area (DSMSA). The Michigan Employment Security Commission utilizes the same region for reporting labor force and employment data. The practicality of this is borne out by local employment characteristics. Of Macomb County's 1960 work force, 47.6% were employed outside of Macomb County, and the corresponding figure for Oakland County was 39.8%; only 16.6% of the three-county labor force were employed outside the Detroit Metropolitan Area. The occupational analysis prepared for this report uses the Detroit Metropolitan Area as the local labor market, unless otherwise noted. Table L-1 illustrates that the Detroit area's employment by occupation is a virtual microcosm of the national picture. This is a happy circumstance for it provides a richness in the variety of opportunities for employment and a degree of assurance of employability for skilled workers who migrate to other areas. This indicates that Macomb County schools can be somewhat provincial in the determination of the labor needs for which youth are to be trained, and that local curriculum planning can be based upon national labor needs studies with a minimum of adaptations for local variations.

Table L-1
OCCUPATIONAL GROUPING OF EMPLOYED MALES FOR MACOMB COUNTY
DETROIT METROPOLITAN AREA, MICHIGAN, AND THE UNITED STATES, 1960

	MACOMB COUNTY		DETROIT SMSA		STATE OF MICHIGAN		UNITED STATES	
	Number Employed	Percent of Total	Number Employed	Percent of Total	Number Employed	Percent of Total	Number Employed	Percent of Total
Professional, Technical								
Engineers	3,273	3.3	27,462	3.0	43,558	2.3	853,738	2.0
Medical and other Health Workers	745	.8	11,255	1.2	22,125	1.1	520,048	1.2
Teachers	1,124	1.1	8,881	1.0	19,854	1.0	417,725	1.0
Other Professional	6,890	7.0	62,901	6.8	115,332	6.1	2,687,847	6.2
Farmers and Farm Managers	1,153	1.2	2,607	.3	57,130	3.0	2,387,584	5.5
Managers, Officials & Proprietors	7,785	7.9	83,635	9.0	173,876	9.1	4,629,842	10.7
Clerical and Kindred Workers	7,338	7.4	71,110	7.7	124,454	6.6	3,015,476	6.9
Sales Workers								
Retail Trade	2,354	2.4	24,852	2.7	50,486	2.7	1,247,878	2.9
Other than Retail Trade	3,915	4.0	43,970	4.7	76,469	4.0	1,729,994	4.0
Craftsmen, Foremen and Kindred								
Construction	5,306	5.4	38,145	4.1	85,593	4.5	2,404,323	5.5
Foremen (N.E.C.)*	3,666	3.7	29,457	3.2	58,100	3.1	1,096,658	2.5
Mechanics and Repairmen	6,584	6.6	53,124	5.7	107,340	5.7	2,197,193	5.1
Metal Craftsmen	8,163	8.2	52,113	5.6	94,230	5.0	1,099,835	2.5
Other	3,768	3.8	32,514	3.5	64,847	3.4	1,690,768	3.9
Operatives and Kindred	25,212	25.3	237,235	25.6	494,849	26.0	8,641,687	19.9
Service Workers								
Protective Service	1,533	1.5	16,609	1.8	29,596	1.6	662,133	1.5
Waiters, Bartenders, Cooks	688	.7	8,718	.9	16,544	.9	508,589	1.2
Other	2,466	2.5	30,748	3.3	62,471	3.3	1,489,010	3.4
Farm Laborers and Foremen	533	.6	1,692	.2	20,767	1.1	1,201,922	2.8
Laborers, Non-Farm								
Construction	767	.8	7,714	.8	17,514	.9	645,423	1.5
Manufacturing	1,139	1.1	19,556	2.1	42,466	2.2	984,323	2.3
Other	1,932	1.9	21,961	2.4	44,814	2.4	1,368,043	3.1
Occupations not Reported	2,740	2.8	40,765	4.4	75,619	4.0	1,986,907	4.6
TOTAL	99,094	100.0	927,024	100.0	1,898,034	100.0	43,466,946	100.0

Source: United States Bureau of the Census

*Not Elsewhere Classified

While the opportunities for job entry are metropolitan in scope, the responsibility for providing educational programs which are adequate to securing entry employment, and the financial and social costs which are consequent to a failure to provide such education, are primarily obligations of the County and its political subdivisions, and its public schools. Stated as a broad generalization, the school systems of the three counties of the Detroit Metropolitan Area are in competition to provide their respective clients with the education necessary to gain and hold employment in a complex and rapidly changing economy. In times of economic dislocation, those communities whose schools have failed to meet the challenges of this competition will bear an inordinate share of the consequent welfare costs.

The Detroit Area Labor Outlook.

Jobs exist because there is a population to be served. In projecting the future demand for labor, one of the fundamental parameters is the projection of future population and its participation in the labor force. Table L-2 compares these projections for the Detroit area in 1975 with the 1960 Census data.

The projections reflected in Table L-2 indicate a number of changes that are significant to the planning of occupational programs for the youth of Macomb County. In the Detroit area the workers in the 15 to 24 age group will increase from 220,000 in 1960 to 406,000 in 1975. Macomb County's participation in the labor force for this age group will increase from 22,000 to 65,000 during this period. The growth of this age group is the most important single factor shaping the labor force of the coming decade, and will account for over fifty percent of the total growth of the Detroit area labor force during the 1960-75 period. Despite an increase of more than 300,000 workers in the total labor force, the number of operatives and laborers (forecast in Table L-7), will decrease as a proportion of the total labor force.

The most obvious consequence of the large increase in the number of young people in the labor force will be the intense competition for the jobs which will be available to semi-skilled and unskilled workers. The extent of this problem is detailed further in a subsequent discussion of the occupational outlook for operatives and laborers. Table L-2 indicates the 1975 labor force participation based upon the 1960 participation rates. While these rates are, in most age ranges, adequate for the purposes of this study, the participation rates of two groups will change markedly from 1960 to 1975;

a) an increasing proportion of women will re-enter the work force after raising their families;

b) the continuing trend toward earlier retirement will reduce the participation rate for workers in the 65 and over age group.

Table L-2

LABOR FORCE PARTICIPATION BY AGE GROUPS
DETROIT STANDARD METROPOLITAN STATISTICAL AREA, 1960-1975

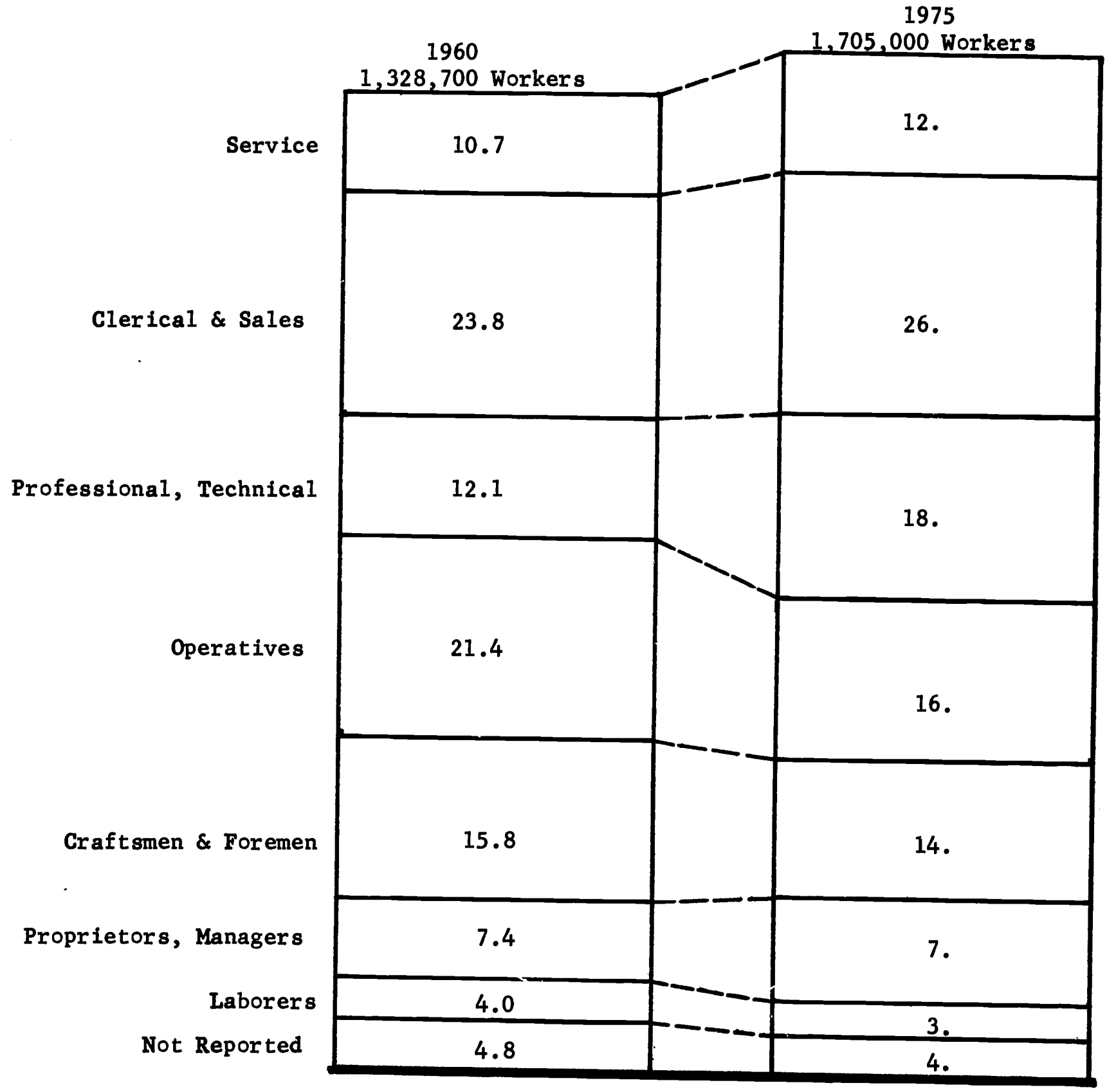
	1960			1975	
	POPULATION OF AGE GROUP	PARTICIPATION RATE	LABOR FORCE	POPULATION OF AGE GROUP	LABOR FORCE*
0 - 14	1,237,558	-----	-----	1,471,397	-----
15 - 19	301,902	.3093	93,387	453,367	140,226
20 - 24	197,071	.6384	125,819	416,755	266,056
25 - 29	231,558	.6226	144,162	346,053	215,452
30 - 34	276,651	.6304	174,409	243,666	153,607
35 - 39	292,378	.6571	192,119	193,434	127,105
40 - 44	262,725	.6854	180,077	226,114	154,979
45 - 49	231,738	.6939	160,795	266,469	184,903
50 - 54	197,449	.6781	133,925	275,418	186,761
55 - 60	180,531	.6367	144,941	238,286	151,717
60 - 64	144,206	.5306	76,515	198,228	105,180
65 & over	265,044	.1674	44,369	413,297	69,186
Total Population	3,764,131			4,742,486	
Total Labor Force			1,440,518		1,755,172

SOURCE: The Future Population of the Detroit Metropolitan Area; United Community Services of Metropolitan Detroit

* At 1960 Participation Rate

Table L-3

DETROIT AREA CIVILIAN LABOR FORCE
Percent Distribution by Occupational Groups



Nationally, the participation rate of women in the 45-54 age group is projected to increase from 49.3% in 1960, to 57.6% in 1975. For the same period, participation by males over 65 will decrease from 32.2% to 23.4%. These are but two examples of the effects of institutional changes upon the labor force; in the case of women re-entering the labor force, early marriage is a significant factor. For males over 65, and eventually for significant numbers in the over 60 age group, labor contracts with special incentives for early retirement are a causative factor. The full significance of these participation rates changes can be best understood when compared to the labor force participation rate of the entire population, which will increase by only one-fourth of one percent from 1960 to 1975. Participation rates must be examined in conjunction with the quantitative measurement of specific groups. Because of the unusual growth of the 15 to 24 age group, the participation rate alone does not indicate the great numerical increase in the labor force participation of this group.

Table L-4 projects the 1975 labor force participation of the Detroit area population, by age groups.

Table L-4

DETROIT METROPOLITAN AREA LABOR FORCE AND LABOR FORCE PARTICIPATION OF THE 15-24 AGE GROUP 1960 and 1975

Population, its age and sex characteristics, and its participation in the labor force comprise but one facet of the complex of factors which must be projected to determine the future need for occupational education programs. An understanding of coming changes in industry and the occupational patterns of employment is required. The problem might be simplified as follows:

> The changing nature of the demands for goods and services, conditioned by such factors as rising population, increased disposable income, advertising and new products, changing customs and tastes,
>
> STIMULATES
>
> innovations in productive and distributive processes, the development and use of new materials, which
>
> CREATES
>
> demands for more highly developed skills, changes in quantitative demands for existing skills, needs for skills in new technical areas, and unique combinations of existing skills, and
>
> DIRECTS
>
> educational efforts to impart these skills to persons seeking to participate in the economic life of the community.

Industry, occupations, and education are factors which must not only be examined as unities but as interacting aspects of a larger whole.

There are various approaches which can be taken in projecting future occupational employment. One method is to review past trends and to assume a continuation of these patterns into the future. The primary recommendation for this technique is its convenience; it has demonstrably little merit for the forecasting of trends. Significant shifts in employment patterns frequently result from the unexpected innovation, such as mechanical inventions, rather than as consequences of measurable trends. Historical experience does, however, provide insights into the tremendous dislocations in employment which can occur during relatively short periods of time.

Table L-5 reflects the occupational shifts which occurred in the Detroit area during the 1940's and '50's. Operatives and kindred workers increased by 38.2% during the 1940's yet decreased by 13.2% during the 1950's. The employment of laborers remained relatively static during the 1940's and '50's quantitatively, while the total work force increased by 49.8%. Craftsmen increased by 33% from 1940 to 1950, but did not increase in numbers during the decade of the 1950's despite a total labor force increase of 11.4% locally.

Table L-5

OCCUPATIONAL DISTRIBUTION OF THE LABOR FORCE
DETROIT STANDARD METROPOLITAN STATISTICAL AREA
1940 - 1960

	1940		1950		1960		PERCENT CHANGE 1940-50	PERCENT CHANGE 1950-60
	PERCENT OF TOTAL	NUMBER	PERCENT OF TOTAL	NUMBER	PERCENT OF TOTAL	NUMBER		
Professional, Technical & Kindred Workers	7.4	65,461	8.7	103,821	12.1	160,892	+58.6	+55.0
Proprietors, Managers & Officials, including Farm	8.1	71,271	8.5	100,894	7.4	98,644	+41.5	- 2.2
Clerical, Sales & Kindred Workers	20.1	178,628	21.6	257,975	23.8	316,622	+44.2	+22.7
Craftsmen, Foremen & Kindred Workers	17.8	157,915	17.6	210,419	15.8	210,103	+33.2	0.0
Operatives & Kindred Workers	26.7	236,935	27.5	327,437	21.4	284,141	+38.2	-13.2
Service Workers	11.9	105,678	9.6	114,980	10.7	142,048	+ .9	+23.5
Laborers including Farm	7.3	64,670	5.3	62,790	4.0	53,368	- 2.9	-15.0
Occupations not reported	.7	6,218	1.2	13,964	4.8	62,917		
Total Labor Force	100.0	886,776	100.0	1,192,280	100.0	1,328,735	+34.4	+11.4

Source: Employment data from the U. S. Census of Population

A significant change, both nationally and locally, has been the shift to white collar jobs. During the 1950's, for the first time in both areas, white collar workers (professional, technical, managerial, office, and sales workers), outnumbered blue collar workers (craftsmen, operatives, and laborers). Nationally, both blue collar and white collar jobs increased during this period; however, most of the total growth in employment was represented by the white collar occupations. Locally, during the fifties, blue collar employment decreased by 50,000, while white collar employment increased by over 100,000 workers. The loss of blue collar jobs was almost totally due to technological and geographic changes in the production of motor vehicles.

While the earlier shift from an agricultural economy to a manufacturing economy did not require a higher level of education for workers, the shift to white collar employment demands higher educational attainment, even for blue collar workers. The more highly trained craftsmen experienced a more favorable employment trend than the less skilled operatives and the unskilled laborers, whose numbers declined by 14% during the 1950's.

Among the white collar workers, the fastest growing group, locally and nationally, have been those employed in the professional-technical sector. The growth rate of this group has been five times the rate of increase in the total labor force. Clerical, sales, and service workers increased at a rate twice that of the total labor force. Only the proprietor-manager group, consisting mostly of owners of small businesses and salaried officials in government and private business, decreased during the period. This decrease resulted principally from a decline in the number of self-employed proprietors. The salaried officials reflect employment increases similar to those of clerical and sales workers - one of the fastest growing employment sectors.

Opportunities for Employment.

Where will the 1,755,000 persons in the Detroit area labor force of 1975 find employment? Attempts to answer this question must necessarily be highly speculative. Because this information is essential for the planning of occupational programs, the available studies deserve careful scrutiny by educators. Information is very limited as to the future requirements for specific occupations, but generalizations can be drawn from the available projections of industry growth patterns. Dr. Wilbur Thompson of Wayne State University has projected employment by industry to 1975 in the study, Michigan in the 1970's. Table L-6 which is drawn from this study reflects the estimated changes in the distribution of employment by industry.

Table L-6

DETROIT METROPOLITAN AREA EMPLOYMENT PROJECTIONS, 1975, BY INDUSTRY

	Employment, 1960		Projected Employment, 1975		Projected Change 1960-75	
	Number	Percent	Number	Percent	Number	Percentage Increase
Agriculture, forestry, fisheries	7,500	0.6	7,500	0.4	0	0.0
Mining	1,000	0.1	1,000	0.1	0	0.0
Construction	53,600	4.0	78,200	4.6	24,600	45.9
Manufacturing	541,400	40.8	627,300	36.9	85,900	15.9
Durables	(447,900)	(33.7)	(499,800)	(29.4)	(51,900)	(11.6)
Nondurables	(93,500)	(6.9)	(127,500)	(7.5)	(34,000)	(36.4)
Transportation	43,500	3.3	55,600	3.3	12,100	27.8
Communication	16,600	1.2	21,600	1.3	5,000	30.1
Utilities and sanitary services	19,100	1.4	24,600	1.5	5,500	28.3
Wholesale trade	42,800	3.2	58,700	3.5	15,900	37.1
Retail trade	195,600	14.7	242,200	14.2	46,600	23.8
Finance, insurance, real estate	51,000	3.8	74,800	4.4	23,800	46.7
Business and repair services	35,500	2.7	50,200	2.9	14,700	41.4
Personal services	63,600	4.8	79,000	4.6	15,400	24.2
Entertainment and recreation services	10,000	0.8	12,800	0.7	2,800	28.0
Professional and related services	146,300	11.0	224,400	13.2	78,100	53.4
Public administration	49,800	3.7	76,500	4.5	26,700	53.6
Industry not reported	51,300	3.9	65,600	3.9	14,300	28.0
Total employment	1,328,600	100.0	1,700,000	100.0	371,400	28.0

Source: Haber, Spivey & Warshaw, Michigan in the 1970's

Manufacturing will maintain its position as the most significant employer, and will provide one-third of all jobs in 1975; however, it will be the industry with the slowest rate of growth. This is partially because manufacturing is the largest industry, but more significantly, the result of a trend toward service type employment. Employment will increase fastest in the areas of professional services, public administration, business and repair services, and the construction industry. This marked trend toward service and white collar employment should receive careful consideration in curriculum planning, and indicates the advisability of reassessing the need for the traditional vocational programs.

Thompson projects 371,400 more jobs in 1975 than were available in 1960. In the United Community Services study, Dr. Albert J. Mayer, also of Wayne State University, estimates a need for 314,655 more jobs in 1975 than were available in the Detroit area in 1960.

The industry shifts indicated in Table L-6, coupled with technological and institutional changes will affect the distribution of employment by occupations. Occupational distribution projections identify the need for vocational-technical programs quantitatively. Table L-7 is based upon the rates of occupational change predicted for the State through the year 1970, by the Michigan Employment Security Commission, and upon the non-quantitative judgments contained in Michigan in the 1970's.

Table L-7

DETAILED OCCUPATIONAL GROUP OF EMPLOYED PERSONS
DETROIT STANDARD METROPOLITAN STATISTICAL AREA 1960-1975

	D.S.M.S.A. PERCENT CHANGE 1950-60 ACTUAL	PERCENT CHANGE 1960-75 PROJECTED INCREASE U.S.	PERCENT CHANGE 1960-75 PROJECTED INCREASE D.S.M.S.A.	EMPLOYMENT 1960 D.S.M.S.A.	PROJECTED EMPLOYMENT D.S.M.S.A. 1975
Professional and Technical	+55.0	+65.	+85.	160,892	297,650
Managers and Proprietors	- 2.2	+32.	+23.	98,644	121,332
Clerical & Sales Workers	+22.7	+43.	+41.	316,622	446,437
Skilled (Craftsmen)	0	+30.	+17.	210,103	246,030
Semi-skilled (Operatives)	-13.2	+18.	- 6.	284,141	267,092
Unskilled (Laborers)	-15.0	0	-15.	53,368	45,363
Service Workers	+23.5	+50.	+43.	142,048	203,413
Occupations not reported *	+11.4	+33.	+25.	62,917	78,394
Total Employment				1,328,735	1,705,711

* Average rate all occupations

The Occupational Outlook for Specific Groups.

Local educators charged with planning and offering programs in occupational education must be provided with evidence, both quantitatively and selectively, of the employment needs of the local labor market. The employment outlook for selected population groups and for selected occupational areas are presented in an effort to provide guidance to local educators. The information offered represents the study staff's interpretation of the information derived from available studies and statistical data.

The Employment Outlook for Men, 1965-1975.

Table L-8 identifies the employment by general occupational grouping of males, ages 18-29, in 1960. Seven of every ten 18 and 19 year old male workers in 1960 found entry employment as operatives, laborers, clerical, or sales workers. Table L-7 projects a sharp decline in the proportion of operatives and laborers in the 1975 work force. While entry opportunities will expand markedly for clerical and sales, and service workers, the combination of low wages and custom make the entry level jobs available to unskilled men unattractive. Many jobs in these areas will be part-time, and/or low-paying, and will not satisfy the financial needs of men who are heads of households. Traditionally, most men are not attracted to secretarial, stenographic, clerical, retail sales, nursing, and many of the service occupations, and few boys enroll in high school programs designed to provide competence in these fields (only 8.2% of 1965 senior boys in Macomb County high schools were enrolled in business or office occupations). If the employment opportunities which will exist in these fields are to be adequately exploited by males, strong efforts will need to be made to overcome the stereotyped attitude that certain jobs are "women's work."

Employment opportunities will expand most rapidly in the professional and technical occupations (Table L-7). These occupations require two or more years post-high school education of a specific nature for entry. Unfortunately, very little opportunity to acquire this type of education is available locally.

Manufacturing will continue to offer the greatest number of job opportunities for men in the local area during the 1965-1975 period. However, manufacturing employment will account for only 36.9% of all local employment in 1975 as compared to 40.8% in 1960. The contraction will occur in the employment of operatives, a traditional entry occupation for young men, which is reported in more detail in another section of this study.

In summary, the entry employment opportunities for young males who lack saleable skills will be bleak, as the need for large numbers of operatives and laborers in manufacturing disappears. This is a recurrence of an earlier experience when mechanization displaced the farm worker; with this disturbing difference: the factory provided employment for the displaced farm worker. There is no similar alternate opportunity today for the employment of unskilled young men unable to find employment in manufacturing. The implications are quite clear. Strong efforts must be made to retain boys in school, at least until high school completion, and to make available to each student an educational program through which he can acquire the specialized skills needed to continue up the educational ladder or to gain entry employment, and preferably, both.

Table L-8

OCCUPATIONAL GROUP OF EMPLOYED MALES BY SELECTED AGE GROUPS - 1960
DETROIT METROPOLITAN AREA

	18 - 19		20 - 24		25 - 29	
	PERCENT OF TOTAL	NUMBER	PERCENT OF TOTAL	NUMBER	PERCENT OF TOTAL	NUMBER
Professional & Technical	4.3	837	12.0	7,989	18.4	17,848
Managers & Proprietors	1.7	334	4.1	2,703	6.0	5,799
Clerical	13.9	2,730	13.9	9,231	9.6	9,327
Sales Workers	12.8	2,514	7.6	5,017	6.6	6,388
Skilled (Craftsmen)	9.0	1,765	16.6	10,993	19.6	19,028
Semi-skilled (Operatives)	25.9	5,098	26.5	17,571	24.7	23,907
Unskilled (Laborers)	18.9	3,709	8.2	5,427	5.4	5,210
Service Workers	6.9	1,357	5.3	3,502	5.3	5,106
Occupations not reported	6.6	1,305	5.9	3,915	4.4	4,317
Total in Labor Force	100.0	19,658	100.0	66,371	100.0	96,930
Not in Labor Force		11,847		11,164		5,805
Unemployed		4,682		9,591		7,777
Employed but not at work		249		889		1,301
Employed - Full Time		11,259		56,076		88,501
Part Time		8,150		9,406		7,128
Total Males in Age Group		36,187		87,126		110,512

Source: United States Census of Population 1960, PC (1) 24D Mich.

Table L-9

POPULATION AND MALE LABOR FORCE 1975
DETROIT STANDARD METROPOLITAN STATISTICAL AREA

AGE GROUP	POPULATION OF AGE GROUP (A)	MALE POPULATION	PERCENTAGE OF MALES (B)	MALES IN LABOR FORCE	MALES LABOR FORCE PARTICIPATION RATES (C)
15 - 19	453,367	218,976	48.3	97,225	.444
20 - 24	416,755	184,247	44.2	162,343	.867
25 - 29	346,053	165,136	47.7	158,861	.962
30 - 34	243,666	118,714	48.7	114,203	.962
35 - 39	193,434	94,299	48.8	91,187	.967
40 - 44	226,114	110,231	48.8	106,593	.967
45 - 49	266,469	132,329	49.7	125,713	.950
50 - 54	275,419	136,773	49.7	129,934	.950
55 - 59	238,287	121,669	51.1	110,110	.905
60 - 64	198,228	101,215	51.1	77,227	.763
65 - Over	413,297	195,448	47.3	45,735	.234
Projected Male Labor Supply				1,219,131	

(A) Source: The Future Population of the Detroit Metropolitan Area, 1965-1980 United Community Services of Metropolitan Detroit

(B) Source: United States Census of Population PC (1) 24C Michigan

(c) Source: U. S. Dept. of Labor, Bureau of Labor Statistics

The Employment Outlook for Women, 1965-1975.

Local employment of women probably will be at a slightly higher rate than the national employment of women. Women are predominantly employed in the professional-technical (nurses, teachers, medical technicians), clerical-sales (secretaries, typists, clerks, retail salesworkers), and service occupations, which will undergo the greatest expansions during the period. Table L-10 indicates that entry employment for women in the 18-19 age group is found primarily in the secretarial, stenographic, clerical, and sales occupations. Existing programs in these areas are the most effective occupational preparations offered by high schools at the present time. Because of the continuing expansion of these occupational areas and the relative adequacy of school programs, girl graduates who have followed these programs have significantly better opportunities for entry employment than do boys, regardless of their high school program.

Table L-10

EMPLOYED PERSONS AGED 18-19
DETROIT STANDARD METROPOLITAN STATISTICAL AREA-1960

	18-19 MALE EMPLOYED	18-19 FEMALE EMPLOYED	18-19 TOTAL
Draftsmen	298	---	298
Medical, Dental Technicians	13	129	142
Managers - Retail Trade	154	18	172
Bookkeepers	100	908	1,008
Cashiers	Incl. in A	832	832
Office Machine Operators	" " "	619	619
Secretaries	" " "	2,147	2,147
Stenographers	" " "	744	744
Telephone Operators	" " "	356	356
Typists	" " "	1,649	1,649
Other Clerical	(A) 2,630	5,437	8,067
Salesmen, Sales Clerks	2,514	2,180	4,694
Carpenters	120	Incl. in B	120
Machinists, Job Setters	97	" " "	97
Automotive Mechanic	371	" " "	371
Other Skilled Workers	1,177	(B) 86	1,263
Apprentices	392	Incl. in C	392
Truck Drivers, Delivermen	824	" " "	824
Operatives - Manufacturing	1,255	171	1,426
Operatives - Non-mfg.	197	78	275
Operatives - Other (NEC)	2,668	(C) 237	2,905
Janitors, Porters, Charwomen	328	61	389
Cooks	89	40	129
Hairdressers, Cosmetologists	Incl. in D	224	224
Waiters, Counter Workers	108	1,026	1,134
Hospital Attendants	Incl. in D	281	281
Other Service Workers	(D) 804	335	1,139
Laborers	3,717	130	3,847
All Other Employed	2,173	3,184	5,357
Total Employed Aged 18-19	19,658	20,872	40,530

Source: U. S. Census of Population, 1960 PC (1) 24D Mich.

Large numbers of young women, older women, and married women will enter or re-enter the work force during periods of expansion. The employment of married women and older women, especially in part-time work, will fluctuate with economic conditions. Much of the labor force participation of these women is optional, and reacts to market demand and wages offered. The training needs of women re-entering the work force after raising their families and the need to upgrade secretarial skills will create a continuing demand for post-high school occupational education.

Entry Level Occupations.

Table L-10 shows the employment of 18 and 19 year olds by sex in 1960. Entry into employment in the less skilled occupational categories will continue to dominate the employment pattern of these groups during the period. Entry level data may be misleading. Frequently, persons gain entry employment at low skill levels because they possess training which indicates that they will be able to perform at higher levels with a minimum of additional training. Macomb County employers' indications of entry level jobs and the education required to gain entry are reported in a separate section of this report. (Tables L-14, L-15, L-16).

Employment of Technicians.

This is the key occupational level for the 1960's and 70's, and offers the greatest opportunities for entry employment at significant wage levels.

An adequate supply of highly skilled workers is essential to the establishment and expansion of business enterprises and the upgrading of public services; an inadequate or uncertain supply of needed skills discourages the investment of enterprise capital. A failure to provide adequate educational facilities and programs for the training of technicians and semi-professional workers can be predicted to have a depressing effect on employment opportunities at all skill levels.

The Associate in Technology degree is expected to achieve the recognition locally which has been evident already in other regions, as the graduates of six to ten Detroit area community colleges are placed in industry to supplement the limited numbers of skilled tradesmen who attain journeymen status through formal apprenticeships. The broader training of the technician should give him an advantage over the apprentice in accommodating to occupational change. Most local area technicians will be employed in manufacturing (Metallurgical, industrial, design, graphics, mechanical, data processing, electronics), but, increasingly, this level of skill will be in demand for public service (sanitation, police, fire, recreation, transportation, engineering), and in health services. Table L-5 indicates that growth of the professional, and technical, and kindred workers group has been 5 times as rapid as the growth of total employment in the Detroit area during the 1950's and 1940's.

Foremen and Craftsmen.

This group will increase numerically in the Detroit area between 1965 and 1975, but not so rapidly as the total labor force. Greater productivity per worker because of increasing capital investment in manufacturing will enhance the importance of foremen and craftsmen and cause their wages to increase faster than the general index for the area.

Operatives and Laborers.

This group will decline both quantitatively and as a proportion of the local work force as it continues to be most susceptible to technological displacement. However, because of high productivity in local manufacturing and the generally high wages which will prevail in the area, operatives' wages will continue to be high in comparison to operatives in other localities, and in relation to national and local income medians. This decreasing need for operatives and laborers in the work force is the most significant factor in the local employment outlook for the next decade. A failure to meet this condition head-on will be disastrous for Macomb County as can be seen by the following projection of the availability of local jobs in these categories.

DETROIT AREA EMPLOYMENT OF OPERATIVES AND LABORERS IN 1975

AGE	Estimated Male Labor Force, 1975	Percentage 1960 Labor Force in Operative and Laborer Jobs	1975 Need for Operative and Laborer Jobs at 1960 Participation Rate
18 - 19	38,890	44.8	17,423
20 - 24	162,343	34.7	56,333
25 - 29	158,861	30.1	47,817
Total	360,094		121,573
Available Operative and Laborer Jobs, 1975			55,975
Detroit Area Males 1975, aged 18 to 29, who will be unemployed unless higher level skills have been acquired.			65,598

It is likely that this projection of the future demand for operatives and laborers is optimistic rather than pessimistic. One local automotive plant, employing several thousand operatives, projects a 66 2/3% decline in the employment of operatives by 1970. At the same time, as the job opportunities in these categories are decreasing, the male labor force in the 18-29 age group will increase by an estimated 177,100 persons. The result of this inverse relationship between the shrinking semi-skilled and unskilled employment opportunities and the growing population, is projected to result in unemployability for twenty percent of the 18-29 age group, unless saleable skills in other expanding occupational areas have been acquired. At least 10,000 Macomb County males of the 18-29 age group will be found in this unenviable class of persons in 1975. Because unemployment generates increased tax burdens, in addition to the waste of manpower and the loss of personal dignity, the potential employability of our citizens is of concern to all.

The employment of operatives in manufacturing was abnormally high in 1965, reversing the long-run downward trend, and reflecting the high demand for all labor created by continued high levels of durable goods production, especially motor vehicles. This boom condition headed off the crisis anticipated to occur with the entry of a record number of eighteen-year olds into the labor force in 1965. If the present peak demand for automobiles continues, manufacturers can be expected to react by expansion of productive capacity, especially by the additional use of automated production machinery which will cut heavily into those structured jobs which are most susceptible to elimination. Thus, the marginally-employed operative who does not upgrade his job skills to a significant level may be displaced even during a period of relatively high employment and economic prosperity.

Clerical and Sales Workers.

The proportion of area workers in these occupations will increase by 41% from 1965 to 1975. The demand for secretarial and high level office skills will intensify, but the need for routine clerical skills will be curtailed by applications of automated processes for reproducing, filing, and retrieving information. The demand for sales workers will be high, but many of these jobs will be at wage levels significantly lower than the median for the area. Women will continue to dominate in clerical and sales employment, partly because of prevailing low wage levels.

Service Workers.

While this group will increase in the 1965-1975 period, it should be noted that the largest single included group are waitresses, an occupation with generally low income. The rising level of personal income and the increase in population, especially among the aged and the very young, will stimulate demands for health services, personal services, and food services. High levels of disposable personal incomes will stimulate many innovative businesses seeking to exploit this income. If past patterns continue, service occupations will provide significantly more employment opportunities for women than for men.

Farmers and Farm Workers.

A steady shrinking of local farm employment will characterize the decade. The per-acre income from such local farm products as sod, garden produce, ornamental shrubs, flowers, and specialty foods such as mushrooms and rhubarb, is very high in comparison to farm income generally, and should be reflected in more realistic incomes for farm workers who are at present the lowest paid occupational group in the national economy. Limited opportunities will exist for agricultural specialists such as ornamental landscapers and florists.

Manufacturing Employment.

Employment in local manufacturing will increase, but at a significantly lower rate than the increase in the total labor force (Table L-6). Manufacturing is particularly adaptable to computerized and automated techniques, and local manufacturers have the capital to undertake these changes. The result will be a continuous rise in output per worker with a lessening need for new workers. The heavy local dependence upon the motor vehicle industry which provides 17.5% of all wage and salary employment, compared to 1.3% nationally, will continue, but at a decreasing rate. In the fifteen years from 1947 to 1962, annual output per worker in the manufacture of vehicles increased from 7.55 units to 14.65 units, or a virtual halving of the manpower requirements per unit. This trend will continue. The reduction in manpower requirements will be almost solely in the unskilled or semi-skilled areas, while opportunities for employment at higher skill levels will expand.

Non-manufacturing Employment.

Most new jobs will be created outside of manufacturing. Construction is anticipated to increase locally, but with much of the construction work pre-fabricated rather than built on the site. Construction wages will remain relatively high and contractors will innovate to reduce the seasonal nature of construction work in an effort to reduce costly over-time wages. All service industries will expand to meet the needs of a rising population and increasing incomes, with the greatest employment opportunities in professional services, finance, insurance, and real estate, business and repair services, and wholesale trade. The implications here are very strong for programs in distributive education in the schools.

Government Employment.

Local government employment will increase more rapidly than employment generally or employment by state and federal governments. Urbanization in Macomb and Oakland Counties will create a demand for public services without a corresponding decrease in government employment in the central city. More leisure time and more disposable income for recreation, and the overdue expansion and improvement of school services will push government employment upward. The ratio of public safety personnel to the total population can be projected to rise significantly. Post-high school programs will be required to prepare persons for the increasingly complex jobs in public employment.

SURVEY OF MANPOWER NEEDS OF MACOMB COUNTY EMPLOYERS

One of the activities undertaken in connection with this study was the gathering of information from employers as one basis for measuring the needs for occupational education programs. A questionnaire was mailed to 2300 businesses in Macomb County representative of all types of local economic activity. A personal interview follow-up was attempted for employers of 100 or more workers. These two efforts resulted in 516 employer responses. Table L-11 indicates the responding employers by size and type of business. Table L-12 compares the relationship of the survey group to the total employers registered with the Macomb office of the Michigan Employment Security Commission by types of businesses and numbers of employees. While the number of responses is only 17.6% of the total number of Macomb County businesses registered, the number of employees reported is 61% of the total employees registered with the MESC, and the occupational makeup of the sample has a reasonable relationship to the MESC group. Employers were queried as to the number of workers employed, the minimum education required for various occupations, the identification of entry jobs, their future needs for each occupational classification, and their assessment of the adequacy of the local supply of worker in each occupation. Table L-13 indicates the responses most frequently reported by employers for each occupation.

The total occupational categories reported by the responding employers were reduced to 115 for practicality in handling by combining closely related occupations which could not be differentiated by the normal existence of specific pre-employment training programs. An example is the merging of a small reported number of draftsmen with a large group identified as drafting and design technicians. A wide range of occupations was reported by industrial employers under such titles as press operator, punch press operator, drill press operator, rolling machine operator, shear operator, slitter operator, polishers and buffers, secondary machine operator, burring machine operator, and other similar specific descriptions. These operatives were combined into the classification of machine operators so that the significant characteristics of this level of job in local industry could be determined.

Educational Requirements.

Employers varied widely in their assessments of the minimum education necessary for employment in a particular occupation. A few employers indicated that high school graduation is not a requirement for employment even in occupations which are usually only attainable with some post-high school training. Such employers were undoubtedly reporting on the educational status of some persons now in their employ, rather than what they would require of a new applicant, or currently acceptable levels resulting from an extremely tight labor supply. Table L-13 indicates the minimum educational requirement most frequently reported for each occupation covered. On this basis, employers reported 23 occupations open to persons not possessing a high school diploma, 45 available to high school graduates, 20 occupations for which one or two years of technical school are required, 17 occupations for which an apprenticeship is necessary, and 10 occupations open to college graduates. These occupations are identified in Table L-13.

Table L-11

RESPONDING MACOMB COUNTY EMPLOYERS GROUPED BY NUMBER OF EMPLOYEES REPORTED

		( ) Number of employees reported for each group											
TYPE OF BUSINESS	TOTAL EMPLOYERS	1-10 EMPLOYES		11-25 EMPLOYES		26-100 EMPLOYES		100-500 EMPLOYES		500-Over EMPLOYES		EMPLOYES NOT REPORTED	TOTAL REPORTED
Agricultural service	9	6	(41)	2	(24)	0	(0)	1	(111)	0	(0)	0	176
Banking & finance	11	3	(22)	3	(54)	4	(316)	0	(0)	0	(0)	1	392
Commercial foods & dairy	4	0	(0)	1	(22)	2	(103)	0	(0)	0	(0)	1	125
Construction	48	23	(108)	5	(104)	15	(757)	1	(105)	0	(0)	4	1,074
Education	21	1	(5)	0	(0)	12	(908)	6	(1469)	1	(800)	1	3,182
Entertainment & recreation	4	1	(6)	0	(0)	3	(150)	0	(0)	0	(0)	0	156
Government	21	1	(2)	6	(118)	3	(179)	8	(1416)	3	(8064)	0	9,779
Hospital, medical, dental	21	14	(46)	1	(16)	1	(75)	3	(476)	1	(590)	1	1,203
Manufacturing	183	18	(111)	48	(868)	63	(3376)	43	(8170)	7	(33139)	4	45,664
Insurance	13	11	(57)	0	(0)	2	(66)	0	(0)	0	(0)	0	123
Marine services	3	3	(17)	0	(0)	0	(0)	0	(0)	0	(0)	0	17
Printing & publishing	4	1	(5)	0	(0)	2	(122)	1	(193)	0	(0)	0	320
Professional (non-medical)	20	17	(59)	2	(48)	1	(95)	0	(0)	0	(0)	0	202
Real Estate	6	4	(30)	1	(25)	1	(32)	0	(0)	0	(0)	0	87
Restaurant & tavern	21	14	(89)	1	(24)	5	(218)	0	(0)	0	(0)	1	331
Retailing	63	29	(180)	12	(187)	9	(328)	10	(2381)	2	(3520)	1	6,596
Service establishment	26	14	(74)	4	(66)	6	(220)	0	(0)	0	(0)	2	360
Transportation	6	3	(22)	0	(0)	3	(185)	0	(0)	0	(0)	0	207
Utilities	2	0	(0)	0	(0)	0	(0)	1	(487)	1	(777)	0	1,264
Wholesaling	12	2	(13)	4	(61)	6	(349)	0	(0)	0	(0)	0	423
Other	18	5	(36)	1	(14)	1	(34)	0	(0)	0	(0)	11	84
Total Employers Reporting	516	170		91		139		74		15		27	71,765
Employees by employers' size		923		1,631		7,513		14,808		46,890			71,765

Table L-12

A COMPARISON OF MACOMB EMPLOYERS RESPONDING TO A SURVEY OF MANPOWER NEEDS WITH MACOMB COUNTY EMPLOYERS COVERED BY THE MICHIGAN EMPLOYMENT SECURITY ACT

	SURVEY GROUP		MESA GROUP		SURVEY GROUP		MESA GROUP	
Type of Business	Number of Employers	Percent of Total	Number of Employers	Percent of Total	Employes Reported	Percent of Total	Employes Reported	Percent of Total
Agricultural Services	9	1.7	13	.4	176	.3	210	.2
Banking and Finance	11	2 1	38	1 3	392	.5	787	.7
Commercial Foods and Dairy	4	8	17	.6	125	.2	500	.4
Communications	-- d	---	3	.1	--- d	--	751	.6
Construction	48	9.3	422	14 5	1074	1.5	4,472	3.8
Education	21	4.1	3 a	.1	3182	4 4	31 a	.03*
Entertainment and Recreation	4	.8	61	2.1	156	.2	931	.8
Government	21	4 1	-- b	---	9779	13.6	--- b	---
Hospital, Medical, Dental	21	4.1	42 a	1.4	1203	1.6	597 a	.5
Hotels and Motels	--	---	22	.8	---	---	218	.2
Manufacturing	183	35.5	801	27.4	45,664	63.7	82,108	69.8
Insurance	13	2.5	9	3	123	2	232	.2
Marine Services	3	.6	3	1	17	.03*	16	.01*
Printing and Publishing	4	8	16	.5	320	.4	463	.4
Professional, Non-medical	20	3.8	83 c	2.8	202	.3	1475 c	1.3
Real Estate	6	1.2	17	.6	87	.1	135	.1
Restaurant	21	4.1	231	7.9	331	.5	2596	2.2
Retailing	63	12.2	540	18.6	6596	9.2	10,419	8 9
Service Establishment	26	5.0	430	13.8	360	.5	6072	5.2
Transportation	6	1.2	61	2.1	207	.3	1031	.9
Utilities	2	.4	9 a	.3	1264	1.8	1610 a	1 4
Wholesaling	12	2 2	126	4.3	423	.6	2876	2.4
Other	18	3.5	---	---	84	1	----	---
TOTALS	516	100.0	2920	100 0	71,765	100.0	117,530	100 0

a Does not include government-supported and government-owned institutions
b Not available as they are not covered by the Act
c Not all inclusive as the professions cut across industry lines
d Duplication: included in utilities
* Too insignificant to be included in total

Table L-13

EDUCATIONAL REQUIREMENTS, HIRING PRACTICES, ANTICIPATED DEMAND AND SUPPLY
OF WORKERS IN NON-PROFESSIONAL OCCUPATIONS AS REPORTED BY MACOMB COUNTY EMPLOYERS, JUNE, 1965

		EDUCATIONAL REQUIREMENT						HIRING PRACTICE				EXPECTED EMPLOYMENT		AVAILABLE SUPPLY	
	Number of Workers Reported	Non-High School Graduate	High School Graduate	1 or 2 Years Technical School	Apprentice	College Graduate	Experience not Required	Hire Only Experienced Worker	Will Remain Constant	Will Increase	Will Decline	Adequate Number Available	Surplus Available	Critically Short Supply
PROFESSIONAL, TECHNICAL, & KINDRED WORKERS															
Engineers, technical															
Automotive technician	18	X					X	X			X		X		
Metallurgical technician	66		X				X	X						X	
Civil & highway technician-surveyor	120		X				X		X					X	
Electrical technician	45		X						X					X	
Electronics technician	10		X				X	X			X				
Chemical technician	36		X				X		X		X				
Industrial technician	31		X				X		X					X	
Mechanical technician	139		X				X		X					X	
Instrumentation technician	104		X				X		X					X	
Quality control technician	486		X				X		X					X	
Medical & other health workers															
Psychiatric technicians	2				X										
Medical/dental technicians	41			X			X		X			X			
Registered nurse	243				X			X	X					X	
Dental hygenist	2				X			X		X				X	
Dietician	73				X			X	X			X			
Hospital attendant	32		X				X		X					X	
Nurse's aide	213		X				X		X					X	
X-ray technician	18			X				X	X			X			
Other Prof'l., tech'l., & kindred workers															
Accountant	236				X			X	X			X			
Architectural draftsmen	14				X			X		X				X	
Drafting & design technician	713			X				X	X					X	
Advertising and/or commercial art	14				X			X	X			X			
Public relations	9				X			X	X			X			
Designer	4				X			X		X				X	
Production control	2	X						X	X					X	
Technical report writer	4			X				X		X		X			
Art-photographic	8	X						X	X			X			
MANAGERS, OFFICIALS, & PROPRIETORS-EXCEPT FARM															
Credit worker	28	X						X	X			X			
Paymaster	9	X						X	X			X			
General, office & plant managers	357				X			X	X			X			
Postal worker	483			X			X			X		X			
CLERICAL & KINDRED WORKERS															
Secretaries, stenographers, & typists															
Secretaries	459	X						X	X			X			
Stenographers	363	X					X		X			X			
Typists	773	X					X		X			X			
Bookkeepers	528	X						X	X			X			
Bank teller	129	X					X			X		X			
Cashiers	182	X						X	X			X		X	
Office machine operators	220	X					X		X			X			
Business machine operators	172	X						X	X			X			

Table L-13 Cont'd.

	Number of Workers Reported	EDUCATIONAL REQUIREMENT: Non-High School Graduate	High School Graduate	1 or 2 Years Technical School	Apprentice	College Graduate	HIRING PRACTICE: Experience not Required	Hire Only Experienced Worker	EXPECTED EMPLOYMENT: Will Remain Constant	Will Increase	Will Decline	AVAILABLE SUPPLY: Adequate Number Available	Surplus Available	Critically Short Supply
OPERATIVES AND KINDRED WORKERS														
Drivers and deliverymen														
Bus driver	197	X					X		X			X		
Chauffeur-taxi driver	136		X					X	X			X		
Service driver	6	X					X		X					X
Truck driver	489	X					X		X			X		
Delivery and route man	208		X				X		X			X		
Other operatives & kindred workers														
Assemblers	2086	X					X		X			X		
Foundry worker	123	X			X		X			X				X
Meat cutter	131				X			X		X		X		
Marine engine assembly	22		X					X	X			X		
Laundry and dry cleaning worker	61		X				X		X			X		
Packers and wrappers	106		X				X		X			X		
Meter reader	40			X			X			X		X		
Recreation worker	17					X		X		X				X
Water treatment or sanitation worker	23		X							X		X		
Welder and flame cutter	390		X					X	X			X		
SERVICE WORKERS EXCEPT PRIVATE HOUSEHOLD														
Protective service workers														
Plant security guard	101		X				X		X			X		
Fire fighter	176		X				X			X				X
Law enforcement officer	261		X				X			X				X
Waiters, cooks, and bartenders														
Bartender	10	X						X	X					X
Busboy	102	X					X			X			X	
Cook, chef or baker	334	X						X		X				X
Waiter/waitress	253	X					X			X		X		
Other service workers														
Barber	10							X	X					X
Beautician	9			X			X		X			X		
Hotel/motel housekeepers	2	X						X	X			X		
Janitor	673	X					X		X			X		
Practical nurse	176			X				X	X					X
FARM LABORERS & FARM FOREMEN														
Farm foremen	3			X				X						X
Farm implement mechanic	10						X			X		X		
Farm workers	18	X					X							X
Florist	15	X					X		X			X		
Gardner-yard care	25	X					X		X			X		
LABORERS, EXCEPT FARM AND MINE														
Marine service worker	6		X				X		X			X		
Service station attendant	9	X					X		X			X		
Unskilled	4463	X					X				X	X		

Table L-13 Cont'd.

	Number of Workers Reported	EDUCATIONAL REQUIREMENT: Non-High School Graduate	High School Graduate	1 or 2 Years Technical School	Apprentice	College Graduate	Experience not Required	HIRING PRACTICE: Hire Only Experienced Worker	Will Remain Constant	Will Increase	Will Decline	EXPECTED EMPLOYMENT: Adequate Number Available	Surplus Available	AVAILABLE SUPPLY: Critically Short Supply
Other clerical workers														
Stock clerk	404		X				X			X		X		
Checkers	102	X					X		X			X		
General office worker	578		X				X		X			X		
Other clerical & kindred workers	543		X				X		X			X		
SALES WORKERS														
Sales clerk, retail	1126		X				X			X			X	
Salesmen	465		X					X		X		X		
CRAFTSMEN, FOREMEN, & KINDRED WORKERS														
Construction craftsmen														
Heavy equipment operator	73	X						X	X			X		
Bricklayer, mason	106				X			X	X				X	
Carpenter	299				X			X	X				X	
Electrician	319				X			X		X			X	
Painter	132	X						X	X			X		
Plasterer	14				X			X	X			X		
Plumber, pipe fitter	159				X			X		X		X		
Grademen	4	X						X		X		X		
Fence erectors	15		X					X	X				X	
Foreman-first line supervisor	1124		X					X	X				X	
Mechanics & repairmen														
Air conditioning, refrig., and/or heating mechanic	5				X			X	X				X	
Appliance repairman	63		X					X	X			X		
Auto mechanic	239		X					X		X			X	
Aviation mechanic	8				X			X	X				X	
Electronics repairmen	8			X				X	X			X		
Mechanic-general	177		X					X	X				X	
Dispatcher	30		X					X	X			X		
Metal craftsmen--except mechanics														
Heat treat, annealer	49		X					X	X			X		
Machine operator	7785	X					X			X			X	
Machinist-general	1025				X			X		X			X	
Millwright	259				X			X	X				X	
Pattern & model maker	167				X			X	X				X	
Secondary machine operator	10		X				X			X		X		
Tool and die maker	2293				X			X		X			X	
Plater	43	X					X			X			X	
Other Craftsmen														
Plastics worker	177		X				X			X		X		
Maintenance men	6		X					X	X				X	
Machine set-up	5				X			X					X	
Seamstress	2		X				X		X			X		
Cranemen, hoist workers	5			X				X				X		
Linemen & servicemen-utility	14		X				X		X			X		
Boat builder	4		X					X		X			X	
Cabinet maker	74				X			X	X				X	
Printer	61		X					X	X				X	
Steam fitter	38				X			X					X	
Sheet metal worker	142				X			X	X				X	
Steel worker	142	X					X			X			X	

The survey was not designed to measure employment characteristics of occupations for which the college degree is a requirement. The responses that indicated the degree requirement were representative of very small samplings, except for accountants, registered nurses, dieticians, and managers. A significant number of employers indicated college graduation is a requirement for employment in these occupations.

Entry Occupations.

Employers differed in their indications of entry occupations and occupations requiring previous experience. For each occupation wherein a significant number of employers reported, some employers indicated that experience is a hiring requirement. The consensus of all employers was that 42 occupations are entry occupations and 71 occupations require experience. Of the 42 entry occupations

19 are in sales and service
9 are in stenographic and clerical
7 are in manufacturing
3 are in health services
4 are in agriculture

In 32 of these 42 occupations, employers reported an adequate or surplus supply of available workers. Because these appear to hold the most promise for job entry, the ten occupations reported as entry jobs characterized by a short supply of available workers were examined in detail. The significant characteristics of these occupations are detailed in Table L-14.

Table L-14
RANK, EARNINGS, AND EDUCATIONAL ATTAINMENT FOR OCCUPATIONS REPORTED AS ENTRY OCCUPATIONS IN SHORT SUPPLY BY MACOMB COUNTY EMPLOYERS, 1965

Occupation (all data pertain to 1959)	Rank*	Median Annual Earnings**	Median School Years Completed	Percent Employed Full Year**	Percent of Women in Occupation
Steel Worker	135	$6,381.	10.0	35.5	.4
Fire Fighter	138	6,430	12.1	94.7	.2
Law Enforcement Officer	161	5,838	12.2	91.5	2.7
Foundry Workers	177	5,312	8.9	40.6	1.7
Operatives, Man'f'g.	212	5,102	9.4	42.7	30.7
Retail Sales Clerk	251	4,202	12.1	62.6	53.6
Plater	260	5,193	8.7	48.4	4.4
Hospital attendant, Nurse's aide	288	2,280	10.6	54.1	73.6
Farm Worker	316	1,465	7.9	42.0	10.5

*Ranked by average annual earnings in 321 occupational groups according to the U. S. Bureau of Labor Statistics.

** Based upon data for Detroit Metropolitan Area, 1960.

Table L-15

EMPLOYERS' INDICATIONS OF EXPERIENCE REQUIREMENTS FOR SELECTED OCCUPATIONS, MACOMB COUNTY, 1965

OCCUPATIONS DEFINITELY AVAILABLE FOR ENTRY EMPLOYMENT
(as determined by the significant ratio of responses)

	Employes Covered	Number of Employers Responding: Entry Occupation	Experience Required	Percent of Entry Occupations
PROFESSIONAL, TECHNICAL & KINDRED WORKERS				
Hospital Attendant	32	4	1	80.0
CLERICAL & KINDRED WORKERS				
Typists	773	47	22	68.1
Stock Clerk	404	11	7	61.1
Checkers	102	6	1	85.7
Other Clerical	543	64	42	60.4
General Office Worker	578	50	25	66.6
SALES WORKERS				
Sales Clerks	1000	17	13	56.7
CRAFTSMEN, FOREMEN & KINDRED WORKERS				
Plastic Worker	177	6	1	85.7
OPERATIVES & KINDRED WORKERS				
Truck Driver	489	62	26	70.5
Delivery & route man	208	21	5	80.8
Assemblers	2086	25	6	80.6
Foundry Worker	123	8	3	72.7
Packers and Wrappers	106	6	2	75.0
Steel Worker	142	6	1	85.7
SERVICE WORKERS EXCEPT PRIVATE HOUSEHOLD				
Plant Security Guard	101	8	3	72.7
Janitor	673	33	5	86.8
LABORERS, EXCEPT FARM & MINE				
Unskilled	4463	147	18	89.1

Table L-16

EMPLOYERS' INDICATIONS OF EXPERIENCE REQUIREMENTS FOR SELECTED OCCUPATIONS, MACOMB COUNTY, 1965

OCCUPATIONS FOR WHICH A HIGH RATE OF RESPONSE INDICATES EXPERIENCE IS REQUIRED FOR EMPLOYMENT
(as determined by the significant ratio of responses)

	Employes Covered	Number of Employers Responding: Entry Occupation	Experience Required	Percent of Entry Occupations
PROFESSIONAL, TECHNICAL, & KINDRED WORKERS				
Mechanical Technician	139	5	15	25.0
Quality Control Technician	486	12	19	38.7
Registered Nurse	243	5	11	31.3
X-Ray Technician	18	1	6	14.3
Accountant	236	14	58	19.4
Drafting & Design Technician	707	15	41	26.8
MANAGERS, OFFICIALS & PROPRIETORS-EXCEPT FARM				
General Office, Plant Manager	357	39	65	37.5
CLERICAL & KINDRED WORKERS				
Secretaries	459	27	64	29.7
Bookkeepers	528	47	74	38.8
SALES WORKERS				
Salesmen	465	21	39	35.0
CRAFTSMEN, FOREMEN, & KINDRED WORKERS				
Heavy Equipment Operator	73	5	11	31.3
Bricklayer, Mason	106	2	14	12.5
Carpenters	299	6	21	22.2
Electrician	319	3	39	7.1
Painter	132	7	18	28.0
Plumber, Pipe fitter	159	4	17	19.0
Foreman-First line Supervisor	1124	12	85	12.4
Auto Mechanic	2309	10	38	20.8
Mechanic-General	177	6	21	22.2
Machinist-General	1025	11	41	21.2
Pattern & Model Maker	167	2	12	14.3
Tool & Die Maker	2293	2	63	3.1
Cabinet Maker	74	2	7	22.2
Sheet Metal Worker	142	2	13	13.3
OPERATIVES & KINDRED WORKERS				
Welder & Flame Cutter	390	10	30	25.0
SERVICE WORKERS EXCEPT PRIVATE HOUSEHOLD				
Practical Nurse	176	2	6	25.0

A small number of employers reported very limited employment of hospital attendants, nurses' aides, platers, steel workers, foundry workers, and farm workers. These are not sufficient indicators that these occupations hold promise for job-seekers. In addition, some jobs in this group are traditionally hard to fill in times of high employment because of their low pay and status, their seasonal nature, or arduous working conditions.

Six employers of fire fighters, an entry occupation, were evenly divided over the adequacy of the available supply of persons to fill these jobs. Law enforcement officers were reported by four employers as in short supply. Pre-employment standards of health, education, and other requirements for fire fighters and law enforcement officers make these occupations unavailable for many job seekers.

Employers of 1126 retail sales clerks reported, by a 28 to 25 margin, that retail sales is an entry occupation, and 25 to 20 that a critically short supply exists in the occupation. The narrowness of these margins of opinion and the looseness of the occupational classification do not permit the pin-pointing of specific job opportunities for the inexperienced. Undoubtedly, many of the available jobs are attractive only to the marginal worker because of the low pay offered. The size of this group makes further detailed examination advisable. Table L-15 indicates those occupations which a significant proportion of employers reported as entry jobs. Table L-16 identifies jobs for which experience is a hiring requirement.

Machine Operators.

The largest single group of employees reported by businesses participating in the Survey of Manpower Needs was reported under the entry machine operator. 95 employers reported that they presently employ 7785 persons in this category. Because of the size of this group and the traditional importance of this occupation as entry employment for young men with few, if any, developed occupational skills, a close scrutiny of all reports on the employment of machine operators was undertaken. The results of this examination are detailed in Table L-17.

Table L-17

SUMMARY OF EDUCATIONAL, HIRING, SUPPLY CHARACTERISTICS OF MACHINE OPERATORS AS REPORTED BY 95 EMPLOYERS, JUNE, 1965

Number of Employees	Totals All Employers Reporting Machine Operators (95) 7785	Percent	Operatives Employers Requiring High School Graduation or Less (64) 5692	Percent	Craftsmen Employers Requiring Post-High School Education (31) 1093	Percent
Educational Requirement						
Less than high school	32	33.7	32	50.0	--	----
High school graduate	32	33.7	32	50.0	--	----
Technical school 1 or 2 yrs.	11	11.6	--	----	11	35.5
Apprentice	20	21.0	--	----	20	64.5
Hiring Practice						
Entry Occupation	50	56.2	39	61.9	11	40.7
Experience necessary	39	43.8	24	38.1	16	59.3
Expected Employment 1965-70						
Need will be constant	24	30.0	19	34.5	10	34.5
Will add workers	47	58.8	29	52.7	17	58.6
Will drop workers	9	11.2	7	12.8	2	6.9
Available Supply of Workers						
Adequate number available	30	36.6) 37.8	28	48.3) 50.0	2	8.3
Surplus Available	1	1.2)	1	1.7)	--	----
Critically short supply	51	62.2	29	50.0	22	91.7
Net change 1965 - 1970						
Total reported	7785		5692		1093	
Total employers will drop	3530		3410		120	
Total employers will add	2600		2325		275	
Net change	- 930		-1085	(-19%)	+ 155	(+14%)

Two thirds of all employers of machine operators reported that this occupation can be filled by persons possessing a high school education or less. Other employers specified that technical school and/or an apprenticeship is required for employment. On the assumption that employers who require post-high school education and/or apprenticeship for machine operators are in reality reporting skilled machinists and craftsmen, such as jig borer operator, thread grinder, tool maker, or die maker, the 31 returns from these employers were studied separately. A comparison of the information reported on these returns concerning educational and experience requirements, expected future demand, and available supply, supports the assumption that the occupations being reported are highly skilled, rather than semi-skilled. On this basis, these 31 returns were subtracted from the total group identified as machine operators, and the returns for the latter group were re-examined. The newly-defined group of machine operators has a definitely altered profile. The number of operatives covered by the Survey shrinks from 7785 to 5692, with a corresponding increase in the craftsmen occupations. The most significant effect of this re-classification is the disclosure that one-half of the employers of machine operators, identifiable as semi-skilled operatives, do not anticipate a shortage of workers in the occupation. For machine operators, identified as craftsmen by their employers' education requirements, 22 of 24 responding employers indicated a critically short supply of available workers.

While the division of the reported machine operators into operatives and craftsmen on the basis of the educational requirement for entry employment alone is not completely reliable, the employers anticipated needs for these occupations in the five year period, 1965 to 1970 is significant. Employers of the group identified as operatives predict a decline of 19% in the employment of machine operators. The group identified as craftsmen by the significant education required for entry employment is expected to increase by 14%.

Employment Outlook.

When queried as to their expected need for employees during the 1965-70 period, many employers were reluctant to predict their future needs for specific skills. Only one classification, unskilled laborer, was reported as a declining need, 71 occupations were reported as remaining constant in demand, and employment in 39 occupations is expected to increase by 1970. An adequate supply of available workers was reported for 64 occupations, a surplus supply for one, busboy, and a critically short supply for 50 occupations. (Table L-13).

The small return (less than one response from each five employers contacted) to the Survey of Manpower Needs should be considered when viewing employers' needs for specific occupations. Table L-13 does not evaluate the numbers of employees reported by each reporting employer. Thus the opinion of the employer of three stenographers is tabulated as equal to the opinion of the employer of thirty stenographers. Table L-13 indicates only that response

to each question which was most frequently reported by employers rather than the proportion of all possible responses. This practice is employed to emphasize that the value of the Survey lies in the presentation of generalized collective aspects of local employment, and to discourage the Survey results from being considered in themselves as adequate evidence of the quantitative need for specific occupational education programs.

In assessing the employers' reports, several factors should be noted. The survey was taken at a time of unprecedented high employment which would cause the number of job skills in short supply to be reported rather high. The large number of responses indicating that the need for particular trades will remain unchanged over the next five years seems unrealistic in view of the same high employment factor. Perhaps employers felt that their indication of future need for specific occupations might obligate them should this need fail to materialize. This interpretation is borne out by the cautious nature of some of the written comments about existing occupational education programs in the schools.

Table L-18

EMPLOYERS' EVALUATION OF YOUNG PERSONS WHO APPLY FOR ENTRY JOBS

	TOTAL ALL EMPLOYERS 516	PERCENT OF ALL EMPLOYERS 516=100%	
Most Young High School Graduates are Reasonably Well Prepared for Entry Employment.	157	30.4	
Young High School Graduates Need a Considerable Amount of Additional Education and/or Training Before They Can Perform Satisfactorily.	138	26.7)	
Young High School Graduates are Virtually Unemployable Because They Lack Occupational Education and Training.	119	23.1)	49.8
Did Not Answer	102	19.8	
Do You Find That Employees Who Have Had Occupational Training in High School are Better Prepared for Entry Jobs in Your Firm?			
Yes	225	43.6	
No	61	11.8	
No opinion	72	14.0)	44.6
Did not answer	158	30.6)	

Employers who were contacted by personal interview tended to be more openly critical of school programs than the employers who responded by mail.

Employability of Job Seekers

When asked to evaluate the employability of young high school graduates who apply for jobs, employers indicated, by a 5 to 3 margin, that high school graduates are virtually unemployable or need a considerable amount of additional training for satisfactory employment. Employers reported, by 4 to 1, that persons with high school occupational training are better prepared for employment. Responding employers feel that present school programs are meeting their occupational needs very well, or fairly well, by almost 2 to 1.

Table L-19

EMPLOYERS' OPINIONS CONCERNING OCCUPATIONAL PROGRAMS IN MACOMB COUNTY SCHOOLS

	TOTAL ALL EMPLOYERS 516	PERCENT OF ALL EMPLOYERS 516=100%	
To What Extent do Existing Educational Facilities in Macomb County Meet the Occupational Training Needs of your Company?			
Very well	38	7.4)	29.9
Fairly well	116	22.5)	
Poorly	84	16.3	
No opinion	110	21.3)	53.8
Did not answer	168	32.5)	
If You Think Occupational Education and Training in the Area Need Improvement, Which of the Following Developments Would You Support?			
Strengthening of occupational programs in the high school.	159	30.8	
Area vocational school(s) for high school occupational training.	131	25.4	
Co-op work-study programs.	118	22.9	
More and stronger community college occupational programs.	120	23.3	

The inference can be made that employers are quite frank in criticizing the employability of the high school graduate but reluctant to criticize the schools. A significantly large percentage (53.8), of the respondents do not have, or declined to reveal, opinions as to the adequacy of occupational programs in the public schools. There was fairly uniform support for four suggested means of upgrading occupational education programs at the high school and community college levels.

Table L-20

EMPLOYERS' ADVICE FOR THE IMPROVEMENT OF OCCUPATIONAL EDUCATION IN MACOMB COUNTY SCHOOLS

240 RECOMMENDATIONS FOR PROGRAM IMPROVEMENT	FREQUENCY	PERCENT OF ALL RECOMMENDATIONS 240=100%
Basic education	44	18.3
Specific occupational programs	78	32.3
Economic education	14	5.8
Character traits and attitude improvement	104	43.3

Employers were more emphatic when they offered their own comments about the specific improvements in school programs which are required to upgrade the employability of job seekers. Two of every five recommendations were for education to improve attitudes and basic character, one of every three was for specific occupational programs, and one of five recommended improved basic education. A small number of employers requested economic education so that the new employee would have an appreciation of the free enterprise system.

In-service Training.

Employers were asked which types of formal training programs are being operated for the in-service training of their workers. The answers are detailed by type and size of business in Table L-21.

The most frequently reported training program was apprenticeship, with almost half of the 171 programs reported by manufacturing companies. Employers reported 91 supervisory training programs, and 69 technician training programs. As expected, many employers operate more than a single program. The larger companies (measured by number of workers reported) operate the greatest number of programs, but even the 170 employers of 1 to 10 workers reported 98 training programs. Obviously, these reports indicate nothing about the depth or extensiveness of the training programs. In a few cases wherein small companies reported several training programs, it is reasonable to assume that the definition used for a training program is a very loose one.

One purpose of the Survey was the identification of employers' interest in participating with the schools to serve or upgrade their training needs. The results of this measurement are detailed in Table L-22.

Table L-21

PRESENT IN-SERVICE TRAINING PROGRAMS OF
MACOMB COUNTY EMPLOYERS RESPONDING

QUESTION: Which of the Following Training Programs Does Your Company Operate?							
Type of business and number of establishments ( )		Apprentice-ship	Super-visory Training	Technician Training	Plant Manage-ment	Executive Development	TOTAL
Agricultural services	(9)	2	-	-	-	-	2
Banking & finance	(11)	1	3	-	-	1	5
Commercial foods & dairy	(4)	2	-	-	-	-	2
Construction	(48)	25	5	1	-	2	33
Education	(21)	-	5	3	-	2	10
Entertainment & recreation	(4)	2	1	-	-	-	3
Government	(21)	6	11	6	-	4	27
Hospital, medical, dental	(21)	8	6	6	-	-	20
Manufacturing	(183)	83	22	21	7	9	142
Insurance	(13)	2	10	1	-	1	14
Marine services	(3)	1	1	-	-	-	2
Printing & publishing	(4)	3	-	-	-	-	3
Professional (non-medical)	(20)	3	2	7	-	-	12
Real estate	(6)	1	2	-	-	1	4
Restaurant & tavern	(21)	-	5	1	-	-	6
Retailing	(63)	19	10	14	-	9	52
Service establishment	(26)	9	2	1	-	-	12
Transportation	(6)	1	-	2	-	-	3
Utilities	(2)	-	2	2	-	2	6
Wholesaling	(12)	2	3	3	1	-	9
Other	(18)	1	1	1	-	-	3
TOTAL	516	171	91	69	8	32	370
Employers grouped by number of employes							
1-10 Employes	(170)	40	31	23	1	3	98
11-25 Employes	(91)	33	12	14	2	4	65
26-99 Employes	(139)	62	16	10	-	6	94
100-500 Employes	(74)	28	18	11	-	8	65
500 + Employes	(15)	7	13	11	5	9	45
No. of Employes not reported	(27)	1	1	-	-	1	3
TOTAL	516	171	91	69	8	31	370

Table L-22

EMPLOYERS' INTEREST IN USING PUBLIC SCHOOLS
TO MEET THEIR TRAINING NEEDS

QUESTION: Which of Your Present Training Programs Would You Prefer to Turn Over to the Schools?

Type of business and number of establishments ( )		Apprentice-ship	Super-visory Training	Technician Training	Plant Manage-ment	Executive Development	TOTAL
Agricultural services	(9)	1	1	-	-	-	2
Banking & finance	(11)	-	2	-	-	2	4
Commercial foods & dairy	(4)	1	1	-	-	1	3
Construction	(48)	12	4	4	1	1	22
Education	(21)	1	1	3	-	-	5
Entertainment & recreation	(4)	-	-	1	-	-	1
Government	(21)	2	3	2	-	3	10
Hospital, medical, dental	(21)	4	3	6	-	2	15
Manufacturing	(183)	56	18	22	8	11	115
Insurance	(13)	-	2	-	-	1	3
Marine services	(3)	-	-	1	-	-	1
Printing & publishing	(4)	2	1	-	-	-	3
Professional (non-medical)	(20)	1	-	5	-	-	6
Real estate	(6)	-	1	-	-	-	1
Restaurant & tavern	(21)	-	2	2	-	-	4
Retailing	(63)	9	4	7	-	4	24
Service establishment	(26)	6	-	1	-	-	7
Transportation	(6)	-	1	-	-	-	1
Utilities	(2)	-	-	1	-	-	1
Wholesaling	(12)	-	1	1	1	-	3
Other	(18)	-	1	1	1	-	3
TOTAL	516	95	46	57	11	25	234
Employers grouped by number of employes							
1-10 Employes	(170)	25	14	19	2	4	64
11-25 Employes	(91)	14	7	12	2	3	38
26-99 Employes	(139)	35	9	10	7	10	71
100-500 Employes	(74)	16	14	11	-	6	47
500 + Employes	(15)	4	2	4	-	2	12
No. of Employes not reported	(27)	1	-	1	-	-	2
TOTAL	516	95	46	57	11	25	234

Employers indicated an interest in using the public schools for 234 training programs, or 63.3% of the 370 programs reported. Least interest was reported by employers of 500 or more workers, indicating that these employers are equipped to meet their own training needs, or that satisfactory arrangements with public institutions have been provided already. The positive respondents to this query should be the objective of further inquiry by Macomb County Community College.

Qualification of the Survey of Manpower Needs.

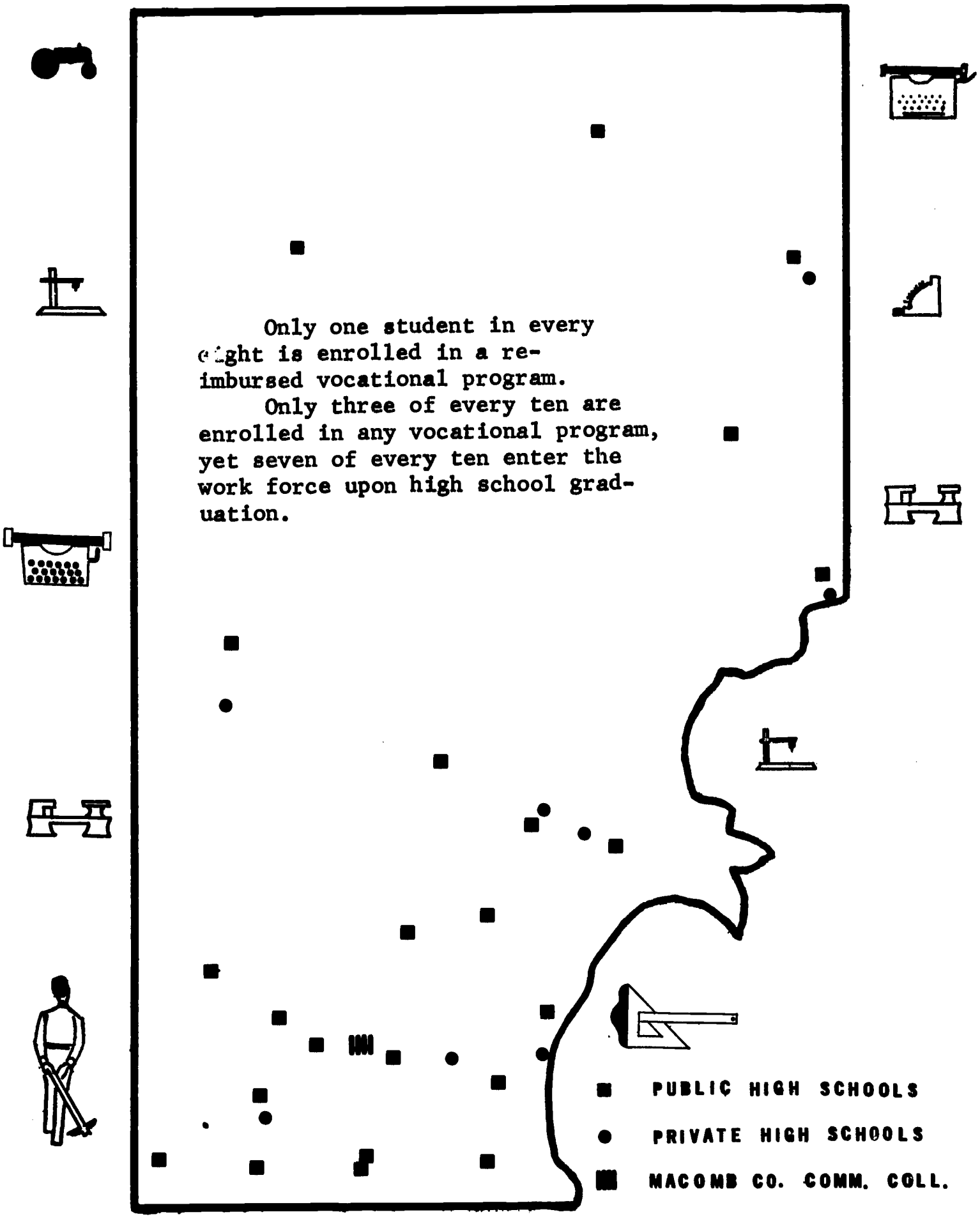
Employer surveys, such as the one taken in connection with this study, have limitations and should be used with caution. Mr. Sol Swerdloff, Bureau of Labor Statistics, United States Department of Labor, speaking at a June 25, 1964 conference, commented on this technique as follows:

> "This method has certain drawbacks. Few companies or other employers devote time to making long-term projections of their activity or manpower requirements, and thus most employers tend to make only a hasty guess when confronted with a request for the number of workers they will need in some future year. Even if all employers guessed correctly, they could not provide the data for firms not now in existence but which will be created in the future. The summation of employers' reports, therefore, has often resulted in projections of manpower requirements which appeared to be unreasonable..."

Many of the returned Survey questionnaires were incomplete, indicating that the information sought was not available, too detailed, or regarded as confidential by the employer. Other returns contained contradictions which indicated that the questionnaire itself was confusing to persons who were desirous of cooperating with the study. The reliability of a completed questionnaire derives from the knowledgeability of the person who is supplying the information. This knowledgeability can only be assumed for mailed-in responses. Financial and manpower resources for this study were too limited to permit extensive personal interviewing of employers. This factor and an apparent apathy of many Macomb employers concerning this study were responsible for the low proportion of responses to the Survey.

The 'moment of time' fallacy must be considered in evaluating the significance of questionnaire responses. June, 1965, during which the employer survey data was collected, was a period of exceptionally high employment. It is a fairly safe assumption that employers' indications of skills needs, and the availability of workers differ markedly from the same measurements taken in June, 1964, or perhaps, June, 1966. It can be assumed, however, that educational and experience requirements, at least as reported, would remain more consistent.

EXISTING VOCATIONAL PROGRAMS AND FACILITIES IN MACOMB COUNTY HIGH SCHOOLS



VOCATIONAL EDUCATION IN MACOMB COUNTY

Types of Measurements

The survey has undertaken a number of measurements and evaluations of the status and adequacy of the existing vocational education programs and services in Macomb County high schools. A special committee of the Citizens Advisory Committee compiled the first detailed balance sheet ever prepared for any educational curriculum in Macomb County. The complete report of this district-by-district inventory of vocational programs, enrollments, and facilities has been forwarded to the superintendents and vocational directors of the County school districts for their information and use. Data which is of interest and significance to all County educators and the public are summarized below. Summary reports of vocational education reactions and evaluations by students, employers, high school principals, and guidance counselors are also included.

The complete tabulations of the survey of Macomb County's 1965 senior class are included in this report because the responses of these students convey strong implications of needed improvements in school programs and services. This is the first County-wide attempt to solicit students' opinions as one basis for the evaluation of school services. Responses are separately reported by students' sex, types of school attended, students' programs of study, and students' indications of academic ranking. These reports deserve the careful study of County school administrators, teachers, and counselors.

Conclusions

From these survey activities and data from State reports on vocational enrollments and reimbursements in Macomb County, a fairly accurate picture of local efforts in vocational education can be drawn. In summary, these sources indicate that Macomb County vocational education efforts compare favorably with vocational education in other counties in Michigan, but can only be described as inadequate, when compared to the needs of a large proportion of Macomb County high school students for such training. Reports filed with the State Department of Education by Macomb County school districts indicate that 63.5% of the 1964 County high school graduates did not enroll in four-year or two-year colleges or in business or trade schools. This large proportion of graduates who leave high school to enter directly into the work force is double the number of persons who prepared for employment through a high school vocational program, and five times the number of Macomb County students who are enrolled in a vocational program which meets the minimum state standards for re-imbursement.

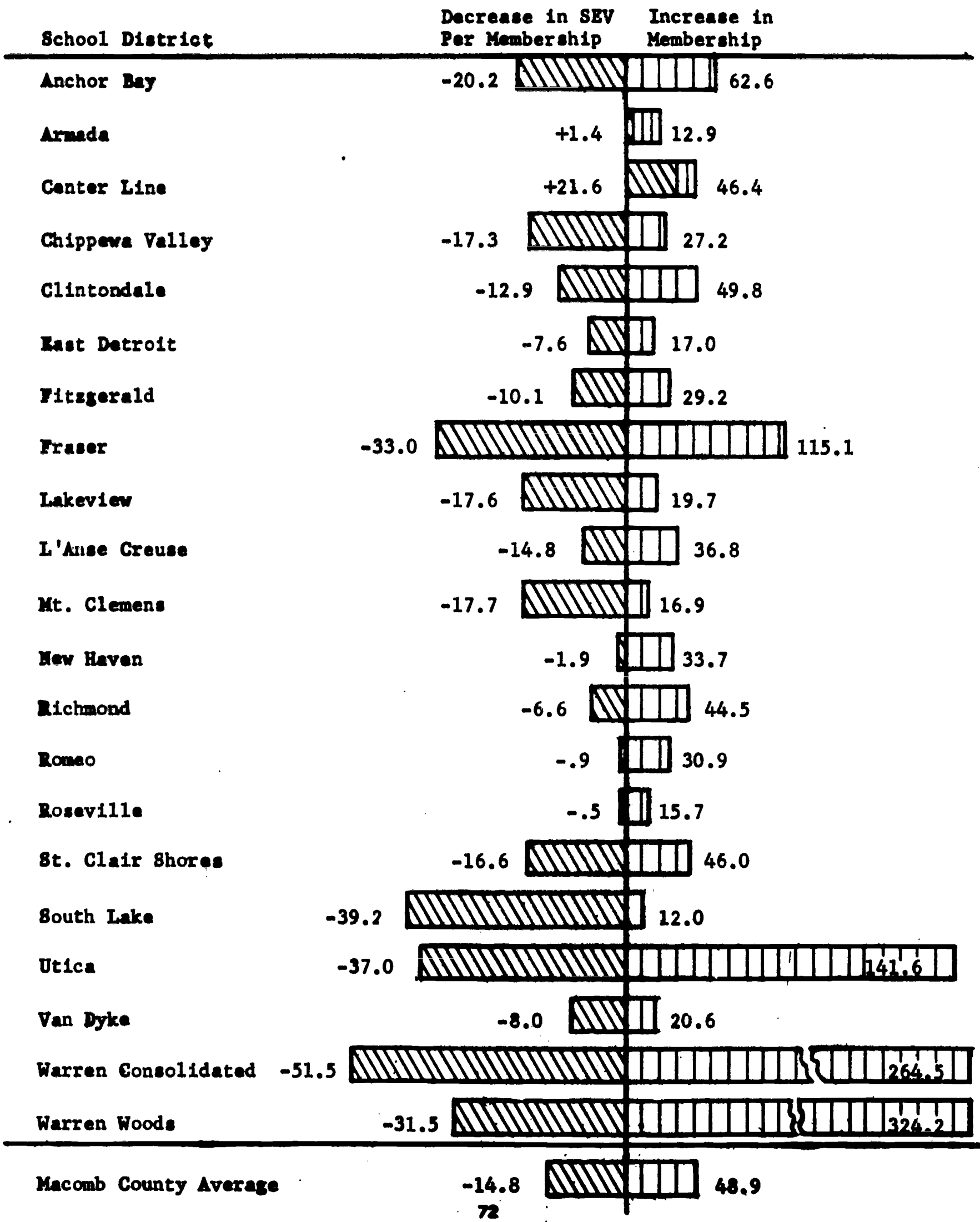
Costs of Vocational Education.

Vocational education programs are among the most costly services which the public school is expected to provide. The more sophisticated programs and the specialized terminal portions of vocational programs are costliest. The explanation for the underdevelopment and low enrollments in vocational programs which meet the State-determined standards for reimbursement is found in the examination of the financial condition of Macomb County school districts. Graph V-1 illustrates the most significant financial problem which affects Macomb County school districts. The school age population increase of most County districts has been so large that serious dislocation has resulted for the local district's ability to maintain the standards of its educational programs. For the five-year period 1959-64, 19 of the 21 local school districts experienced a reduction in the tax base, when measured as the State Equalized Valuation per membership child in the district. In most of these districts, the loss in tax base per membership child has been roughly proportional to the increase in memberships during the 1959-64 period.

One purpose of state and federal-derived support for vocational education programs is to encourage greater local effort to provide such programs. However, financially-pressed districts frequently cannot participate in the reimbursement. School districts which have the local financial resources to provide vocational facilities and to hire vocationally certifiable teachers are thereby enabled to qualify for reimbursement of vocational programs. A comparison of the per capita operating costs of Macomb County school districts (Graph V-2) and the vocational programs reimbursement per student enrolled in grades 11 and 12 (Graph V-3) illustrates this relationship. Only two County districts with per capita operating costs below the median for all County districts in 1964-65, received vocational reimbursements at per capita rates above the median for all County districts. In both of these schools, extremely small 11th and 12th grade enrollments caused the reimbursement of a single modest vocational program to reflect this apparent affluence. The two County districts with per capita expenditures significantly above County-wide levels also receive vocational reimbursements at per capita level well above the other County districts. It is likely that local educational leadership in these districts is partly responsible for higher levels of local education expenditures and for vocational education programs which achieve higher rates of reimbursement.

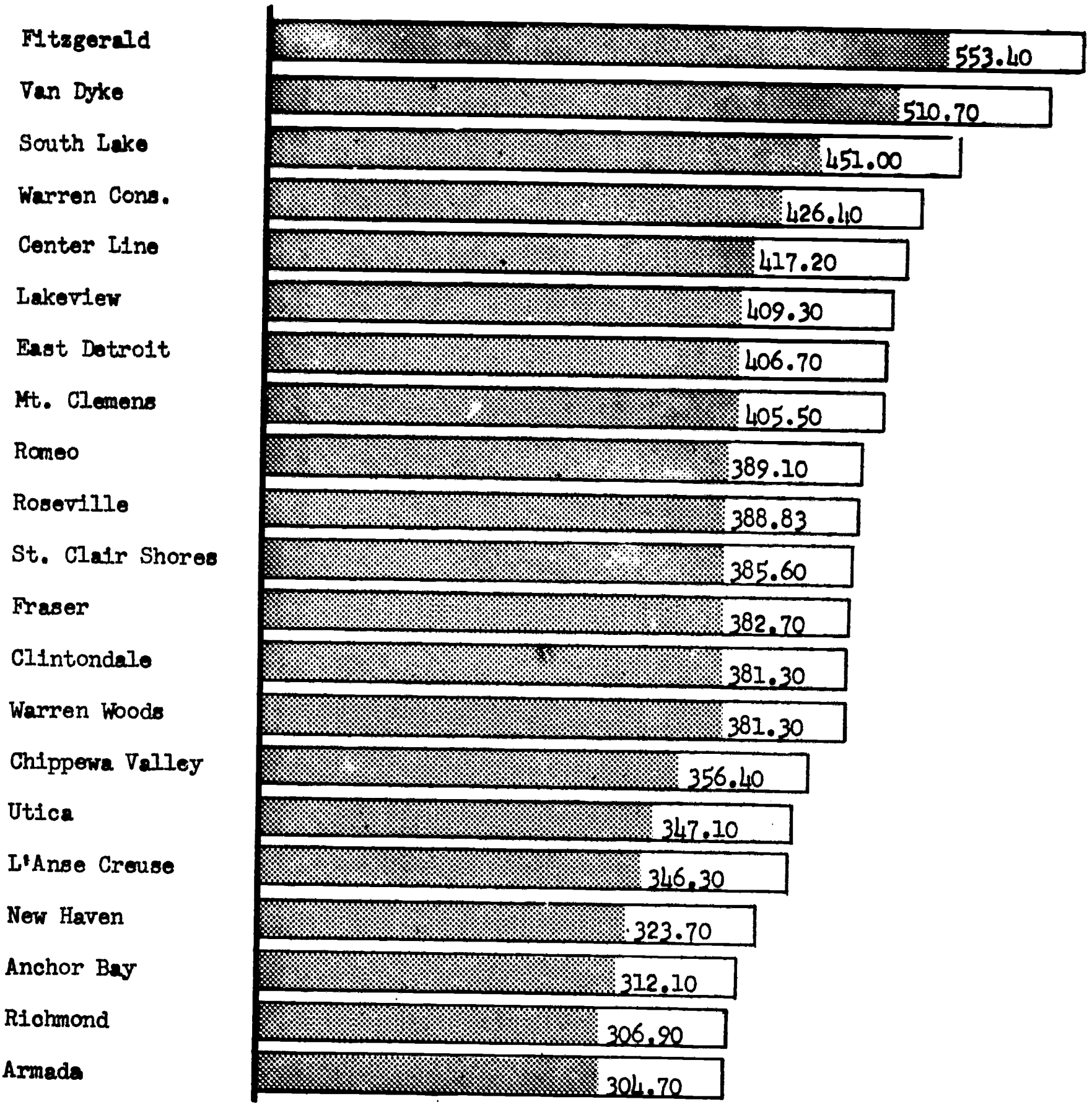
Complicating the problems for local districts which result from the County's position as the fastest-growing county in Michigan is the extent to which the balance of total public school costs have been shifted from state-derived support to local resources during the ten-year period from 1954-55 to 1964-65. Graph V-4 illustrates this situation as it affects all of Michigan's school districts. The local district's share of financing the public schools increased from 38% in 1954-55 to 50.2% in 1964-65, while the state share decreased from 57.7% to 46.4% over the same period. Table V-5 indicates that state support per student has been raised by the Legislature during recent years, but not on a scale which is in proportion with the increasing costs of providing public education.

COMPARISON OF INCREASES IN RESIDENT MEMBERSHIPS AND DECREASES IN STATE EQUALIZED VALUATIONS PER RESIDENT MEMBERSHIP FOR MACOMB COUNTY SCHOOL DISTRICTS, 1959 to 1964



V-2

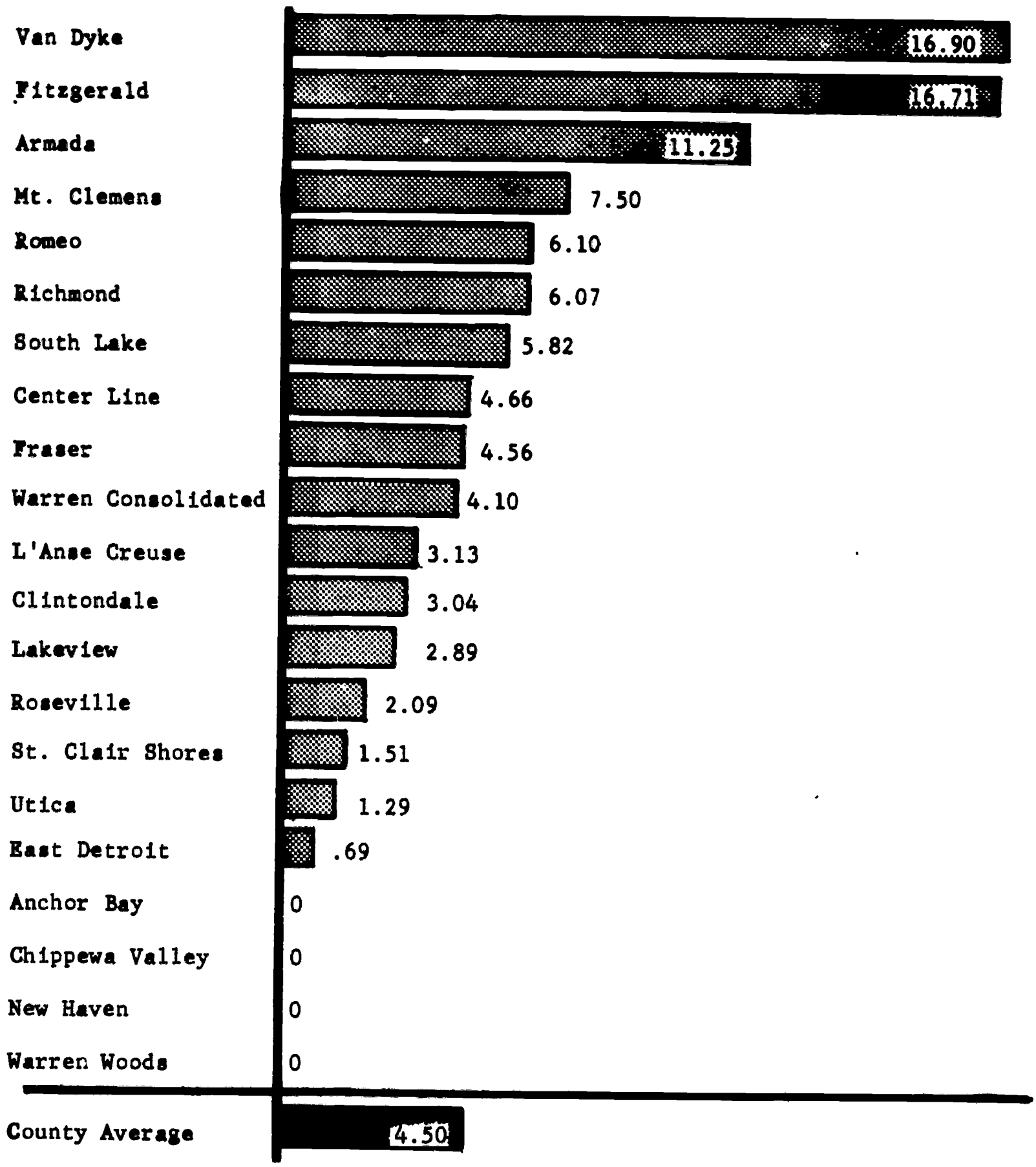
PER CAPITA OPERATING COSTS
MACOMB COUNTY PUBLIC SCHOOL DISTRICTS 1964-65



V-3

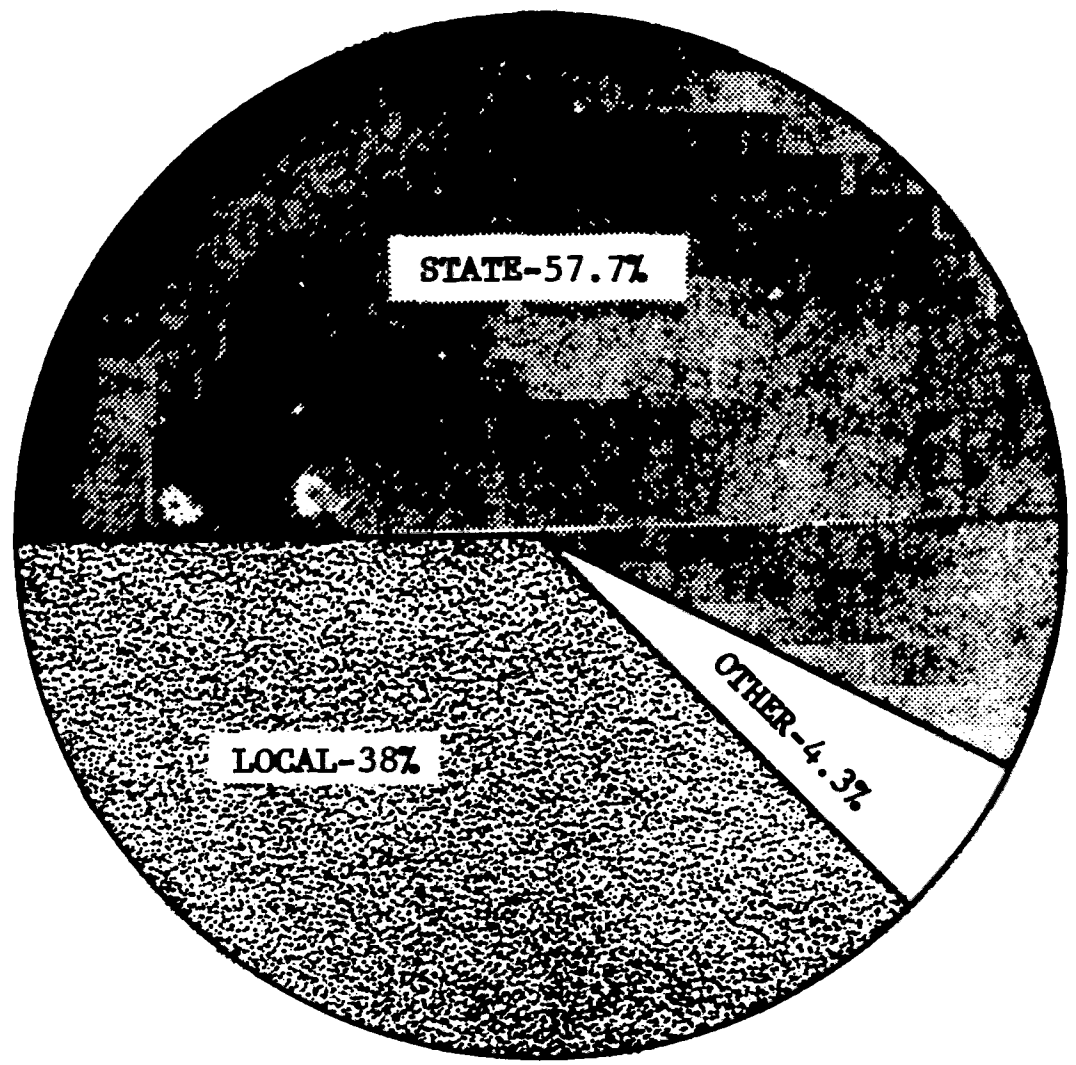
VOCATIONAL PROGRAM REIMBURSEMENTS PER STUDENT IN GRADES 11 AND 12

MACOMB COUNTY PUBLIC HIGH SCHOOLS 1964-65

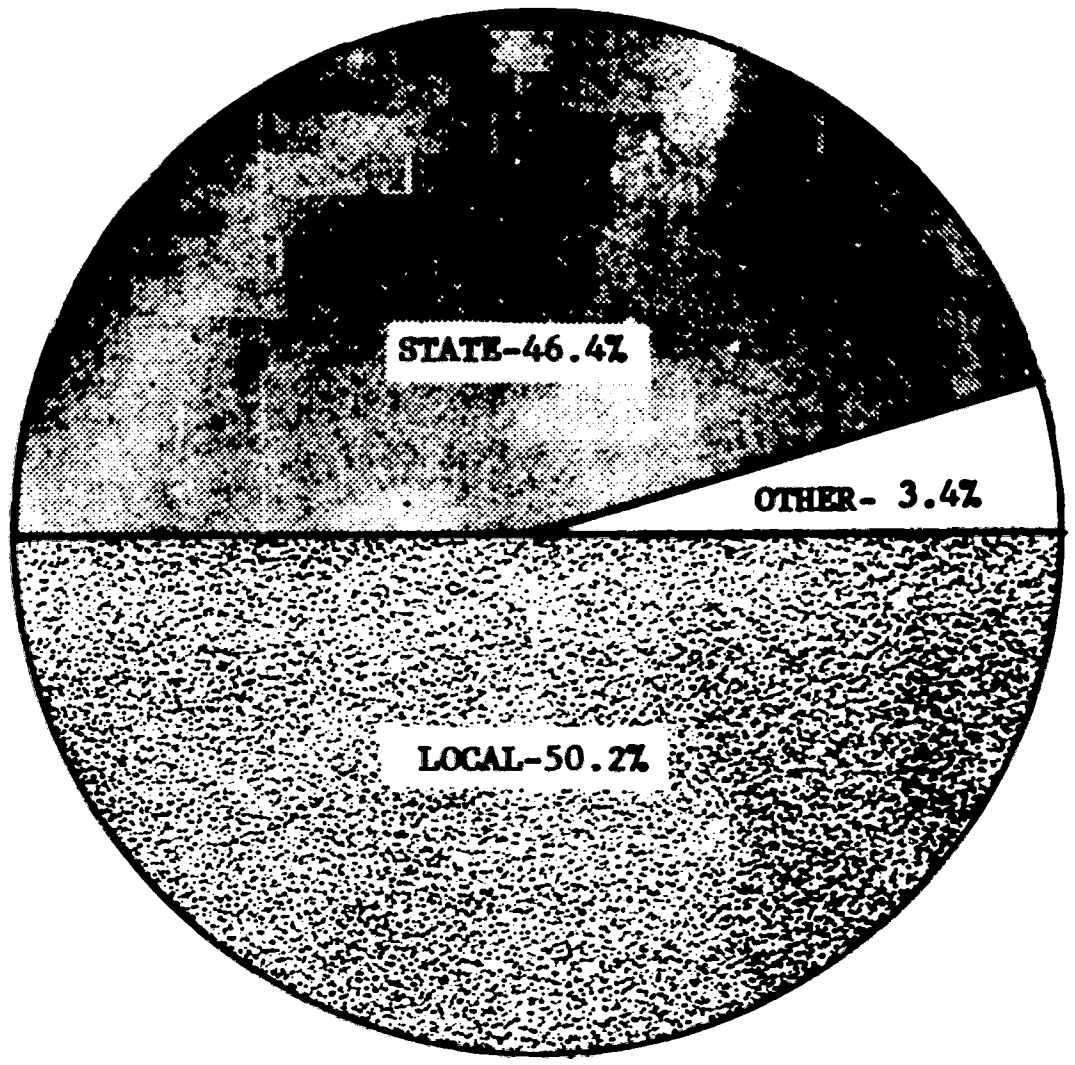


Homemaking reimbursements not included

CHANGING PATTERN OF FINANCIAL SUPPORT FOR PUBLIC SCHOOLS IN MICHIGAN
1954-55 to 1964-65



1954-55



1964-65

CURRENT OPERATION REVENUE RECEIPTS PER PUPIL
AND PERCENT BY SOURCE FOR THE PERIOD 1959-60 TO 1964-65

School Years	Local Property Tax	State Taxes	Other	Total
1959-60	$170 (47.4%)	$174 (48.4%)	$15 (4.2%)	$359
1960-61	185 (49.7)	171 (46.0)	16 (4.3)	372
1961-62	192 (50.4)	172 (45.1)	17 (4.5)	381
1962-63	198 (49.2)	189 (47.0)	16 (3.8)	403
1963-64	208 (50.5)	188 (45.8)*	15 (3.7)*	411*
1964-65	215 (50.2)	199 (46.4)*	15 (3.4)*	429*

*Estimated

Increases in state aid have been reduced in effectiveness by legislative exemption from full local taxation of the personal and real property of special groups such as veterans, elderly persons, and manufacturers. The State Tax Board has required changes in assessing practices which are reducing the tax base in some school districts.

Graph V-6 indicates the sources of funds for local programs of vocational education in Michigan for the biennium, 1962-64.

State support for vocational education in the local districts equalled or surpassed federal support from 1949-50 to 1959-60. Since the latter year, however, state support has remained virtually unchanged, while federal funds have increased.

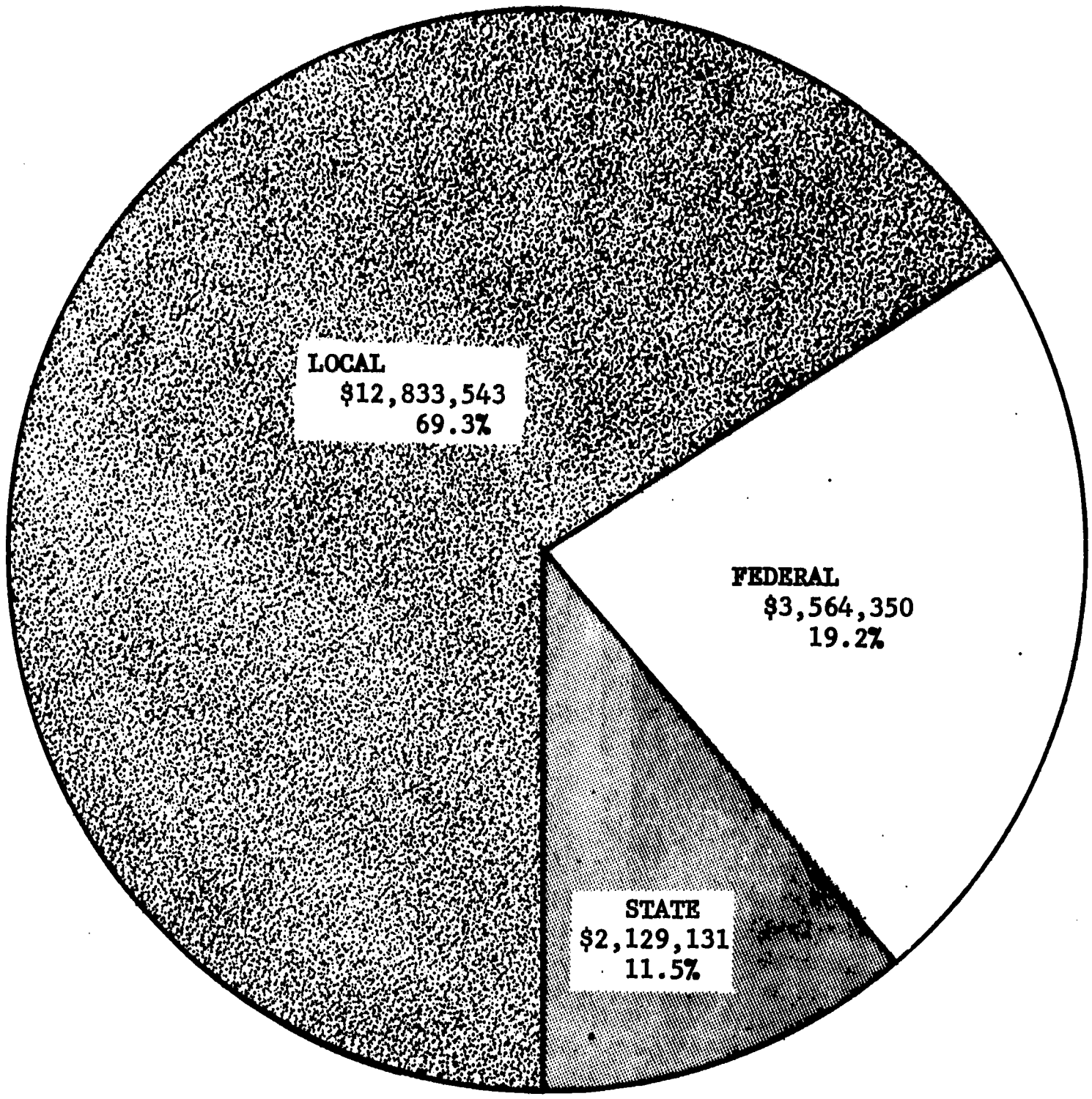
Vocational Enrollments

A major obstacle to efforts to summarize numerically the extent of vocational education in Macomb County is presented by the widespread confusion over the definition of the term "vocational education". Both the broad and narrow outlines of the topic are found in Guidelines for Establishing Trade and Technical Education Programs.[1]

Vocational Education

> Education designed to develop skills, abilities, understandings, attitudes, work habits and appreciations, encompassing knowledge and information needed by workers to enter and make progress in employment on a useful and productive basis. It is an integral part of the total education program and contributes toward the development of good citizens by developing their physical, social, civic, cultural and economic competencies.

[1]Lynn M. Bartlett, (Division of Vocational Education Department of Public Instruction; Lansing, Michigan, 1965) Bulletin No. 2147.



SOURCES OF FUNDS USED FOR LOCAL PROGRAMS OF
VOCATIONAL EDUCATION IN MICHIGAN FOR THE BIENNIUM, 1962-64

Reimbursable Vocational Program

> A class or curriculum offered through a public school or teacher-training institution which is organized and conducted in accordance with the provisions of the State Plan for Vocational Education approved by the United States Office of Education. Such programs are eligible to receive funds from the state (from state and federal vocational education appropriations) to cover, in part, certain costs already incurred.

Under the above definition for Vocational Education, student enrollments in homemaking, and single or unrelated courses in industrial arts or vocational subjects can be included in the measurement of vocational education enrollments. This broad definition has been applied by many Macomb County administrators in their contacts with Survey personnel. Local directors of Vocational Education, however, usually adhere to the narrower limits of Reimbursable Vocational Programs as their definition of Vocational Education.

Vocational directors are oriented toward the conceptions of Vocational Education which have become traditional since the passage of the Smith-Hughes Act in 1917. Reimbursement under Smith-Hughes required that the following standards be met:

1. Vocational certification of the instructor.

2. Relatedness of the course to a specific occupational area within the Smith-Hughes spectrum of agriculture, trade and industry, office, and distributive education.

3. Length of the daily instruction period (2 hours daily minimum in shop classes and 1 hour of related instruction).

Under the 1965 Michigan State Plan for Vocational Education, the requirements for teacher-certification have been liberalized, the occupational areas have been broadened to include programs in any occupations excepting the professions, and the instructional time requirements have been opened to a more liberal interpretation. Under the new Plan, vocational program students are required to identify with a specific occupational goal. It remains to be demonstrated whether local vocational educators or the State Division of Vocational Education will change their thinking and policies significantly from the traditional Smith-Hughes concepts.

Under the latitude provided by these differing definitions of Vocational Education, it is not surprising that vocational enrollments are reported by high school principals as ranging from 13 to 63 percent. Senior boys reported a range of 6 to 32 percent for vocational enrollments in the 22 public high schools in Macomb County. The corresponding range of vocational enrollments reported by public high school girls was from 30 to 57 percent. The high vocational enrollments for girls results from the popularity of office occupations programs. Table V-7 indicates vocational enrollments by schools.

V-7

VOCATIONAL ENROLLMENTS AS INDICATED BY
MACOMB COUNTY PUBLIC HIGH SENIORS, May, 1965

High School	Percents Boys	Girls
Anchor Bay	12	42
Armada	17	30
Center Line	30	40
Chippewa Valley	12	30
Clintondale	27	51
East Detroit	25	57
Fitzgerald	21	31
Fraser	20	42
Lakeview	14	38
L'Anse Creuse	29	42
Mt. Clemens	20	38
New Haven	13	50
Richmond	22	40
Romeo	6	33
Roseville	32	56
St. Clair Shores	19	32
South Lake	20	46
Utica	22	40
Van Dyke	22	47
Warren Cousino	31	44
Warren High	24	40

Table V-8 indicates Macomb County high school enrollments in reimbursed vocational programs in 1963-64 and 1964-65. Approximately one of every eight Macomb County 11th and 12th grade students is enrolled in a reimbursed vocational program.

V-8

ENROLLMENTS IN REIMBURSED VOCATIONAL PROGRAMS
IN MACOMB COUNTY HIGH SCHOOLS

	1963-64	1964-65	PERCENT OF CHANGE
Trade and Industry	1011	944	- 6.6
Distributive	266	312	+17.3
Office	331	381	+15.1
Agriculture	118	138	+16.9
County, excluding Homemaking	1726	1775	+ 2.8
Homemaking	3781	3893	+ 3.0
County Totals	5507	5668	2.9

It will be noted that homemaking enrollments and reimbursements have been extracted before certain measurements of vocational programs have been made. This is not an attempt to downgrade or eliminate homemaking, for this curriculum area has excellent educational values. It was deemed proper, however, to extract homemaking data from vocational education data in order to present an accurate picture of vocational education in Macomb County. Homemaking, as it is presently offered in Macomb County, is general education, rather than vocational (i.e., oriented toward the development of specific employable skills which can be exploited in the local labor market).

Table V-9 compares vocational enrollments in four regions of Macomb County. The regions have been identified as one logical pattern for the establishment of the proposed Area Occupational Education Centers. The South West Area which includes 27.6% of 11th and 12th grade enrollments receives 44.2% of all vocational reimbursements in Macomb County.

V-9

ENROLLMENTS IN GRADES 11 AND 12 IN MACOMB COUNTY PUBLIC SCHOOLS COMPARED WITH VOCATIONAL EDUCATION REIMBURSEMENTS 1964-65

AREA	SEPTEMBER, 1964 ENROLLMENT Grades 11-12	PERCENT OF COUNTY TOTAL	VOCATIONAL REIMBURSEMENT	PERCENT OF COUNTY TOTAL
North Area	1060	8.15	$ 7,900.15	7.7
Central Area	3412	26.23	19,368.83	19.0
South East Area	4941	38.0	29,444.88	29.1
South West Area	3592	27.63	44,976.25	44.2
Macomb County Totals	13,005	100.01	$101,690.11	100.0

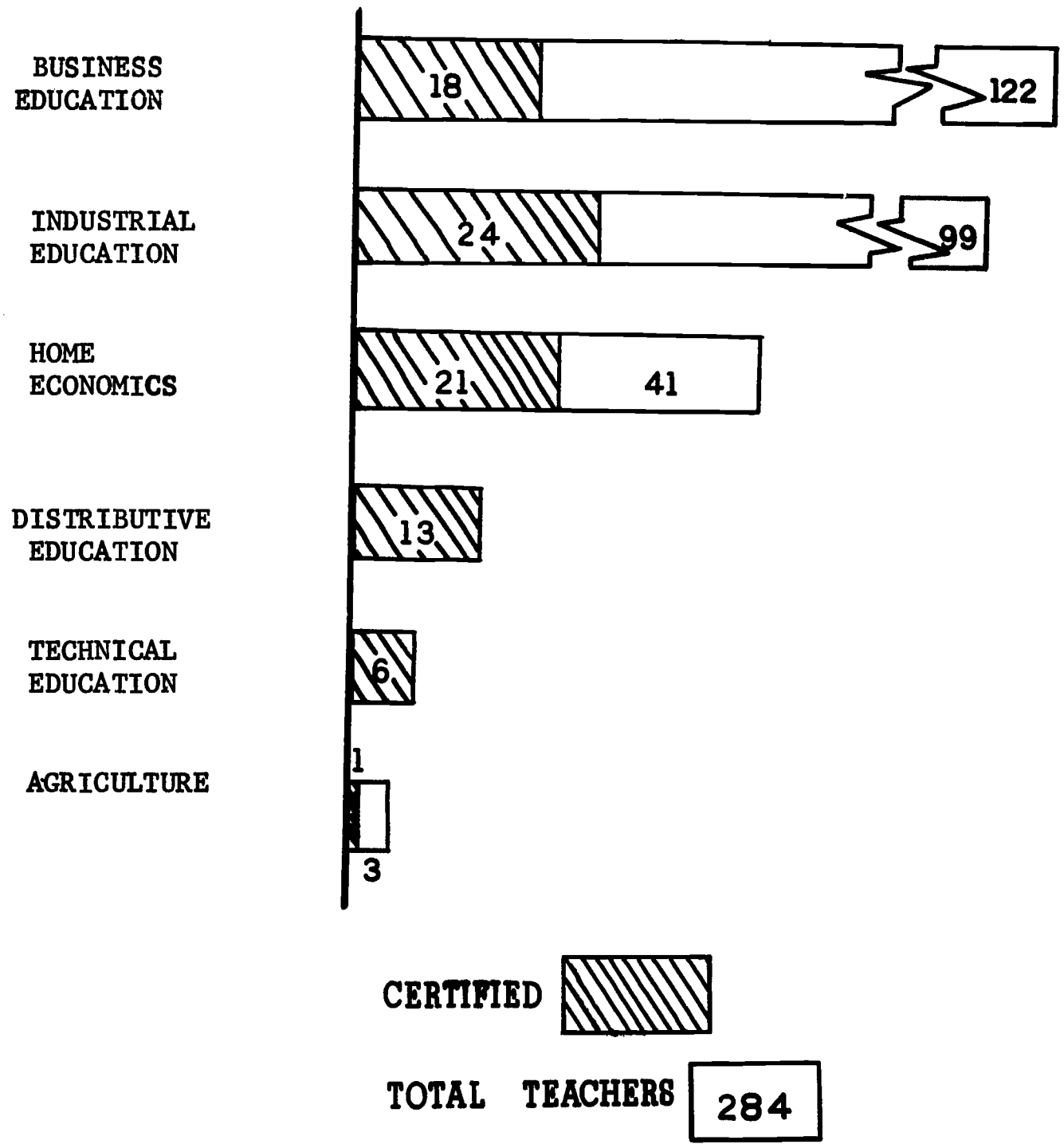
North Area: Anchor Bay, Armada, New Haven, Richmond, Romeo.
Central Area: Chippewa Valley, Clintondale, Fraser, L'Anse Creuse, Mt. Clemens Utica.
South East Area: East Detroit, Lakeview, Roseville, St. Clair Shores, South Lake.
South West Area: Center Line, Fitzgerald, Van Dyke, Warren, Warren Woods.

Vocational Certification.

Graph V-10 indicates the distribution of the 83 vocationally certified teachers in Macomb County high schools by program areas.

V-10

CERTIFICATION OF VOCATIONAL TEACHERS



MACOMB COUNTY PUBLIC HIGH SCHOOL PRINCIPALS' VIEWS ON VOCATIONAL-TECHNICAL EDUCATION

High school principals exert considerable influence upon the direction of secondary education. Not only are they in the best position to know all aspects of their schools, but their opinions and attitudes very often translate into procedures, policies, and programs. The responses of each of the twenty-two public high school principals in Macomb County to questions measuring present vocational programs and the need for improved programs were obtained through personal interviews.

Dropouts.

Students in the 10th, 11th, and 12th grades of Macomb County public high schools who dropped out of school during the 1964-65 school year, including those who completed the year but neither graduated nor returned in September, 1965, total 1430. This is 6.34% of the total who enrolled in September, 1964. Projecting the same dropout rate for three years to cover the span of grades 10 to 12 indicates that 19.1% of the students entering grade 10 do not complete grade 12. While this is a single year measurement, the conclusion is comparable to the findings of more sophisticated studies of dropout rates taken nation-wide.

Program Enrollments.

According to the high school principals, 11th and 12th grade students are divided among the three programs of study as indicated:

College Preparatory	37%
General	31%
Vocational or Occupational	32%

Vocational Program Costs.

Principals were asked "What is the cost, in your school, of vocational education as compared to general education?" Answers were recorded as the ratio of vocational education costs to general education costs. Twenty respondents indicated that vocational education is more expensive. The most frequently expressed opinion was that vocational education is 1½ times as costly as general education; five principals thought vocational education is twice as costly.

COST OF VOCATIONAL EDUCATION
COMPARED TO COST OF GENERAL EDUCATION
Estimates of 21 Macomb County High School Principals

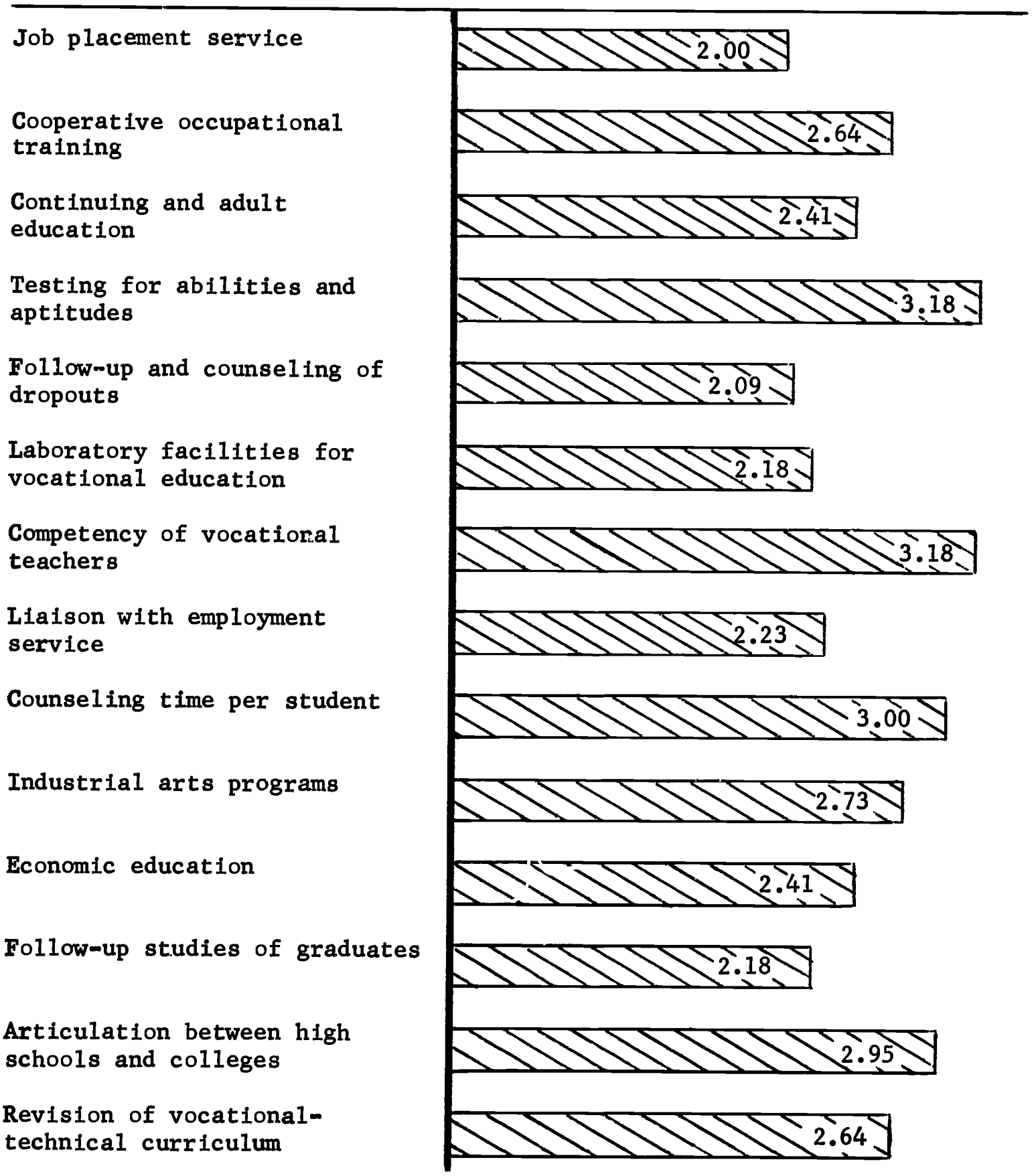
Expense Ratio	No. of Responses
1 to 1	1
1½ to 1	11
2 to 1	5
2½ to 1	3
3 to 1	0
More than 3 to 1	1
No Opinion	1

Present Programs.

Principals were asked to rate the adequacy in their schools of fourteen various services, programs, or activities which are closely associated with vocational education. The composite responses below indicate that principals believe considerably more attention should be given to these aspects of the high school program.

PRINCIPALS' RATING OF VOCATIONAL SERVICES IN MACOMB COUNTY PUBLIC HIGH SCHOOLS 1965

Rating scale
(4) Exceptionally good
(3) Adequate
(2) Less than adequate
(1) Very poor
(0) Not being done



Most high schools are providing counseling personnel at a ratio of one counselor for each 300 students which is the minimum recommended by accrediting agencies. While there are several factors which determine a student's course of study, and no one factor is applied to the exclusion of the others, most principals indicated that the student's own choice has more weight than either the choice of his parents or the recommendation of the school.

Two-thirds of the principals stated that staff personnel, usually counselors, are assigned to contacting students who drop out of school. Such contacts are confined, however, to those students who indicate their intent to leave school before actually leaving. There is little evidence that students who leave without giving prior notice are contacted other than to confirm their status. Students who give notice of their decision to leave school are encouraged to remain in school.

Principals indicated that all schools perform some placement of their graduates, but only one of the 22 schools has a formalized placement service. In most situations students are referred, generally through a member of the counseling staff, upon requests from employers. Only one of the high schools provides placement services during the summer months.

Program Expansion.

Principals are of the opinion that many of the students enrolled in college preparatory and general programs would benefit by enrollment in one of their present vocational programs. An average of all responses indicates that 25% of those not on vocational programs would benefit by participation in a vocational program that presently is being offered.

There was a wide divergence of opinion regarding the numbers of students the high schools could prepare for meaningful job entry by expanded use of existing facilities. A few high school principals indicated that their present facilities are utilized to capacity. Others stated that the use of facilities could be expanded, but that vocational teachers were unavailable. About half of the principals indicated that their present facilities could accommodate expansion of some programs of vocational education.

In none of the schools were all vocational laboratories in use, for vocational instruction only the entire school day. While some laboratories are adaptable to regular academic instruction, other facilities such as machine shops, drafting rooms, and graphic arts laboratories may be used practically only for their specific purposes. Vocational-technical laboratories are utilized for vocational instruction about 70 percent of the school day.

There is more intensive utilization of vocational teaching personnel than of vocational facilities. Vocational teachers frequently have other teaching, supervisory, or preparatory assignments in addition to their vocational classes. The survey indicates that vocational teachers are engaged in teaching vocational subjects about 85 to 90% of their "in-class" time.

Adequacy of Student Preparation.

When asked what proportion of their graduates leave school without adequate preparation for further education or for direct employment, the principals' answers were as high as 80% with an average of 21.1%. The wide range of answers indicate differing personal philosophies of the purposes of high school education rather than differences in the quality of education among the schools. Every principal agreed that at least some of his students are graduating without adequate preparation for his next step in life.

If a wider choice of vocational programs were available, principals believe such programs would benefit over one-third of those students presently enrolled in non-vocational programs.

Means of Improving Vocational Education.

When asked how Macomb County high schools should conduct programs in vocational education, 15 of 22 principals favor area vocational schools providing a much wider choice of programs than local schools are able to offer. The responses were as follows:

	No. of Responses
Within the individual schools for their own students	1
Through area vocational high schools which would enroll selected students on a full-time basis	1
Through area--vocational high schools which would share the students time with the home high school on a half-day, alternate week, or other arrangement	15
Through the County Community College	2
By sharing students, programs and facilities among neighboring districts-a decentralized arrangement.	2
Other - describe	0

With the exception of one high school, credit requirements for graduation are the same for all students, regardless of program. However, in practice, the vocational program student may be required to attend school for more class hours daily. This increased attendance is required to meet both the minimum academic credit requirements for graduation and the minimum class hours of participation for reimbursement of the vocational program. Two Macomb County schools extend the daily schedule by one hour to meet the needs of students in vocational programs.

In an effort to determine local impact of the Vocational Education Act of 1963, principals were asked if <u>new</u> vocational programs had been initiated that could be attributed to the Act. Eight high schools have developed new programs primarily because of the financial assistance which the Vocational Act of 1963 provides. All are larger schools in the southern half of Macomb County.

VOCATIONAL GUIDANCE

Preliminary to the full effectiveness of vocational programs and facilities within the school is the student's identification of attainable and satisfying personal career goals. The adolescent needs assistance in identifying the relationship which exists between his own pattern of aptitudes and interests and the pattern required for effective performance in an occupation. This assistance cannot begin too early, for as Baer says, "From childhood on, individuals need an organized program of counseling and group processes designed to help them assess the meaning of occupational experiences and project new experiences for further testing . . . Occupational experience is an essential part of an individual's orientation and induction into his culture".[1] Only after the student has established for himself what he wants to achieve can the available educational opportunities be fully utilized.

Vocational goals need not be permanent and persistency of goals is not necessarily a virtue. A study of 507 Merit scholars indicated that almost one half of the total group changed their vocational choice between the senior year of high school and the junior year of college. It should be the purpose of the school to encourage the student toward more realistic choices as he learns more about his own abilities and more about occupational choices. Goal-oriented high school students can be programmed into the most appropriate course of study available within the school. Students possessing vocational goals characteristically perform better academically, and are less likely to terminate school before successful completion.

There is little evidence of success on the part of schools in identifying the student with a vocational goal of his own choosing. Results of a recent survey[2] covering 440,000 students in high schools throughout the United States indicate that the great majority of young people do not make an appropriate choice of career while attending high school. Of the 5078 high school seniors responding to a questionnaire of the Macomb Occupational Education Survey, 24.1% did not identify themselves with the college preparatory program or a vocational program. Of the total students reporting to the Macomb survey, 62% indicated that they had received little or no help in high school in making post-high school plans. In both surveys the problem of non-direction was found to be most acute with the general program student. In Macomb County, 75 percent of the general program students reported little or no help in planning what to do after high school. If the high school general program has values, these are not evident to the students. Only 35 percent of the general program students said their school program fit their future goals.

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[1]Max F. Baer and Edward C. Roeber, Occupational Information, (Chicago, Science Research Associates, Inc., Chicago, 1964) p.46.

[2]Project Talent.

The corresponding figure for the college-bound was 77 percent, and for the business students, 71 percent. These figures indicate that vocational guidance service in the school must be expanded and upgraded.

Dr. James B. Conant, in speaking before the "Conference on Unemployed, Out-of-School Youth in Urban Areas", stated that "This expansion of the school's function will cost money and will mean additional staff -- at least a doubling of the guidance staff in most of the large cities; but the expense is necessary, for vocational and educational guidance must be a continuing process to help assure a smooth transition from school to the world of work."

In order to assess the present state of vocational guidance in Macomb County high schools, guidance counselors were requested to supply information to the Survey. Of the 65 counselors indicated as being on the staffs of the public senior high schools of Macomb County, 33 responded to a questionnaire from the Survey.

The responses to the question "Circle the level of education that applies to you" were as follows:

70% indicated possession of a masters degree or more incounseling and guidance

21% indicated having a masters degree in education with some graduate course work in counseling and guidance

9% indicated they did not have the masters degree but had some graduate work in counseling and guidance

The number of students assigned to each counselor varied from 250 to 600. The average student load per counselor was 332. The most frequent (modal) response was 300 students per counselor. Student reaction to the adequacy of vocational guidance service, reported below, indicates that a siginificantly smaller ratio, perhaps 150 students per counselor, deserves serious consideration.

The effectiveness of the counselors' services is proportional to the amount of time they have available for counseling. Counselors indicated the following time utilization:

	Average
Counseling	55%
Administration	9%
Teaching	11%
Clerical Work	22%
Other	3%

Based upon a 180 day school year, with seven in-school work hours per day, application of the above counseling rate of 55% would permit 693 counseling hours per year, or 2.1 hours per student yearly. Obviously, not every student receives this amount of personal counseling, nor is this an adequate measure of the need of many students for counseling services.

In the utilization of available counseling time, counselors indicated the following ranking of effectiveness in dealing with student problems.

COUNSELORS' INDICATION OF EFFECTIVENESS IN DEALING WITH STUDENT PROBLEMS

Problem Area	Degree of Effectiveness (percent of responses)			
	1	2	3	4
Counseling on School Problems	18	47	22	13
Counseling on Personal Problems	26	17	22	35
Counseling on Vocational Choice	9	22	43	26
Counseling on College Education	52	17	9	22

1 = most effective
4 = least effective

In the significant area of vocational choice, 9% of the counselors felt they were most effective and 26% felt they were least effective.

A similar evaluation of counseling services was asked of the high school seniors. Comparison of their ratings with that of the counselors reflects some interesting similarities and differences:

COMPARISON OF SENIORS' AND COUNSELORS' RATING OF COUNSELING EFFECTIVENESS IN STUDENT PROBLEM AREAS

	Seniors	Counselors
Counseling on School Problems	4	1
Counseling on Personal Problems	1	3
Counseling on Vocational Choice	3	4
Counseling on College Education	2	2

1 = most effective
4 = least effective

These comparisons indicate that counselors and students agree that counseling on vocational choice is least effective, and that counseling on college education is adequate.

The confidence expressed in the quality of counseling on college education is not surprising and results from a relative harmony of factors:

* Counselors have extensive personal experience in the area of college matters.

* The high school program is generally suitable to the attainment of the college-entry goal.

* The student has established his immediate goal -- college education.

The non-college bound are not so fortunate. These students are less apt to have determined their career goals. (24.1% of 1965 Macomb County seniors indicated their school program as 'general'.) Counselors are on less certain ground when advising on vocational choices and employment opportunities. Reliable information about job opportunities in non-professional occupations is not readily available, nor is information as to what school training will open up these jobs to the high school graduate. Even when the counselor has such information, the school may not be able to provide the recommended educational experiences. The local findings are reinforced by information extracted from a nation-wide survey of high school students taken by Purdue University. In the Purdue poll, high students indicated by a 7 to 1 margin that the high school programs favor the college-goer over the non-college bound student. Students indicated that the vocational programs were most in need of upgrading.[3]

The Survey reviewed the testing programs utilized in Macomb County junior high schools to determine the extent to which standardized interest tests are used as one basis for assisting the student to make a high school program choice compatible with his interests and aptitudes.

STANDARDIZED TEST USED IN MACOMB COUNTY GRADES 7 to 9

Types of Tests	Districts Using	Frequency
Intelligence Tests	20	31
Scholastic Aptitude Batteries	20	27
Scholastic Achievement Tests	20	45
Interest Inventories	5	5
Total		108

There is extensive use of standardized tests in grades 7, 8, and 9. It is significant, however, that interest inventory testing comprises only 5% of the total testing program and is offered by only 5 of the 21 public school districts. No testing of non-scholastic aptitudes is undertaken as a part of the normal testing program.

High school counselors indicated that the results of standardized tests are used in counseling students for vocational and academic choices. Counselors reported that students are informed of test results, and in some cases, parents are also advised of test findings. Most counselors are reasonably satisfied with the extent of their current testing program. A few counselors professed the opinion that the amount of test data was excessive compared to the time available for its practical utilization.

Counselors in districts which do not have testing specialists on the regular staff indicated the desirability of adding such personnel.

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[3] Youth's Attitude Toward School, Teenage Employment Problems, and Women Working, Measurements and Research Center, Purdue University, Lafayette, Indiana, January, 1965. p. 4.

The Macomb County survey of high school seniors indicates that the majority of non-college bound students fail to develop appropriate educational and occupational goals. Two-thirds of the general program students indicated their intent to go directly to work after high school, yet they were not preparing for this in a vocational program. Counselors indicated the following obstacles to the development of goals by the non-college-bound student. These responses are listed in the order of frequency reported:

1. Counselors lack the time to work adequately with students.

2. The attitudes of the community and the school emphasize the needs of the college-bound student.

3. The college-bound students form a "peer" group and to be identified as non-college bound may be considered an admission of failure.

4. Some students are under parental pressure to attend college regardless of their scholarship.

5. Students lack understanding of the various occupational fields and have no frame of reference on which to base a vocational decision.

6. Adequate vocational programs and facilities are not available.

7. Counselors do not have reliable information as to current employment opportunities and future employment trends.

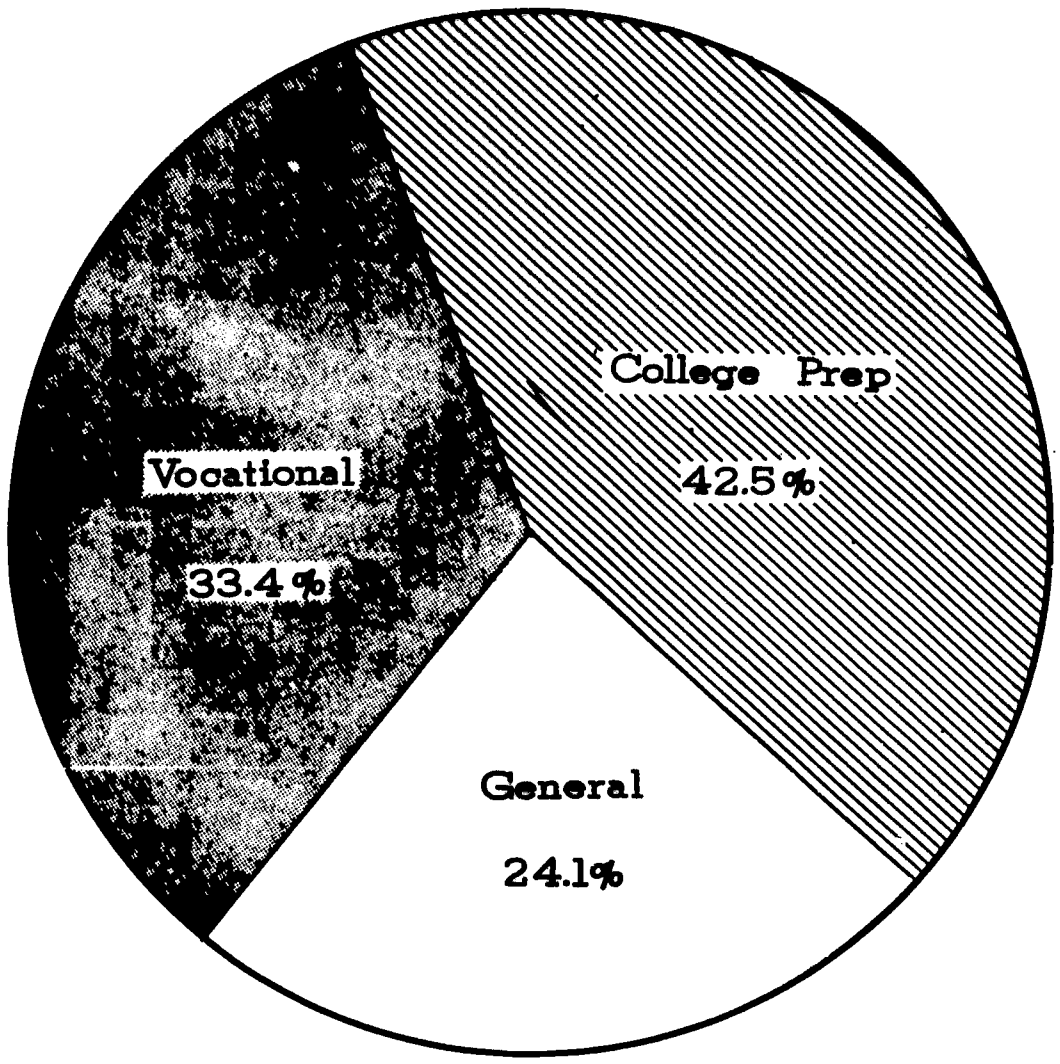
Recommendations

It is recommended that the exploratory function of the junior high grades be re-identified, broadened, and emphasized. Industrial arts, homemaking, music, art, and other programs which provide opportunities for vocational and career exploration, should be widely available, imaginatively developed, and creatively taught. Opportunity should be provided for the child to discover his own interests and aptitudes through school experiences.

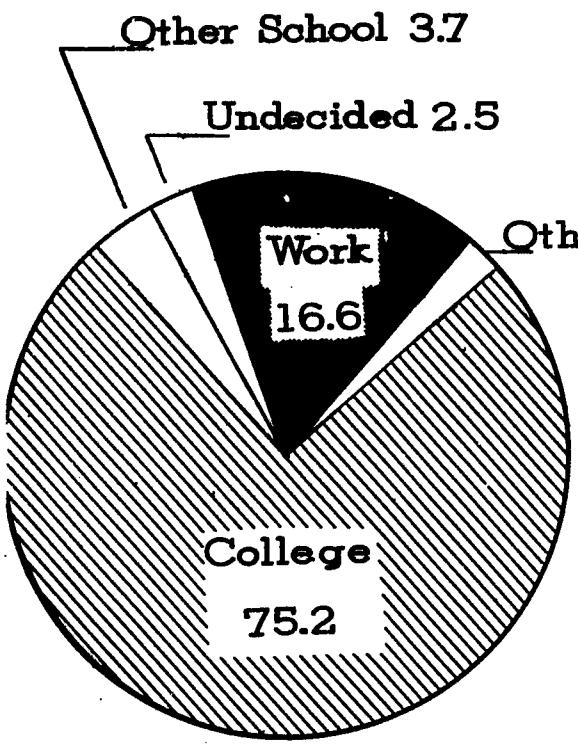
It is recommended that every student should have the benefit of interest and aptitude testing and the interpretation of the results of such tests prior to the selection of his high school program. Every student should be fully informed of the nature and purposes of the high school programs which are available to him.

It is recommended that efforts be made to identify each potential early school-leaver and to provide testing, remedial, and counseling services which will improve the potential school-leaver's chances for retention and success in a school program appropriate to his abilities and interests.

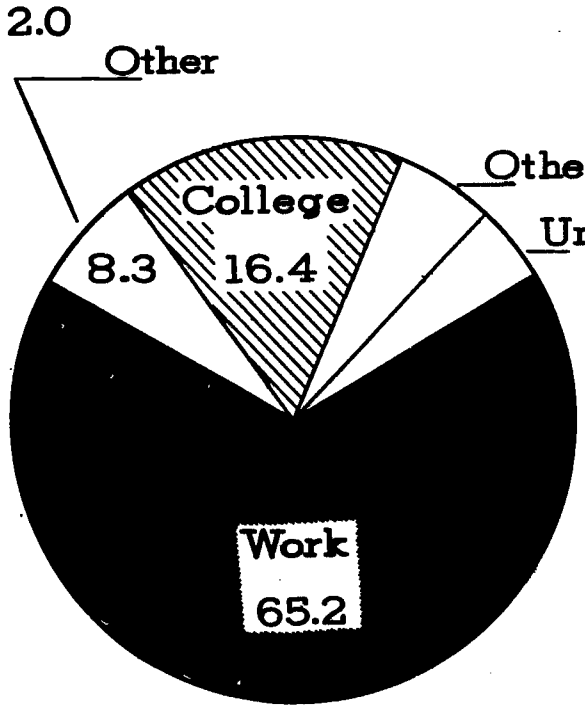
MACOMB COUNTY SENIORS BY CURRICULUM, 1965



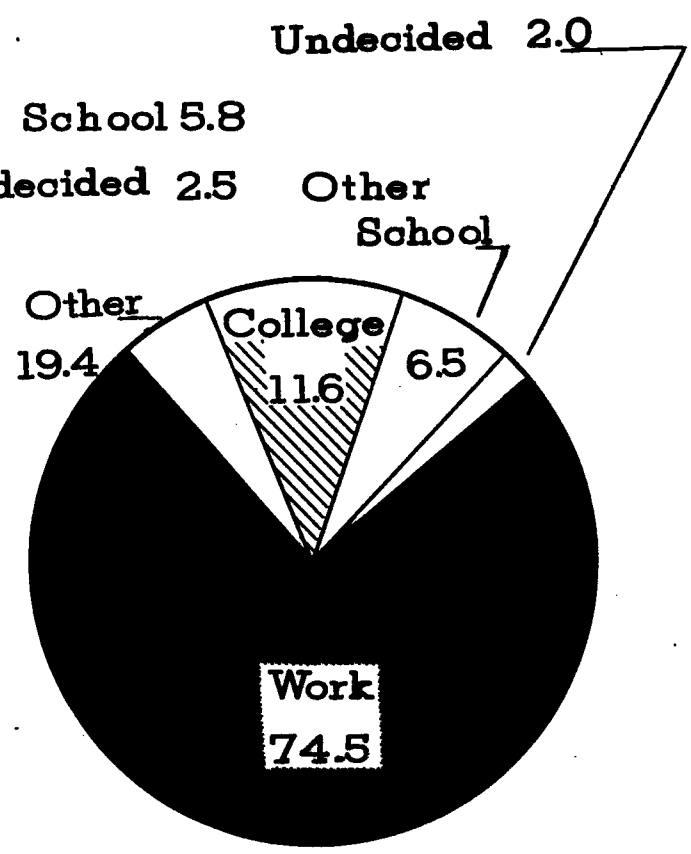
PLANS AFTER GRADUATION



COLLEGE PREP

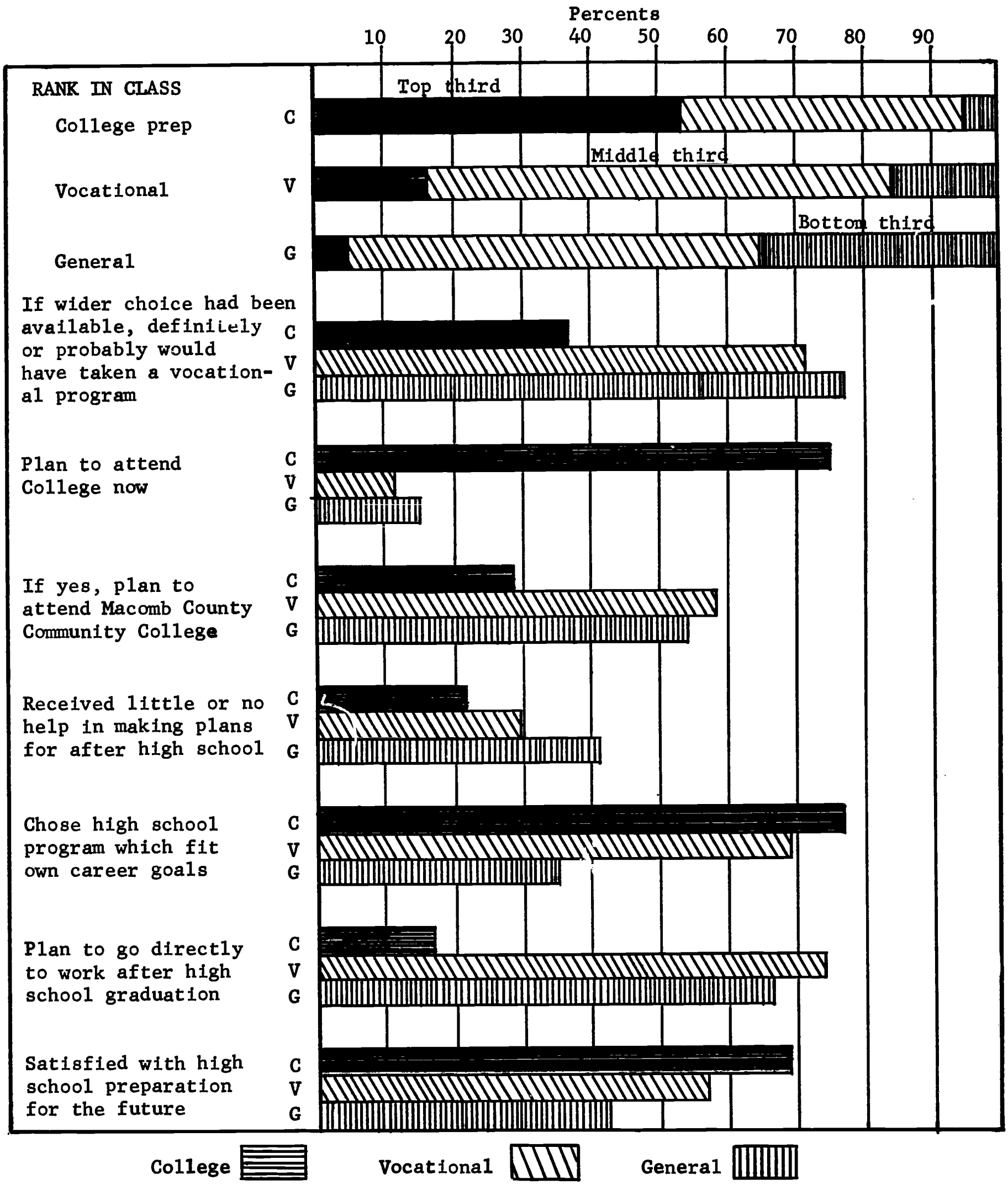


GENERAL



VOCATIONAL

RESPONSES TO SELECTED QUESTIONS BY MACOMB COUNTY HIGH SCHOOL SENIORS GROUPED BY PROGRAMS OF STUDY
May, 1965



Seniors in Macomb County public and parochial high schools were polled by the Survey staff in May, 1965 to determine their occupational goals and their opinions of high school opportunities. Returns were received from 5078 of the 6500 seniors. This is a 79% return. Some significant findings from the questionnaire are pointed out below: the complete results are included at the end of this report.

Programs of Study and Post-High School Plans.

Macomb County high school enrollments by program have remained remarkably stable over a three year period as seen by comparing the results of similar surveys conducted by Macomb County Community College in 1963 and 1964 to determine high school students' plans for further education. An analysis of the three yearly surveys reveals the following information:

SENIOR STUDENTS' IDENTIFICATION
OF THEIR HIGH SCHOOL PROGRAMS

Year	College Prep	Commercial	Shop	General
1963	45 %	24 %	7 %	24 %
1964	43.5%	24.5%	9 %	23 %
1965	43 %	23 %	9.5%	24.5%

The proportion of students enrolled in the general program remains constant despite heavy publicity being given to the importance of specific skills for entry employment. Vocational enrollments in the County appear to be unrealistically small when one considers that 40% of all employment in the Detroit area is in manufacturing, and 25% in clerical and sales occupations.

College preparatory enrollments have not increased during the period despite the nation-wide trend toward greater college attendance. College preparatory programs enroll one-third more Macomb County high school students than actually go to college upon high school graduation.

HIGH SCHOOL PROGRAMS OF STUDY--BOYS

	% College	% General	% Commercial	% Shop	% Other
Total	47.8	26.9	8.2	14.0	3.1
Public	47.2	26.6	8.3	14.7	3.2
Private	56.2	36.2	7.2	2.7	1.3
Top 1/3	87.5	5.6	2.7	2.8	1.8
Middle 1/3	41.1	27.8	9.6	17.9	4.6
Bottom 1/3	17.0	51.1	11.5	17.2	4.2

The nature of the entry employment opportunities for boys in the Detroit area raises questions of whether boys are taking high school programs which will help them to obtain jobs. College preparatory and general programs which enroll three-fourths of all boys offer little opportunity for the development of specific occupational skills.

1. One-fourth of all boys are neither preparing for college nor for any specific occupation. This is more than half of the public and three-fourths of the private school boys who are not planning on college. Seven of every ten boys are hopeful of apprenticeship or other on-the-job training--an unrealistic goal in view of the limited numbers of apprentices in training and the high entry qualifications.

2. Very few boys, regardless of academic rank, display an interest in the commercial program of study. It seems likely that boys view commercial studies as being "feminine" and are reluctant to identify with these studies. This is unfortunate in view of the opportunities in business, banking, and industrial offices, as well as in sales and sales-related jobs.

3. Only 20 students of the 5,078 total named agriculture (included in "other") as their high school program of study.

4. Lack of adequate vocational programs undoubtedly causes many boys to enroll in college preparatory or general programs.

HIGH SCHOOL PROGRAMS OF STUDY--GIRLS

	% College	% General	% Commercial	% Other
Total	37.4	15.7	43.2	3.7
Public	36.8	15.4	44.0	3.8
Private	44.3	19.0	33.7	3.0
Top 1/3	70.8	2.8	24.1	2.3
Middle 1/3	23.6	18.6	53.7	4.1
Bottom 1/3	10.0	36.7	47.6	5.7

1. More girls than boys select a high school program designed to prepare the student for employment.

2. The commercial program obviously has greater appeal to girls than the "male" vocational programs have to boys. The enrollment of 43% of all girls in a commercial program results in a smaller enrollment of girls in both college preparatory and general programs.

3. Home economics (included in "Other") has little appeal for girls in terms of an occupational future. Only 18 girls in the county indicated home economics as their program of study, apparently because they perceive home economics, as it is presently organized, as general rather than vocational education.

Interest in Vocational Programs.

Senior students were asked, "Would you have taken a vocational course of study if a wider choice of these programs had been available when you entered high school?" When grouped according to their own indication of academic placement in the top, middle, or bottom third of their class, students' responses indicate that:

1. The top third of the boys and girls are most satisfied with their present selection of program. Eighty percent of these students identify themselves as on a college preparatory program.

2. Sixty percent of all students expressed the opinion that they definitely, or probably, would have taken a vocational course of study if a wider choice of programs had been available when they entered high school. This group includes virtually all of those who actually did follow a vocational program and three-fourths of the students who consider themselves in the lowest third academically.

3. Of the 1,074 students on the general program, 813, or 75%, indicated they definitely or probably would have chosen an occupational course of study if the choice had been wider.

4. Private school boys indicated greater interest in vocational training than did public school boys.

Other factors besides the lack of variety of vocational programs undoubtedly contributed to this dissatisfaction. Other factors might be:

a) A lack of concern regarding employability until too late. Evidence of this is expressed in students' responses to the question "Why did you choose the course of study which you have followed in high school." Over one-fourth of the general program students answered "My friends were taking this program," or "This program seemed easiest to me."

b) A lack of information about labor market trends, what employers seek in the way of educational background, and an understanding of their own aptitudes and abilities.

c) The scarcity of vocational programs in which students of low academic ability can succeed.

Plans After Graduation.

The number of high school seniors who actually attend college is hard to determine without adequate follow-up studies of graduates. Much of the present school program is justified by identifying a large proportion of the high school population as college-bound. This identification is, in some degree, based upon students' expressed intent while still in high school.

1. In answer to the question "Do you plan to attend a college or university?," 2151 Macomb seniors responded "Yes, definitely," and 688 responded "Probably so." These two groups total 2839, or 49.7% of the seniors polled.

2. In answer to the question "What do you plan to do on a full-time basis the first year after high school graduation?," 2253 listed attendance at college or university, business college, or trade or technical school as their plans. Thus, 39.4% of the total group has immediate plans for some type of post-high school education. In the light of past evidence, it is unlikely that this proportion of Macomb seniors will enroll in post high school institutions within a year of completing high school. Reports filed with the State Department of Education indicate that 31.6% of Macomb public high school graduates for the past three years have enrolled in a junior college, college or university.

3. Of the seniors who plan to go to college, (including some who plan to attend college eventually, but not immediately), 40.3% expressed an intention of attending Macomb County Community College, 46.8% plan to attend other colleges or universities, and 12.9% intend to enter trade, technical, or business schools. The 46.8% planning to attend four year institutions include a sizeable, but undetermined, number of seniors who indicated that they plan to attend both Macomb Community College and a four year college.

4. While one-fourth of all seniors plan on attending Macomb County Community College, only 16% of the boys and 20% of the girls in the top third of their class expect to do so. In the middle and lowest thirds over 50% of those planning to attend college plan to enroll at Macomb County Community College. More than a fourth of all students identifying themselves in the bottom third and desiring further education, indicate that they plan to enroll in a technical, trade, or business school.

5. Almost half of all Macomb high school graduates expect to go directly to work. Fewer than one-fifth of the top third academically plan on seeking jobs; while two-thirds of all other students are included in the job seekers.

6. Full-time employment after graduation will be sought by 42.3% of the boys and 53% of the girls. Yet high school vocational programs enrolled only 22.9% of all boys and 43.8% of the girls.

Student Opinions.

In order to provide Macomb high school counselors and teachers some indication of students' relative assessment of the school curriculum and guidance services, nine areas were rated by students. Commercial and college preparatory students were generally satisfied that the school had adequately prepared them for their future careers. Fewer than half of the general students were in agreement.

SENIORS RATINGS OF HIGH SCHOOL PROGRAMS AND COUNSELING SERVICES

	% Excellent	% Good	% Poor
School Problems	16.4	57.9	25.7
Personal Problems	61.2	22.0	16.8
Vocational Choice	18.5	54.9	26.6
College Education	27.0	52.1	20.0
Library Materials	16.7	54.6	28.7
Courses Offered	9.4	65.3	25.3

1. Macomb high school seniors judged their counselors to be most successful in the area of personal problem assistance. The only exception is private school girls, 30% of whom felt this assistance was poor.

2. While over half of the students rated counseling on vocational choice as good, only 18.5% rated it excellent, and 26.6% rated the service as poor. Library materials and information on vocations received comparable ratings.

3. Private school boys were the least satisfied with counseling services.

4. "Courses offered" received an excellent rating from only 9.4% of the seniors. Only 2.7% of private school boys rated the courses as excellent.

Environmental Factors.

FATHERS' EDUCATION

	% College	% Commercial	% Shop	% General	% Other
Less than high school	36.8	55.2	64.7	54.4	49.2
High school	27.8	28.0	29.4	27.3	32.2
College graduate	12.8	3.7	----	3.9	6.5

1. 47.3% of the fathers are not high school graduates. Only 7.7% graduated from college. Of the college preparatory students, 13% of the fathers are college graduates. 3.7% of the general students' fathers are college graduates.

2. 70% of the boys and 50% of the girls had part-time jobs while in school; 78% of the boys in the bottom third and 72% of the boys in the middle third had part-time jobs.

Table 8-1

RESPONSES OF SENIOR STUDENTS IN PUBLIC AND PRIVATE HIGH SCHOOLS OF MACOMB COUNTY

TO QUESTIONS CONCERNING THEIR HIGH SCHOOL EXPERIENCES

AND THEIR FUTURE VOCATIONAL AND EDUCATIONAL PLANS

	TOTAL RESPONSES	ALL		PUBLIC SCHOOLS		PRIVATE SCHOOLS	
	5076	BOYS 2512	GIRLS 2566	BOYS 2358	GIRLS 2361	BOYS 154	GIRLS 205
WHICH OF THE FOLLOWING BEST DESCRIBES YOUR HIGH SCHOOL PROGRAM OF STUDY?							
Commercial or business education.	1312	206	1106	195	1037	11	69
College or university preparatory.	2154	1197	957	1111	866	86	91
Shop or industrial arts.	364	350	14	346	13	4	1
Agriculture.	20	17	3	17	3	0	0
Homemaking or home economics.	22	4	18	4	17	0	1
General.	1074	673	401	624	362	49	39
Other.	116	55	61	53	57	2	4
WOULD YOU HAVE TAKEN A VOCATIONAL COURSE OF STUDY IF A WIDER CHOICE OF THESE PROGRAMS HAD BEEN AVAILABLE WHEN YOU ENTERED HIGH SCHOOL?							
Definitely yes.	949	536	413	495	375	41	38
Probably.	1961	1018	963	948	879	70	84
Probably not.	1471	642	829	611	766	31	63
Definitely not.	561	263	298	252	280	11	18
IF YOU ANSWERED "DEFINITELY YES" OR "PROBABLY" TO THE LAST QUESTION, WHICH VOCATIONAL PROGRAM WOULD YOU HAVE CHOSEN?							
Agriculture.	118	93	25	87	22	6	3
Business (Office).	1037	199	838	181	767	18	71
Commercial Art.	259	96	163	89	145	7	18
Distributive (Sales).	142	92	50	88	50	4	0
Metal Trades.	232	226	6	218	6	8	0
Electronics.	328	316	12	297	11	19	1
Auto Mechanics.	339	325	14	295	14	30	0
Advanced Drafting.	239	229	10	212	10	17	0
Clothing Construction.	108	5	103	5	97	0	6
Graphic Arts-Printing.	38	25	13	25	11	0	2
Food Preparation.	85	20	65	19	60	1	5
Other.	381	202	179	184	155	18	24
WHY DID YOU CHOOSE THE COURSE OF STUDY WHICH YOU HAVE FOLLOWED IN HIGH SCHOOL?							
My parents decided for me.	197	98	99	86	94	12	5
My friends were taking this program.	108	61	47	53	45	8	2
Counselor advised me into this program.	740	447	293	439	283	8	10
This program seemed easiest to me.	414	269	145	258	136	11	9
This program seemed to fit my own future goals.	3274	1430	1844	1344	1680	86	164
Other.	290	174	116	152	105	22	11
TO THE BEST OF YOUR KNOWLEDGE, WHERE DO YOU RANK IN YOUR GRADUATING CLASS?							
Top Third.	1475	630	845	587	757	43	88
Middle Third.	2684	1330	1354	1268	1266	61	104
Bottom Third.	844	513	331	483	318	30	13
WHAT DO YOU PLAN TO DO ON A FULL-TIME BASIS THE FIRST YEAR AFTER HIGH SCHOOL GRADUATION?							
Work.	2406	1053	1353	992	1261	61	92
Enter military service.	143	130	13	122	13	8	0
Become a full-time housewife.	100	21	79	21	75	0	4
Attend college or university.	2010	1114	896	1044	820	70	76
Attend business college.	95	18	77	16	65	2	12
Attend trade or technical school.	148	100	48	90	44	10	4
Other.	102	36	66	34	53	2	13
Don't know.	40	19	21	19	19	0	2

Table 8-1 continued

	TOTAL RESPONSES	ALL BOYS	ALL GIRLS	PUBLIC SCHOOLS BOYS	PUBLIC SCHOOLS GIRLS	PRIVATE SCHOOLS BOYS	PRIVATE SCHOOLS GIRLS
	5076	8518	8566	8358	8361	154	205
HOW WELL DO YOU THINK YOUR HIGH SCHOOL IS PREPARING YOU FOR WHAT YOU PLAN TO DO AFTER GRADUATION?							
Providing just what is needed.	797	318	479	301	441	17	38
Very well in some ways but in other ways preparation is not adequate.	2040	901	1139	838	1042	63	97
Fairly well but all the training could be improved.	1368	740	648	700	596	40	52
Poorly.	616	416	200	388	189	28	11
HOW MUCH HELP HAVE YOU RECEIVED IN HIGH SCHOOL IN DECIDING WHAT YOU PLAN TO DO AFTER GRADUATION?							
A lot of help, all you need.	704	321	383	305	346	16	37
Considerable help, but could have used more.	1145	533	612	505	569	28	43
Some help, but not very much.	1514	763	781	712	711	51	70
Little or no help.	1431	743	688	691	638	52	50
HOW WOULD YOU RATE THE FOLLOWING HIGH SCHOOL SERVICES, EXPERIENCES, OR FACILITIES?							
Counseling or guidance on school problems.							
Excellent	792	397	395	382	381	15	14
Good	2607	1357	1450	1300	1345	57	105
Poor	1245	619	626	540	542	79	84
Counseling or guidance on personal problems.							
Excellent	2831	1686	1205	1523	1126	103	79
Good	1020	389	631	372	580	17	51
Poor	780	893	487	867	435	26	52
Counseling or guidance on vocational choice.							
Excellent	880	443	437	414	393	29	44
Good	2619	1218	1401	1166	1298	52	103
Poor	1268	676	592	607	538	69	54
Counseling or guidance on college education.							
Excellent	1318	667	651	640	605	27	46
Good	2459	1168	1291	1090	1191	78	100
Poor	944	481	463	436	412	45	51
Library materials and information on vocations.							
Excellent	796	391	405	373	365	18	40
Good	2599	1221	1378	1133	1244	88	134
Poor	1362	715	647	672	620	43	27
Courses offered.							
Excellent	451	237	214	233	199	4	15
Good	3133	1453	1680	1370	1559	83	121
Poor	1213	654	559	592	492	62	67
Social activities.							
Excellent	791	405	386	378	341	27	45
Good	2751	1289	1462	1208	1340	81	122
Poor	1217	634	583	593	549	41	34
HOW MUCH EDUCATION HAS YOUR FATHER HAD?							
Eighth grade education or less.	1018	500	518	468	480	32	38
Some high school.	1261	617	644	591	596	26	48
Graduated from high school.	1318	643	675	591	619	52	56
Business or trade school.	270	126	144	116	133	10	11
Some college.	446	207	239	192	212	15	27
Graduated from college.	372	189	183	180	168	9	15
Don't know.	128	66	62	63	58	3	4
DO YOU HAVE A PART-TIME JOB DURING SCHOOL?							
Yes.	2831	1626	1205	1523	1126	103	79
No.	1953	703	1250	660	1131	43	119
DO YOU PLAN TO ATTEND COLLEGE OR UNIVERSITY?							
Yes, definitely.	2151	1159	992	1087	904	72	88
Probably so.	688	387	301	363	275	24	26
Probably not.	373	175	198	163	182	12	16
No.	1060	351	709	329	661	22	48
Don't Know.	528	274	254	263	245	11	9

Table 8-1 Continued

	TOTAL RESPONSES	ALL BOYS	ALL GIRLS	PUBLIC SCHOOLS BOYS	PUBLIC SCHOOLS GIRLS	PRIVATE SCHOOLS BOYS	PRIVATE SCHOOLS GIRLS
	5078	2512	2566	2358	2361	154	205
IF YOU PLAN TO GO TO COLLEGE, WHERE DO YOU PLAN TO ENROLL?							
Macomb County Community College.	1284	744	540	704	501	40	39
Other college or university.	1493	768	725	720	660	48	65
Technical, trade, or business school.	410	217	193	199	172	18	21
WHAT DO YOUR PARENTS FEEL ABOUT WHETHER OR NOT YOU ATTEND COLLEGE?							
Insist or expect you to go.	1047	681	366	636	342	45	24
Want you to go if you want to.	3023	1376	1647	1290	1495	86	152
Don't care one way or the other.	492	203	289	193	277	10	12
Don't want you to go.	67	17	50	16	48	1	2
Won't allow you to go.	20	8	12	8	11	0	1
Don't know what they think.	168	74	94	69	88	5	6
Answer the following questions ONLY if your future plans include "NOT" or "PROBABLY NOT" going to college as indicated in a previous question.							
WHICH OF THE FOLLOWING TYPES OF TRAINING OR EDUCATION INTEREST YOU MOST?							
Paid apprenticeship as a helper to learn a trade.	397	328	69	310	66	18	3
On-the-job training with a company or industrial firm.	643	222	421	210	387	12	34
Correspondence study.	37	13	24	12	22	1	2
Post-graduate high school work in high school at night.	47	20	27	20	25	0	2
Adult education classes.	59	9	50	7	45	2	5
Military service or training.	94	84	10	76	10	8	0
None of the above.	472	117	355	107	332	10	23
WHAT IS THE MOST IMPORTANT REASON WHY YOU DO NOT PLAN TO GO TO COLLEGE?							
Tired of school.	227	133	94	122	88	11	6
Want to work and make money.	350	117	233	109	215	8	18
Can't afford it.	240	101	139	96	131	5	8
Parents don't want me to.	15	6	9	5	9	1	0
Can be just as successful without going to college.	17	10	7	7	6	3	1
Couldn't make good enough grades.	349	183	166	169	155	14	11
Want to get married.	143	16	127	16	123	0	4
Other.	193	65	128	62	113	3	15
WOULD YOU GO TO COLLEGE IF YOU HAD ENOUGH MONEY?							
Yes.	338	188	150	183	138	5	12
No.	761	271	490	253	456	18	34
Maybe.	681	314	367	289	344	25	23
IF YOU ANSWERED "YES" OR "MAYBE" YOU WOULD GO TO COLLEGE IF YOU HAD ENOUGH MONEY, HOW MUCH WOULD YOU NEED?							
Enough to pay all expenses ($1,200 to $1,500 per year.)	488	254	234	239	214	15	20
Enough to pay half of the expenses ($600 to $750.)	414	198	216	186	206	12	10
Enough to pay some but less than half of the expenses.	111	54	57	49	53	5	4

Table 8-2

RESPONSES OF SENIOR STUDENTS IN PUBLIC AND PRIVATE HIGH SCHOOLS OF MACOMB COUNTY

TO QUESTIONS CONCERNING THEIR HIGH SCHOOL EXPERIENCES

AND THEIR FUTURE VOCATIONAL AND EDUCATIONAL PLANS

Answers Recorded as a Percent of Each Group Responding	TOTAL RESPONSES	ALL		PUBLIC SCHOOLS		PRIVATE SCHOOLS	
		BOYS	GIRLS	BOYS	GIRLS	BOYS	GIRLS
	5078	2512	2566	2358	2361	154	205
	100%	100%	100%	100%	100%	100%	100%
WHICH OF THE FOLLOWING BEST DESCRIBES YOUR HIGH SCHOOL PROGRAM OF STUDY?							
Commercial or business education.	25.9	8.2	43.2	8.3	44.0	7.2	33.7
College or university preparatory.	42.6	47.8	37.4	47.2	36.8	56.6	44.3
Shop or industrial arts.	7.2	14.0	0.5	14.7	0.6	2.7	0.5
Agriculture.	0.4	0.7	0.1	0.7	0.1	0.0	0.0
Homemaking or home economics.	0.4	0.2	0.7	0.2	0.7	0.0	0.5
General.	21.2	26.9	15.7	26.6	15.4	32.2	19.0
Other	2.3	2.2	2.4	2.3	2.4	1.3	2.0
WOULD YOU HAVE TAKEN A VOCATIONAL COURSE OF STUDY IF A WIDER CHOICE OF THESE PROGRAMS HAD BEEN AVAILABLE WHEN YOU ENTERED HIGH SCHOOL?							
Definitely yes.	19.1	21.8	16.5	21.5	16.3	26.8	18.7
Probably.	40.0	41.4	38.4	41.1	38.2	45.7	41.4
Probably not.	29.6	26.1	33.2	26.5	33.3	20.3	31.0
Definitely not.	11.3	10.7	11.9	10.9	12.2	7.2	8.9
IF YOU ANSWERED "DEFINITELY YES" OR "PROBABLY" TO THE LAST QUESTION, WHICH VOCATIONAL PROGRAM WOULD YOU HAVE CHOSEN?							
Agriculture.	3.6	5.1	1.7	5.1	1.6	4.7	2.3
Business (Office).	31.4	10.9	56.7	10.6	56.9	14.1	54.6
Commercial Art.	7.8	5.3	11.1	5.2	10.8	5.5	3.8
Distributive (Sales).	4.3	5.0	3.4	5.2	3.7	3.1	0.0
Metal Trades.	7.0	12.4	0.4	12.8	0.4	6.3	0.0
Electronics.	9.9	17.2	0.8	17.5	0.8	14.8	0.8
Auto Mechanics.	10.3	17.8	0.9	17.4	1.0	23.4	0.0
Advanced Drafting.	7.2	12.5	0.7	12.5	0.7	13.2	0.0
Clothing Construction.	3.3	0.3	6.8	0.3	7.2	0.0	4.6
Graphic Arts-Printing.	1.1	1.3	0.9	1.5	0.8	0.0	1.5
Food Preparation.	2.6	1.1	4.4	1.1	4.6	0.8	3.9
Other.	11.5	11.1	12.2	10.8	11.5	14.1	18.5
WHY DID YOU CHOOSE THE COURSE OF STUDY WHICH YOU HAVE FOLLOWED IN HIGH SCHOOL?							
My parents decided for me.	3.9	4.0	3.9	3.7	4.0	8.2	2.4
My friends were taking this program.	2.2	2.5	1.8	2.3	1.9	5.4	1.0
Counselor advised me into this program.	14.7	18.0	11.5	18.8	12.2	5.4	5.0
This program seemed easiest to me.	8.2	10.8	5.7	11.1	5.8	7.5	4.5
This program seemed to fit my own future goals.	65.2	57.7	72.6	57.6	71.7	58.5	81.6
Other.	5.8	7.0	4.5	6.5	4.5	15.0	5.5
TO THE BEST OF YOUR KNOWLEDGE, WHERE DO YOU RANK IN YOUR GRADUATING CLASS?							
Top Third.	29.5	25.6	33.4	24.9	32.1	27.9	42.9
Middle Third.	53.6	53.8	53.5	54.6	54.5	52.6	50.7
Bottom Third.	16.9	20.6	13.1	20.5	13.4	19.5	6.4
WHAT DO YOU PLAN TO DO ON A FULL-TIME BASIS THE FIRST YEAR AFTER HIGH SCHOOL GRADUATION?							
Work.	47.7	42.3	53.0	42.4	53.7	39.9	45.3
Enter military service.	2.8	5.3	0.5	5.2	0.6	5.2	0.0
Become a full-time housewife.	2.0	0.8	3.1	0.9	3.2	0.0	2.0
Attend college or university.	39.9	44.7	35.1	44.7	34.8	45.8	37.4
Attend business college.	1.8	0.7	3.0	0.7	2.7	1.3	5.9
Attend trade or technical school.	2.9	4.0	1.9	3.8	1.9	6.5	2.0
Other.	2.0	1.4	2.6	1.5	2.3	1.3	6.4
Don't know.	0.9	0.8	0.8	0.8	0.8	0.0	1.0

Table 8-2 Continued

Answers Recorded as a Percent of Each Group Responding	TOTAL RESPONSES	ALL BOYS	ALL GIRLS	PUBLIC SCHOOLS BOYS	PUBLIC SCHOOLS GIRLS	PRIVATE SCHOOLS BOYS	PRIVATE SCHOOLS GIRLS
	5078	2512	2566	2358	2361	154	205
	100%	100%	100%	100%	100%	100%	100%
HOW WELL DO YOU THINK YOUR HIGH SCHOOL IS PREPARING YOU FOR WHAT YOU PLAN TO DO AFTER GRADUATION?							
Providing just what is needed.	16.5	13.4	19.4	13.5	19.4	11.5	19.2
Very well in some ways but in other ways preparation is not adequate.	42.1	37.9	46.2	37.6	45.9	42.6	49.0
Fairly well but all the training could be improved.	28.7	31.2	26.3	31.5	26.4	27.0	26.3
Poorly.	12.7	17.5	8.1	17.4	8.3	18.9	5.5
HOW MUCH HELP HAVE YOU RECEIVED IN HIGH SCHOOL IN DECIDING WHAT YOU PLAN TO DO AFTER GRADUATION?							
A lot of help, all you need.	14.6	13.6	15.6	13.8	15.3	10.9	18.5
Considerable help, but could have used more.	23.7	22.6	24.8	22.8	25.1	19.0	21.5
Some help, but not very much.	32.0	32.3	31.7	32.2	31.4	34.7	35.0
Little or no help.	29.7	31.5	27.9	31.2	28.2	35.4	25.0
HOW WOULD YOU RATE THE FOLLOWING HIGH SCHOOL SERVICES, EXPERIENCES, OR FACILITIES?							
Counseling or guidance on school problems.							
Excellent	16.4	16.7	16.0	17.2	16.8	9.9	6.9
Good	57.9	57.2	58.7	58.5	59.3	37.7	51.7
Poor	25.7	26.1	25.3	24.3	23.9	52.4	41.4
Counseling or guidance on personal problems.							
Excellent	61.2	70.4	51.8	70.4	52.6	70.5	43.4
Good	22.0	16.9	27.2	17.3	27.1	11.7	28.0
Poor	16.8	12.7	21.0	12.3	20.3	17.8	28.6
Counseling or guidance on vocational choice.							
Excellent	18.5	19.0	18.0	18.9	17.6	19.3	21.9
Good	54.9	52.1	57.6	53.3	58.2	34.7	51.2
Poor	26.6	28.9	24.4	27.8	24.2	46.0	26.9
Counseling or guidance on college education.							
Excellent	27.9	28.8	27.1	29.5	27.4	18.0	23.4
Good	52.1	50.4	53.7	50.3	53.9	52.0	50.8
Poor	20.0	20.8	19.2	20.2	18.7	30.0	25.8
Library materials and information on vocations.							
Excellent	16.7	16.8	16.7	17.1	16.4	12.1	19.9
Good	54.6	52.5	56.7	52.0	55.8	59.1	66.7
Poor	28.7	30.7	26.6	30.9	27.8	28.8	13.4
Courses offered.							
Excellent	9.4	10.1	8.7	10.6	8.8	2.7	7.4
Good	65.3	62.0	68.5	62.4	69.3	55.7	59.6
Poor	25.3	27.9	22.8	27.0	21.9	41.6	33.0
Social activities.							
Excellent	16.6	17.4	15.9	17.3	15.3	18.1	22.4
Good	57.8	55.4	60.1	55.4	60.1	54.4	60.7
Poor	25.6	27.2	24.0	27.3	24.6	27.5	16.9
HOW MUCH EDUCATION HAS YOUR FATHER HAD?							
Eighth grade education or less.	21.2	21.3	21.1	21.3	21.2	21.8	19.1
Some high school.	26.1	26.3	26.2	26.6	26.3	17.7	24.1
Graduated from high school.	27.4	27.4	27.4	26.8	27.3	35.4	28.2
Business or trade school.	5.6	5.4	5.8	5.3	5.9	6.8	5.5
Some college.	9.3	8.8	9.6	8.7	9.4	10.2	13.6
Graduated from college.	7.7	8.0	7.4	8.2	7.4	6.1	7.5
Don't know.	2.7	2.8	2.5	2.9	2.5	2.0	2.0
DO YOU HAVE A PART-TIME JOB DURING SCHOOL?							
Yes.	59.2	69.8	49.1	69.8	49.9	70.5	39.9
No.	40.8	30.2	50.9	30.2	50.1	29.5	60.1
DO YOU PLAN TO ATTEND COLLEGE OR UNIVERSITY?							
Yes, definitely.	44.8	49.4	40.3	49.3	39.9	51.1	47.0
Probably so.	14.3	16.5	12.3	16.5	12.1	17.0	13.9
Probably not.	7.8	7.4	8.1	7.4	8.0	8.5	8.6
No.	22.1	15.0	28.9	14.9	29.2	15.6	25.7
Don't know.	11.0	11.7	10.4	11.9	10.8	7.8	4.8

Table 4-2 Continued

Answers Recorded as a Percent of Each Group Responding	TOTAL RESPONSES	ALL BOYS	ALL GIRLS	PUBLIC SCHOOLS BOYS	PUBLIC SCHOOLS GIRLS	PRIVATE SCHOOLS BOYS	PRIVATE SCHOOLS GIRLS
	5078	2512	2566	2358	2361	154	205
	100%	100%	100%	100%	100%	100%	100%
IF YOU PLAN TO GO TO COLLEGE, WHERE DO YOU PLAN TO ENROLL?							
Macomb County Community College.	40.3	43.0	37.0	43.4	37.6	37.7	31.2
Other college or university.	46.8	44.4	49.7	44.3	49.5	45.3	52.0
Technical, trade, or business school.	12.9	12.6	13.3	12.3	12.9	17.0	16.8
WHAT DO YOUR PARENTS FEEL ABOUT WHETHER OR NOT YOU ATTEND COLLEGE?							
Insist or expect you to go.	21.7	28.9	15.0	28.6	15.1	30.6	12.2
Want you to go if you want to.	62.8	58.3	67.0	58.4	66.1	58.5	77.2
Don't care one way or the other.	10.2	8.6	11.8	8.7	12.3	6.8	6.1
Don't want you to go.	1.4	0.7	2.0	0.7	2.1	0.7	1.0
Won't allow you to go.	0.4	0.3	0.5	0.4	0.5	0.0	0.5
Don't know what they think.	3.5	3.2	3.7	3.2	3.9	3.4	3.0
Answer the following questions ONLY if your future plans include "NOT" or "PROBABLY NOT" going to college as indicated in a previous question.							
WHICH OF THE FOLLOWING TYPES OF TRAINING OR EDUCATION INTEREST YOU MOST?							
Paid apprenticeship as a helper to learn a trade.	22.7	41.4	7.2	41.8	7.4	35.3	4.3
On-the-job training with a company or industrial firm.	36.8	28.0	44.0	28.3	43.6	23.5	49.3
Correspondence study.	2.1	1.6	2.5	1.6	2.5	2.0	2.9
Post-graduate high school work in high school at night.	2.7	2.5	2.8	2.7	2.8	0.0	3.0
Adult education classes.	3.4	1.1	5.3	0.9	5.1	3.9	7.2
Military service or training.	5.3	10.6	1.1	10.3	1.2	15.7	0.0
None of the above.	27.0	14.8	37.1	14.4	37.4	19.6	33.3
WHAT IS THE MOST IMPORTANT REASON WHY YOU DO NOT PLAN TO GO TO COLLEGE?							
Tired of school.	14.8	21.1	10.4	20.8	10.5	24.4	9.5
Want to work and make money.	22.8	18.5	25.8	18.6	25.6	17.8	28.6
Can't afford it.	15.6	16.0	15.3	16.4	15.6	11.2	12.7
Parents don't want me to.	1.0	1.0	1.0	0.9	1.1	2.2	0.0
Can be just as successful without going to college.	1.1	1.6	0.8	1.2	0.7	6.7	1.6
Couldn't make good enough grades.	22.8	29.0	18.4	28.8	18.5	31.1	17.5
Want to get married.	9.3	2.5	14.1	2.7	14.6	0.0	6.3
Other.	12.6	10.3	14.2	10.6	13.4	6.6	23.8
WOULD YOU GO TO COLLEGE IF YOU HAD ENOUGH MONEY?							
Yes.	19.0	24.3	14.9	25.2	14.7	10.4	17.4
No.	42.8	35.1	48.7	34.9	48.6	37.5	49.3
Maybe.	38.2	40.6	36.4	39.9	36.7	52.1	33.3
IF YOU ANSWERED "YES" OR "MAYBE" YOU WOULD GO TO COLLEGE IF YOU HAD ENOUGH MONEY, HOW MUCH WOULD YOU NEED?							
Enough to pay all expenses ($1,200 to $1,500 per year.)	48.2	50.2	46.2	50.4	45.2	46.9	58.8
Enough to pay half of the expenses ($600 to $750.)	40.9	39.1	42.6	39.2	43.6	37.5	29.4
Enough to pay some but less than half of the expenses.	10.9	10.7	11.2	10.4	11.2	15.6	11.8

Table 8-3

RESPONSES OF SENIOR STUDENTS IN PUBLIC AND PRIVATE HIGH SCHOOLS OF MACOMB COUNTY

TO QUESTIONS CONCERNING THEIR HIGH SCHOOL EXPERIENCES

AND THEIR FUTURE VOCATIONAL AND EDUCATIONAL PLANS

Students Grouped According to Their Own Indication of Academic Placement in Top, Middle, or Bottom Third of Senior Class

	TOP THIRD OF CLASS		MIDDLE THIRD OF CLASS		BOTTOM THIRD OF CLASS	
	BOYS	GIRLS	BOYS	GIRLS	BOYS	GIRLS
	630	845	1369	1390	513	331
WHICH OF THE FOLLOWING BEST DESCRIBES YOUR HIGH SCHOOL PROGRAM OF STUDY?						
Commercial or business education.	17	203	130	746	59	157
College or university preparatory.	551	597	559	327	87	33
Shop or industrial arts.	18	0	244	10	88	4
Agriculture.	3	2	9	1	5	0
Homemaking or home economics.	2	0	2	9	0	9
General.	39	24	379	256	261	121
Other.	6	17	38	38	11	6
WOULD YOU HAVE TAKEN A VOCATIONAL COURSE OF STUDY IF A WIDER CHOICE OF THESE PROGRAMS HAD BEEN AVAILABLE WHEN YOU ENTERED HIGH SCHOOL?						
Definitely yes.	64	108	338	257	134	48
Probably.	149	164	618	626	251	173
Probably not.	233	338	308	402	101	89
Definitely not.	168	206	77	76	18	16
IF YOU ANSWERED "DEFINITELY YES" OR "PROBABLY" TO THE LAST QUESTION, WHICH VOCATIONAL PROGRAM WOULD YOU HAVE CHOSEN?						
Agriculture.	13	7	52	13	28	5
Business (Office).	41	149	117	558	41	131
Commercial Art.	12	34	67	99	17	30
Distributive (Sales).	13	4	54	35	25	11
Metal Trades.	11	1	155	3	60	2
Electronics.	51	5	195	4	70	3
Auto Mechanics.	28	1	172	9	125	4
Advanced Drafting.	42	2	153	5	34	3
Clothing Construction.	0	19	4	62	1	22
Graphic Arts-Printing.	2	2	14	9	9	2
Food Preparation.	0	10	10	39	10	16
Other.	51	55	109	110	42	14
WHY DID YOU CHOOSE THE COURSE OF STUDY WHICH YOU HAVE FOLLOWED IN HIGH SCHOOL?						
My parents decided for me.	25	19	51	56	22	24
My friends were taking this program.	10	6	33	30	18	11
Counselor advised me into this program.	92	69	257	156	98	68
This program seemed easiest to me.	14	13	139	80	116	52
This program seemed to fit my own future goals.	454	712	777	982	199	150
Other.	27	23	91	73	56	20
WHAT DO YOU PLAN TO DO ON A FULL-TIME BASIS THE FIRST YEAR AFTER HIGH SCHOOL GRADUATION?						
Work.	69	221	642	893	342	239
Enter military service.	19	5	61	5	50	3
Become a full-time housewife.	7	15	8	46	6	18
Attend college or university.	514	547	527	315	73	34
Attend business college.	0	17	15	47	3	13
Attend trade or technical school.	8	11	68	28	24	9
Other.	7	24	20	34	9	8
Don't know.	2	4	13	12	4	5
HOW WELL DO YOU THINK YOUR HIGH SCHOOL IS PREPARING YOU FOR WHAT YOU PLAN TO DO AFTER GRADUATION?						
Providing just what is needed.	99	186	161	235	58	58
Very well in some ways but in other ways preparation is not adequate.	333	437	442	601	126	101
Fairly well but all the training could be improved.	142	167	438	379	160	102
Poorly.	38	31	242	114	136	55

Table 8-3 Continued

	TOP THIRD OF CLASS		MIDDLE THIRD OF CLASS		BOTTOM THIRD OF CLASS	
	BOYS	GIRLS	BOYS	GIRLS	BOYS	GIRLS
	630	845	1369	1390	513	331
HOW MUCH HELP HAVE YOU RECEIVED IN HIGH SCHOOL IN DECIDING WHAT YOU PLAN TO DO AFTER GRADUATION?						
A lot of help, all you need.	135	182	153	172	33	29
Considerable help, but could have used more.	140	219	324	327	69	66
Some help, but not very much.	191	243	414	444	158	94
Little or no help.	138	177	392	386	213	125
HOW WOULD YOU RATE THE FOLLOWING HIGH SCHOOL SERVICES, EXPERIENCES, OR FACILITIES?						
Counseling or guidance on school problems.						
Excellent	120	158	213	195	64	42
Good	331	464	752	804	274	182
Poor	147	191	327	345	145	90
Counseling or guidance on personal problems.						
Excellent	352	399	908	669	366	137
Good	132	194	193	351	64	86
Poor	94	156	149	254	50	77
Counseling or guidance on vocational choice.						
Excellent	137	160	225	234	81	43
Good	305	436	682	780	231	185
Poor	150	202	367	314	159	76
Counseling or guidance on college education.						
Excellent	210	242	346	340	111	69
Good	282	424	643	702	243	165
Poor	113	143	259	263	109	57
Library materials and information on vocations.						
Excellent	89	141	225	204	77	60
Good	319	432	644	776	258	170
Poor	190	225	399	347	126	75
Courses offered						
Excellent	77	92	120	100	40	22
Good	423	589	783	894	247	197
Poor	104	136	376	334	174	89
Social activities						
Excellent	118	165	214	179	73	42
Good	347	491	698	808	244	163
Poor	135	150	350	340	149	93
HOW MUCH EDUCATION HAS YOUR FATHER HAD?						
Eighth grade education or less.	103	134	267	305	130	79
Some high school.	126	189	366	366	125	89
Graduated from high school.	179	229	345	375	119	71
Business or trade school.	39	55	70	70	17	19
Some college.	78	100	98	117	31	22
Graduated from college.	73	107	92	60	24	16
Don't know.	7	10	37	38	22	14
DO YOU HAVE A PART-TIME JOB DURING SCHOOL?						
Yes.	352	399	908	669	366	137
No.	249	424	354	652	100	174
DO YOU PLAN TO ATTEND COLLEGE OR UNIVERSITY?						
Yes, definitely.	534	573	557	381	68	38
Probably so.	32	72	265	194	90	35
Probably not.	8	39	105	125	62	34
No.	14	96	180	450	157	163
Don't know.	17	39	166	172	91	43

Table s-3 Continued

	TOP THIRD OF CLASS		MIDDLE THIRD OF CLASS		BOTTOM THIRD OF CLASS	
	BOYS	GIRLS	BOYS	GIRLS	BOYS	GIRLS
	630	845	1369	1390	513	331
IF YOU PLAN TO GO TO COLLEGE, WHERE DO YOU PLAN TO ENROLL?						
Macomb County Community College.	98	133	513	354	133	53
Other college or university.	454	492	285	211	29	22
Technical, trade, or business school.	26	39	138	117	53	37
WHAT DO YOUR PARENTS FEEL ABOUT WHETHER OR NOT YOU ATTEND COLLEGE?						
Insist or expect you to go.	285	201	330	144	66	21
Want you to go if you want to.	298	549	795	906	283	192
Don't care one way or the other.	16	47	104	182	83	60
Don't want you to go.	2	15	8	25	7	10
Won't allow you to go.	2	3	4	8	2	1
Don't know what they think.	3	8	42	60	29	26
Answer the following questions ONLY if your future plans include "NOT" or "PROBABLY NOT" going to college as indicated in a previous question.						
WHICH OF THE FOLLOWING TYPES OF TRAINING OR EDUCATION INTEREST YOU MOST?						
Paid apprenticeship as a helper to learn a trade.	16	5	188	46	124	18
On-the-job training with a company or industrial firm.	9	62	136	300	77	59
Correspondence study.	1	4	5	15	7	5
Post-graduate high school work in high school at night.	0	4	11	16	9	7
Adult education classes.	1	7	7	32	1	11
Military service or training.	11	0	31	5	42	5
None of the above.	20	59	55	211	42	85
WHAT IS THE MOST IMPORTANT REASON WHY YOU DO NOT PLAN TO GO TO COLLEGE?						
Tired of school.	11	18	60	57	62	19
Want to work and make money.	5	40	64	149	48	44
Can't afford it.	5	15	67	108	29	16
Parents don't want me to.	2	1	2	6	2	2
Can be just as successful without going to college.	0	2	7	5	3	0
Couldn't make good enough grades.	4	1	87	90	92	75
Want to get married.	1	21	8	78	7	28
Other.	4	27	42	84	19	17
WOULD YOU GO TO COLLEGE IF YOU HAD ENOUGH MONEY?						
Yes.	15	29	116	103	57	18
No.	16	70	128	304	127	116
Maybe.	19	50	181	241	114	76
IF YOU ANSWERED "YES" OR "MAYBE" YOU WOULD GO TO COLLEGE IF YOU HAD ENOUGH MONEY, HOW MUCH WOULD YOU NEED?						
Enough to pay all expenses ($1,200 to $1,500 per year.)	26	43	136	151	92	40
Enough to pay half of the expenses ($600 to $750.)	13	37	125	143	60	36
Enough to pay some but less than half of the expenses.	4	5	33	39	17	13

Table 8-4

RESPONSES OF SENIOR STUDENTS IN PUBLIC AND PRIVATE HIGH SCHOOLS OF MACOMB COUNTY

TO QUESTIONS CONCERNING THEIR HIGH SCHOOL EXPERIENCES

AND THEIR FUTURE VOCATIONAL AND EDUCATIONAL PLANS

Students Grouped According to Their Own Indication of Academic Placement in Top, Middle, or Bottom Third of Senior Class

	TOP THIRD OF CLASS		MIDDLE THIRD OF CLASS		BOTTOM THIRD OF CLASS	
	BOYS	GIRLS	BOYS	GIRLS	BOYS	GIRLS
	630	643	1369	1390	513	551
Answers Recorded as a Percent of Each Group Responding	100%	100%	100%	100%	100%	100%
WHICH OF THE FOLLOWING BEST DESCRIBES YOUR HIGH SCHOOL PROGRAM OF STUDY?						
Commercial or business education.	2.7	24.1	9.6	53.7	11.5	47.6
College or university preparatory.	87.5	70.8	41.1	23.6	17.0	10.0
Shop or industrial arts.	2.8	0.0	17.9	0.7	12.2	1.2
Agriculture.	0.5	0.2	0.7	0.1	1.0	0.0
Homemaking or home economics.	0.3	0.0	0.1	0.6	0.0	2.7
General.	5.2	2.8	27.8	18.6	51.1	36.7
Other.	1.0	2.1	2.8	2.7	2.2	1.8
WOULD YOU HAVE TAKEN A VOCATIONAL COURSE OF STUDY IF A WIDER CHOICE OF THESE PROGRAMS HAD BEEN AVAILABLE WHEN YOU ENTERED HIGH SCHOOL?						
Definitely yes.	10.4	13.2	25.2	18.8	26.6	14.7
Probably.	24.3	20.0	46.1	46.0	49.8	53.0
Probably not.	37.9	41.4	23.0	29.6	20.0	27.4
Definitely not.	27.4	25.4	5.7	5.6	3.6	4.9
IF YOU ANSWERED "DEFINITELY YES" OR "PROBABLY" TO THE LAST QUESTION, WHICH VOCATIONAL PROGRAM WOULD YOU HAVE CHOSEN?						
Agriculture.	4.9	2.4	4.7	1.4	6.0	2.1
Business (Office).	15.5	51.8	10.6	59.0	8.9	53.6
Commercial Art.	4.5	11.7	6.1	10.5	3.7	12.5
Distributive (Sales).	4.9	1.4	4.8	3.8	5.4	4.5
Metal Trades.	4.3	0.3	14.1	0.3	13.0	0.8
Electronics.	19.3	1.6	17.7	0.4	15.2	1.2
Auto Mechanics.	10.6	0.3	15.6	0.9	27.1	1.6
Advanced Drafting.	15.9	0.7	13.9	0.5	7.4	1.2
Clothing Construction.	00.0	6.6	0.4	6.6	0.2	9.2
Graphic Arts-Printing.	0.8	0.7	1.3	0.9	1.9	0.8
Food Preparation.	00.0	3.5	0.9	4.1	2.2	6.6
Other.	19.3	19.0	9.9	11.6	9.0	5.9
WHY DID YOU CHOOSE THE COURSE OF STUDY WHICH YOU HAVE FOLLOWED IN HIGH SCHOOL?						
My parents decided for me.	4.0	2.3	3.8	4.0	4.3	7.3
My friends were taking this program.	1.6	0.7	2.4	2.2	3.5	3.4
Counselor advised me into this program.	14.8	8.3	19.1	11.5	19.3	20.9
This program seemed easiest to me.	2.3	1.5	10.3	5.8	22.8	16.0
This program seemed to fit my own future goals.	73.0	84.5	57.6	71.2	39.1	46.1
Other.	4.3	2.7	6.8	5.3	11.0	6.3
WHAT DO YOU PLAN TO DO ON A FULL-TIME BASIS THE FIRST YEAR AFTER HIGH SCHOOL GRADUATION?						
Work.	11.0	26.0	47.4	64.6	66.9	72.5
Enter military service.	3.0	.0.6	4.5	0.4	9.8	0.1
Become a full-time housewife.	1.1	1.8	0.6	3.3	1.2	5.5
Attend college or university.	82.1	65.0	38.9	22.8	14.3	10.3
Attend business college.	00.0	2.0	1.1	3.4	0.6	4.0
Attend trade or technical school.	1.3	1.3	5.0	2.0	4.7	2.8
Other.	1.2	2.8	1.5	2.6	1.7	2.4
Don't know.	0.3	0.5	1.0	0.9	0.8	1.5

Table 8-4 Continued

Answers Recorded as a Percent of Each Group Responding	TOP THIRD OF CLASS BOYS 630 100%	TOP THIRD OF CLASS GIRLS 845 100%	MIDDLE THIRD OF CLASS BOYS 1369 100%	MIDDLE THIRD OF CLASS GIRLS 1390 100%	BOTTOM THIRD OF CLASS BOYS 513 100%	BOTTOM THIRD OF CLASS GIRLS 551 100%
HOW WELL DO YOU THINK YOUR HIGH SCHOOL IS PREPARING YOU FOR WHAT YOU PLAN TO DO AFTER GRADUATION?						
Providing just what is needed.	16.2	22.6	12.5	17.7	12.1	18.4
Very well in some ways but in other ways preparation is not adequate.	54.4	53.1	34.5	45.5	26.3	32.0
Fairly well but all the training could be improved.	23.2	20.4	34.1	28.2	33.3	32.3
Poorly.	6.2	3.9	18.9	8.6	28.3	17.3
HOW MUCH HELP HAVE YOU RECEIVED IN HIGH SCHOOL IN DECIDING WHAT YOU PLAN TO DO AFTER GRADUATION?						
A lot of help, all you need.	22.4	22.2	11.9	12.9	7.0	9.3
Considerable help, but could have used more.	23.2	26.8	25.3	24.6	14.6	21.1
Some help, but not very much.	31.6	29.6	32.3	33.5	33.4	30.0
Little or no help.	22.8	21.4	30.5	29.0	45.0	39.1
HOW WOULD YOU RATE THE FOLLOWING HIGH SCHOOL SERVICES, EXPERIENCES, OR FACILITIES?						
Counseling or guidance on school problems.						
Excellent	20.0	19.4	16.5	14.5	13.3	13.4
Good	55.4	57.1	50.2	59.7	56.7	58.0
Poor	24.6	23.5	33.3	25.8	30.0	28.6
Counseling or guidance on personal problems.						
Excellent	60.9	53.3	72.6	52.5	76.3	45.7
Good	22.8	25.9	15.4	27.6	13.3	28.7
Poor	16.3	20.8	12.0	19.9	10.4	25.6
Counseling or guidance on vocational choice.						
Excellent	23.2	20.0	17.7	17.6	17.2	14.1
Good	51.5	54.5	53.5	58.8	49.0	60.9
Poor	25.3	25.5	28.8	23.6	33.8	25.0
Counseling or guidance on college education.						
Excellent	34.7	29.6	27.7	26.0	24.0	23.8
Good	46.6	52.6	51.5	53.9	52.5	56.7
Poor	18.7	17.8	20.8	20.1	23.5	19.5
Library materials and information on vocations.						
Excellent	14.8	17.6	17.7	15.1	16.7	19.7
Good	53.4	54.0	50.8	58.5	56.0	55.8
Poor	31.8	28.4	31.5	26.4	27.3	24.5
Courses offered						
Excellent	12.8	11.3	9.4	7.6	8.7	7.2
Good	70.0	72.1	61.2	67.4	53.6	64.0
Poor	17.2	16.6	29.4	25.0	37.7	28.8
Social activities						
Excellent	19.7	20.5	17.0	13.4	15.7	14.1
Good	57.8	61.0	55.3	61.0	52.4	54.7
Poor	22.5	18.5	27.7	25.6	31.9	31.2
HOW MUCH EDUCATION HAS YOUR FATHER HAD?						
Eighth grade education or less.	17.0	16.3	20.9	22.9	27.8	25.5
Some high school.	20.8	22.9	28.7	27.5	26.7	28.7
Graduated from high school.	29.6	27.8	27.1	28.2	25.4	22.9
Business or trade school.	6.4	6.7	5.5	5.3	3.6	6.1
Some college.	12.9	12.1	7.7	8.7	6.6	7.1
Graduated from college.	12.1	13.0	7.2	4.5	5.1	5.2
Don't know.	1.2	1.2	2.9	2.9	4.8	4.5
DO YOU HAVE A PART-TIME JOB DURING SCHOOL?						
Yes.	58.6	48.5	71.9	50.5	78.5	44.0
No.	41.4	51.5	28.1	49.5	21.5	56.0

Table 1-4 Continued

Answers Recorded as a Percent of Each Group Responding	TOP THIRD OF CLASS BOYS 630 100%	TOP THIRD OF CLASS GIRLS 645 100%	MIDDLE THIRD OF CLASS BOYS 1389 100%	MIDDLE THIRD OF CLASS GIRLS 1390 100%	BOTTOM THIRD OF CLASS BOYS 513 100%	BOTTOM THIRD OF CLASS GIRLS 331 100%
DO YOU PLAN TO ATTEND COLLEGE OR UNIVERSITY?						
Yes, definitely.	88.3	70.0	43.8	26.8	14.5	12.1
Probably so.	5.3	8.7	20.8	14.7	19.2	11.2
Probably not.	1.3	4.8	8.2	9.5	13.2	10.9
No.	2.3	11.7	14.1	36.0	33.5	52.1
Don't know.	2.8	4.8	13.1	13.0	19.4	13.7
IF YOU PLAN TO GO TO COLLEGE, WHERE DO YOU PLAN TO ENROLL?						
Macomb County Community College.	17.0	20.0	54.8	51.9	61.8	47.3
Other college or university.	78.5	74.1	30.4	30.9	13.5	19.6
Technical, trade, or business school.	4.5	5.9	14.8	17.2	24.7	33.1
WHAT DO YOUR PARENTS FEEL ABOUT WHETHER OR NOT YOU ATTEND COLLEGE?						
Insist or expect you to go.	47.0	24.4	25.7	10.9	14.0	6.8
Want you to go if you want to.	49.2	66.7	68.0	68.4	60.2	61.9
Don't care one way or the other.	2.6	5.7	5.1	13.7	17.7	19.4
Don't want you to go.	0.3	1.8	0.6	1.9	1.5	3.2
Won't allow you to go.	0.3	0.4	0.3	0.6	0.4	0.3
Don't know what they think.	0.6	1.0	3.3	4.5	6.2	8.4
Answer the following questions ONLY if your future plans include "NOT" or "PROBABLY NOT" going to college as indicated in a previous question.						
WHICH OF THE FOLLOWING TYPES OF TRAINING OR EDUCATION INTEREST YOU MOST?						
Paid apprenticeship as a helper to learn a trade.	27.6	3.6	43.4	7.4	41.1	9.6
On-the-job training with a company or industrial firm.	15.5	44.0	31.4	48.0	25.5	31.0
Correspondence study.	1.7	2.8	1.2	2.4	2.3	2.6
Post-graduate high school work in high school at night.	0.0	2.8	2.5	2.6	3.0	3.7
Adult education classes.	1.7	5.0	1.6	5.1	0.3	5.8
Military service or training.	19.0	0.0	7.2	.8	13.9	2.6
None of the above.	34.5	41.8	12.7	33.7	13.9	44.7
WHAT IS THE MOST IMPORTANT REASON WHY YOU DO NOT PLAN TO GO TO COLLEGE?						
Tired of school.	34.4	14.4	17.8	2.9	23.7	9.4
Want to work and make money.	15.6	32.0	19.0	25.8	18.3	21.8
Can't afford it.	15.6	12.0	19.9	18.7	11.1	8.0
Parents don't want me to.	6.3	0.8	0.6	1.0	0.8	1.0
Can be just as successful without going to college.	0.0	1.6	2.0	0.9	1.1	0.0
Couldn't make good enough grades.	12.5	0.8	25.8	15.6	35.0	37.4
Want to get married.	3.1	16.8	2.4	13.5	2.7	13.9
Other.	12.5	21.6	12.5	14.6	7.3	8.5
WOULD YOU GO TO COLLEGE IF YOU HAD ENOUGH MONEY?						
Yes.	30.0	19.5	27.3	15.9	19.1	8.6
No.	32.0	47.0	30.1	46.9	42.6	55.2
Maybe.	38.0	33.5	42.6	37.2	38.3	36.2
IF YOU ANSWERED "YES" OR "MAYBE" YOU WOULD GO TO COLLEGE IF YOU HAD ENOUGH MONEY, HOW MUCH WOULD YOU NEED?						
Enough to pay all expenses ($1,200 to $1,500 per year.)	60.5	50.5	46.3	45.4	54.4	45.0
Enough to pay half of the expenses ($600 to $750.)	30.2	43.5	42.5	42.9	35.5	40.5
Enough to pay some but less than half of the expenses.	9.3	6.0	11.2	11.7	10.1	14.5

Table 1-8

RESPONSES OF SENIOR STUDENTS IN PUBLIC AND PRIVATE HIGH SCHOOLS OF MACOMB COUNTY

TO QUESTIONS CONCERNING THEIR HIGH SCHOOL EXPERIENCES

AND THEIR FUTURE VOCATIONAL AND EDUCATIONAL PLANS

Students Grouped by High School Program of Study

	Commercial/ Business Education	College Preparatory	Shop/Industrial Arts	Agriculture	Homemaking/ Home Economics	General	Other
	1312	2154	364	20	22	1074	158
WOULD YOU HAVE TAKEN A VOCATIONAL COURSE OF STUDY IF A WIDER CHOICE OF THESE PROGRAMS HAD BEEN AVAILABLE WHEN YOU ENTERED HIGH SCHOOL?							
Definitely yes.	305	221	150	3	3	235	38
Probably.	615	564	147	6	12	578	59
Probably not.	305	866	44	6	4	218	28
Definitely not.	64	454	7	2	3	38	3
IF YOU ANSWERED "DEFINITELY YES" OR "PROBABLY" TO THE LAST QUESTION, WHICH VOCATIONAL PROGRAM WOULD YOU HAVE CHOSEN?							
Agriculture.	22	39	8	8	0	39	2
Business (Office).	686	153	4	0	4	168	22
Commercial Art.	69	75	24	0	6	75	10
Distributive (Sales).	58	30	4	1	1	47	7
Metal Trades.	12	37	97	1	1	81	3
Electronics.	21	163	47	0	0	89	8
Auto Mechanics.	31	69	89	0	2	140	8
Advanced Drafting.	13	73	70	0	1	69	13
Clothing Construction.	38	30	0	1	0	30	2
Graphic Arts-Printing.	6	5	8	0	0	18	1
Food Preparation.	23	16	5	0	0	34	1
Other.	52	175	13	0	1	117	23
WHY DID YOU CHOOSE THE COURSE OF STUDY WHICH YOU HAVE FOLLOWED IN HIGH SCHOOL?							
My parents decided for me.	56	91	8	0	3	33	6
My friends were taking this program.	31	25	9	3	0	39	1
Counselor advised me into this program.	136	276	50	1	1	255	19
This program seemed easiest to me.	86	37	35	2	8	236	10
This program seemed to fit my own future goals.	926	1631	242	14	8	376	77
Other.	62	73	17	0	2	119	17
TO THE BEST OF YOUR KNOWLEDGE, WHERE DO YOU RANK IN YOUR GRADUATING CLASS?							
Top Third.	220	1148	18	5	2	57	25
Middle Third.	876	886	254	10	11	635	87
Bottom Third.	216	120	92	5	9	382	20
WHAT DO YOU PLAN TO DO ON A FULL-TIME BASIS THE FIRST YEAR AFTER HIGH SCHOOL GRADUATION?							
Work.	992	361	251	9	10	710	73
Enter military service.	23	33	22	1	0	61	3
Become a full-time housewife.	40	18	3	3	8	25	3
Attend college or university.	144	1615	46	6	2	163	34
Attend business college.	64	15	0	0	0	16	0
Attend trade or technical school.	23	46	25	0	2	48	4
Other.	14	42	9	1	0	27	9
Don't know.	7	14	3	0	0	14	2

Table 2-8 Continued

	Commercial/ Business Education	College Preparatory	Shop/Industrial Arts	Agriculture	Homemaking/ Home Economics	General	Other
	1312	2154	364	20	22	1074	132
HOW WELL DO YOU THINK YOUR HIGH SCHOOL IS PREPARING YOU FOR WHAT YOU PLAN TO DO AFTER GRADUATION?							
Providing just what is needed.	261	363	38	2	5	112	16
Very well in some ways but in other ways preparation is not adequate.	521	1048	105	6	6	311	43
Fairly well but all the training could be improved.	360	482	126	6	6	361	47
Poorly.	126	168	71	4	5	221	21
HOW MUCH HELP HAVE YOU RECEIVED IN HIGH SCHOOL IN DECIDING WHAT YOU PLAN TO DO AFTER GRADUATION?							
A lot of help, all you need.	167	416	39	2	1	64	15
Considerable help, but could have used more.	319	533	77	2	3	188	23
Some help, but not very much.	396	658	95	8	9	338	40
Little or no help.	381	449	120	5	7	419	50
HOW WOULD YOU RATE THE FOLLOWING HIGH SCHOOL SERVICES, EXPERIENCES, OR FACILITIES?							
Counseling or guidance on school problems.							
Excellent	181	407	47	2	3	134	18
Good	756	1168	190	10	10	602	71
Poor	324	492	90	4	6	293	36
Counseling or guidance on personal problems.							
Excellent	723	1102	252	14	12	640	88
Good	292	466	49	2	2	189	20
Poor	204	358	30	1	3	170	14
Counseling or guidance on vocational choice.							
Excellent	234	399	69	2	3	151	22
Good	733	1065	164	6	11	568	72
Poor	278	565	87	7	6	293	32
Counseling or guidance on college education.							
Excellent	330	642	83	4	5	227	27
Good	671	1019	146	6	9	546	62
Poor	213	401	77	5	5	213	30
Library materials and information on vocations.							
Excellent	201	332	62	2	4	172	23
Good	731	1049	168	8	13	556	74
Poor	303	663	84	6	3	274	29
Courses offered.							
Excellent	109	217	33	1	3	74	14
Good	861	1393	197	8	12	579	83
Poor	279	461	83	7	5	350	28
Social activities.							
Excellent	185	392	54	2	2	136	20
Good	707	1202	174	10	10	578	70
Poor	339	455	83	4	7	294	35
HOW MUCH EDUCATION HAS YOUR FATHER HAD?							
Eighth grade education or less.	313	321	97	7	9	248	23
Some high school.	383	436	91	4	7	302	38
Graduated from high school.	353	571	74	5	0	275	40
Business or trade school.	58	145	18	1	1	42	5
Some college.	69	291	16	0	0	61	9
Graduated from college.	48	268	13	0	2	39	8
Don't know.	38	32	15	0	1	41	1

Table 8-5 Continued

	COMMERCIAL/ BUSINESS EDUCATION	COLLEGE PREPARATORY	SHOP/INDUSTRIAL ARTS	AGRICULTURE	HOMEMAKING/ HOME ECONOMICS	GENERAL	OTHER
	1312	2154	364	80	82	1074	132
DO YOU HAVE A PART-TIME JOB DURING SCHOOL?							
Yes.	723	1102	252	14	12	640	88
No.	523	949	69	3	8	365	36
DO YOU PLAN TO ATTEND COLLEGE OR UNIVERSITY?							
Yes, definitely.	219	1634	58	4	3	183	50
Probably so.	182	216	78	2	0	186	24
Probably not.	147	46	49	1	1	114	15
No.	509	82	88	7	14	344	16
Don't know.	193	80	57	3	3	171	21
IF YOU PLAN TO GO TO COLLEGE, WHERE DO YOU PLAN TO ENROLL?							
Macomb County Community College.	304	543	116	3	2	264	52
Other college or university.	90	1266	15	3	3	96	20
Technical, trade, or business school.	127	91	53	1	0	124	14
WHAT DO YOUR PARENTS FEEL ABOUT WHETHER OR NOT YOU ATTEND COLLEGE?							
Insist or expect you to go.	107	773	40	1	3	106	17
Want you to go if you want to.	844	1196	222	9	12	647	93
Don't care one way or the other.	196	59	50	7	2	164	12
Don't want you to go.	27	9	5	0	0	25	1
Won't allow you to go.	8	3	1	0	1	6	1
Don't know what they think.	72	21	15	0	2	57	1

Answer the following questions ONLY if your future plans include "NOT" or "PROBABLY NOT" going to college as indicated in a previous question.

WHICH OF THE FOLLOWING TYPES OF TRAINING OR EDUCATION INTEREST YOU MOST?							
Paid apprenticeship as a helper to learn a trade.	70	47	92	1	1	177	9
On-the-job training with a company or industrial firm.	350	63	50	3	5	160	12
Correspondence study.	13	5	0	1	0	17	1
Post-graduate high school work in high school at night.	21	6	4	3	0	12	1
Adult education classes.	29	7	3	0	2	15	3
Military service or training.	18	15	9	1	0	47	4
None of the above.	202	86	11	0	6	158	9
WHAT IS THE MOST IMPORTANT REASON WHY YOU DO NOT PLAN TO GO TO COLLEGE?							
Tired of school.	74	33	20	1	3	87	9
Want to work and make money.	193	24	21	1	1	101	9
Can't afford it.	105	29	20	3	0	78	5
Parents don't want me to.	7	0	1	1	0	6	0
Can be just as successful without going to college.	5	0	5	1	0	5	1
Couldn't make good enough grades.	119	21	45	0	3	157	4
Want to get married.	69	15	4	0	5	47	3
Other.	85	38	11	0	2	55	2
WOULD YOU GO TO COLLEGE IF YOU HAD ENOUGH MONEY?							
Yes.	103	80	33	1	1	109	11
No.	357	56	68	6	10	252	12
Maybe.	287	69	68	2	4	235	16
IF YOU ANSWERED "YES" OR "MAYBE" YOU WOULD GO TO COLLEGE IF YOU HAD ENOUGH MONEY, HOW MUCH WOULD YOU NEED?							
Enough to pay all expenses ($1,200 to $1,500 per year.)	186	78	48	3	2	158	13
Enough to pay half of the expenses ($600 to $750.)	152	79	38	1	4	127	13
Enough to pay some but less than half of the expenses.	41	11	12	2	0	42	3

Table s-4

RESPONSES OF SENIOR STUDENTS IN PUBLIC AND PRIVATE HIGH SCHOOLS OF MACOMB COUNTY TO QUESTIONS CONCERNING THEIR HIGH SCHOOL EXPERIENCES AND THEIR FUTURE VOCATIONAL AND EDUCATIONAL PLANS

Students Grouped by High School Program of Study

	COMMERCIAL/ BUSINESS EDUCATION	COLLEGE PREPARATORY	SHOP/INDUSTRIAL ARTS	AGRICULTURE	HOMEMAKING/ HOME ECONOMICS	GENERAL	OTHER
Answers Recorded as a Percent of Each Group Responding	1312 100%	2154 100%	364 100%	20 100%	22 100%	1074 100%	132 100%
WOULD YOU HAVE TAKEN A VOCATIONAL COURSE OF STUDY IF A WIDER CHOICE OF THESE PROGRAMS HAD BEEN AVAILABLE WHEN YOU ENTERED HIGH SCHOOL?							
Definitely yes.	23.7	10.5	43.0	17.6	13.6	22.2	26.2
Probably.	47.8	26.7	42.3	35.2	54.5	54.6	48.4
Probably not.	23.7	41.1	12.6	35.2	18.1	20.5	22.9
Definitely not.	4.8	21.7	2.1	12.0	13.6	2.7	2.5
IF YOU ANSWERED "DEFINITELY YES" OR "PROBABLY" TO THE LAST QUESTION, WHICH VOCATIONAL PROGRAM WOULD YOU HAVE CHOSEN?							
Agriculture.	2.1	4.5	2.2	66.8	0.0	4.3	2.0
Business (Office).	66.8	17.7	1.1	0.0	14.3	18.4	22.0
Commercial Art.	6.8	8.7	6.6	0.0	21.5	8.3	10.0
Distributive (Sales).	5.1	3.5	1.1	8.3	3.6	5.3	7.0
Metal Trades.	1.1	4.2	26.3	8.3	3.6	8.9	3.0
Electronics.	2.1	18.8	12.7	0.0	0.0	9.8	8.0
Auto Mechanics.	3.0	8.0	24.0	0.0	7.2	15.4	8.0
Advanced Drafting.	1.3	8.5	19.0	8.3	0.0	7.6	13.0
Clothing Construction.	3.6	3.5	0.0	8.3	24.8	3.3	2.0
Graphic Arts-Printing.	0.6	0.6	2.2	0.0	0.0	2.0	1.0
Food Preparation.	2.2	1.9	1.3	0.0	21.4	3.8	1.0
Other.	5.1	20.1	3.5	0.0	3.6	12.9	23.0
WHY DID YOU CHOOSE THE COURSE OF STUDY WHICH YOU HAVE FOLLOWED IN HIGH SCHOOL?							
My parents decided for me.	4.2	4.3	2.3	0.0	13.6	3.1	4.6
My friends were taking this program.	2.4	1.2	2.5	15.0	0.0	3.7	0.8
Counselor advised me into this program.	10.6	13.0	13.8	5.0	4.6	24.2	14.6
This program seemed easiest to me.	6.6	1.7	9.7	10.5	36.4	22.3	7.7
This program seemed to fit my own future goals.	71.4	76.6	67.0	70.0	36.4	35.4	59.2
Other.	4.8	3.2	4.7	0.0	9.0	11.3	13.1
TO THE BEST OF YOUR KNOWLEDGE, WHERE DO YOU RANK IN YOUR GRADUATING CLASS?							
Top Third.	16.8	53.3	4.9	25.0	9.1	5.4	18.9
Middle Third.	66.7	41.2	70.0	50.0	50.0	59.0	66.0
Bottom Third.	16.5	5.5	25.1	25.0	40.9	35.6	15.1
WHAT DO YOU PLAN TO DO ON A FULL-TIME BASIS THE FIRST YEAR AFTER HIGH SCHOOL GRADUATION?							
Work.	76.0	16.8	70.0	45.0	45.5	66.6	57.0
Enter military service.	1.7	1.5	6.1	5.0	0.0	5.7	2.3
Become a full-time housewife.	3.1	0.8	0.8	15.0	36.3	2.4	2.3
Attend college or university.	11.0	75.2	12.8	30.0	9.1	15.4	26.6
Attend business college.	4.9	0.7	0.0	0.0	0.0	1.5	0.0
Attend trade or technical school.	1.7	2.2	7.0	0.0	9.1	4.5	3.2
Other.	1.1	2.1	2.5	5.0	0.0	2.6	7.0
Don't know.	0.5	0.6	0.8	0.0	0.0	1.3	1.6

Table 5-6 Continued

Answers Recorded as a Percent of Each Group Responding	COMMERCIAL/ BUSINESS EDUCATION	COLLEGE PREPARATORY	SHOP/INDUSTRIAL ARTS	AGRICULTURE	HOMEMAKING/ HOME ECONOMICS	GENERAL	OTHER
	1318	2154	364	20	22	1074	132
	100%	100%	100%	100%	100%	100%	100%
HOW WELL DO YOU THINK YOUR HIGH SCHOOL IS PREPARING YOU FOR WHAT YOU PLAN TO DO AFTER GRADUATION?							
Providing just what is needed.	20.6	17.6	11.2	11.1	22.7	11.0	12.6
Very well in some ways but in other ways preparation is not adequate.	41.5	50.8	30.9	33.4	27.3	31.0	33.8
Fairly well but all the training could be improved.	28.4	23.4	37.0	33.4	27.3	36.0	37.0
Poorly.	9.5	8.2	20.9	22.1	22.7	22.0	16.6
HOW MUCH HELP HAVE YOU RECEIVED IN HIGH SCHOOL IN DECIDING WHAT YOU PLAN TO DO AFTER GRADUATION?							
A lot of help, all you need.	13.2	20.3	11.8	11.8	5.0	6.4	11.7
Considerable help, but could have used more.	25.2	26.0	23.0	11.8	15.0	18.6	18.0
Some help, but not very much.	31.4	32.0	28.7	47.0	45.0	33.5	31.2
Little or no help.	30.2	21.7	36.5	29.4	35.0	41.5	39.1
HOW WOULD YOU RATE THE FOLLOWING HIGH SCHOOL SERVICES, EXPERIENCES, OR FACILITIES?							
Counseling or guidance on school problems.							
Excellent	14.4	19.7	14.4	12.5	15.8	13.0	14.4
Good	60.0	56.5	58.0	62.5	52.6	58.6	56.8
Poor	25.6	23.8	27.6	25.0	31.6	28.4	28.8
Counseling or guidance on personal problems.							
Excellent	59.4	57.2	76.1	82.5	70.6	64.0	72.0
Good	24.0	24.2	14.8	11.7	11.8	18.9	16.4
Poor	16.6	18.6	9.1	5.8	17.6	17.1	11.6
Counseling or guidance on vocational choice.							
Excellent	18.8	19.7	21.5	13.3	15.0	14.9	17.5
Good	58.9	52.5	51.3	40.0	55.0	56.1	57.1
Poor	22.3	27.8	27.2	46.7	30.0	29.0	25.4
Counseling or guidance on college education.							
Excellent	27.2	31.0	27.1	26.8	26.3	23.0	22.7
Good	55.3	49.3	47.8	40.0	47.4	55.5	52.1
Poor	17.5	19.7	25.1	33.2	26.3	21.5	25.2
Library materials and information on vocations.							
Excellent	16.3	16.3	19..8	12.5	20.0	17.1	18.3
Good	59.3	51.3	53.5	50.0	65.0	55.5	58.8
Poor	24.4	32.4	26.7	37.5	15.0	27.4	22.9
Courses offered.							
Excellent	8.7	10.5	10.6	6.3	15.0	7.3	11.2
Good	69.0	67.4	63.0	50.0	60.0	57.8	66.4
Poor	22.3	22.1	26.4	43.7	25.0	34.9	22.4
Social activities.							
Excellent	15.0	19.2	17.3	12.5	10.5	13.4	16.0
Good	57.4	58.6	56.0	62.5	52.6	57.5	56.0
Poor	27.6	22.2	26.7	25.0	36.9	29.1	28.0
HOW MUCH EDUCATION HAS YOUR FATHER HAD?							
Eighth grade education or less.	24.8	15.6	29.9	41.2	45.0	24.6	18.6
Some high school.	30.4	21.2	28.2	23.5	35.0	29.8	30.6
Graduated from high school.	28.0	27.8	22.8	29.4	0.0	27.3	32.2
Business or trade school.	4.6	7.1	5.6	5.9	5.0	4.2	4.0
Some college.	5.5	14.3	4.9	0.0	0.0	6.1	7.3
Graduated from college.	3.7	12.8	4.0	0.0	10.0	3.9	6.5
Don't know.	3.0	1.2	4.6	0.0	5.0	4.1	0.8

Table 5-6 Continued

Answers Recorded as a Percent of Each Group Responding	COMMERCIAL/ BUSINESS EDUCATION	COLLEGE PREPARATORY	SHOP/INDUSTRIAL ARTS	AGRICULTURE	HOMEMAKING/ HOME ECONOMICS	GENERAL	OTHER
	1312 100%	2154 100%	364 100%	20 100%	22 100%	1074 100%	132 100%
DO YOU HAVE A PART-TIME JOB DURING SCHOOL?							
Yes.	58.0	53.8	78.5	82.5	60.0	63.6	76.0
No.	42.0	46.2	21.5	17.5	40.0	36.4	29.0
DO YOU PLAN TO ATTEND COLLEGE OR UNIVERSITY?							
Yes, definitely.	17.5	79.5	17.6	23.6	14.3	18.4	39.7
Probably so.	14.6	10.5	23.6	11.7	0.0	18.8	19.0
Probably not.	11.7	2.2	14.8	5.8	4.8	11.4	11.9
No.	40.7	4.0	26.6	41.2	66.6	34.4	12.7
Don't know.	15.5	3.8	17.4	17.7	14.3	17.2	16.7
IF YOU PLAN TO GO TO COLLEGE, WHERE DO YOU PLAN TO ENROLL?							
Macomb County Community College.	58.5	28.6	63.0	43.0	40.0	54.5	60.5
Other college or university.	17.3	66.6	8.2	43.0	60.0	19.8	23.2
Technical, trade, or business school.	24.2	4.8	28.8	14.0	0.0	25.7	16.3
WHAT DO YOUR PARENTS FEEL ABOUT WHETHER OR NOT YOU ATTEND COLLEGE?							
Insist or expect you to go.	8.5	37.5	12.0	5.9	15.0	10.5	13.6
Want you to go if you want to.	67.2	58.1	66.7	52.9	60.0	64.3	74.5
Don't care one way or the other.	15.8	2.9	15.0	41.2	10.0	16.3	9.5
Don't want you to go.	2.1	0.4	1.5	0.0	0.0	2.5	0.8
Won't allow you to go.	0.6	0.1	0.3	0.0	5.0	0.6	0.8
Don't know what they think.	5.7	1.0	4.5	0.0	10.0	5.8	0.8
Answer the following questions ONLY if your future plans include "NOT" or "PROBABLY NOT" going to college as indicated in a previous question.							
WHICH OF THE FOLLOWING TYPES OF TRAINING OR EDUCATION INTEREST YOU MOST?							
Paid apprenticeship as a helper to learn a trade.	9.7	20.5	54.4	11.1	7.2	30.2	23.0
On-the-job training with a company or industrial firm.	49.8	27.5	29.6	33.3	35.6	27.3	30.8
Correspondence study.	1.9	2.2	0.0	11.1	0.0	2.7	2.6
Post-graduate high school work in high school at night.	3.0	2.6	2.4	33.3	0.0	2.2	2.6
Adult education classes.	4.2	3.1	1.8	0.0	14.5	2.6	7.6
Military service or training.	2.6	6.6	5.3	11.2	0.0	8.0	10.4
None of the above.	28.8	37.5	6.5	0.0	42.7	27.0	23.0
WHAT IS THE MOST IMPORTANT REASON WHY YOU DO NOT PLAN TO GO TO COLLEGE?							
Tired of school.	11.3	20.6	15.8	14.3	21.4	16.2	27.3
Want to work and make money.	29.4	15.0	16.5	14.3	7.1	18.8	27.3
Can't afford it.	16.0	18.1	15.8	42.8	0.0	14.6	15.2
Parents don't want me to.	1.1	0.0	0.8	14.3	0.0	1.1	0.0
Can be just as successful without going to college.	0.8	0.0	3.9	14.3	0.0	0.9	3.0
Couldn't make good enough grades.	18.1	13.1	35.4	0.0	21.4	29.3	12.0
Want to get married.	10.5	9.4	3.2	0.0	35.6	8.8	9.1
Other.	12.8	23.8	8.6	0.0	14.5	10.3	6.1
WOULD YOU GO TO COLLEGE IF YOU HAD ENOUGH MONEY?							
Yes.	13.8	39.0	19.4	11.1	6.7	18.3	28.2
No.	47.8	27.3	40.3	66.6	66.6	42.3	30.8
Maybe.	38.4	33.7	40.3	22.3	26.7	39.4	41.0
IF YOU ANSWERED "YES" OR "MAYBE" YOU WOULD GO TO COLLEGE IF YOU HAD ENOUGH MONEY, HOW MUCH WOULD YOU NEED?							
Enough to pay all expenses ($1,200 to $1,500 per year.)	49.0	46.4	49.0	50.0	33.3	48.4	44.8
Enough to pay half of the expenses ($600 to $750.)	40.2	47.0	38.8	16.7	66.7	38.8	44.8
Enough to pay some but less than half of the expenses.	10.8	6.6	12.2	33.3	0.0	12.8	10.4

INTEREST IN FURTHER EDUCATION EXPRESSED BY PARENTS OF EIGHTH GRADERS

Parents of eighth graders in Macomb County public and parochial schools were asked about their educational attainment and their interest in further education for themselves. The following table compares the educational level reported by 6171 fathers and 6232 mothers and the educational level of all Macomb County males and females, aged 25 and over, in 1960.

FORMAL EDUCATION OF PARENTS OF MACOMB COUNTY EIGHTH GRADERS IN 1965 AND EDUCATION OF TOTAL COUNTY POPULATION, AGED 25 AND OVER, IN 1960

(percents)

EDUCATIONAL LEVEL	1960 Males	1965 Fathers	Difference	1960 Females	1965 Mothers	Difference
8th grade or less	34.3	15.7	-18.6	31.2	10.4	-20.8
Some high school	25.4	27.6	+ 2.2	25/4	27.5	+ 2.1
High school grad	25/2	32.9	+ 7.7	34/3	48.4	+14.1
Some college	8.2	14.9	+ 6.7	5.8	9.4	+ 3.6
College graduate	7.0	8.7	+ 1.7	3.3	4.3	+ 1.0

The parents reporting in 1965 are a younger population than the 1960 over-25 population, and this is evident in the sharp decrease in the number of parents reporting eight years or less of education in 1965 compared to the 1960 figure. The parent group reflects the continuing trend toward longer participation in school. The proportion of fathers reporting in 1965 who terminated upon high school graduation was 30% greater than for all males over 25 in 1960, and for mothers the increase was 41%.

Of the parents participating in the 1965 Survey, 43.3% of the fathers and 37.9% of the mothers did not complete high school. The comparable figures for the 1960 adults were 59.7% males and 56.6% females. The proportion of mothers who completed high school but did not continue their education exceeded the proportion of such fathers by 50%. Participation in college by fathers was almost double the participation of mothers. Of fathers who attended college, 37.3% graduated, while only 31.2% of mothers who entered college completed four or more years. College participation among the 1965 parent group is significantly higher that that of the total over-25 population in 1960, 55% greater for fathers and 50% greater for mothers. College graduates comprised 6.6% of the reporting parents compared to 5.1% of the total adult population in 1960. Only 35% of the 1965 parent group who entered college graduated, compared to a college completion of 42% of the total over-25 population in 1960 who had attended college.

The parent group was asked to indicate their interest in further education. The responses are tabulated as percents in the following table.

PARENTS' INTEREST IN FURTHER EDUCATION

TYPE OF EDUCATION	Fathers	Mothers	Combined
Work on college degree	10.8	11.0	10.9
Job improvement courses	34.4	18.4	26.4
Self improvement courses	15.1	30.1	22.6
No present interest	39.7	40.5	40.1

Twice as many mothers are interested in education for self improvement and almost twice as many fathers as mothers are concerned about further education for improving job skills.

When projected to include the needs and interests of the total adult population in Macomb County, these responses indicate very large potential enrollments in the Community College academic, occupational, and continuing education programs as well as opportunities for expanding adult education programs in the local school districts.

FOLLOW-UP PRACTICES IN MACOMB COUNTY HIGH SCHOOLS

Principals of Macomb County public and parochial high schools were asked to provide information concerning their efforts to identify the present status of former graduates. All schools contacted, nineteen public and eight parochial, responded to the survey. Three public high schools were not surveyed because they had no 196 graduating classes.

Thirteen of the public high schools had conducted follow-up studies of a former graduating class. None of the parochial schools had attempted follow-up studies. Only five high schools had surveyed their 1964 graduates, and in five cases the most recent study was done for a class graduating prior to 1960.

The following table shows the extent of follow-up efforts in the high schools of Macomb County:

FOLLOW-UP STUDIES IN MACOMB COUNTY HIGH SCHOOLS

Graduating Class Studied	No. of Schools Reporting Studies	Was Information Put Into Report Form?	
		Yes	No
1964	5	4	1
1963	2	1	1
1962	0	-	-
1961	1	1	0
1960	0	-	-
1959	1	0	1
1958	2	2	0
Year Unknown	2	1	1

Schools were asked which of their staff made regular use of information gathered through follow-up studies. Principals were the most frequent users of the information, and in only five schools were classroom teachers regular users, although such information could have considerable significance for evaluation of course content and instructional methods.

PERSONNEL USING FOLLOW-UP STUDY INFORMATION

Personnel	Frequency Reported
Principals	15
Assistant Principals	9
Counselors	13
Vocational Coordinators	9
Classroom Teachers	5
Others	4

All schools surveyed reported the numbers of students graduated in 1964. Twenty-three of the 27 schools reported the numbers of 1964 graduates in attendance at two or four-year colleges and universities. Three schools made percentage estimates of graduates in college and one school did not answer. The numbers of 1964 graduates in attendance at four-year colleges and universities were derived from various sources as follows:

Source	No. of Schools Using Source
Reports from college registrars	14
Student indications of intent while still enrolled in high school	12
Follow-up study made of graduates of 1964	9
Other	2

Twenty-three schools reported that 1,445 of 3,840 graduates of the 1964 class had enrolled in four-year colleges and universities. This proportion of college-goers, 37.6%, contrasts with the county-wide totals compiled from the Annual Fall Statistical Reports submitted to the State Department of Education. These reports indicate that 31.3% of all 1964 Macomb County public high graduates were enrolled in four-year colleges and universities or junior colleges in October of 1964. It is apparent that high schools do not have sufficient information concerning the status of their graduates and the 37.63 percent determined to be in attendance at four-year colleges and universities is probably an unrealistically high estimate.

While there is great variation among high schools in their efforts to accomplish follow-up studies, the high school principals supported overwhelmingly the suggestion of cooperating with the other schools in Macomb County to prepare standardized forms and procedures (such as data processing) for follow-up studies of high school graduates and drop-outs.

Recommendations

1. A coordinated follow-up study of high school graduates and drop-outs should be conducted annually by Macomb County high schools and Macomb County Community College. Such studies should include all students, rather than only those students in reimburseable vocational programs as presently required by the Department of Vocational Education.

2. The coordinated follow-up study should employ standardized procedures and survey instruments to facilitate tabulation by data processing and to yield information on which County-wide evaluations can be based.

3. Information regarding the employment and educational status of graduates and drop-outs should be obtained as a function of the Annual Expanded School Census, which is conducted by all school districts.

4. Greater emphasis should be put on follow-up of students who leave high school prior to graduation. These persons should be encouraged to continue their educations, either in regular school, adult evening classes, or in special programs developed for their needs.

OCCUPATIONAL TRAINING THROUGH EXISTING ADULT EDUCATION PROGRAMS IN MACOMB COUNTY

Fifteen of the twenty-one public school districts in Macomb County offered adult education programs during 1964-65 that included occupational training classes. It is expected that additional districts will offer adult education under the newly liberalized reimbursement policies of the State. Macomb County Community College is offering a program of adult education for September, 1965.

ADULT VOCATIONAL PROGRAMS IN MACOMB COUNTY 1964-65.

OCCUPATIONAL AREA	COURSES OFFERED	ENROLLMENT
Agriculture	None	---
Business	11	1,868
Distributive	4	308
Home Economics	7	2,291
Trade & Industry	14	1,048

Occupational classes offered through adult education have several unique values.

1. Classes typically are offered to meet specific community interest.

2. Programs are offered with a maximum freedom from administrative procedures which discourage many persons from participating in regular 'credit' programs.

3. School facilities are available during evening hours when adult education has been most popular.

4. Decentralization into small units in many schools brings education opportunities closer to the people and minimizes problems such as parking.

5. Instruction may be informal and experimental.

Offsetting these are certain problems peculiar to adult education.

1. Narrowness and sterility of occupational offerings may result from the small drawing power of single-district programs.

2. The general practice of cancelling classes when minimum enrollments do not materialize discourages participation.

3. Expenses of administering adult education program and adequately publicizing available courses.

4. Confusion in purpose, methodology, and level of instruction which is caused by attempting to serve many purposes in a single course:

   a) high school completion credit
   b) occupational training, retraining, or upgrading
   c) hobby, recreational, or leisure goals
   d) community service.

5. Difficulties in recruitment, evaluation, compensation, and retention of a competent teaching staff.

Recommendations to make adult education more effective as an agency for occupational training.

1. All adult education programs and classes should be evaluated for purpose(s) and should be structured and taught toward those purposes.

2. Sequences of classes in occupational areas should be developed and presented in consecutive terms.

3. The adult education directors (or vocational directors) of Macomb County public school districts should function as an Adult Education Committee to recommend the development of programs and the scheduling of specific portions of occupationally oriented programs in adult education. The committee should undertake the evaluation of adult education offerings to insure their quality.

4. The Adult Education Committee should assist in the preparation of a master list of available qualified persons interested in teaching in their area of occupational proficiency.

5. The Committee should prepare a master schedule publicizing all adult education courses offered in the County. The master schedule should be mailed to every residence in the County. The schedule should identify adult education courses by purpose(s), i.e., high school completion, occupational training, or recreational and cultural development. The selection of courses to be offered should consider these factors:

   Indicated public interest in courses or programs

   Local employment opportunities

   Availability of specialized teaching facilities and qualified instructors

   Geographic factors of distance and main roads.

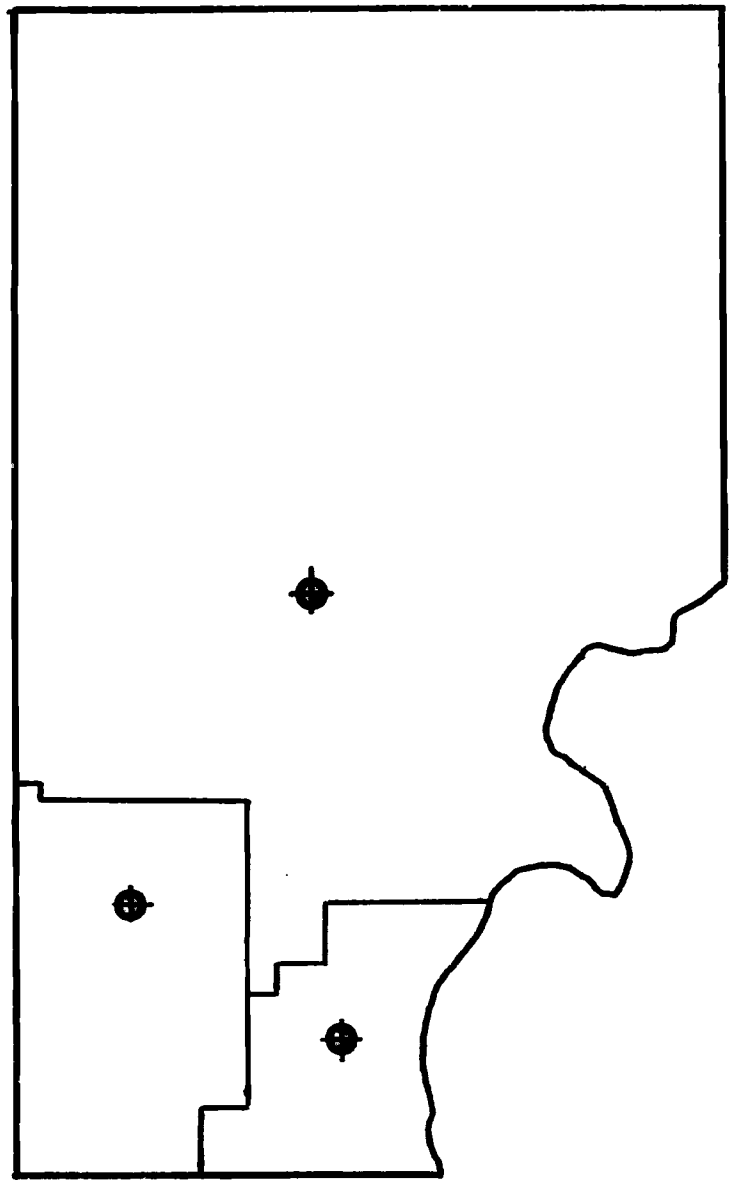
   Sequences of courses in occupational families

   Avoidance of wasteful competition from duplicated classes.

   It may be found more practical to use a smaller area than the entire County for coordination of adult vocational education programming. In this case, the areas proposed as service areas for Area Occupational Education Centers may be more suitable.

6. Fees should be established which will yield an income sufficient to guarantee the quality and continuation of adult education programs. It is suggested that determining costs by an entire program rather than by individual classes may reduce the number of classes cancelled because of low enrollments.

PLAN FOR OCCUPATIONAL EDUCATION CENTER DEVELOPMENT IN MACOMB COUNTY



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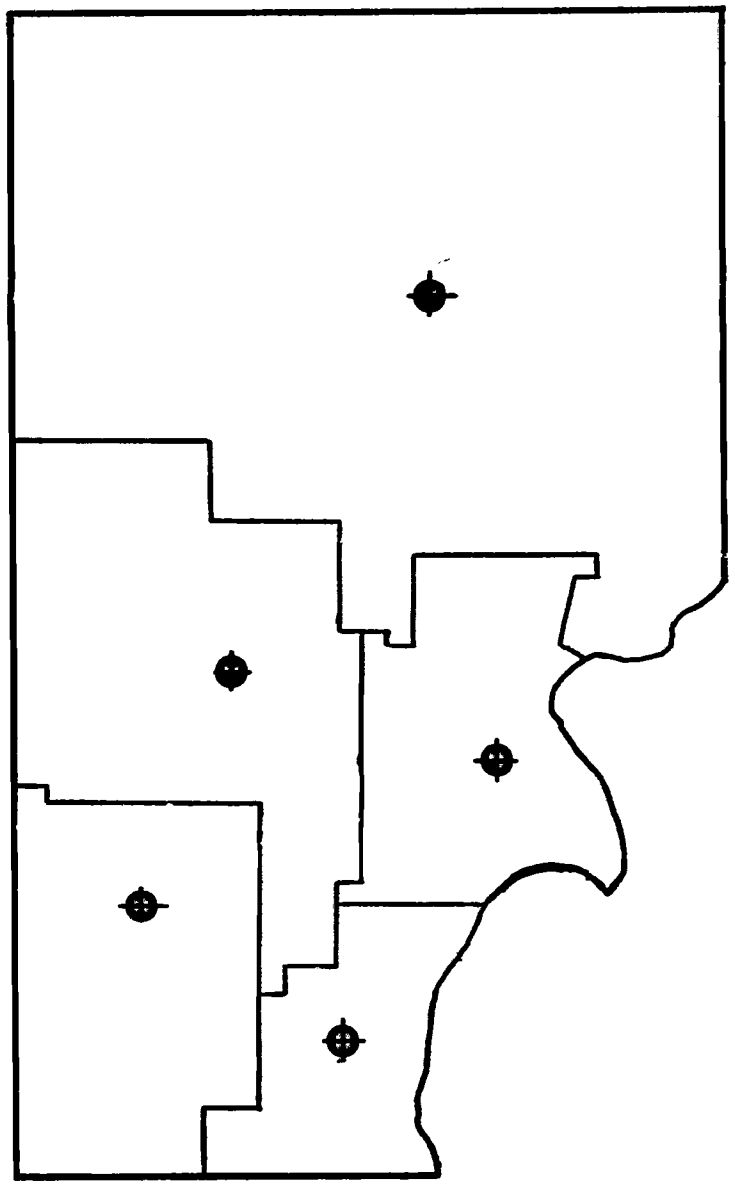
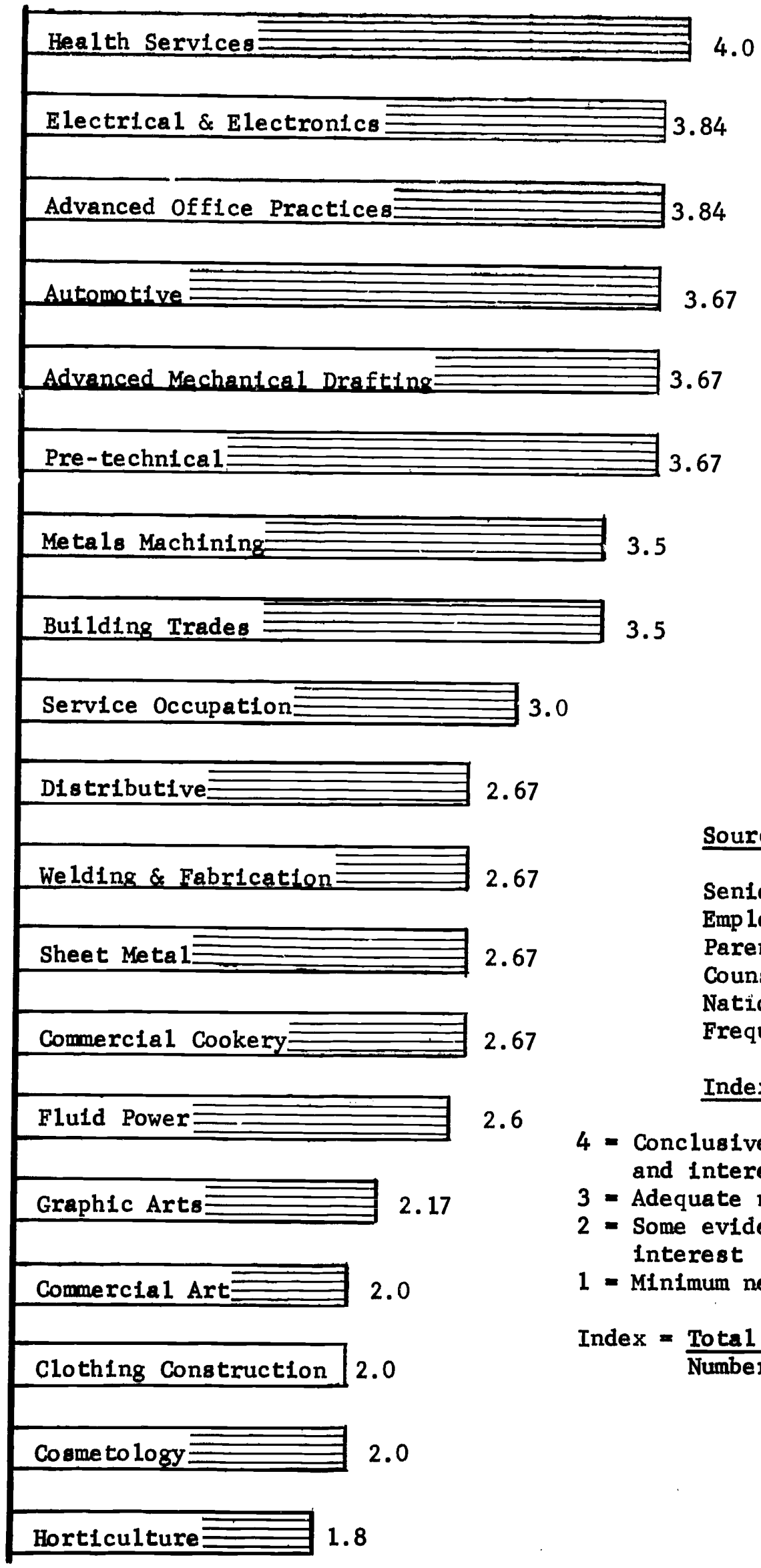


1975

INDEX OF INTEREST OR NEED FOR SELECTED VOCATIONAL-TECHNICAL PROGRAMS IN MACOMB COUNTY



Sources of Index

Seniors
Employers
Parents
Counselors
National Outlook
Frequency Scale

Index

4 = Conclusive evidence of need and interest
3 = Adequate need and interest
2 = Some evidence of need and interest
1 = Minimum need or interest

$$\text{Index} = \frac{\text{Total all Ratings}}{\text{Number of Ratings}}$$

RECOMMENDATION I

The Citizens Advisory Committee recommends that greatly increased efforts be made to upgrade the quality and expand the types of occupational education opportunities offered by Macomb County secondary schools. The Committee offers the following information gathered by this study to support its recommendation:

Education and Employability.

* There exists an alarming gap between the competence required for entry employment at a significant level in the local work force and the ability of the existing school programs to provide persons with that level of competence.

* This skills gap will continue to widen as technological changes create demands for highly skilled workers and eliminate employment opportunities for unskilled workers. Employment opportunities for professional, technical and kindred workers in 1975 will be 85% greater than in 1960, while the numbers of persons employed as operatives and laborers may actually decrease in spite of population and labor force growth.

* Each year record numbers of eighteen year olds are seeking entry into a work force with fewer opportunities for the unskilled. The number of Macomb County residents attaining age 18 in 1975 will be more than double the 1965 figure of 8,152.

Inadequacy of Present Programs.

* Despite the widespread publicity being given to the importance of education for gaining employment, more than one of every four persons terminates formal education before high school graduation. The Committee believes that this is sufficient evidence that the educational needs of these persons are not being served by present secondary school programs.

* One-fourth of all Macomb County high school graduates were not enrolled in either a college preparatory or a vocational program of studies while in high school.

* Only three of every four students who prepare in high school for college entry actually enroll in college and, according to national studies, only half of these will graduate.

* The existing vocational programs in Macomb County high schools are extremely limited, especially programs for occupations which offer the greatest employment opportunities for boys. Table A-1 indicates that of 2512 senior boys responding to a Survey questionnaire in May, 1965, 195 were enrolled in a commercial program, and 346 boys were enrolled in a vocational shop program. In addition, 17 boys

Table A-1

SENIORS INDICATION OF THEIR HIGH SCHOOL COURSE OF STUDY
MACOMB COUNTY PUBLIC SCHOOLS - MAY 1965

	Commercial		College Prep		Shop		General	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Anchor Bay	3	17	22	21	1	-	8	2
Armada	3	10	24	18	4	1	10	4
New Haven	2	14	11	7	1	-	10	7
Richmond	6	12	18	16	3	-	13	2
Romeo	3	22	46	32	1	-	16	13
Total North Area	17	75	121	94	10	1	57	28
Chippewa Valley	1	14	38	24	6	-	14	9
Clintondale	8	24	30	14	6	-	7	9
Fraser	4	34	33	23	12	-	30	23
L'Anse Creuse	6	41	35	34	20	-	28	22
Mt. Clemens	7	56	79	69	26	2	53	18
Utica	17	82	128	85	32	2	43	36
Total Central Area	43	251	343	249	102	4	175	117
East Detroit	33	174	123	98	40	-	89	29
Lakeview	5	63	77	84	16	-	48	19
Roseville	38	147	116	72	61	-	95	46
St. Clair Shores	6	46	56	67	17	2	43	27
South Lake	8	54	66	44	15	-	24	19
Total Southeast Area	90	484	438	365	149	2	299	140
Center Line	5	51	42	29	31	3	44	45
Fitzgerald	4	14	24	17	3	-	2	14
Van Dyke	11	77	56	42	26	1	75	43
Warren-Cousino	14	34	24	17	8	-	25	26
Warren-Senior High	11	51	63	53	17	2	23	26
Total Southwest Area	45	227	209	158	85	6	166	154
County Totals	195	1,037	1,111	866	346	13	697	439

reported that they were following an agricultural program in high school. The combined total of 558 boys on vocational programs is only 22.2% of the total boys responding. The lack of variety in vocational programs results in unrealistically large enrollments in college preparatory and general programs, and contributes to the decision of many youngsters to terminate school before high school completion.

RECOMMENDATION II

The Citizens' Advisory Committee recommends that a system of area occupational education centers be established to provide adequate occupational education opportunities for public and parochial high school students in all districts of Macomb County.

It is further proposed that these centers be fully utilized, during the daily time periods when not in use for high school programs, for Community College occupational, adult remedial, worker retraining and upgrading, apprenticeship, and continuing education programs as the needs for these are identified. All such programs should be coordinated with other public educational efforts in Macomb County. The Committee offers the following information as evidence of the need for a County-based approach to providing adequate occupational education opportunities in Macomb County.

Local District Financial Ability.

* Few, if any, Macomb County school districts have both the enrollment and tax base sufficient to provide adequate programs in vocational education. Such programs are among the most costly activities of the public schools, yet they are not provided with substantial state financial support as are programs for the physically and mentally handicapped. The dispersion of effort and the fragmentation of resources among 21 school districts makes adequate occupational education opportunities for all County citizens an unattainable goal.

* The tax resources of the 21 school districts vary so widely that equal educational opportunities are not available to all Macomb residents. Operating costs for the 1964-65 school year ranged from a low of $304.70 per pupil to a high of $553.40 among the 21 public school districts. The accompanying map illustrates that a significant proportion of the families in many school districts had a family income of less than $4,000 in 1960. It is doubtful that such families can afford the increased local school taxes which would be required if each district is to provide adequate occupational programs alone.

* The ability of the County districts to support adequate educational programs is decreasing rapidly as school enrollments increase and statutory requirements tend to reduce assessable property valuations. From 1959 to 1964, 19 of the 21 County school districts experienced a depreciation in state equalized valuation per membership child, and for five districts this loss exceeded 30%.

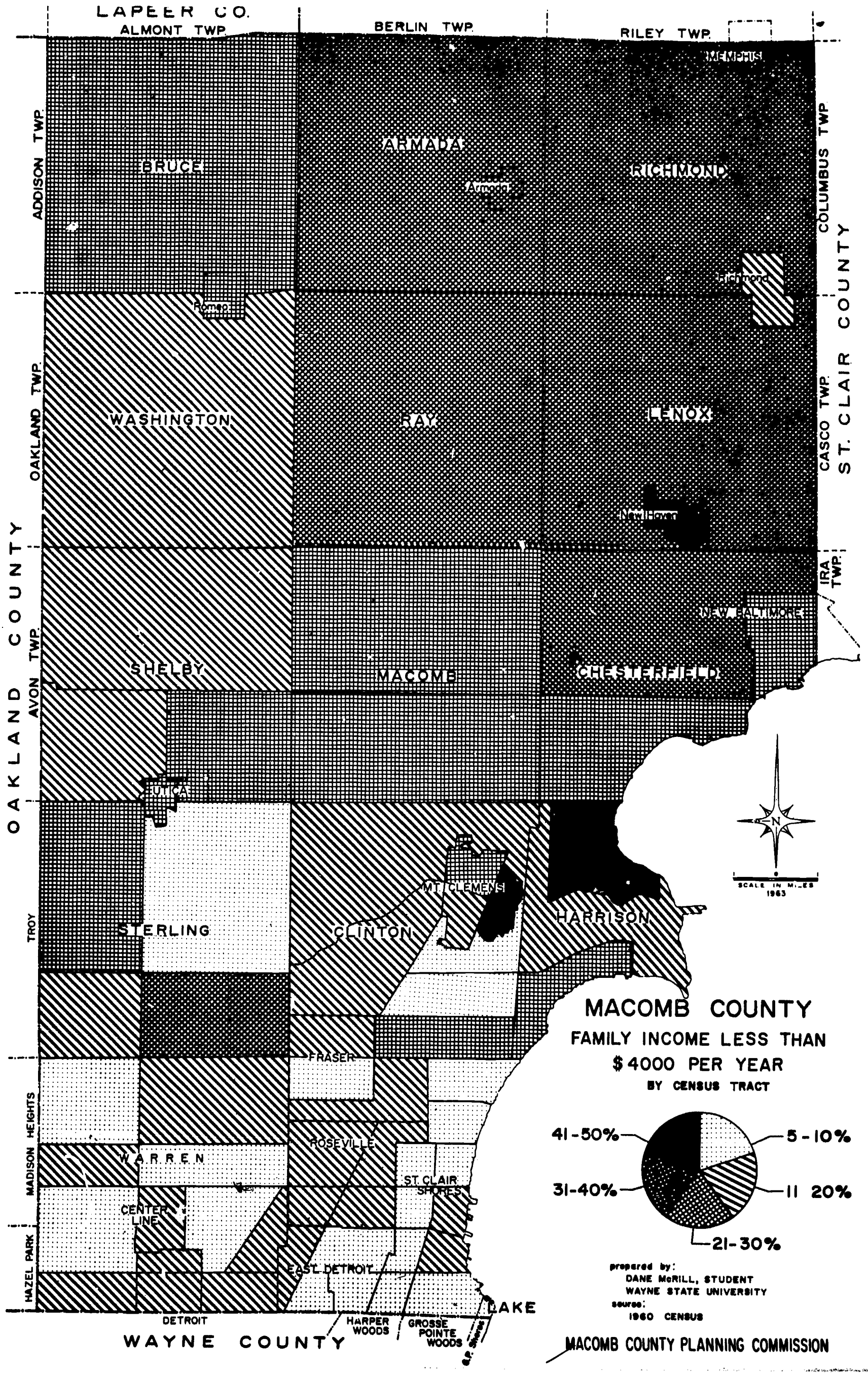

LAPEER CO.
ALMONT TWP.
BERLIN TWP.
RILEY TWP.
MEMPHIS
ADDISON TWP.
BRUCE
ARMADA
Armada
RICHMOND
COLUMBUS TWP.
Richmond
Romeo
OAKLAND TWP.
WASHINGTON
RAY
LENOX
CASCO TWP.
ST. CLAIR COUNTY
New Haven
IRA TWP.
NEW BALTIMORE
OAKLAND COUNTY
SHELBY
MACOMB
CHESTERFIELD
AVON TWP.
UTICA
MT. CLEMENS
HARRISON
TROY
STERLING
CLINTON
FRASER
MADISON HEIGHTS
ROSEVILLE
WARREN
ST. CLAIR SHORES
CENTER LINE
HAZEL PARK
EAST DETROIT
LAKE
DETROIT
HARPER WOODS
GROSSE POINTE WOODS
WAYNE COUNTY
N
SCALE IN MILES
1963
MACOMB COUNTY
FAMILY INCOME LESS THAN
$4000 PER YEAR
BY CENSUS TRACT
41-50%
5-10%
31-40%
11 20%
21-30%
prepared by:
DANE McRILL, STUDENT
WAYNE STATE UNIVERSITY
source:
1960 CENSUS
MACOMB COUNTY PLANNING COMMISSION

Table A-2

School District	Depreciation of tax base per membership child 1959-64
Warren Consolidated	51.5%
South Lake	39.2
Utica	37.
Fraser	33.
Warren Woods	31.5

State Support.

* State-derived financial support for all public school needs decreased from a state-wide average of 57.7% in 1954 to 46.4% in 1964. When viewing vocational education only, state support for local programs accounted for 11.5% of the total cost for the biennium, 1962-64, compared to 19.2% derived from federal sources, and 69.3% provided by the local school districts.

* Only one of every eight 11th and 12th grade students in Macomb County public high schools is enrolled in a vocational program which meets state standards for reimbursement. Total state and federal vocational reimbursements average only $4.50 a year for each 11th and 12th grade student. (Enrollments and reimbursement for homemaking are not included)

* Macomb County enrolls 6.62% of the state public school population yet receives only 3.83% of the state-distributed reimbursement for vocational education. This is evidence of insufficient vocational programs and the inadequacy of some programs when measured by reimbursement standards.

Population Growth.

* The inadequacy of Macomb County schools to provide realistic occupational programs will become even more serious during the next decade. Enrollments in grades 11 and 12 will double from today's 15,000 students to 30,000 in 1975. Table A-3 indicates the size of the 16-17 age group population by school districts in 1970 and 1975. These populations are based upon the 1965 annual school census, and no adjustment has been made for in-migration or out-migration. Projecting the same net growth in the age group from in-migration for the 1965-70 and 1970-75 periods as occurred in 1960-65, Macomb County will have 25,120 persons in the 16-17 age group in 1970, and 33,256 in 1975. A 5% increase in the rate of school participation for the group is projected for each five year period. This is not an unrealistic goal. The 1960 school enrollment of 16-17 year olds in Macomb County was 84.1% of the age group. The continuing trend toward higher retention in school of the school age population, the increasing demands for higher levels of employment skills, intensive efforts to curb school dropouts, and the enrichment of educational programs, especially in occupational areas, should expand markedly the school participation of 16-17 year olds. The projected participation rate, (94.1%), is below rates already being achieved in a number of Michigan counties. On this basis, 1970 enrollments in grades 11 and 12 are projected as 22,859, and 1975

Table A-3

1970 and 1975 ENROLLMENTS IN GRADES 11 and 12 BASED UPON PRESENT POPULATION PROJECTED TO AGES 16-17 and CONTINUING IN-MIGRATION

SCHOOL DISTRICT	1965	1970	1975
Anchor Bay	318	396	460
Armada	209	209	214
New Haven	233	237	320
Richmond	257	231	319
Romeo	438	475	534
Total North Area	1,455	1,548	1,847
Chippewa Valley	278	382	390
Clintondale	427	615	945
Fraser	476	755	1,142
L'Anse Creuse	775	1,013	1,068
Mt. Clemens	948	1,145	1,288
Utica	1,483	2,083	2,828
Total Central Area	4,387	5,993	7,661
East Detroit	2,192	2,664	3,021
Lakeview	1,105	1,598	1,682
Roseville	2,060	2,729	2,938
St. Clair Shores	906	1,511	2,282
South Lake	1,009	1,277	1,342
Total Southeast Area	7,[illegible]	9,779	11,265
Center Line	879	1,102	1,390
Fitzgerald	778	889	1,101
Van Dyke	946	1,145	1,448
Warren	1,720	2,639	4,001
Warren Woods	475	768	1,333
Total Southwest Area	4,798	6,543	9,273
County Totals	17,912	23,863	30,046
In-migration based upon 1960-65 experience rates		+ 1,257	+ 3,210
Projected population in 16-17 age group		25,120	33,256
11th and 12th grade enrollments at 1965 participation rate		21,603	28,600
11th and 12th grade enrollments at 1965 participation rate + additional 5% of 16-17 age group		22,859	
11th and 12th grade enrollments at 1965 participation rate + additional 10% of 16-17 age group			31,926

enrollments will total 31,926 for the same grades. While these techniques for projecting enrollments are imprecise, the three major factors of existing population, continuing significant in-migration, and increasing school participation of the age group are consistent with previous experience.

* Population increases will not occur uniformly throughout the County. Increases will be concentrated in the central region of the County and the northern area of the city of Warren. 1960 populations and 1980 population projections prepared by the Macomb County Planning Commission for selected central Macomb County communities illustrates this concentration.

Table A-4

Community	Population 1960	Projected 1980	Percent Increase
Chesterfield Twp.	5,880	33,500	472%
Clinton Twp.	25,688	67,700	164%
Fraser	7,027	21,200	202%
Harrison Twp.	12,910	30,000	132%
Macomb Twp.	4,807	9,900	106%
New Baltimore	2,375	6,450	172%
Shelby Twp.	17,114	69,300	304%
Sterling Twp.	14,622	150,700	931%

* Enrollment increases are overtaxing school capacities in many County districts. County-wide, school enrollments increased by 48.9% from 1959 to 1964. Enrollments for four districts more than doubled in this five year period.

Table A-5

School District	1959-64 Increase
Warren Woods	324.2%
Warren Consolidated	264.5%
Utica	141.6%
Fraser	115.1%

Student Reactions.

* Only one of every six seniors in Macomb County high school believes that his high school is preparing him adequately for what he plans to do after high school.

* 81.5% of the seniors not on a vocational or college preparatory program stated that they definitely, or probably, would have enrolled in a vocational course of study if a wider choice had been available when they entered high school.

* Only one of seven seniors reported that he had received all the help he needed in making plans for his future.

* Less than 10% of the seniors rated the choice of high school courses available as excellent. Only 2.7% of the parochial school boys considered their choice of courses as excellent.

* The non-college bound students, the vocational and general students, and students ranking in the lowest third of their class academically were least satisfied with the high school programs and services. One notable exception was the reaction of girls on a business program, who were satisfied generally with the opportunities the high school has to offer.

Employer Reactions.

* A representative group of Macomb County employers stated by a five to three margin that most high school graduates are not ready for employment because they lack occupational skills.

* Two of every five responding employers were critical of the new employee's attitudes toward work and his responsibilities to his employer.

* Employers reported by a four to one margin that employees who have had occupational training in high school are better prepared for entry jobs in their firms.

* Most employers who responded to our questionnaire indicated that they would support improved high school occupational programs, and strong support was expressed for area vocational high schools.

Educators' Reactions.

* Macomb County counselors indicated that student interests and talents can be served only by a wide range of vocational programs and services. Many counselors stated that adequate programs are beyond the capacity of their high school to provide.

* Macomb County high school principals reported that many needed services such as job information, job placement, follow-up of graduates, and assistance to school dropouts are not being adequately provided.

* Fifteen of the twenty-two public high school principals selected the area vocational school as the most practical means of providing adequate occupational programs in Macomb County.

PHILOSOPHY OF THE AREA OCCUPATIONAL EDUCATION CENTERS (AOEC)

Public education has a responsibility for assisting each person in the attainment of self-realization, whether his goals consist of further education or direct employment. Public education must assist the individual in assessing his own potential and must provide reasonably adequate opportunities for exploration and self-development in a wide variety of areas.

In recognition of the vertical mobility of American society, each student should have access to programs which are structured to permit and encourage a broad education and the maximum development of his intellectual capacity.

While the AOEC programs aim to equip students with skills and attitudes adequate to obtaining entry employment, it should be the purpose of the AOEC to encourage each student to continue his education to the maximum of his capacity.

The AOEC will be complementary to the students' home high school. The AOEC should not undertake any social or extra-curricular activities which might tend to weaken the student's participation in his home high school. A student choosing to terminate his attendance in the home high school before graduation should be removed from the AOEC program. However, such students, and other dropouts not enrolled in an AOEC program, should be encouraged to enroll in a suitable evening program of the AOEC. The potential school-leaver and his parents should be interviewed to ascertain the student's needs and to persuade him to continue his education, preferably as a full-time high school student.

The AOEC staff should provide the leadership in the development of secondary occupational curriculum. All Macomb County high school students should have access to the following types of occupational programs:

Pre-technical programs which are part of a well-defined sequential transfer program established with the Community College technical programs.

Vocational programs which provide entry employment skills in a definable occupation for which a demand usually exists. These programs are designed to serve the needs of persons who intend to enter the labor force directly upon high school completion.

Opportunity programs which are designed to provide employable skills for persons of limited ability and/or limiting handicaps.

The needs for occupational competence of persons enrolled in non-public schools must be met, for their skills contribute, or their lack of skills burden the community, in the same measure as persons attending public institutions.

SPECIAL ADVANTAGES OF THE AOEC

The activation of the area occupational education centers offers the greatest potential for the development of realistic programs of occupational education equally available to all residents of Macomb County.

a. The resources, human and material, of the entire County can be concentrated to implement realistic occupational programs as rapidly as possible.

b. Coordinating the efforts of the present vocational staffs will effect prompt program expansion and improvement.

c. Existing and proposed facilities can be better utilized and serve more persons.

d. Services of recognized value, not now being provided adequately, can be made available to the community. These include:

vocational counseling
aptitude testing
cooperative work experience
job placement service
follow-up studies
job information service
qualified, specialized instruction
realistic learning laboratories
wide choice of programs designed to develop entry competence in a cluster of occupations.

e. Reimbursement of programs can be achieved at rates significantly more realistic to the costs of occupational education.

f. Economies in purchasing, planning, and instruction can be effected by the elimination of duplicated and overlapping activities.

g. A learning environment will be provided wherein the development of wholesome attitudes toward work and the employer are integral aspects.

h. Adoption of the area concept through the AOEC will result in eligibility for federal grants for construction of vocational facilities under the provisions of the Vocational Education Act of 1963 (PL 88-210).

i. The need for additional secondary facilities of the comprehensive type will be diminished and postponed by the development of the AOEC. This savings will be shared by all school districts, but will be especially advantageous to districts confronted with the greatest population growth and lowest tax bases.

j. The success of area vocational centers in other states indicates that the AOEC can be expected to attract between 20% and 30% of the 11th and 12th grade students in Macomb County high schools.

PROBLEMS ARISING FROM THE ACTIVATION AND OPERATION OF THE AOEC

Changes in the internal organization of institutions can be expected to cause dislocations. These dislocations must be weighed against the expected benefits resulting from such changes. The Committee has attempted to identify the problems and inconveniences which will result from the creation of the AOEC program, and while it does not attempt to minimize the problems involved, the Committee believes that the values of the proposal far outweigh the inherent disadvantages.

A. Deviation from Approved Organizational Patterns

The pattern for control of the AOEC's which is proposed in this recommendation does not conform to any of the organizational patterns which are identified in the State school codes. A ruling from the State Attorney General should be sought promptly to ascertain the legality of the proposed pattern, and if necessary, enabling legislation for its acceptability should be requested from the Legislature. The proposed pattern reflects the Committee s strong conviction that any additional public educational services provided in Macomb County should be coordinated with the existing educational agencies; however, another pattern of control should be adopted if necessary to the achievement of the objective of this Survey - adequate opportunities for realistic occupational education equally available to all citizens of Macomb County.

B. Need for Additional Financial Support

The high costs of providing adequate occupational programs necessitates additional financial support from the admittedly already over-burdened general property tax. The Committee strongly urges more realistic State support for occupational education as a more equitable solution, but recognizes that this is not likely to materialize rapidly enough to meet our pressing needs for the immediate future. The least costly means of providing the minimum necessary programs is a county-wide approach, rather than the continuation of 21 inadequate local district efforts. Federal and State funds are obtainable for partial support of construction of facilities and reimbursement of operating costs, but these resources are supplemental to local financing, and usually only available on the basis of the quality and extent of present on-going vocational programs.

C. State Aid

Steps must be taken to acquire state aid for that portion of a parochial student's education which is provided in the AOEC. Diversion of some portion of the state aid provided for the public school student, or a nominal tuition charge to the district of residence, may be required to finance the AOEC programs and to comply with legal requirements.

D. Transportation Requirements

The commuting of students to the AOEC will add both to the student's time involvement and to the expense of transportation services. In the Southwest Area, the distance from the high schools within the service area to the AOEC will not exceed five miles, nor four miles in the Southeast Area. A single AOEC to serve the immediate needs of both the Central and North Area will require the transporting of small numbers of students for distances not exceeding twenty miles, and with the activation of additional AOEC's to serve the eventual needs for separate East Central and North Areas, the distances involved should not exceed ten miles. Because of the small potential enrollments in the north-County districts, a sharing of transportation services appears to be practical. If the expense of transportation is a prohibitive factor, other schedules, such as week-in and week-out, or two weeks in and two weeks out, should be considered.

E. Coordination of School Schedules

The coordination of daily schedules and yearly calendars between home high schools and the AOEC will require some surrender of autonomy by the home high schools. The Committee believes that this is a minor problem.

ADMINISTRATION AND CONTROL OF THE AOEC's

The accompanying organizational chart details a suggested pattern for control and administration of the area occupational education centers. Significant features are:

1. Control of all AOEC's should be vested in a Board of Control for Area Occupational Education Centers composed of:

   a) one member of an existing K-12 school district board of education within each AOEC service area*, elected by the school boards of all K-12 districts comprising the AOEC service area.

b) one superintendent of an existing K-12 school district within each AOEC service area, elected by the superintendents of all K-12 districts comprising the AOEC service area.

c) one member of the school board of the Intermediate School District, elected by that body.

d) the superintendent of the Intermediate School District, or his appointed representative.

e) the Superintendent of the Intermediate School District shall take the necessary steps to activate the Board of Control.

* the service area of each AOEC is composed of the school districts which are served by that AOEC

2. The Board of Control shall exercise control and supervision of all area occupational education activities carried on under the authority vested in them.

3. The Board of Control for AOEC's shall appoint a director to administer and operate all AOEC's established under their jurisdiction, and a principal, administrative and instructional staff, and supportive personnel for each AOEC. These personnel shall meet the educational and occupational experience requirements outlined in the Michigan State Plan for Vocational Education (Section 1.5), and such additional qualifications as may be specified by the Board of Control for AOEC's.

4. The Board of Control shall apportion to the various AOEC's all monies that are appropriated, levied, or granted for such purposes, according to the needs of each AOEC.

5. Determination and revision of AOEC service areas should be based upon the following factors:

Existing school district boundaries,

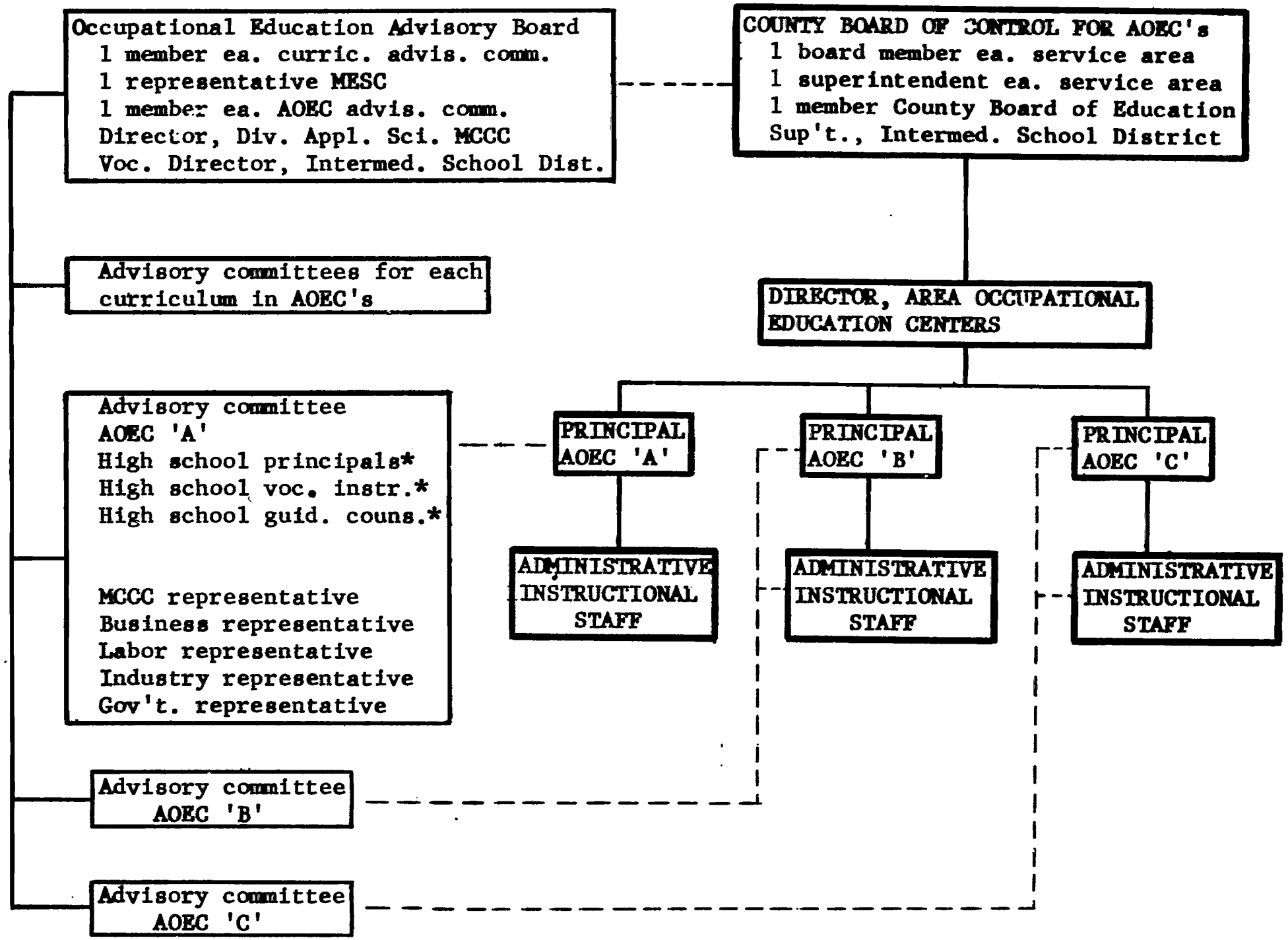
Present high school enrollments and projections to 1970 and 1975.

Geographic areas, distances, and the adequacy of roads.

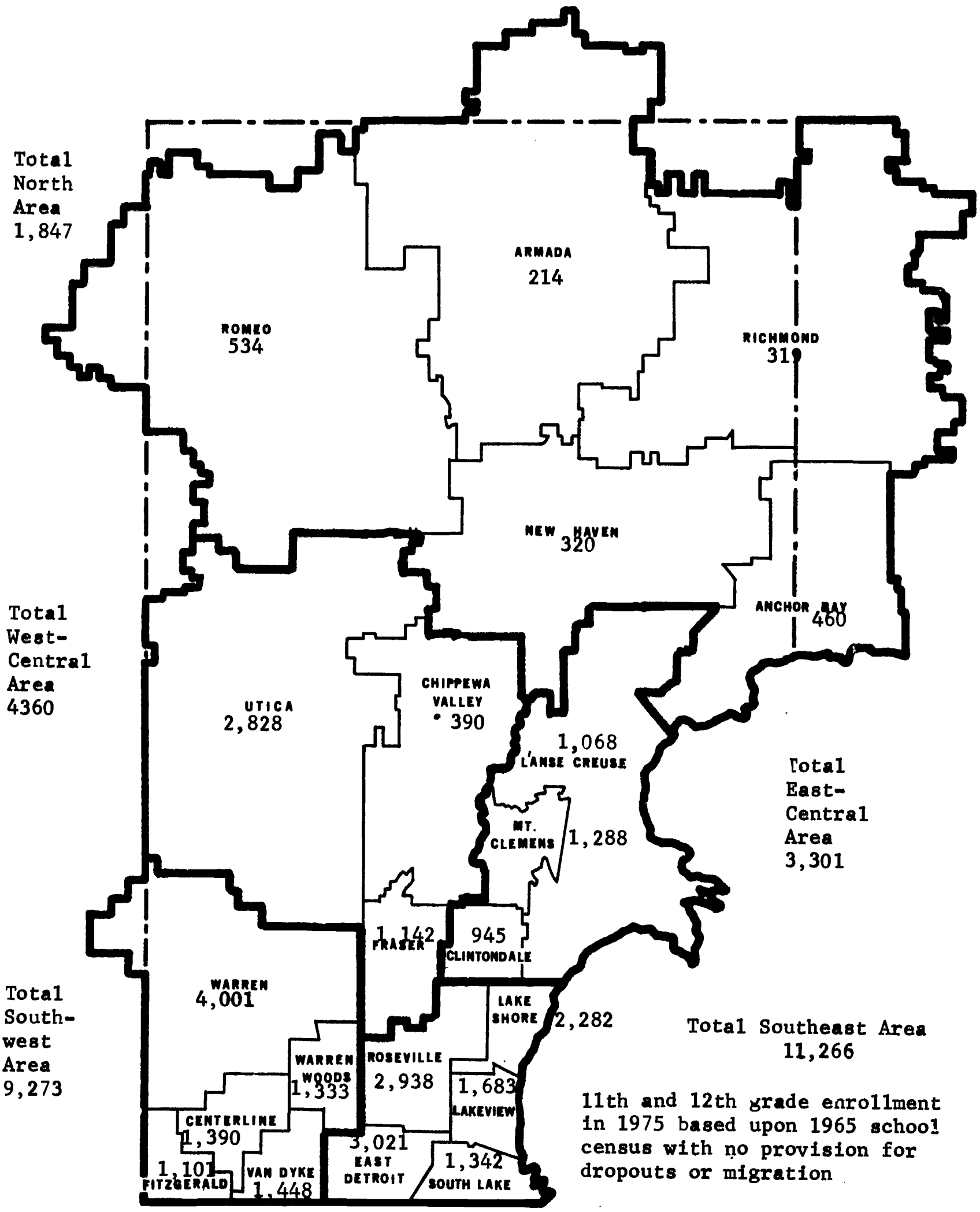
The Citizens' Committee has proposed four AOEC service areas to include the following K-12 school districts:

North Area:	Anchor Bay, Armada, New Haven, Richmond, Romeo.
Central Area:	Chippewa Valley, Clintondale, Fraser, L'Anse Creuse, Mt. Clemens, Utica.
Southeast Area:	East Detroit, Lakeview, Roseville, St. Clair Shores South Lake.
Southwest Area:	Center Line, Fitzgerald, Van Dyke, Warren, Warren Woods.

ORGANIZATION OF A SYSTEM OF AREA OCCUPATIONAL EDUCATION CENTERS IN MACOMB COUNTY



* at least one representative from each high school within the AOEC service area will be a member of the AOEC Advisory Committee.



11th and 12th grade enrollment in 1975 based upon 1965 school census with no provision for dropouts or migration

MACOMB COUNTY

—·— COMMUNITY COLLEGE DISTRICT

——— INTERMEDIATE SCHOOL DISTRICT

MACOMB OCCUPATIONAL EDUCATION SURVEY - 1965

The Committee recommends that, initially, AOEC's be established in the Central Area, the Southeast Area, and the Southwest Area. The Central Area AOEC should serve the needs of all students in the North Area until increased enrollments warrant the construction of separate facilities for the North Area. The facilities provided for the Central Area should be located centrally to the Utica and Chippewa Valley districts in anticipation of a future need for the creation of a separate East Central service area. An accompanying map identifies the service areas and the projected 11th and 12th grade enrollments in 1975 for each service area.

6. The Vocational-Technical Director of the Intermediate School District shall

   a. advise the Intermediate School District Board of Education and the County Board of Control for AOEC's periodically of his evaluation of the functioning of each AOEC.

   b. meet with the director of the AOEC regularly to assist in coordinating programs.

   c. represent the county board of education and/or the county superintendent, at their request, in any dealings with the AOEC's.

OPERATION OF AREA OCCUPATIONAL EDUCATION CENTERS

Instructional Staff

Recognizing that superior instruction is essential to successful accomplishment in occupational education, each AOEC program should be placed under the supervision of a Chairman who is vocationally certified under the Michigan State Plan for Vocational Education and possesses exceptional teaching proficiency and demonstrated skills competence in the curriculum area under his supervision. Business or industrial experience of a significant level should be evaluated highly in the selection of these persons. It shall be the responsibility of the chairman to plan and develop a program which will lead to trade competence, and to coordinate all instruction within that program offered in each of the AOEC's. The chairman shall make full use of a curriculum advisory committee in carrying on these functions.

The AOEC instructor must possess trade competence, demonstrated ability as a teacher, and the personal qualities required for success in working with adolescents. Instructors should be vocationally certified excepting that persons exceptionally qualified in their occupational skills who do not meet full academic requirements may be employed if certifiable under the State Plan (Section 1.53-13).

The salary schedule for instructors should be sufficiently high to attract and hold the truly exceptional vocational teacher.

Guidance counselors in the AOEC shall be vocationally certified under the State Plan, possess occupational experience of significant depth and duration, and demonstrate the capacity to deal effectively with the secondary school occupational students. The guidance functions of the AOEC will be closely coordinated with the home high school and the progress of each student should be evaluated frequently by the AOEC staff and the home high school counselor.

Students to be Served

Entry to AOEC programs will be open to all public and parochial students in grades 11 and 12 who demonstrate the capacity to profit from a program in the AOEC. If a program suitable to his needs is not available in the AOEC within his own service area, the student may be admitted to such a program offered elsewhere in the County. Not all programs will be of two years duration. Some students' needs may be served adequately with a single year or a single semester of attendance in the AOEC.

The normal procedure for admitting students to a program in the AOEC should be as follows:

1. Student makes application for a program, usually in the tenth grade and after consultation with a guidance counselor.

2. The approval of the student's parents is obtained.

3. The AOEC approves or rejects the student's application solely on the predictable ability of the student to succeed in the program he has chosen as measured by aptitude tests and the judgment of his instructors. If rejected, the student is advised of other AOEC programs for which he meets entry standards.

4. The student is free to change goals and programs after consultation with a counselor, and every effort should be made to enable him to do so without loss of scholastic standing.

Curriculum Development in the AOEC

Curriculum should be developed, insofar as possible, in anticipation of changing occupational patterns and skills requirements. Thus an essential function of the AOEC staff is the continuing exploration of occupational changes, and experimentation and innovation in instructional technology. Emphasis should be given to interdisciplinary instruction as promising more effective results than the traditional unrelated courses approach to occupational education.

Table A-6

INDEX OF INTEREST AND NEED FOR SELECTED VOCATIONAL-TECHNICAL PROGRAMS IN MACOMB COUNTY

Program	LOCAL SURVEY FINDINGS				OTHER INDICATORS		
	Seniors	Employers	Parents	Counselors	National Outlook	Frequency in Other Areas	Index
Health Services	N/M	4	4	4	4	4	4.0
Electrical & Electronics	4	4	4	4	3	4	3.84
Advanced Office	4	3	4	4	4	4	3.84
Automotive	4	4	4	4	3	3	3.67
Advanced Mechanical Drafting	3	4	4	4	3	4	3.67
Pre-technical	3	4	4	3	4	4	3.67
Metals Machining	3	4	3	4	4	3	3.5
Building Trades	N/M	4	N/M	3	4	3	3.5
Service Occupations	N/M	3	N/M	3	3	3	3.0
Distributive	2	4	1	2	4	3	2.67
Welding & Fabrication	3	3	1	2	3	4	2.67
Sheet Metal	N/M	3	N/M	N/M	2	3	2.67
Commercial Cookery	1	4	2	3	3	3	2.67
Fluid Power	N/M	4	2	2	3	2	2.6
Graphic Arts	1	3	1	2	2	4	2.17
Commercial Arts	3	1	N/M	2	1	3	2.0
Clothing Construction	2	1	2	1	3	3	2.0
Cosmetology	N/M	1	2	2	2	3	2.0
Horticulture	2	1	N/M	1	2	3	1.8

Scale: 4 - conclusive evidence of need and interest
3 - adequate need and interest
2 - some evidence of need and interest
1 - minimum need or interest
N/M- not measured

Index: $\frac{\text{Totals all scales}}{\text{Number of Measurements}}$

Table A-7

SENIORS' INDICATED INTEREST IN VOCATIONAL PROGRAMS
IF A WIDER CHOICE HAD BEEN AVAILABLE WHEN THEY ENTERED HIGH SCHOOL

Boys Grouped by Their Own Indication of Academic Placement

PROGRAM	PERCENT OF TOP THIRD	PERCENT OF MIDDLE THIRD	PERCENT OF BOTTOM THIRD
Auto Mechanics	10.6	15.6	27.1
Electronics	19.3	17.6	15.1
Other	19.3	9.9	9.1
Advanced Drafting	16.0	13.9	7.4
Business	15.5	10.5	8.9
Metal Trades	4.2	14.1	13.0
Agriculture	4.9	4.7	6.1
Distributive	4.9	5.0	5.4
Commercial Art	4.5	6.1	3.6
Graphic Arts	.8	1.3	1.9
Food Preparation	---	.9	2.2
Clothing Construction	---	.4	.2

Girls Grouped by Their Own Indication of Academic Placement

Business	51.8	59.0	53.6
Other	19.0	11.6	5.9
Commercial Art	11.7	10.5	12.5
Clothing Construction	6.6	6.6	9.2
Food Preparation	3.5	4.1	6.6
Distributive	1.4	3.8	4.5
Agriculture	2.4	1.4	2.1
Electronics	1.6	.4	1.2
Auto Mechanics	.3	.9	1.6
Advanced Drafting	.7	.5	1.2
Graphic Arts	.7	.9	.8
Metal Trades	.3	.3	.8

Table A-7 indicates the interest in selected occupational programs expressed by Macomb County high school seniors, grouped by sex, and by academic placement.

Two types of learnings will comprise the AOEC offerings:

1. Experiences that provide the student with specific skills related to the occupation, or cluster of occupations, for which he is preparing.

2. Work-orientation experiences which provide the environment in which a particular occupation can be pursued most effectively.

Work-orientation includes:

employer-employee relations
techniques of applying for a job
development of good work habits
personal appearance and grooming
assuming responsibility
occupational information
value and use of money
laws and regulations affecting the worker, such as social security and income tax requirements.

A major advantage of the AOEC program will be the pooling of instructional resources which are now dispersed among the 21 K-12 districts. The concentration of effort through the AOEC should result in:

the maximum use of specialized teaching skills,
individualized instruction,
experimentation and innovation in teaching techniques,
realistic curriculum development based upon the continuing exploration of occupational shifts and changes in occupational skills requirements.

Content of vocational programs and courses which are offered in the home high school should be determined by the home high school, except for that which is preparatory to the area program (mathematics, science, graphic communications). Courses which are designed as preparatory to an AOEC program should be cooperatively developed by the home high school and the AOEC staffs.

Area Programs

Occupational programs should be explored, developed, and conducted with the full involvement of advisory committees composed of persons knowledgeable and skilled in the occupations for which programs are aimed. The determination of the specific area programs, or portions of programs, which are appropriate for development at the secondary level, should be made by the AOEC staff and the advisory committee selected for each curriculum area. Preferably, such decisions should involve the staff of the Community College in order to achieve these results:

1. the maximum articulation between the secondary and post-secondary occupational programs;

2. the appropriate grade placement of specific learnings;

3. the avoidance of undesirable duplication of offerings.

Full use should be made of occupational needs surveys, both on the local and national level, student interest measurements, and the continuing follow-up of former students in program development.

Table A-5 indicates the relative interest and need for occupational programs in Macomb County as measured by various activities undertaken in connection with this study. This index indicates that programs in health, electrical and electronics, advanced office practices, pre-technical, automotive, mechanical drafting, metals machining, and building trades can be advantageously developed in Macomb County. More extensive measurements to determine the specific nature and level of area programs should be undertaken in the period during which the necessary legal steps are being taken to implement a County-wide system of area occupational education centers. Programs should be developed in a wide range of occupational areas, including appropriate secondary programs in the occupational areas indexed in Table A-6.

It is the Committee s belief that the selection, location, priority, content, and methodology of specific occupational education programs should be determined by the professional staff charged with providing such programs, and the advisory committees selected to assist in these activities. However, the following general criteria are offered for guidance in the determination of the priority of establishment, and the placement of programs in the AOEC's or the home high schools.

a. The priority of programs to be developed and offered in the AOEC's should include consideration of:

   The extent of student interest in a program,

   The immediate entry employment outlook for a specific occupation, or a cluster of occupations,

   the long-range entry employment and advancement opportunities,

   the lack or inadequacy of existing County high school programs in the field.

b. The decision to offer a particular program in the AOEC or in the home high school should include consideration of:

the costs of program development and equipment,

the potential student enrollments,

the availability of qualified instructors,

the special values of cooperative work experiences, and

the location of suitable work stations.

Coordination Between the AOEC and the Home High School

A close cooperation between these two units is essential if the needs of the student are to be served adequately. Time schedules of all high schools within the service area will necessarily be arranged so that the student can be accommodated in both institutions. Students would be served in the AOEC for the equivalent of one-half of each school day and would attend the home high school for the balance of their instruction. The home high school would provide:

1. Instruction in general education, fine arts, sciences, mathematics, and those occupational courses or programs which can be offered more practically in the home high school.

2. Opportunities to participate in activities of a social or extra-curricular nature.

3. Determination of requirements for graduation.

4. All pupil personnel services.

5. Maintenance of all necessary student records.

6. Any necessary transportation between schools and between home and school.

In order to implement this close cooperation, it is recommended that home high school administrators, guidance personnel, and vocational instructors be represented on the Advisory Committee of each AOEC.

The AOEC should undertake only those activities which are essential to the successful operation of its occupational education function.

Financing the Area Program

Occupational education doesn't cost, it pays. However, an initial investment is required to guarantee the long-range dividends. In-school occupational training is more practical and far less costly than programs to retrain the unemployed. The average cost per trainee under the MDTA program is about $1500, and about $700 per trainee under ARA. In contrast to the costs of these short-term programs, available evidence indicates that AOEC operational costs will be approximately $350 a year for each student served. All amounts are based upon 1965 cost figures.

Table A-8

SENIORS' INDICATED PREFERENCE OF VOCATIONAL PROGRAM
IF WIDER CHOICE HAD BEEN AVAILABLE WHEN THEY ENTERED HIGH SCHOOL

PROGRAM	NORTH AREA Boys	NORTH AREA Girls	CENTRAL AREA Boys	CENTRAL AREA Girls	SOUTH EAST AREA Boys	SOUTH EAST AREA Girls	SOUTH WEST AREA Boys	SOUTH WEST AREA Girls	COUNTY TOTALS
Advanced Drafting	13	-	63	3	97	1	56	6	239
Agriculture	18	2	32	7	29	12	19	4	123
Auto Mechanic	42	1	107	6	100	5	76	2	339
Business	17	66	40	251	90	308	47	208	1027
Clothing Construction	-	8	1	32	3	42	1	21	108
Commercial Art	5	12	29	48	39	62	23	45	263
Distributive	5	1	23	15	40	22	24	13	143
Electronics	1	36	91	5	127	3	62	3	328
Food Preparation	2	3	8	15	5	30	5	17	85
Graphic Arts	1	-	5	3	15	6	4	4	38
Metal Trades	13	1	62	-	105	3	46	2	232
All Others	11	11	61	61	83	74	47	33	381

North Area: Anchor Bay, Armada, New Haven, Richmond, Romeo, St. Augustine
Central Area: Chippewa Valley, Clintondale, Fraser, L'Anse Creuse, Mt. Clemens, St. Lawrence, St. Louis, St. Mary-Anchor Bay, St. Mary's-Mt. Clemens, Utica
South East Area: East Detroit, Lakeview, Roseville, St. Clair Shores, St. Gertrude, South Lake
South West Area: Center Line, Fitzgerald, St. Clement, Van Dyke, Warren, Warren Woods

Additional financing will be required to construct and operate the area occupational education centers. Justification for increased support is based upon the premise that it will be more economical to provide programs to develop occupational competence than it will be to meet the consequences of the failure to provide such programs. These sources will need to be utilized to provide sufficient funds for the establishment of the area occupational education program:

1. A general property tax millage levy should be sought through the existing power of the Intermediate School District to request voter approval for this measure. This obligation should be sought for the maximum number of years, and a sufficient portion of the proceeds should be reserved for the retirement of bonds issued to finance the local share of construction and capital outlay requirements.

2. Every effort should be made, individually, and in cooperation with other counties, to persuade the legislature to consider the needs of vocational education in a manner similar to the consideration being given to special education. This additional state financial support should be realistic and continuing, and should be for the construction and operation of area occupational education centers, on a formula which recognizes the high costs of these programs.

3. Every effort should be made to obtain the maximum state and federal reimbursement which is compatible with sound program development and the welfare of the student. Application should be made for other appropriate state and federal subsidies as these become available.

4. Equalization of educational opportunities for all citizens of Macomb County indicates that the burden of financing the AOEC program should be borne by a County-wide millage, plus the available state and federal reimbursements and grants. However, practical limitations upon the size of the County-wide millage may require local K-12 district participation in the financing of the AOEC's. Preferably, such support, if necessary, should be in the form of pre-determined tuition charges to the district of pupil residence. A less desirable procedure could be the apportionment of budget deficits in the operation of the AOEC's to the K-12 districts on a ratio determined by pupil attendance in the AOEC's.

Table A-9

ESTIMATED CAPITAL OUTLAY REQUIREMENTS FOR VOCATIONAL-TECHNICAL LABORATORY FACILITIES

Occupational Program	Sq. ft. Lab.	Constr. Cost $20 ft.	Equip. Cost	Total Columns 2 & 3	Cost per Stud. sta. 25 stud. per lab.	Cost per daily student in attendance 50 stud. 2 sections	75 stud. 3 sections	100 stud. 4 sections
Automotive	4000	80,000	80,000	160,000	6,400	3,200	2,133	1,600
Distributive	1200	24,000	4,000	28,000	1,120	560	373	280
Electronics	1800	36,000	20,000	56,000	2,240	1,120	741	560
Fluid Power	1500	30,000	15,000	45,000	1,800	900	600	450
Graphic Arts	2600	52,000	50,000	102,000	4,080	2,040	1,360	1,020
Advanced Mech. Drafting	2000	40,000	10,000	50,000	2,000	1,000	666	500
Metals Machining	3000	60,000	100,000	160,000	6,400	3,200	2,133	1,600
Welding and Fabrication	1600	32,000	20,000	52,000	2,080	1,040	693	520
Sheet Metal	1400	28,000	10,000	38,000	1,600	800	533	400
Horticulture	1000	20,000	15,000	35,000	1,400	700	467	350
(Greenhouse)	1600	16,000	6,000	22,000	880	440	293	220
Advanced Office	1200	24,000	20,000	44,000	1,760	880	587	440
Health Services	2000	40,000	12,000	52,000	2,080	1,040	693	520
Commercial Cookery	2400	48,000	50,000	98,000	3,920	1,960	1,307	980
Commercial Art	2000	40,000	10,000	50,000	2,000	1,000	666	500
Totals	29,300	570,000	422,000	992,000	39,760	19,880	13,253	9,940
Average	1,953	38,000	28,180	66,200	2,644	1,325	883	663

Costs of Constructing and Operating the AOEC Program

An estimate of the costs of providing area occupational education in Macomb County through the AOEC program previously outlined can be made upon the following assumptions:

Assumption #1 - 11th and 12th grade pupil participation will be between 5,000 (20% of enrollments in grades 11 and 12), and 8,000 (30%), in 1970. Participation in 1975 will be between 7,500 and 10,500 pupils in grades 11 and 12. (Table A-3).

Assumption #2 - A one-mill general property tax levied on the real and personal property of the Intermediate School District will yield an amount averaging $1,750,000 annually for the next ten years, and at least $2,000,000 each year for the succeeding ten-year period.

Assumption #3 - Three area occupational education centers, each with a half-day capacity of 1,000 students, would require a capital outlay of $12,000,000. (Based in part upon laboratory facilities costs projected in Table A-9). With intensive utilization as skills centers for adult vocational, apprentice, Community College technical, rehabilitation, or other special programs, each of these centers could serve 3,000 persons daily. The needs of both the central area and the north area can be met by a single area occupational education center for the next five years.

Assumption #4 - State and federal grants could provide $4,000,000 of the required capital funds. Applications would be prepared each year for funding of construction projects to be undertaken during the succeeding fiscal year.

Assumption #5 - $750,000 of the local property tax levy would be required annually to retire bonds sold to finance $8,000,000 of capital outlay in 20 years, ($600,000 would be required annually to retire the same capital borrowing in 30 years).

Assumption #6 - Realistic programs designed to achieve occupational competence in a field of identified need can be provided at an average per half-day pupil cost of $350, based upon 1965 costs.

Assumption #7 - Federal and state reimbursement for eligible programs will average at least $75 for each half-day pupil enrolled in an area occupational education center.

Based on these assumptions, the following conclusions can be drawn from Table A-10.

Conclusion A: A one-mill County-wide general property tax could provide financial support for serving 3700 students enrolled in AOEC programs. Larger enrollments would require significantly higher state and/or local district support. (Table A-10, Column 1).

Conclusion B: A one and one-half mills County-wide general property tax could provide financial support for AOEC enrollments of 7,000 students. (Column 2).

Conclusion C: A two-mills County-wide general property tax could provide financial support for AOEC enrollments of 10,000 students. (Column 3).

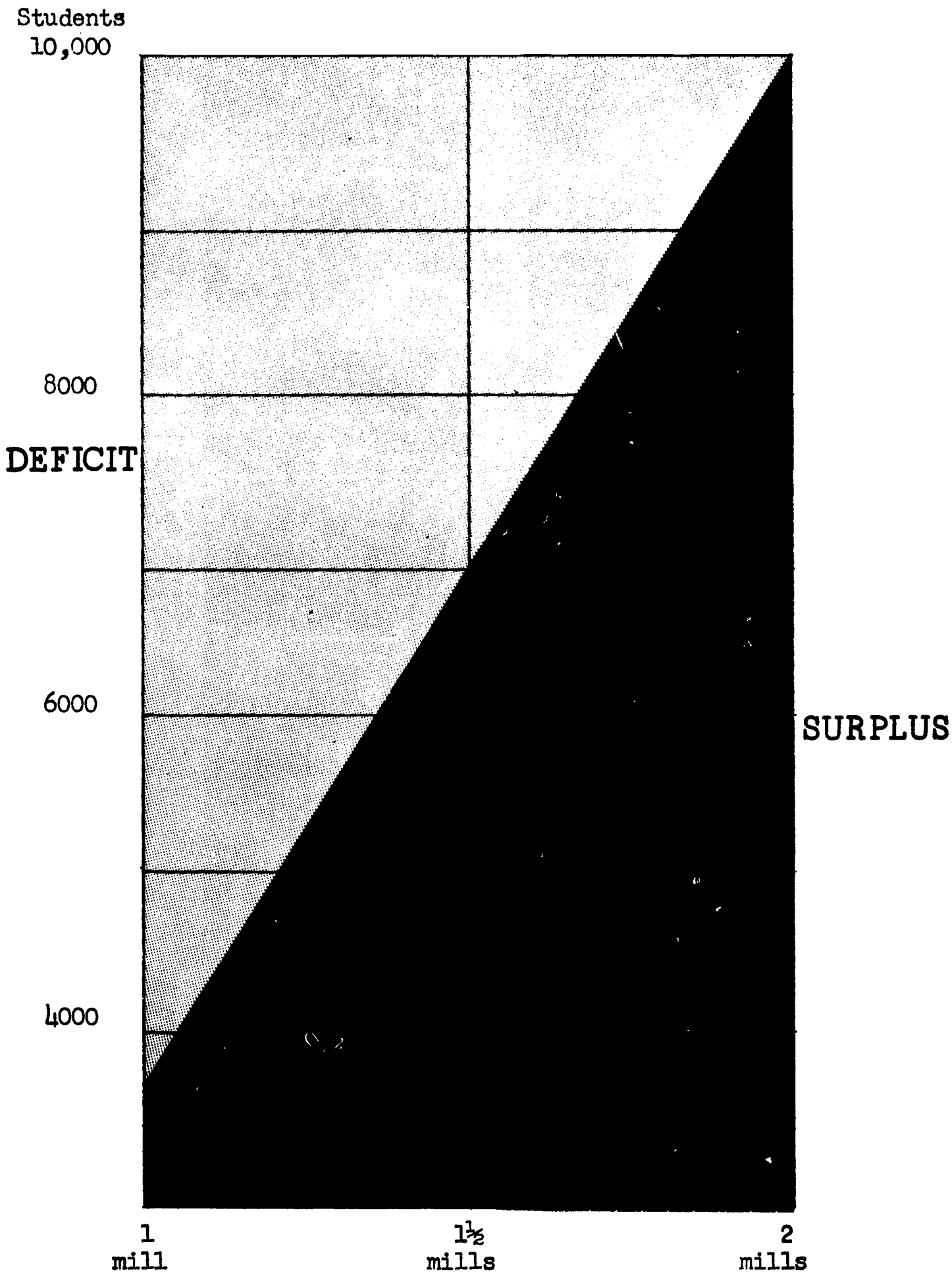
Table A-10

INCOME AND COST PROJECTIONS FOR A SYSTEM OF AREA VOCATIONAL-TECHNICAL CENTERS

	(1)		(2)		(3)	
Local Property Tax Yield	1 mill =	$1,750,000	1½ mill =	$2,625,000	2 mills =	$3,500,000
Reserve for Debt Service		750,000		750,000		750,000
Net Proceeds for Operating		$1,000,000		$1,875,000		$2,750,000

	COST	INCOME	COST	INCOME	COST	INCOME
4,000 students on area program						
$350 per capita operating cost	1,400,000		1,400,000		1,400,000	
$ 75 per capita reimbursement		300,000		300,000		300,000
Proceeds of County millage		1,000,000		1,875,000		2,750,000
Totals	1,400,000	1,300,000	1,400,000	2,175,000	1,400,000	3,050,000
Surplus or deficit	deficit	100,000	775,000	Surplus	1,650,000	Surplus
5,000 students on area program						
$350 per capita operating cost	1,750,000		1,750,000		1,750,000	
$ 75 per capita reimbursement		375,000		375,000		375,000
Proceeds of County millage		1,000,000		1,875,000		2,750,000
Totals	1,750,000	1,375,000	1,750,000	2,250,000	1,750,000	3,125,000
Surplus or deficit	deficit	375,000	500,000	Surplus	1,375,000	Surplus
6,000 students on area program						
$350 per capita operating cost	2,100,000		2,100,000		2,100,000	
$ 75 per capita reimbursement		450,000		450,000		450,000
Proceeds of County millage		1,000,000		1,875,000		2,750,000
Totals	2,100,000	1,450,000	2,100,000	2,325,000	2,100,000	3,200,000
Surplus or deficit	deficit	650,000	225,000	Surplus	1,100,000	Surplus
8,000 students on area program						
$350 per capita operating cost	2,800,000		2,800,000		2,800,000	
$ 75 per capita reimbursement		600,000		600,000		600,000
Proceeds of County millage		1,000,000		1,875,000		2,750,000
Totals	2,800,000	1,600,000	2,800,000	2,475,000	2,800,000	3,350,000
Surplus or deficit	deficit	1,200,000	deficit	325,000	550,000	Surplus
10,000 students on area program						
$350 per capita operating cost	3,500,000		3,500,000		3,500,000	
$ 75 per capita reimbursement		750,000		750,000		750,000
Proceeds of County millage		1,000,000		1,875,000		2,750,000
Totals	3,500,000	1,750,000	3,500,000	2,625,000	3,500,000	3,500,000
Surplus or deficit	deficit	1,750,000	deficit	875,000	----	----

A PROJECTION OF AREA OCCUPATIONAL-EDUCATION-CENTER ENROLLMENTS AS DETERMINED BY THE LEVEL OF LOCAL TAX SUPPORT



3700 students can be served through the proceeds of 1 mill general property tax.
7000 students can be served through the proceeds of 1½ mills general property tax.
10,000 students can be served through the proceeds of 2 mills general property tax.

RECOMMENDATION III

The Committee recommends that intensive study of the most appropriate means of providing opportunities to develop occupational and social proficiency should be a continuing responsibioity of all public education authorities in Macomb County. One purpose of such study should be to effect the optimum continuing utilization of County-supported facilities, such as the AOEC's, whether such use is of a secondary or a post-secondary level. The Committee's concern is prompted by the recognition that there exists a definite lengthening of the years spent in educational preparation for entry into employment and acceptance of adult responsibilities. High school in the future will become pre-vocational for an increasing proportion of our population, especially if college programs which are realistic to the interests of young people and the skills needs of the economy are made available. This is a welcome development, and if it is accompanied by a numerical decrease of high school students who need and desire secondary level occupational training, the AOEC's should be made available for Community College programs to the extent that secondary programs are reduced in size and number, or phased out. At the present time, however, three of every four persons in the high school age group will not be served best by the pre-college programs which are being offered in our high schools. National studies predict that in 1975, only 16.3% of the 25 to 29 age group will have acquired the four year college degree. It is for these reasons that the Committee has based its recommendation for the creation of the AOEC program on the documented needs of our secondary school population only.

RECOMMENDATION IV

The Citizens' Committee recognizes that the implementation of the AOEC program in Macomb County cannot be effected in time to improve occupational education opportunities for the students presently enrolled in high school. The Committee recommends that each school district make the maximum possible effort to expand and upgrade its vocational offerings for the pressing needs of these students, and that informal inter-district programs be implemented where these can be utilized advantageously.

The Committee urges that local boards of education make every effort to meet the occupational education needs of students enrolled in non-public high schools during the period in which the AOEC program is being activated.

COOPERATIVE OCCUPATIONAL TRAINING IN MACOMB COUNTY.

Cooperative Occupational Training--What it Is.

Cooperative occupational training programs may be employed in the training of students sixteen years of age and over who are juniors or seniors in high school or enrolled at the community college level. Such programs are based on the premise that learning takes place more rapidly, and is more permanent, in an experience environment. Cooperative programs integrate school and work by combining classroom instruction with supervised part-time employment which meets and expands the student's abilities, aptitudes, and interests.

The "training station," which is the employing firm, provides a laboratory in which the student tests, observes, and applies concepts and skills presented in the job-related class in school, thereby assuring transfer of learning to the employment situation. Job performance and progress toward development of skills, attitudes, and knowledge required for full-time employment are provided by the employer and are supervised in cooperation with a coordinator representing the school. The student learner is paid a wage by the employer. On a reduced-time program in school the student receives instruction related to the occupation and participates in regular course work required for graduation.

The coordinator is a certified teacher who also has two or more years of employment experience in the occupational field which he supervises. In most instances the coordinator is the teacher of the job-related classes, working with employers, visiting training stations, finding employment opportunities, meeting with advisory groups, and consulting with cooperative training students and their parents. The coordinator should possess special talent as a counselor and advisor to the students, parents, and employers.

Cooperative training students are not denied the normal academic offerings of the school. Job-related instruction is only one part of a student's load. A cooperative training student qualifies for a regular graduation diploma, but adds to his qualifications specific training for specialized work.

The Status of Cooperative Occupational Training in Macomb County.

Fourteen of the thirty-one high schools in Macomb County offered cooperative training in office occupations, twelve schools conducted programs in distributive education, and ten schools conducted programs in trade and industrial occupations during the 1964-65 school year. While the larger high schools are generally more active in cooperative training, one of the largest schools had no cooperative training program and several other schools with enrollments of 800 or more offered less than all three programs.

The number of students enrolled in the various cooperative training programs are, in a few instances, too small to permit economical operation. While the survey does not clearly indicate which programs are "diversified," it is known that several programs are of this type. A diversified program is one in which all cooperative training students, whether office, distributive, or trade and industrial, are supervised by one coordinator. The

related instruction is either handled by "farming out" the Co-op students to other classes, or by grouping them in one class. In the first instance, the students are in classes with non-Co-op students and are observed by the program coordinator only occasionally. In the latter case the students, while grouped in a class conducted by the coordinator, have a wide range of objectives and instruction must be highly individualized. This is not an easy task, and seldom does a coordinator have experience in all three areas. While diversified programs are successfully aiding students in their career objectives, separate programs are preferable whenever the school enrollment is large enough to justify them.

Cooperative occupational training has been offered by several Macomb County high schools for over twelve years. One of every ten public twelfth grade students in the county is currently enrolled in a cooperative training program.

About one-third of the respondents to the employer opinion poll of the Macomb Occupational Education Survey indicated they would support occupational training for high school students.

Over 60 percent of the employers responding to the survey were of the opinion that employees who have had occupational training in high school are better prepared for entry jobs in their firms.

Evidence of the Need for Cooperative Occupational Training in Macomb County.

While 48 percent of the high school seniors responding to a questionnaire circulated by the Survey indicated they planned to work on a full-time basis after graduation, only 783, or about 10 percent, participated in a cooperative work-study program.[1]

COOPERATIVE EDUCATION PROGRAMS - MACOMB COUNTY.

Type of Program	No. of Schools Conducting Programs	No. of Students Enrolled
Distributive	12	247
Office	14	362
Trade & Industry	10	174
Total Students		783

Employment trends place special urgency upon specialized training that cooperative programs provide. Persons employed in clerical, sales and kindred occupations in Macomb County increased from 12.3 to 17.0 percent between 1940 and 1950, and from 17.0 to 22.7 percent from 1950 to 1960.[2]

[1]Existing Programs and Facilities Survey, Macomb County Occupational Survey.

[2]Vocational Curricula in Michigan (Office of Research and Publications, College of Education, Michigan State University: Educational Research Series No. 17; East Lansing, September, 1963), Appendix A. Table 1.

Nationally, office work is the second largest employment classification today. About 15 percent of the civilian labor force is engaged in office work, and it is predicted that between 1960 and 1975 office employment will climb by approximately 45 percent.

Retailing in Macomb County is increasing rapidly as it follows the population to the suburbs. Over 3,000 retail establishments and sales in excess of $537 million in 1963, with a payroll of almost $52 million.[3] Since 1963 two regional shopping centers have opened, with over 100 additional establishments employing about 4,000 more full-time people. Nationally, total employment in wholesale and retail trade increased six percent from 1956 to 1960. In finance, insurance, real estate and the service trades, employment increased over twelve percent.[4]

While the demand for workers in the trade and industrial occupations will not increase in the manner of the sales and clerical occupations, the march of technology has brought a new complexity to trade and industrial occupations. Schools cannot adequately simulate industrial processes; the cost is simply too great. Students need the laboratory experiences that only on-the-job training can provide. In discussing criteria for evaluating programs of vocational education, Byram and Wenrich state, "The environment in which the instruction is given is, or simulates, the working environment to the maximum possible degree."[5]

A follow-up study of Michigan high school cooperative trainees offers evidence that cooperative training promotes rapid transition from school to work. Only one percent of the cooperative trainee graduates were unemployed ten months after graduation, and five out of ten of those available for work had obtained their current full-time employment within one month after graduation.[6]

Suggestions and Recommendations.

High schools with enrollments of 800 or more should survey the interest of the students and the opportunities for part-time employment in all three areas of cooperative training. Smaller high schools should investigate, in addition to student interest, the availability of training stations, as well as staff and facilities available within the high school. Some of the cooperative training needs, especially of the smaller high schools, may be provided in the proposed Area Occupational Education Centers.

[3]Bureau of the Census, Retail Trade-Area Statistics.

[4]Chamber of Commerce of the United States, "Distributive Education: An Answer to Training Needs of Business," A Special Supplement to Washington Report (Washington: February 21, 1964).

[5]H. M. Byram and R. C. Wenrich, Vocational Education and Practical Arts in the Community School. (New York: The MacMillan Company 1956), p.201.

[6]How High School Cooperative Trainees Fare in the Labor Market: Phase B (Office of Research and Publications, College of Education, Michigan State University: Educational Research Series No.23; East Lansing, June, 1965.)

Preparatory programs should be offered to those students who, while not interested in a cooperative training program at the high school level, may be planning to pursue a vocational program at the community college. Cooperative training in office occupations is currently offered at Macomb County Community College, and a cooperative program in sales and marketing will begin in the near future. A cooperative program in trade and industry is also being developed.

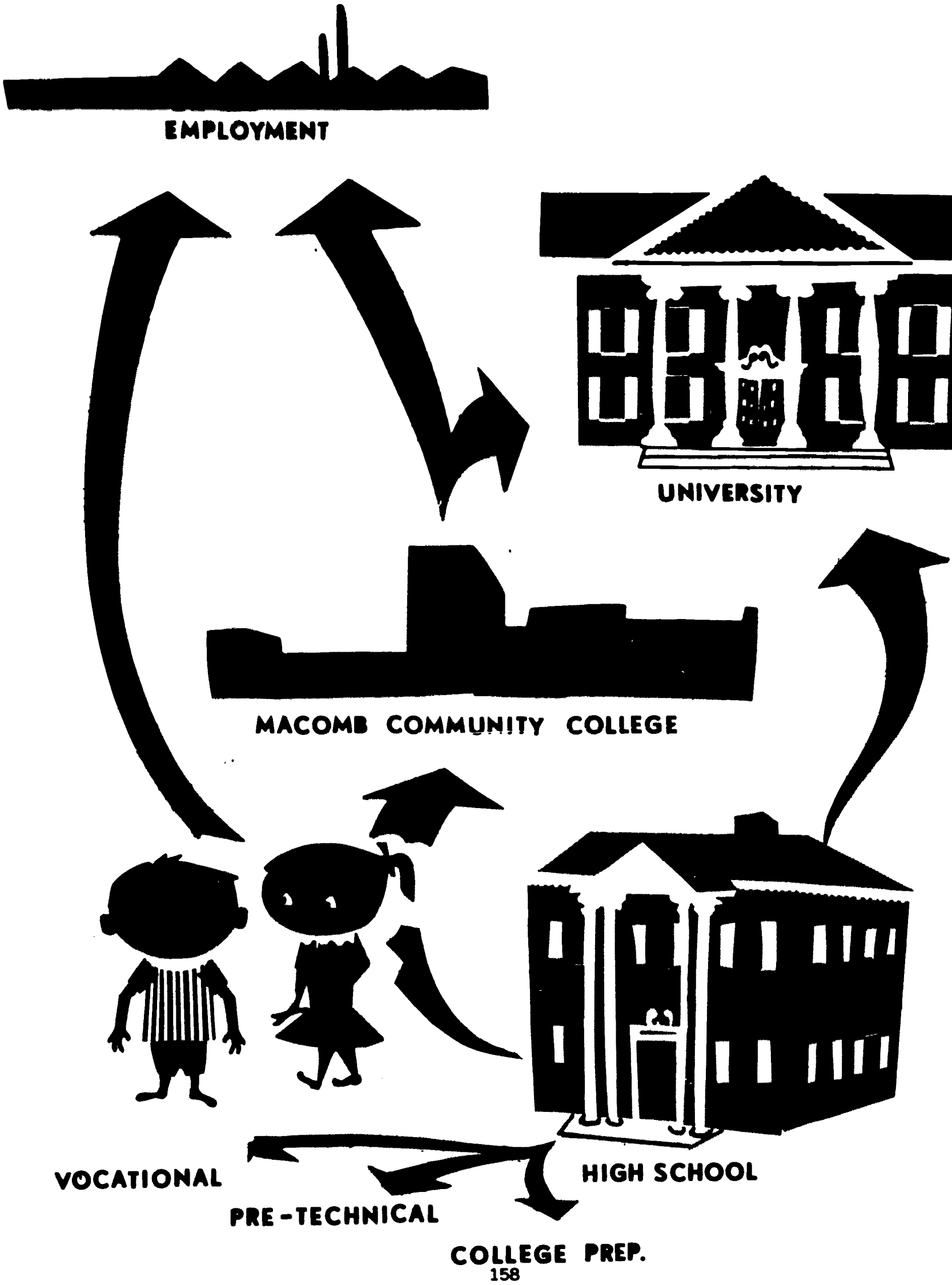
Traditionally, laboratory facilities and equipment for distributive and office occupations programs have been minimal, in contrast to home economics classrooms, for example, which invariably house a rather complete array of household equipment. Instruction is more meaningful and interesting when it simulates actual work situations. Typing and shorthand alone are not adequate preparation for office trainees: students need simulated office practice classrooms, with the machines commonly in use in business. Distributive education classrooms should include electric cash registers, show cases, and display windows. With the financial assistance provided by the Vocational Act of 1963, schools should give immediate attention to providing adequate laboratory-classrooms for cooperative programs.

A successful cooperative training program is dependent upon a coordinator with enthusiasm, up-to-date trade or business experience, and the ability to relate well to students, faculty, and the business community. Persons should be carefully chosen for such positions and encouraged to maintain their occupational skills through summer and/or part-time employment in their trade or business specialty.

Smaller high schools within ten or fifteen miles of one another might consider sharing the services of one teacher-coordinator. By scheduling cooperative training students into two-hour periods twice a week, a coordinator could teach two days in one school, two days in the other, and still have one full day plus half-time the remaining days for coordination. An example follows.

Period	Mon.	Tues.	Wed.	Thur.	Fri.
1	Preparation	Co-op Class	Preparation	Co-op Class	
2	Co-op Class	School B	Co-op Class	School B	
3	School A	Preparation	School A	Preparation	
4	COORDINATION				
5					
6					

The coordinator would be under contract to one school for salary and tenure purposes, with the second school reimbursing the first for half of the coordinator's salary (less the amount reimbursed from federal funds).


EMPLOYMENT
UNIVERSITY
MACOMB COMMUNITY COLLEGE
VOCATIONAL
PRE-TECHNICAL
HIGH SCHOOL
COLLEGE PREP.

THE PRE-TECHNICAL PROGRAM IN MACOMB COUNTY HIGH SCHOOLS.

The development of pre-technical programs at the senior high school level is one of the major changes which must occur if educational practice is to be brought into balance with technological change. The primary purpose of the pre-technical programs is the early identification and nurture of the high school student who can successfully prepare, by additional education, for highly skilled, technical, and semi-professional occupations. Although employment opportunities, in the mid-manpower range of the occupational spectrum are improving and expanding rapidly, the lack of specialized training closes these opportunities to the majority of new job-seekers today. Unsuccessful job seekers include the school drop-out and the non-specialized high school graduate, and may also include persons who have acquired college training of a general nature and are attempting to enter the work force at levels where specific job skills are required for employment.

The needs for skills in the economy and the earning needs of labor force entrants cannot be brought into balance by the continuation of the present haphazard mating of pupil aptitudes, school programs, and job opportunities. Tomorrow's high school student will need to be viewed much as a medical clinic staff might view a patient who has put the care of his health into their hands. The first step in this direction should be the development of programs of a depth and variety to accommodate the wide ranges of interest and ability which exist in every high school's student population. Improvement of vocational guidance services alone without the development of meaningful programs is comparable to improving medical diagnosis without corresponding advances in medical treatment. Two obvious and over-due activities are the upgrading of vocational education for the student seeking immediate job entry, and the development of pre-technical programs. The problems of vocational education and a recommended approach to their solution are detailed in other sections of this report.

The name "pre-technical" has been employed in other studies to define the high school programs which can offer adequate entry preparation for Community College technician training programs. The term is used in this report to describe all high school programs which have been designed to provide entry into a specific area of specialization in the Community College.

The six suggested high school-community college sequences which have been prepared for this report are not intended to be prescriptive, but rather to provide guidelines along which high school staffs and the Macomb County Community College staff can establish dialogs which will develop such programs tailored to the Associate Degree or certificate occupational programs of the Community College. Such program planning should involve the contributions of persons experienced in the appropriate occupational skills areas.

The units to be covered in the high school portions of the suggested Retailing and Marketing sequence and Food Service Supervision sequence have been identified because the course titles "Retailing" and "Foods" leave the purposes of the programs undefined. On the other hand, drafting, office occupations, electricity-electronics, and art are subject areas wherein existing programs provide a basis of general understanding.

The sample pre-technical high school programs have been written broadly enough to permit at least the more capable students these choices upon high school completion:

immediate job entry with some skills development,

further specialization in the Community College,

entry into a four-year college program.

Not all pre-technical programs will need to provide this flexibility. The accompanying samples have been so structured to demonstrate that the pre-technical, and even the vocational program, need not be closed-end programs, shutting off the student from moving upward or outward from his early career goals. The significant step of electing cooperative work-study experience or additional academic course work as preparation for more effective work in the Community College can be delayed until the 12th grade for undecided students.

The success of the pre-technical programs will be largely dependent upon the offering of alternate courses at various levels of rigor in mathematics, science, and communications. Students should be offered instruction at levels which are challenging, yet appropriate to their learning ability. Students should not be identified with a level or track, but rather placed in courses on their predictable ability to master separate subjects.

Most of the content of the pre-technical programs, as these are now perceived, can be provided by the staffs and the facilities of the truly comprehensive high school. Very small high schools, and some parochial high schools regardless of size, probably will lack the depth of staff and adequate facilities to provide instruction in all of the pre-technical programs. Considering that some portion of these programs will be the responsibility of each department within every high school, and that there will probably be about 36 public and 12 parochial high schools in Macomb County in the 1970's, rapid and adequate development of pre-technical programs will require some centralization. The proposed area Occupational Education Centers could provide instruction for some portions of the pre-technical programs, instruction in all of some pre-technical programs for small high schools, and the necessary coordination to effect pre-technical program development in each area of the County.

The development of the pre-technical high school programs is anticipated to yield these dividends:

FOR THE HIGH SCHOOL STUDENT.

* Opportunity to explore a career field early in the high school experience.

* Development of occupational skills through realistic learning experiences.

* Identification with a specific Community College program as an educational goal.

* Flexibility within programs which permits the student to change his goals without loss of time or academic standing.

* Instruction in academic subjects at levels which accommodate to the wide range of abilities which exists among students.

* Promotes the concept that education should continue beyond high school completion.

FOR THE COMMUNITY COLLEGE.

* Early identification and direction of students capable of success in the Community College occupational programs.

* The development of uniform acceptable standards in the high school pre-technical programs which will reduce the necessity of offering Community College instruction at many levels to accommodate to the varying preparations of the students.

A SUGGESTED HIGH SCHOOL - COMMUNITY COLLEGE SEQUENCE IN COMMERCIAL ART AND TECHNICAL ILLUSTRATING

	HIGH SCHOOL			COMMUNITY COLLEGE	
	9th or 10th grade	11th grade	12th grade	1st year	2nd year
SPECIALTY COURSES	"Vocations" or "Occupational Orientation" Industrial Arts (boys) Homemaking (girls) Drafting Art	Art (2 hrs) Applied Physics* Drafting	Art (2 hrs)	Descriptive Geometry Perspective Art Media and other art and design courses to further develop practical skills for 2nd year specialization in -	Commercial Art or Technical Illustrating Cooperative Internship
RELATED or SUPPORTING COURSES	Algebra* Geometry*		Chemistry*	Hydraulics - Pneumatics** Physics Metals Processing** Electricity - Electronics** Psychology	Automation Data Processing Technical Report Writing Industrial Organization Economics
GENERAL EDUCATION COURSES	Courses in the following areas as recommended or required by the high school: Composition, literature, and speech (3), social studies (2), mathematics (2), science (2), fine arts, foreign language, physical education			Sequences of courses in the following areas as required by the Community College: Composition, literature, and speech, social studies, science, mathematics, foreign language, fine arts, physical education	
	() Number of years recommended for students desiring to continue in the Community College.				
ALTERNATE 12th GRADE PATHS	PREPARATION FOR EMPLOYMENT	Additional course work Cooperative work-study experience		FOR CONTINUATION IN THE COMMUNITY COLLEGE	
ENTRY EMPLOYMENT OPPORTUNITIES		Tracer Key-line and paste-up ass't.			Commercial Artist Product Designer Industrial Illustrator Display Designer Catalog Illustrator

* or other mathematics and science courses appropriate to the student's ability.

** Courses required for Technical Illustrating and elective for Commercial Art.

A SUGGESTED HIGH SCHOOL - COMMUNITY COLLEGE SEQUENCE IN DRAFTING-DESIGN TECHNOLOGY

	HIGH SCHOOL			COMMUNITY COLLEGE	
	9th or 10th grade	11th grade	12th grade	1st year	2nd year
SPECIALTY COURSES	"Vocations" or "Occupational Orientation Industrial Arts (boys) Homemaking (girls) Drafting	Drafting (2 hrs) Applied Physics*	Drafting-Design (2 hrs)	Descriptive Geometry Advanced drafting & design courses to further develop practical skills for 2nd year specialization in	Tool, Die, Fixture Design or Auto Body Design or Special Machine Design Cooperative Internship
RELATED or SUPPORTING COURSES	Algebra* Geometry*	Trigonometry* Machine Shop	Chemistry* Art	Hydraulics-Pneumatics Physics Metal Processing Electricity-Electronics Psychology	Automation Data Processing Technical Report Writing Industrial Organizations Economics
GENERAL EDUCATION COURSES	Courses in the following areas as recommended or required by the high school: Composition, literature, and speech (3), social studies (2), mathematics (2), science (2), fine arts, foreign language, physical education			Sequences of courses in the following areas as required by the Community College: Composition, literature, and speech, social studies, science, mathematics, foreign language, fine arts, physical education	
	() Number of years recommended for students desiring to continue in the Community College.				
ALTERNATE 12th GRADE PATHS	PREPARATION FOR EMPLOYMENT	Additional course work Cooperative work-study experience		FOR CONTINUATION IN THE COMMUNITY COLLEGE	
ENTRY EMPLOYMENT OPPORTUNITIES		Junior Draftsman Detailer Blue Print Librarian			Senior Draftsman Tool Designer Die Designer Jig & Fixture Designer Body Designer Special Machine Designer Body Detailer Layout Man

* or other mathematics and science courses appropriate to the student's ability.

A SUGGESTED HIGH SCHOOL - COMMUNITY COLLEGE SEQUENCE IN ELECTRICAL-ELECTRONICS TECHNOLOGY

	HIGH SCHOOL			COMMUNITY COLLEGE	
	9th or 10th grade	11th grade	12th grade	1st year	2nd year
SPECIALTY COURSES	"Vocations" or "Occupational Orientation" Industrial Arts (boys) Homemaking (girls) Drafting	Applied Physics* Electrical Drafting Electricity (2 hrs)	Electronics (2 hrs)	Advanced Electricity and electronics courses to further develop understandings and practical skills for 2nd year specialization in ---------	Industrial Electronics or Computer Electronics or Communications Electronics Cooperative Internship
RELATED or SUPPORTING COURSES	Algebra* Geometry*	Trigonometry* Machine Shop	Chemistry*	Technical Report Writing Electrical Math Hydraulics - Pneumatics Physics Metals Processing	Computer Math Psychology Economics Electrical Drafting
GENERAL EDUCATION COURSES	Courses in the following areas as recommended or required by the high school Composition, literature, and speech (3) social studies (2), mathematics (2), science (2), fine arts, foreign language, physical education			Sequences of courses in the following areas as required by the Community College Composition, literature, and speech social studies, science, mathematics foreign language, fine arts, physical education	

() Number of years recommended for students desiring to continue in the Community College.

ALTERNATE 12th GRADE PATHS	PREPARATION FOR EMPLOYMENT	Additional course work	FOR CONTINUATION IN THE COMMUNITY COLLEGE
		Cooperative work-study experience	
ENTRY EMPLOYMENT OPPORTUNITIES		Electrician helper Electrician apprentice Radio service assistant TV service assistant Electric motor repair assistant Radio - TV store counterman	Electrical-electronic technician Instrument repairman Institutional electronics maintenance

* or other mathematics and science courses appropriate to the student's ability.

A SUGGESTED HIGH SCHOOL - COMMUNITY COLLEGE SEQUENCE IN FOOD SERVICE SUPERVISION

	HIGH SCHOOL			COMMUNITY COLLEGE	
	9th or 10th grade	11th grade	12th grade	1st year	2nd year
SPECIALTY COURSES	"Vocations" or "Occupational Orientation" Industrial Arts (boys) Homemaking (girls)	FOODS I (2 hrs) (Nutrition) Course Content Basic Foods Foods & Health Balanced & Special Diets Menu Planning Food Costs & Purchasing Storage & Refrigeration Food Preparation	FOODS II (2 hrs) (Food Service) Course Content Table Service Cafeteria Service Specialty Foods Preparation Sanitation Records Keeping Food Preparation	Curriculum Nutrition Menu Planning Food Purchasing, Preservation & Storage Public Health Dietetics	Curriculum Institutional Fo Catering & Resta rant operation Foods Cost Estimating Foods Service Re- cords Manageme Cooperative Internship
RELATED or SUPPORTING COURSES	Typing Bookkeeping Algebra* Geometry*	Consumer Mathematics Art Health-Hygiene	Chemistry*	Marketing Business Communications Art	Economics Accounting Business Law Psychology
GENERAL EDUCATION COURSES	Courses in the following areas as recommended or required by the high school Composition, literature, and speech (3) social studies (2), mathematics (2), science (2), fine arts, foreign language, physical education () Number of years recommended for students desiring to continue in the Community College.			Sequence of courses in the following areas as required by the Community College Composition, literature, and speech social studies, science, mathematics foreign language, fine arts, physical education	
ALTERNATE" 12th GRADE PATHS	PREPARATION FOR EMPLOYMENT	Additional course work Cooperative work-study experience		FOR CONTINUATION IN THE COMMUNITY COLLEGE	
ENTRY EMPLOYMENT OPPORTUNITIES		Short order cook Salad chef Second cook Waiter, waitress Hostess Pantryman Food checker		Chef Specialty chef Institutional foods manager Food sales representativ Caterer Dining Room manager	

* or other mathematics and science courses appropriate to the student's ability.

A SUGGESTED HIGH SCHOOL - COMMUNITY COLLEGE SEQUENCE IN RETAILING AND MARKETING

	HIGH SCHOOL			COMMUNITY COLLEGE	
	9th or 10th grade	11th grade	12th grade	1st year	2nd year
SPECIALTY COURSES	"Vocations" or "Occupational Orientation" Industrial Arts (boys) Homemaking (girls)	RETAILING I (Preparatory-elective) Course Content Importance of distrib. in the economy Marketing functions Store Organization Channels of distribution Retail math Oral expression Business behavior and dress Job interview Entry skills Register Operation Stockkeeping Service selling	RETAILING II (Cooperative training related instruction) Course Content Creative selling Merchandise information Sales Promotion Merchandise planning Stock control Consumer credit Store policy Trends in distribution Gov't. regulation and legal aspects Indiv. & group projects Case studies Sales Demonstrations Merchandise manuals	Introduction to Business Principles of Marketing Retailing Accounting	Salesmanship Sales Promotion Business Law Cooperative Internship
RELATED or SUPPORTING COURSES	Algebra* Geometry* Typing	Business Communication Business Machines Art Speech	Business Math Business Law Economics	Business Math Speech Psychology	Economics Data Processing Algebra

	Courses in the following areas as recommended or required by the high school	Sequences of courses in the following areas as required by the Community College
GENERAL EDUCATION COURSES	Composition, literature, and speech (3), social studies (2), mathematics (2), science (2), fine arts, foreign language, physical education	Composition, literature, and speech social studies, science, mathematics foreign language, fine arts, physical education

() Number of years recommended for students desiring to continue in the Community College.

ALTERNATE 12th GRADE PATHS	PREPARATION FOR EMPLOYMENT	Additional course work Cooperative work-study experience	FOR CONTINUATION IN THE COMMUNITY COLLEGE
ENTRY EMPLOYMENT OPPORTUNITIES		Salesman (retail) Stock clerk Receiving clerk Cashier Dept. Mgr. trainee Display assistant Credit clerk	Salesman (retail) Salesman (direct) Dept. Manager Ass't. Buyer Ass't. Store Mgr. Ass't. Credit Mgr. Ass't. Personnel Manager Trainee-Sales Promotion Traffic Management Trainee Fashion Coordinator Trainee

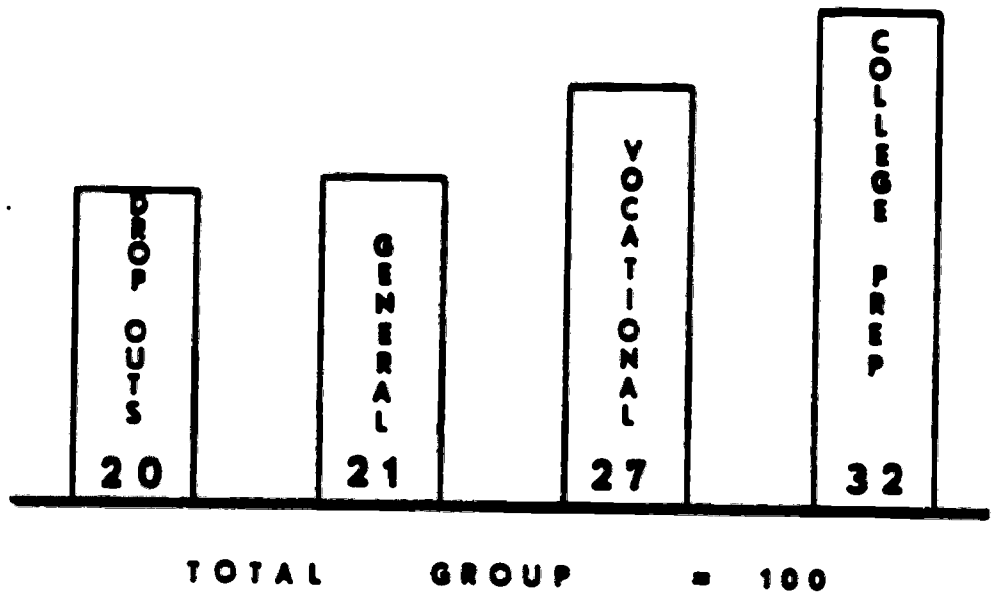
* or other mathematics and science courses appropriate to the student's ability.

A SUGGESTED HIGH SCHOOL - COMMUNITY COLLEGE SEQUENCE IN STENOGRAPHIC-SECRETARIAL PRACTICE

	HIGH SCHOOL			COMMUNITY COLLEGE	
	9th or 10th grade	11th grade	12th grade	1st year	2nd year
SPECIALTY COURSES	"Vocations" or "Occupational Orientation" Industrial Arts (b./s) Homemaking (girls) Typing I	Typing II Shorthand I Bookkeeping	Shorthand II Office Practices	Typing* Shorthand* Accounting Business Correspondence Office Machines Business Law	Specialized** Office Practice Records Management Data Processing Office Supervision Cooperative Internship
RELATED or SUPPORTING COURSES	Business Math	Business Communication	Business Law Economics	Personality Development Psychology	Economics Business Math*
GENERAL EDUCATION COURSES	Courses in the following areas as recommended or required by the high school Composition, literature, and speech (3), social studies (2), mathematics (2), science (2), fine arts, foreign language, physical education () Number of years recommended for students desiring to continue in the Community College.			Sequence of courses in the following areas as required by the Community College Composition, literature, and speech social studies, science, mathematics, foreign language, fine arts, physical education	
ALTERNATE 12th GRADE PATHS	PREPARATION FOR EMPLOYMENT	Additional course work Cooperative work-study experience		FOR CONTINUATION IN THE COMMUNITY COLLEGE	
ENTRY EMPLOYMENT OPPORTUNITIES		Clerk-typist Receptionist Cashier Office machines operator File & records clerk Key punch operator Stenographer, junior		Administrative Assistant Stenographer Clerk, senior Statistical typist Educational) Legal) Executive) Secre- Medical) tary Technical)	

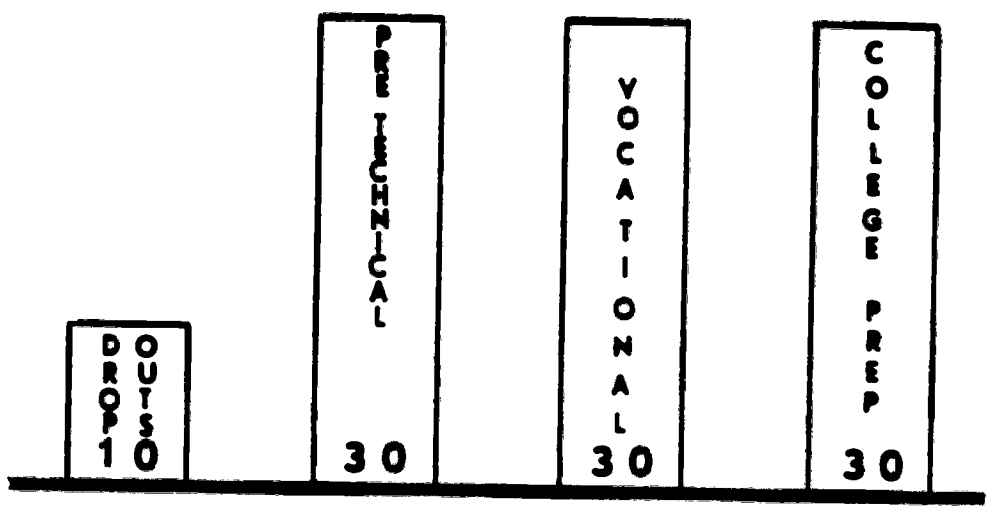
* certain courses may be waived on the basis of student proficiency.

** additional courses should be provided for occupational specialization.



TOTAL GROUP = 100

The 1965 high school age group in Macomb County is distributed as illustrated in the above graph. Combining the drop-outs and the general program students reveals that 41 of every 100 persons in the age group do not have goals for which school programs are available.

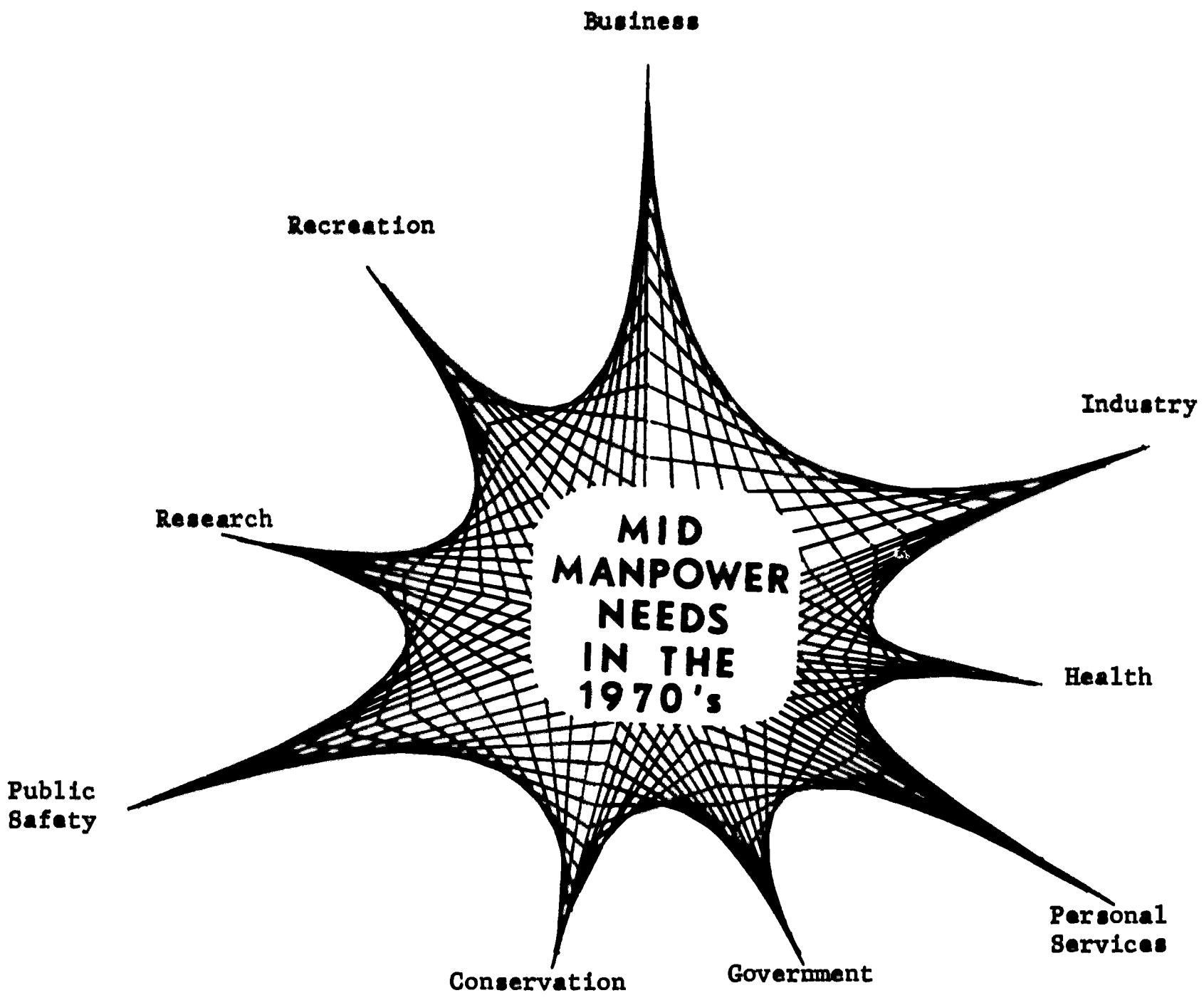


TOTAL GROUP = 100

The development of high school pre-technical programs to identify and direct potential students toward Community College occupational programs will be the most significant curriculum change in the immediate future. The creation or expansion of meaningful high school vocational programs should reduce the proportion of drop-outs by half. The proportion of students preparing for a four year college is not expected to increase as the values of the Community College occupational programs become more generally evident. The second graph illustrates a practical distribution of the high school age population in 1975. More or fewer students may be following each of the high school programs than are indicated on the graph. This will be determined by the efforts which are made to improve educational opportunities. It is imperative that every effort be made to retain persons in school until high school graduation, that every student have a commitment to a career goal, and that the schools offer programs which can assist the student in achieving his goal.

CHALLENGE TO THE COMMUNITY COLLEGE

The community junior college is in a very real sense society's answer to the need for expanded educational opportunity. Millions of high school graduates of "middle level" ability need further education and training to fit them for careers within the spectrum of "middle level Manpower" -- in semi-professional and technical jobs. By 1970, one fourth of the nation's labor force will be employed in semi-professional and technical jobs which did not even exist in 1930.[1]



[1]Norman C. Harris, Technical Education in the Junior College, New Programs For New Jobs, (American Association of Junior Colleges, Washington D.C., 1964), p.19.

OCCUPATIONAL EDUCATION AT THE POST-HIGH SCHOOL LEVEL

Technological Change and Post-High School Education.

Technological innovations in industry since World War II have resulted in the development of new products, new materials, new processes, and new equipment. New businesses have been created out of these innovations and old businesses have reorganized to meet the competition and opportunities arising from these changes. Greater emphasis upon research and development has spread these technological changes into commercial, government, and institutional applications.

Technological innovations are stimulating a relentless demand for workers possessing highly-developed technical skills to service, operate, and adapt the mechanisms and processes of these changes. Further technological advances are dependent upon an available supply of technically competent persons to perform these functions. As indicated in the Labor Market Needs section of this report, an available supply of highly-skilled manpower stimulates capital investment in business enterprises. Job opportunities at all skill levels are created by an adequate supply of technical, semi-professional, and other mid-manpower workers.

The changing employment needs of the new technology have been stated by Professor Norman C. Harris of the University of Michigan:

> "Professional jobs, making up six percent of the labor force in 1930, will probably constitute 12 percent by 1970. At the other extreme, unskilled, semi-skilled, and service jobs, which together accounted for 56 percent of the labor force in the 1930's will by 1970 decrease to only 26 percent of the labor force. But the really significant changes in our labor force, and in society in general, have occurred at the level of the semi-professional and technical; the managerial, business, and sales; and the highly skilled jobs. These jobs taken together, will account for over 50 percent of the labor force by 1970."[1]

Community colleges are developing specialized curriculums to meet this need and to provide employability in an economy characterized by technical skills. The current unemployment rate for 16-24 year old high school graduates is over twice the rate experienced by the total work force. Although the rate of unemployment is high among all young people, it is far higher for the high school dropout than for the high school graduate. The waste incident to our failure to provide education for occupational entry is exorbitantly expensive, socially and individually.

[1]Harris, "The Community Junior College--A Solution to the Skilled Manpower Problem," in Higher Education in an Age of Revolution, ed. G. Kerry Smith (Washington: Association for Higher Education, 1962), p. 111.

The dependence of an area economy upon an adequate pool of skilled manpower has been pin-pointed by Dr. M. D. Mobley, Executive Secretary of the American Vocational Association:

> "If you want to determine the status of any state in the nation during the '70's, look at their activities in the field of vocational and technical education in the '60's. The states that lag behind in vocational education in the '60's will lag behind in economic growth in the '70's."

The extent of the need for post-high school occupational education programs can be seen from an examination of the anticipated change in the nature of the national economic activities from 1960 to 1975.

Economic Activity	1960-1975 Increase
Professional and related services	53.4%
Public administration	53.6
Finance, insurance, real estate	46.7
Construction	45.9
Business and repair services	41.4

State-wide, community colleges are expanding to meet the increasing needs for post-high school education. For the ten years from 1955 to 1965, state community college enrollments increased from 13,652 to 61,275.

Local Need.

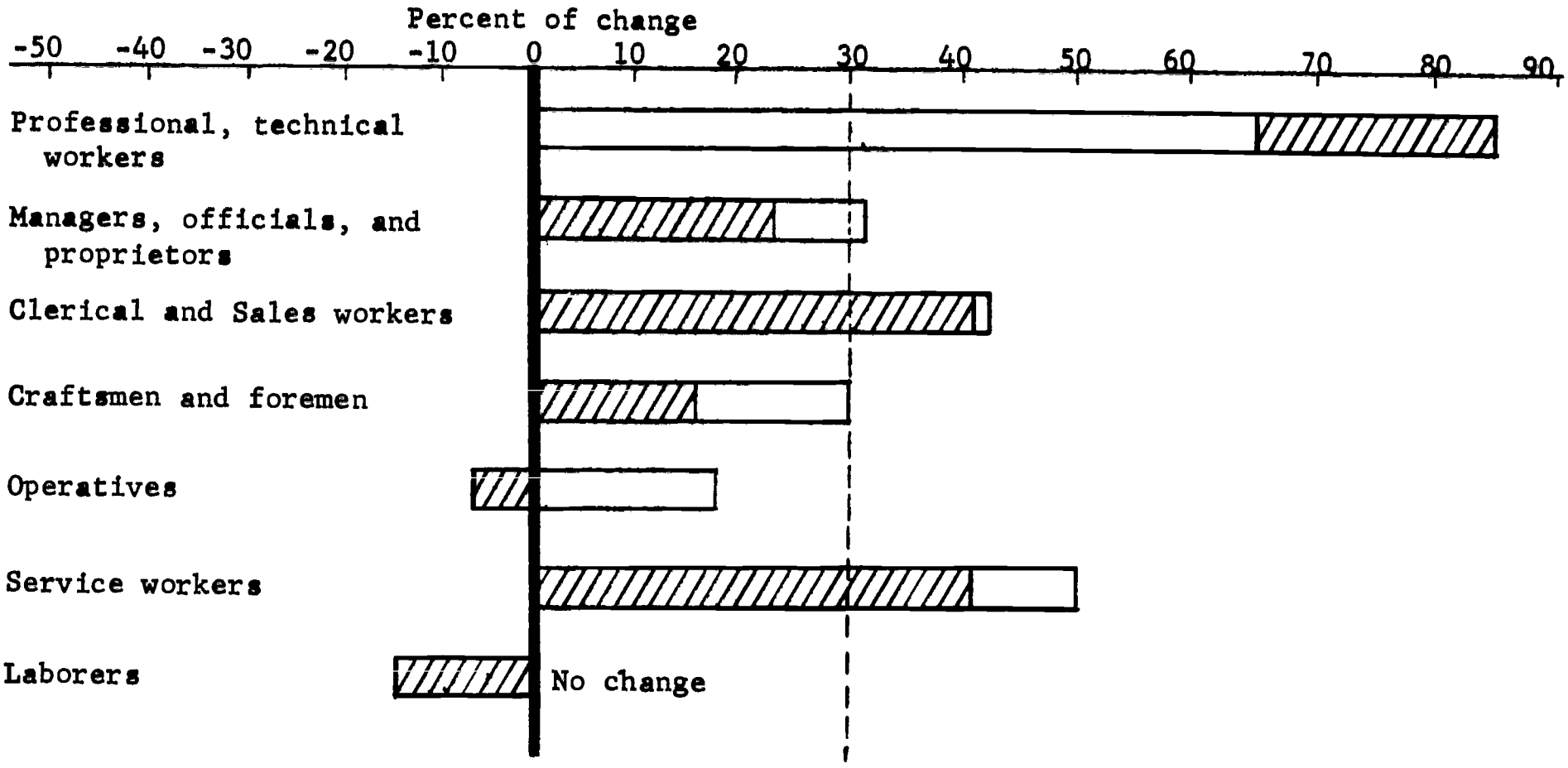
The need for community college occupational training in Macomb County has been measured by a number of activities of this Survey. Based upon these investigations, the demand for occupational preparation in the next decade will challenge the planning resourcefulness and tax the financial resources available to Macomb County Community College. By 1975, the number of 18 and 19 year olds in Macomb County will be approximately 30,000. Table C-1 indicates the County population in the 18-19 age group at five year intervals.

Table C-1

MACOMB COUNTY POPULATIONS IN THE 18-19 AGE GROUP
1965-80

Year	Population
1965	15,332
1970	20,412
1975	29,677
1980	33,621

PROJECTED PERCENT OF CHANGE IN EMPLOYMENT OF WORKERS IN MAJOR OCCUPATIONAL GROUPS UNITED STATES AND DETROIT AREA



United States

Detroit Area

Provided with educational opportunities realistic to their capacities and needs at costs within reach of most of the population, Community College occupational programs could attract between 10,000 and 20,000 of these 18 and 19 year olds. Additional thousands of older persons will look to the Community College for opportunities to upgrade their employment skills as industry becomes increasingly reluctant to invest the capital required to provide this training. The accompanying graph compares the anticipated local and national change in the nature of the work force. This training must be provided if the local economy is to expand sufficiently to offer employment to the record number of young persons who will enter the work force during the 1965-1980 period.

The existence of 68 privately operated trade, technical, and business schools in the Detroit area is evidence of the pressing demand for post-high school occupational education. These private schools enroll more students than all public post-high occupational programs in the three County area. Private occupational training charges range as high as $2,000 a year. Equity indicates that a person desiring training in a socially-useful occupation for which definite employment opportunities exist should have access to a publicly-supported training program.

In response to a Survey questionnaire, one of every three parents of eighth grade students in Macomb County definitely plans upon an occupational curriculum in the Community College for his child. The actual demand may be greater for parental hopes become increasingly realistic as the child's progress in school gives further evidence of his true potential. Seniors in Macomb County high schools indicate a very strong desire for continuing their education. Macomb County Community College, or a technical, trade, or business school, is the first choice of four of every five seniors not in a college preparatory program. When student academic ability is considered, boys and girls placing in the middle and bottom thirds of their graduating class chose the Community College, or other occupational training, over the four year college by a three to one margin.

Table C-2

SENIORS' PLANS TO ATTEND COLLEGE

	Yes	Probably	Probably Not	No	Don't Know
Boys - Total	49.4	16.5	7.4	15.0	11.7
Public	49.3	16.5	7.4	14.1	11.9
Private	51.1	17.0	8.5	15.6	7.8
Top 1/3	88.3	5.3	1.3	2.3	2.8
Middle 1/3	43.8	20.8	8.2	14.1	13.1
Bottom 1/3	14.5	19.2	13.2	33.5	19.4
Girls -Total	40.3	12.3	8.1	28.9	10.4
Public	39.9	12.1	8.0	29.2	10.8
Private	47.0	13.9	8.6	25.7	4.8
Top 1/3	70.0	8.7	4.8	11.7	4.8
Middle 1/3	43.8	20.8	8.2	14.1	13.1
Bottom 1/3	12.1	11.2	10.9	52.1	13.7

Table C-3

PREFERENCE OF SENIORS PLANNING TO GO TO COLLEGE

	MCCC	Other	Technical Trade or Business
Boys - Total	40.3	44.4	12.6
Public	43.4	44.3	12.3
Private	37.7	45.3	17.0
Top 1/3	17.0	78.5	4.5
Middle 1/3	54.8	30.4	14.8
Bottom 1/3	61.8	13.5	24.7
Girls- Total	37.0	49.7	13.3
Public	37.6	49.5	12.9
Private	31.2	52.0	16.8
Top 1/3	20.0	74.1	5.9
Middle 1/3	51.9	30.9	17.2
Bottom 1/3	47.3	19.6	33.3

When asked about their own interest in further education, three of five parents of eighth graders indicated interest, with more than twice as many desiring job improvement education as are interested in working for a college degree.

Three of every five Macomb County employers who responded to a questionnaire seeking their opinions of educational preparation for employment believe that high school graduates are not adequately prepared for entry employment. More than half of the employers who indicated a willingness to support improved occupational education programs recommended more and stronger community college programs. Employer interest in school programs for upgrading the occupational proficiency of their present employees is strong. Table L-22 indicates this interest by types of training programs.

The suitability of the community college to meet the increasing needs for occupational education is evidenced by the rapid growth of such programs in community colleges in Michigan and throughout the nation.

Mr. John W. Lehman, Regional Director, Bureau of Labor Statistics, was requested by our Survey to comment on the future employment outlook for the Detroit area. The following statement is taken from Mr. Lehman's reply:

> "At the junior college level there should be considerable demand for engineering and science technicians to go into research and development, to become factory foremen, and for highly sophisticated repair and maintenance work.....Health service occupations will offer many good job opportunities, particularly for women. There is no end in sight to the shortage of registered professional nurses and licensed practical nurses. About 80 percent of the professional nurses are currently being trained in diploma schools

operated by hospitals, but an increasing number of junior colleges are entering this field. Dental hygienists and dental laboratory technicians are also expected to be in demand. Business graduates of two-year college programs should continue to be sought. Women graduating from executive secretarial programs should readily find jobs. The tremendous demand for accountants of all types is expanding job opportunities for two-year accountants. The electronic data processing field will offer many opportunities. More and more junior colleges and technical institutes are offering computer programming and console operation in their curriculum. Occupations in the expanding public sector should not be overlooked."

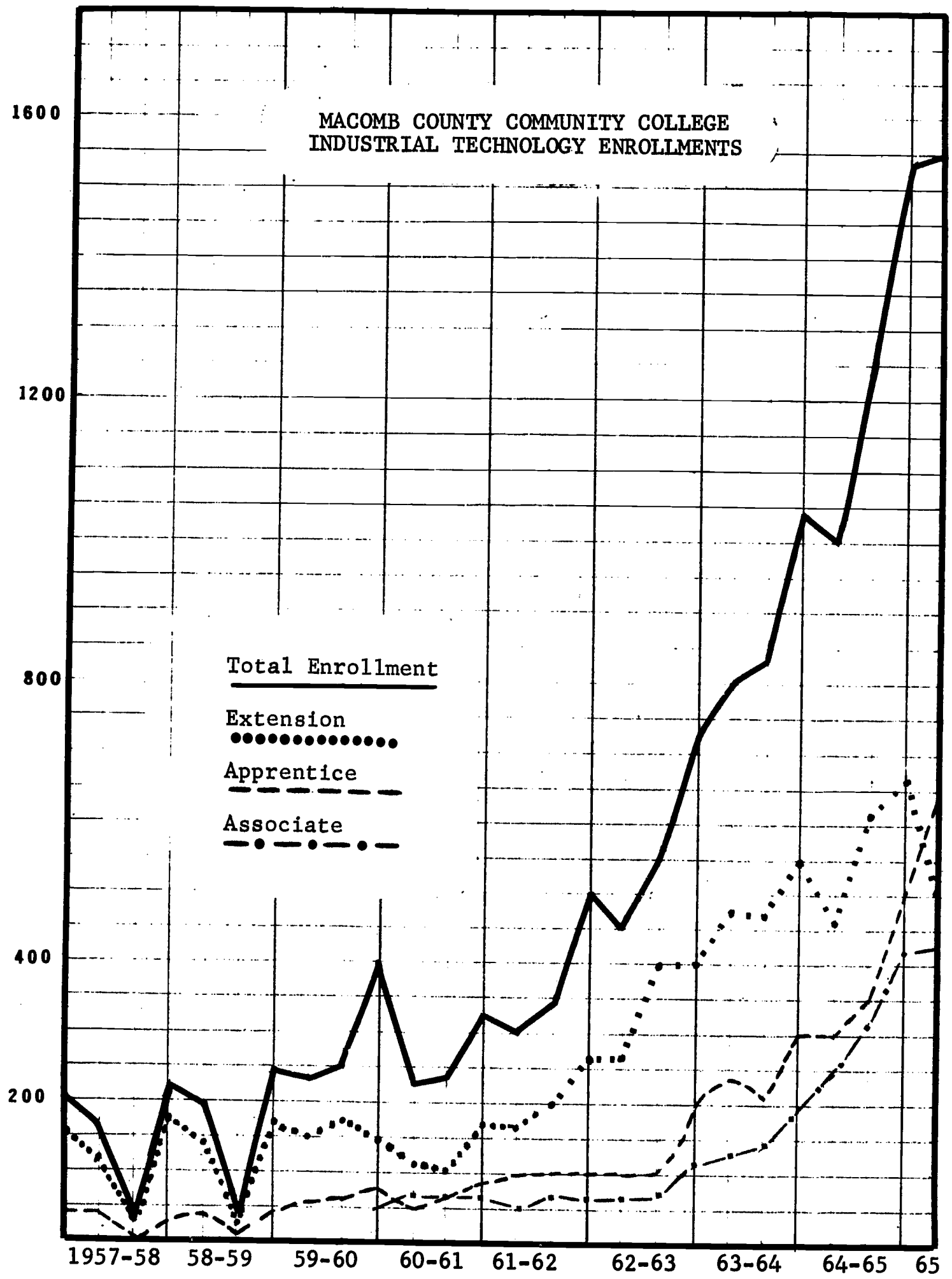
Occupational Enrollments at Macomb County Community College.

Terminal occupational programs enroll approximately 22% of the 7183 students enrolled in Macomb County Community College. Enrollments in industrial technology courses offered by the College have increased from 300 to 1440 in the four years from 1961 to 1965. Table C-4 indicates enrollments by occupational programs in September, 1965.

Table C-4
OCCUPATIONAL PROGRAM ENROLLMENTS MACOMB COUNTY COMMUNITY COLLEGE
FALL 1965

Program	Program Students	Non-Program Students	Total Enrolled
Industrial Technology			1440
Apprentices	624		
Technicians	368		
Other Students		448	
Office Occupations			410
Secretarial	182		
Stenographic-clerical	20		
Other Students		208	
Health Occupations			30
Nursing	30		
Business			1214
Business administration	562*		
Accounting	47		
General business	35		
Marketing	17		
Other Students		553	
	661		3094
Program Students	1885		
Non-program		1209	
Total Enrolled			3094

* Not identified whether terminal or transfer
Half are assumed to be terminal students


MACOMB COUNTY COMMUNITY COLLEGE
INDUSTRIAL TECHNOLOGY ENROLLMENTS
1600
1200
800
400
200
Total Enrollment
Extension
Apprentice
Associate
1957-58
58-59
59-60
60-61
61-62
62-63
63-64
64-65
65

Although 40% of all Macomb County Community College students take some course work in the occupational curriculum areas, only one of every five full-time students is following an occupational program. Almost half of all part-time students are enrolled in occupational programs.

Apprentice programs serve apprentices in 18 manufacturing trades and one construction trade, bricklaying.

Associate in technology degree students (identified as technicians in Table C-4) who have accumulated 15 or more credit hours are distributed by programs as follows:

Auto Body Design	29%
Tool, Die and Fixture Design	27%
Special Machine Design	12%
Fluid Power	10%
Technical Illustrating	10%
Metal Processing	8%
Electrical	4%

This Committee recommends that, excepting for adult education programs offered by the K-12 school districts, all public vocational-technical education of a post-high school level in Macomb County be provided by Macomb County Community College. The following reasons are the basis for the committee's recommendation:

1. Macomb County Community College is already established and financed by the taxpayers of the County, and its programs and facilities are available to all residents.

2. Macomb County Community College has demonstrated a willingness and ability to develop meaningful occupational programs in a limited number of occupational areas.

3. Macomb County Community College is recognized by the State Department of Vocational Education as an area skills center and is eligible to secure federal and state grants on that basis.

4. Macomb County Community College is accredited by the Michigan Commission on College Accreditation and is eligible on that basis to secure federal and state grants.

5. Macomb County Community College has achieved recognition by senior institutions for the quality of its programs and the performance of its graduates.

6. Studies of the local, regional, and national labor outlook indicate that the greatest employment opportunities for our citizens will occur at those occupational levels for which the community college occupational programs are specifically aimed.

Occupational Curriculums.

Occupational programs are designed for the development of competence to perform adequately in a skills area which can be utilized for employment at a significant level, and thus curriculum content is derived from the skills and knowledge required for employment. The present trade and technical, business, and office occupations programs of Macomb County Community College have been derived in this manner and should be strengthened and expanded as evidence of local need and pupil interest warrants. The College should investigate the suitability of a wide range of additional offerings to the needs of our local economy and of our citizens who desire occupational competence. The study of the area economy and its anticipated development, and an analysis of the several interest measurements taken by the Survey indicate that the following occupational programs warrant investigation by the College. The inclusion of these programs is not an indication that the Survey has identified a local demand sufficient to justify the offering of each of these programs, nor that other areas are not suitable for investigation. The number of programs under development should not exceed the College's capacity to do so in an orderly manner and to insure the quality of each. Each of the following programs offers opportunities for entry employment in a number of trades or occupations and at different levels of competence.

Agriculture and Horticulture
- Agri-business
- Agronomy
- Farm Management
- Floristry
- Landscaping & Ornamental Horticulture

Business and Commerce
- Accounting
- Advertising
- Business Management
- Data Processing
- Insurance
- Office Management
- Purchasing
- Real Estate
- Retail Sales & Merchandising
- Secretarial
- Stenographic & Clerical

Graphic Arts
- Commercial Art
- Forms & Records Reproduction and Management
- Photography
- Printing
- Technical Illustrating

Communications
- Journalism
- Radio & Television Broadcasting
- Technical Writing

Manufacturing and Industrial Technologies
- Architectural Drafting
- Auto Body Design
- Automotive Service & Repair
- Building Trades Apprentice Training
- Business Machine Service & Repair
- Climate Control
- Communications Electronics
- Data Processing Electronics
- Engineering Drafting
- Fluid Power
- Industrial Chemistry & Plastics
- Industrial Electronics
- Industrial Maintenance
- Industrial Management
- Industrial Supervision
- Instrumentation
- Manufacturing Trades Apprentice Training
- Metallurgy
- Metals Processing - Machining, Welding Foundry Work
- Packaging & Transportation
- Plumbing & Pipefitting

Printing Trades Apprentice Training
Quality Control
Radio & Television Service and Repair
Sheet Metal Fabrication
Special Machines Design
Time and Motion Study
Tool and Die Design
Warehousing and Storage

Health Services
Dental Assisting & Technology
Laboratory Assisting & Technology
Medical Assisting & Technology
Medical Records Library Maintenance
Nursing
Nutrition & Dietetics
Practical Nursing
Sanitation Technology

Public Services
Custodial Engineering
Fire Fighting
Highway Technology & Surveying
Law Enforcement & Protection
Playground & Recreation Supervision

Service Occupations
Barbering
Clothing Construction
Cosmetology
Hotel & Motel Management
Industrial Housekeeping
Service Station Management

Food Services
Baking & Commercial Cooking
Restaurant Management & Catering

Development of Curriculum.

Occupational curriculum should be envisioned as fluid and exploratory, limited only by

the employability of graduates,
the interests of potential students,
the financial capacity of the College,
and the social usefulness of each program.

Curriculum should be developed with the maximum participation of advisory committees of persons knowledgeable in the skills requirements of occupations, and preferably, active in the exercise of those skills.

Curriculum revision must be continuous, not periodic. A vigorous curriculum is characterized by courses and programs under constant upgrading, with new programs being developed, programs of diminishing need being phased out, and many new programs being investigated. To promote this vitality, membership on advisory committees should be on a short-term basis.

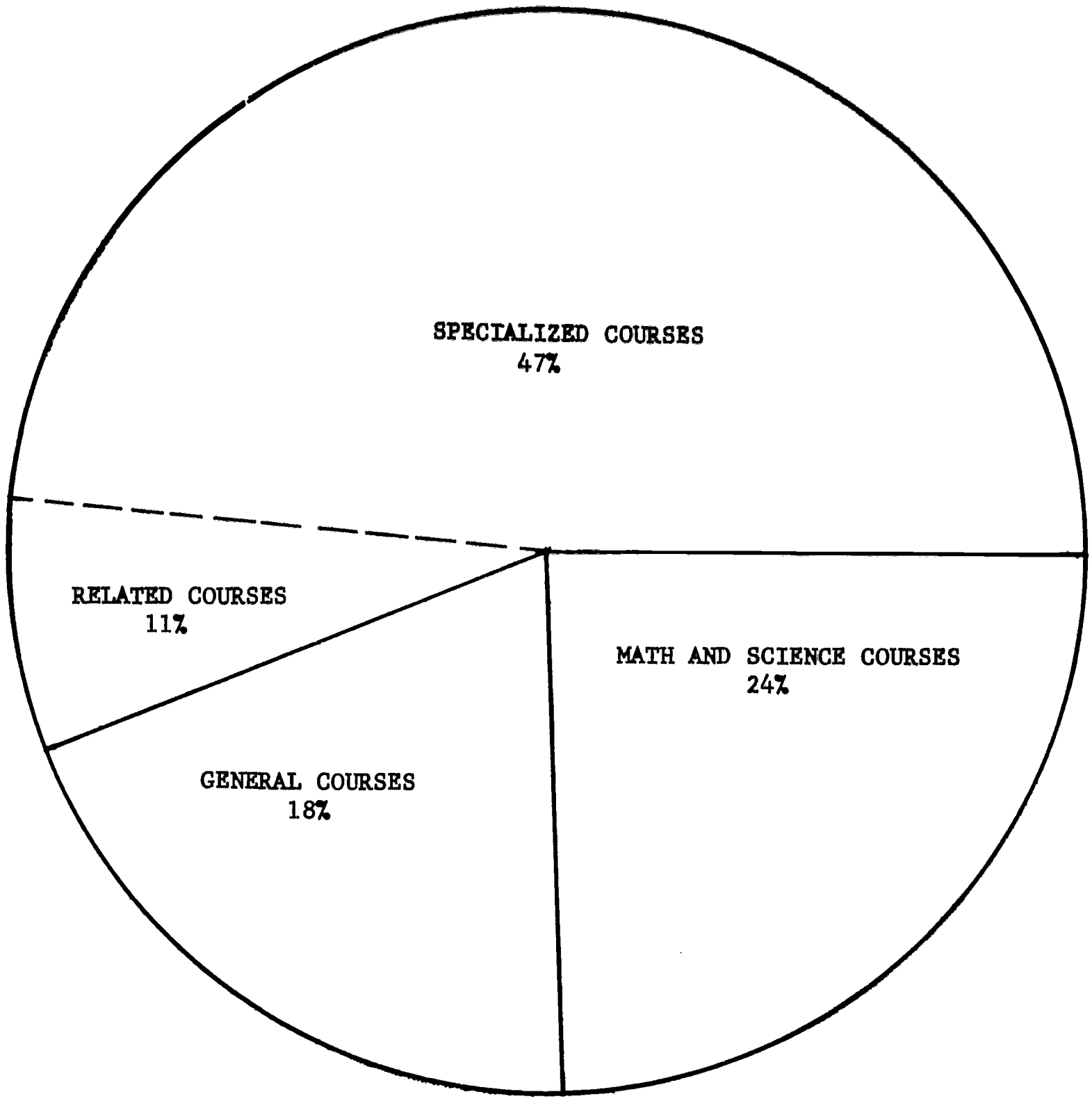
Occupational curriculum should be under continuing evaluation. The primary evaluation is the employability of the student trained in a program. The College should seek the evaluation of programs by former students as an integral aim of follow-up studies of these persons. Evaluation should also be sought periodically by outside experts, and by professional accrediting associations.

Levels of Instruction.

Students vary in their capacity to perform in different curriculum areas. When courses of varying rigor might satisfy a requirement of the student's program, the student should be encouraged to select that course which is most challenging to his own aptitude so that his preparation will be as broad as possible. Presumably, this choice of courses will be available in communications, mathematics, science, social studies, and in technical curriculum areas.

Suggested Division of Credit for

TWO-YEAR POST HIGH SCHOOL TECHNICAL CURRICULUMS



Identification of Programs.

Occupational programs should be flexible and broad enough to achieve competence in a broad area of skills rather than in a single trade. Programs vary in content, length, and rigor according to the knowledge and skills requirements of the occupational area.

a. Programs designed to prepare the individual for engineering technician occupations are characterized by intensive mathematics and science requirements. Mastery of these programs will culminate in the Associate in Technology degrees. Students enrolled in these programs will have given evidence of adequate performance in college preparatory or pre-technical curriculums in high school.

b. Other occupational programs in the Community College which lead to the Associate degree may not require the engineering technician's proficiency in mathematics and science, but will be characterized by similar depth in other curriculum areas.

c. Trades preparation programs are designed to achieve employability in occupations which require a high degree of manipulative skills development and less academic preparation than that required for the Associate Degree.

d. Apprentice related training programs should be developed with the participation of the employer and, if applicable, the Federal Bureau of Apprenticeship and Training and the trade unions concerned.

e. Preparatory programs should be offered to remedy academic deficiencies which would prevent success in the regular programs. These would serve, among other persons, school graduates lacking necessary preparatory courses and older persons whose basic educational skills have deteriorated through disuse.

f. Special programs of varying length designed to meet the immediate and special needs of particular groups. Examples would include upgrading courses offered on an employer's premises for his own workers or a special class to clarify the applications of a new law for persons needing this information.

g. Continuing education courses and programs in occupational areas should be offered when there is evidence of a need for programs of a post-high school level.

Relationship to the Secondary Schools.

Occupational programs developed to levels which can achieve employment competence and taught by dedicated teachers possessing practical experience and teaching proficiency can only succeed if student enrollments are sufficiently high to maintain these programs.

The number of persons graduating from Macomb County high schools, 6,500 in 1965, will increase annually to more than 16,000 by 1975. At least half of these persons could be enrolled in Community College occupational programs at great profit to themselves and the community. However, potential students must be identified early in their high school careers, and counseled into courses which will prepare them for success in a community college program. Although specific data is not available, an examination of fall enrollments in occupational programs in the Community College indicates that less than one tenth of the 1965 Macomb County seniors are enrolled in such programs in the College. If the occupational programs of the Community College are to be of maximum service to the community, a great deal of effort will be required to convince high school students, their parents, teachers, and counselors of the value of these Community College programs. This can be accomplished by cooperative effort between the Community College and the secondary school.

Curriculum Coordination.

The Community College should cooperate with the secondary school staffs to determine the content and level of pre-technical programs. These pre-technical programs will consist of courses in mathematics, science, language and graphic communications, and basic courses in an occupational area. The pre-technical programs would be offered in grades 11 and 12 with the specific purpose of preparing high school students for success in the Community College occupational programs. Pre-technical programs which are part of a well-defined sequential program terminating in the Community College may be eligible for vocational reimbursement within the State Plan.

A close relationship should be effected between the Community College occupational programs staff and the counselors in the secondary schools so that the latter group can be most effective in counseling students concerning the opportunities and program entry requirements in the Community College.

The staff and more comprehensive facilities of the Community College should be made available to the secondary vocational staffs in the form of assistance in the preparation of instructional materials and the development of secondary vocational curriculum.

The Community College should undertake active programs to publicize the opportunities of its occupational programs directly to secondary school students and their parents.

High school students who can profit from instruction in Community College courses should be admitted for advanced work for College credit upon request of the appropriate secondary authority.

The Community College should initiate such reports to the secondary schools on the performance of their graduates as will be of assistance to the secondary schools in assessing and upgrading their services.

Adult vocational courses and programs of the Community College should be coordinated with the secondary school adult education programs to provide the maximum service to the public and to avoid harmful overlapping of programs.

Recognizing the limited facilities for the preparation of industrial arts and technical teachers in the teacher training institutions, the College should make available its specialized laboratories for County-wide in-service teacher training, preferably in degree-credit courses arranged in conjunction with one of the state universities.

The College should study the advisibility of maintaining and expanding arrangements for the use of secondary vocational-technical laboratories both in the existing high schools and in the proposed area occupational education centers for those portions of the Community College programs for which secondary facilities are adequate and available.

Coordination With Other Post-secondary Institutions.

Macomb County Community College should undertake cooperative study and planning with other Community Colleges in the Detroit metropolitan area to coordinate calendars and schedules and to avoid duplication of technical programs wherein high instructional costs and low potential enrollments would make such duplication unwise.

Macomb County Community College should give every assistance to four year institutions which seek to evaluate the credits which have been earned at the Community College. However, the occupational programs of the Community College should be designed for employability only; to attempt to achieve transfer of credits as a major goal weakens the flexibility, the local orientation, and the job relatedness of the occupational programs.

Student Services.

Counseling of students in occupational programs or seeking admission to these programs should be entrusted to persons possessing occupational experience as well as adequate preparation and proficiency in counseling techniques. Extensive aptitude testing services should be available for the student seeking program guidance.

Cooperative work-study experiences should be an integral segment of the occupational program of all full-time students. The work experience should be directly related to the occupational nature of the student's program and fully supervised to assure maximum educational values and to safeguard the welfare of the student. Cooperative work-study experiences should be formalized by written contracts among the student, the employer-trainer, and the College.

Terminal job-placement in his field of preparation should be sought for every student on an occupational program. This will require the commitment of College personnel on a full-time basis. Part-time job referrals for in-school students should be a College activity in order to help students maintain themselves while enrolled in school. Former students should have access to the College placement services.

Follow-up studies of occupational program graduates should be a continuing activity. The College should attempt to determine job placement, job retention, job satisfaction, advancement, and the relatedness of instruction to job requirements as one basis of curriculum evaluation.

Faculty.

The Community College should recognize that superior instruction is indispensable to adequate occupational preparation. The successful occupational teacher possesses significant depth and breadth in practical occupational experience in addition to teaching proficiency. Salaries will need to be relatively high to attract and hold such teachers against the competition of other educational institutions and private industry.

The practice of employing expert persons from business and industry to teach within their respective skills areas has been an outstanding feature of the Macomb County Community College occupational programs, and should be continued.

Instructional Facilities and Equipment.

Realistic occupational programs require a realistic learning environment. Some occupational programs are specifically designed to meet the needs of students who are object-oriented or spatially-oriented, rather than abstraction-oriented. Learning laboratories must include equipment which is as nearly comparable to that employed in industrial and commercial practice as budget limitations will permit. However, the cost of some highly-sophisticated equipment is prohibitive, and, in such cases, simulative or miniaturized equipment may be advantageously employed. Rapid obsolescence of certain types of instructional equipment may preclude its acquisition by the College. Programs which require student experience in the manipulation of such equipment should be developed so that this phase of the program can be accommodated in a cooperative work-study plan utilizing the equipment available in the industrial or commercial training station.

Financing Occupational Programs.

Macomb County Community College, in cooperation with the other community colleges in Michigan, should endeavor to persuade the Legislature to recognize the unique needs and contributions of occupational programs and the high costs of maintaining quality in these programs by more adequate state-derived financial support.

This increased support should be based upon a consideration of the varying costs of different programs and should provide incentives for the exploration of new curriculum areas.

The Community College should seek the maximum reimbursement of occupational programs under existing state and federal statutes where such reimbursement can be obtained without sacrificing desirable program goals. No fewer than thirteen federal acts provide support for vocational-technical education; of these, the following appear to have provisions applicable to the community college:

PL 347 (Smith-Hughes Act, 1917)
PL 586 (George-Barden Act, 1946)
PL 85-864 (National Defense Education Act, 1958)
PL 87-27 (Area Redevelopment Act, 1961)
PL 87-415 (Manpower Development and Training Act, 1962)
PL 88-204 (Higher Education Facilities Act, 1963)
PL 88-210 (Vocational Education Act, 1963)
PL 88-452 (Economic Opportunity Act, 1964)

Private sources of financial assistance and instructional equipment should be explored fully as a means of enriching the occupational programs.

PARENTS' INTEREST IN THE FUTURE EDUCATION AND THE OCCUPATIONAL CHOICE OF THEIR EIGHTH GRADE CHILDREN

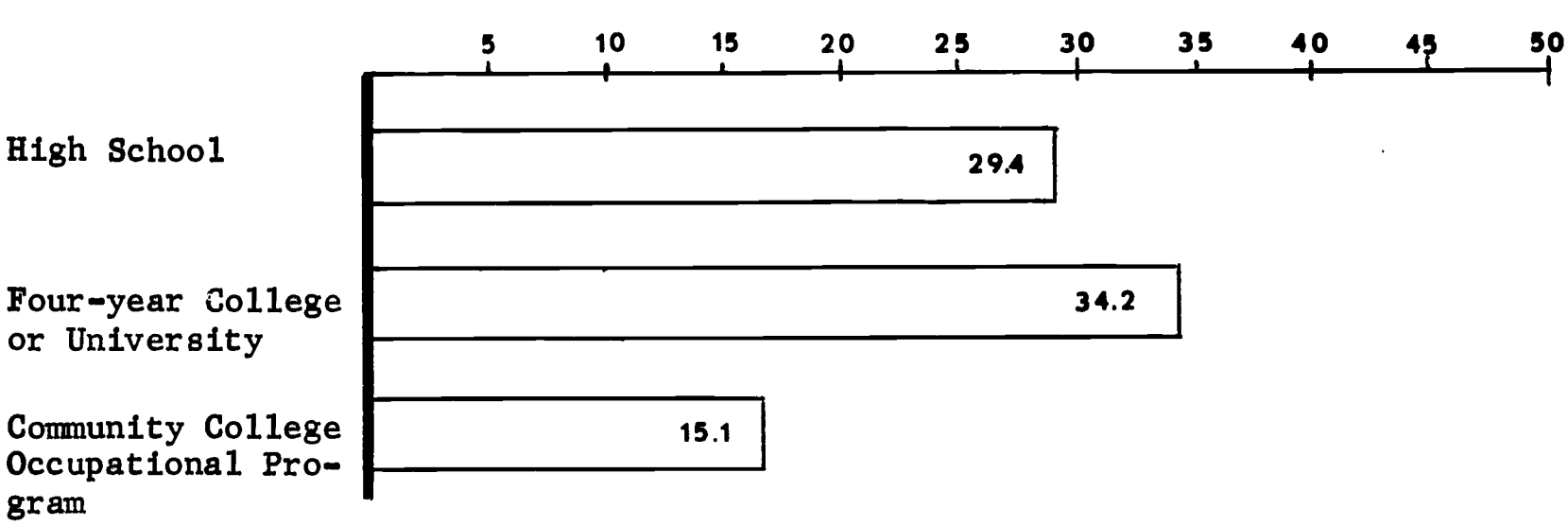
Parents of eighth grade students in both public and private schools in Macomb County were asked to indicate their plans for further education of their youngsters. Over 38 percent of the parents, when asked how certain they were that their youngsters would attend college, indicated that their child would not attend college, or were at least uncertain. The remainder, 61.6 percent, said their eighth graders would "definitely" or "probably" attend college. Only one in three, however, expects his child to graduate from a four-year college or university.

When presented with the information that by the time their children graduate from high school Macomb County Community College will have classes, both occupational and pre-professional, within easy driving distance, parents were considerably more inclined to consider post-high school education than when simply asked to choose between their youngsters attending college and not attending college.

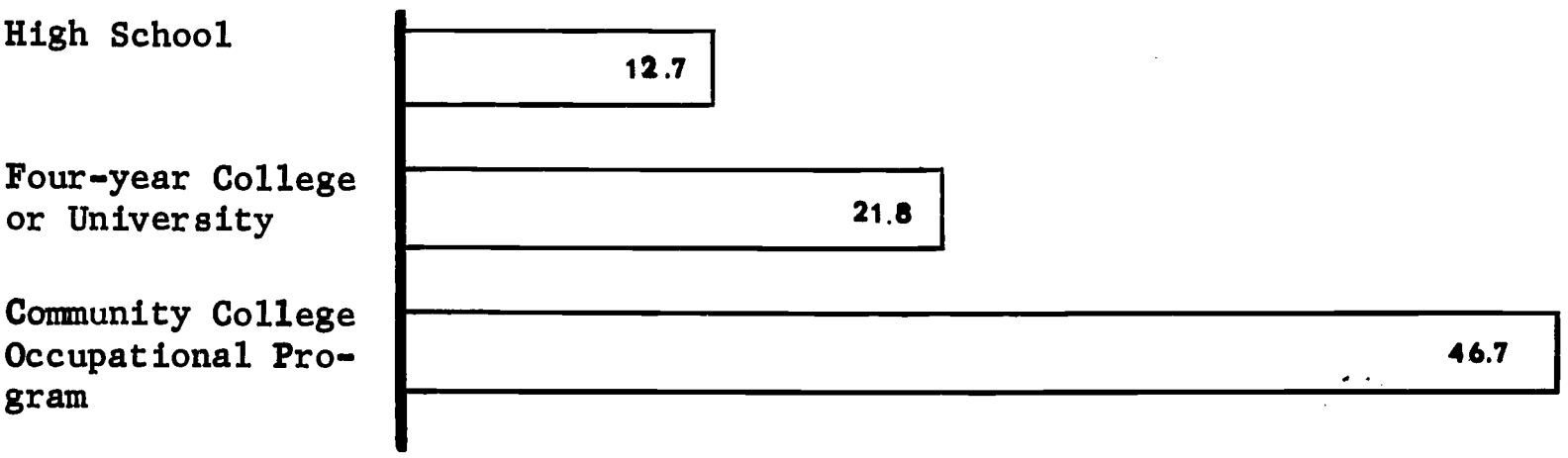
When occupational programs of the college were named, only 12.7 percent of the parents said their children probably would not go beyond high school.

An interesting comparison of responses follows:

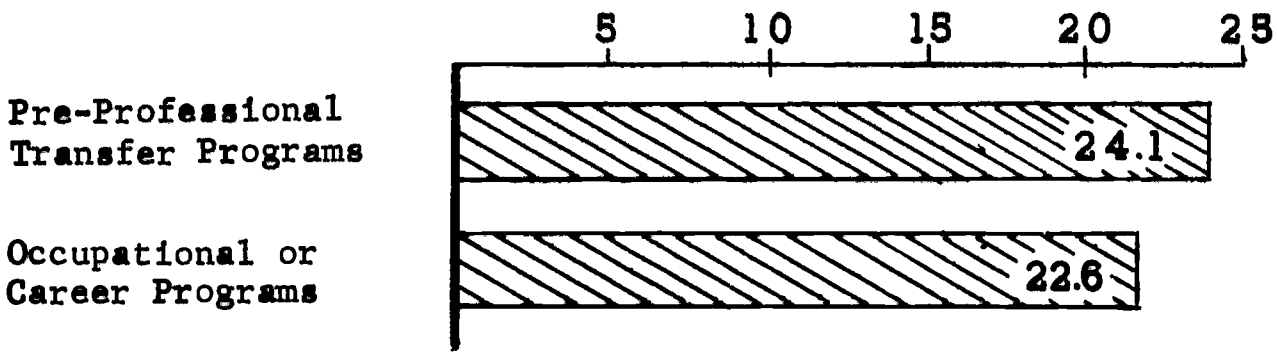
When asked, "In view of your child's scholarship record so far, how much further education do you plan for him (her) to complete," parents responded in the following manner.



But --- when advised that by the time their child graduates from high school, Macomb County Community College will offer both pre-professional and occupational programs within easy driving distance, parent's attitudes concerning post-high school education changed considerably.



When informed about educational opportunities offered in the community college, parents not only identified more strongly with the community college, but indicated as much interest in career programs as they did in pre-professional transfer programs. A breakdown of the 46.7 percent response favoring community college education in the chart above shows a slightly stronger interest in occupational programs.



The variation in responses, depending upon the parent's definition of "college", is evidence that many persons are unaware of the various educational objectives of the community college. Such evidence points to the importance of an intensive public information program concerning the educational opportunities available.

Parent responses also reinforce evidence gathered elsewhere that availability of college is the strongest determinant of college attendance. College attendance among residents of Macomb County has been lower than in other urban areas because it was less accessible.

One of four families who expect their children to attend college has a definite savings program to finance the college education. More than half (56.6 percent) say they will help their children work their way through college.

Only 13.5 percent of the parents who expect their children to go to college said that they regard a low cost community college program as an important factor in the attainment of this goal.

Occupational Interest.

Parents reported that 53.5 percent of their eighth grade children, (60.3 percent of the girls), have started making occupational plans. Two of three parents concur with the choices of their children.

Of the skilled trades, auto mechanic, electrician, and machinist occupations were of greatest interest among the parents of boys, while girls' parents expressed the greatest interest in practical nursing and cosmetology careers.

Plumbing, printing, and welding are trades which find least favor with parents, and scarcely more popular are radio and television repair, air-conditioning and refrigeration, and commercial cooking.

Among the semi-professional or technical occupations, parents of boys expressed preference for drafting, mechanical technology, electronics, and data processing. Among parents of girls, careers most popular are secretarial (44.1 percent) and nursing (30.2 percent). Little enthusiasm is shown for the occupations of surveying, banking and retail sales by parents of either boys or girls.

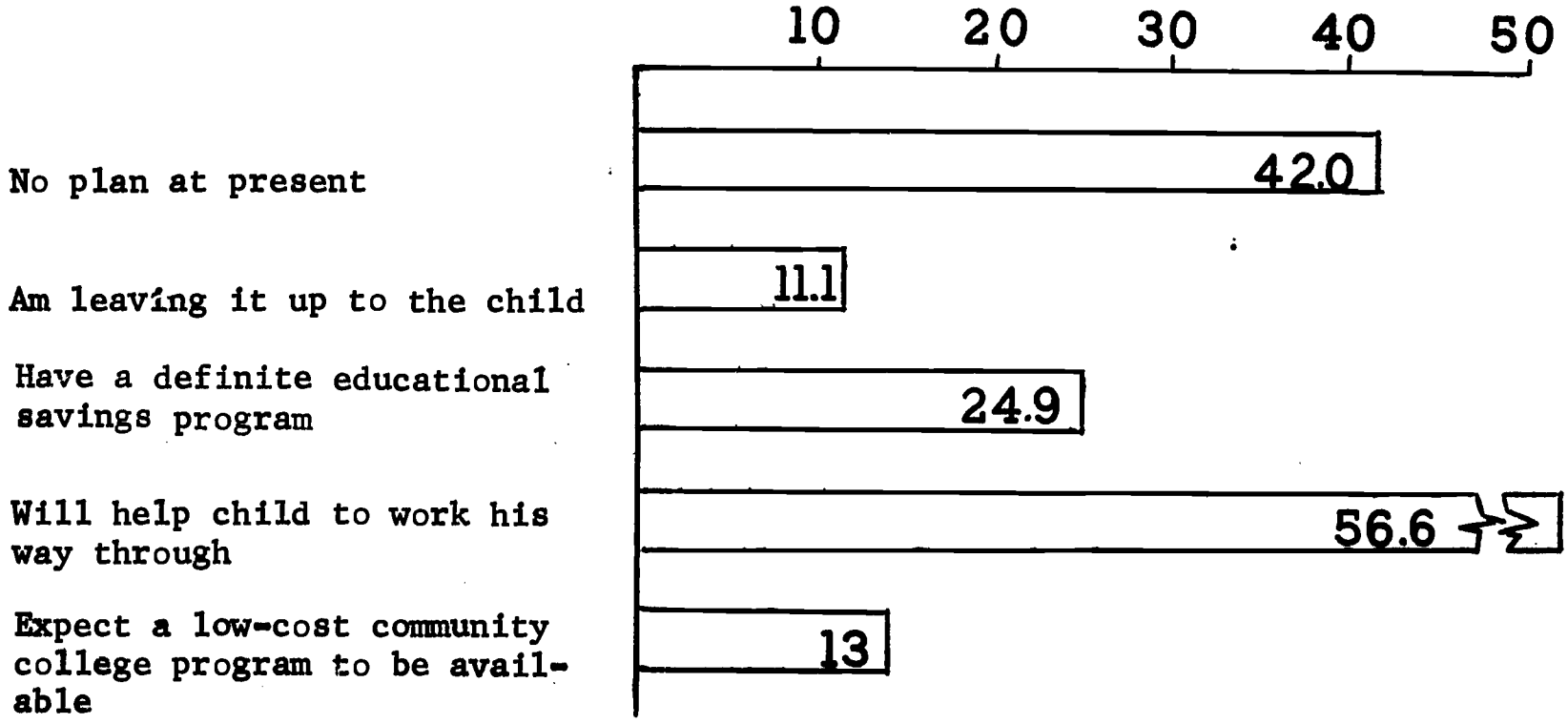
If these preferences reflect parents' opinions concerning job opportunities of the future, they suggest that parents, as well as students, need considerably more information about present and projected labor market needs. Some occupations in which parents indicate the least interest will have increasing need for trained workers.

The second largest industry group in 1962 was retail and wholesale trade, and it continues to be a "growth" industry, but only 2.2 percent of the parents indicated an interest in their youngster preparing for a career in retail sales.

According to the United States Chamber of Commerce, office occupations provide 11 percent of male high school graduates with their first jobs, and it is predicted that between 1960 and 1975 office employment will climb by approximately 45 percent, yet only 2.1 percent of parents indicated an interest in their eighth grade boys preparing for such an occupation.

Financing College Education.

Few parents are planning now to meet the costs of their children's college education. Three of every four responding parents are not considering this problem now. This may reflect optimism about future economic conditions, or unawareness of the costs of maintaining a student in college which may prevent some youngsters from attending college.



PARENTS' RESPONSES TO QUESTIONNAIRE TO DETERMINE THEIR PLANS

FOR FURTHER EDUCATION OF PRESENT EIGHTH GRADE STUDENTS IN MACOMB COUNTY SCHOOLS

	TOTAL RESPONSES	ALL		PUBLIC SCHOOLS		PRIVATE SCHOOLS	
		BOYS	GIRLS	BOYS	GIRLS	BOYS	GIRLS
	6306	3025	3281	2240	2344	785	937
HOW MUCH FORMAL (in school) EDUCATION DID YOU HAVE?							
FATHER							
Eighth grade education or less.	967	441	526	332	388	109	138
Some high school	1705	830	875	633	637	197	238
Graduated from high school.	2029	984	1045	688	726	296	319
Some college.	922	454	468	341	325	113	143
Graduated from college.	548	249	299	194	214	55	85
MOTHER							
Eighth grade education or less.	647	308	339	228	233	80	106
Some high school	1715	812	903	662	691	150	212
Graduated from high school.	3015	1434	1581	993	1072	441	509
Some college	588	296	292	225	221	71	71
Graduated from college	267	133	134	101	100	32	34
IN VIEW OF YOUR CHILD'S SCHOLARSHIP RECORD SO FAR, HOW MUCH FURTHER EDUCATION DO YOU PLAN FOR HIM (HER) TO COMPLETE?							
High school, with college preparatory major.	881	383	498	250	317	133	181
High school, with a vocational emphasis.	972	407	565	306	415	101	150
Community college, technical, or occupational program.	955	496	459	385	344	111	115
Four-year college or university.	2158	1166	992	861	703	305	289
Undecided	1218	521	697	402	506	119	191
ARE YOU INTERESTED IN YOUR CHILD'S PREPARING FOR ENTRY INTO A SKILLED TRADE?							
Yes	3169	1575	1594	1185	1157	390	437
No	2485	1120	1365	801	959	319	406
IF YOU CHECKED YES, INDICATE THOSE FIELDS OF WORK WHICH ARE IN ACCORD WITH YOUR PRESENT THINKING.							
Air conditioning and refrigeration.	80	75	5	58	4	17	1
Auto mechanic	348	338	10	263	7	75	3
Cook, commercial	92	24	68	20	50	4	18
Cosmetology	250	12	238	11	178	1	60
Dressmaker, tailor	102	5	97	4	74	1	23
Electrician	274	262	12	203	7	59	5
Plumber	45	41	4	30	3	11	1
Practical nurse	401	17	384	15	270	2	114
Printer	31	29	2	19	2	10	0
Radio & TV repairman	87	83	4	57	3	26	1
Welder	51	48	3	37	3	11	0
Other	975	364	611	273	441	91	170
Undecided	936	553	383	401	277	152	106
Machinist	194	191	3	146	3	45	0
HOW CERTAIN ARE YOU THAT YOUR EIGHTH GRADE CHILD WILL ATTEND COLLEGE?							
Definitely plan on his (her) attending.	2274	1265	1009	919	722	346	287
Probably attend	1608	733	875	527	622	206	253
Uncertain	1541	679	862	512	589	167	273
Probably not attend	314	117	197	86	131	31	66
ARE YOU INTERESTED IN YOUR CHILD'S PREPARING FOR ENTRY INTO SEMI-PROFESSIONAL, TECHNICAL, OR BUSINESS OCCUPATIONS?							
Yes	3245	1469	1776	1088	1254	381	522
No	2288	1115	1173	819	852	296	321

PARENTS' RESPONSES TO QUESTIONNAIRE TO DETERMINE THEIR PLANS

FOR FURTHER EDUCATION OF PRESENT EIGHTH GRADE STUDENTS IN MACOMB COUNTY SCHOOLS

	TOTAL RESPONSES	ALL BOYS	ALL GIRLS	PUBLIC SCHOOLS BOYS	PUBLIC SCHOOLS GIRLS	PRIVATE SCHOOLS BOYS	PRIVATE SCHOOLS GIRLS
	6306	3025	3281	2240	2344	785	937
IF YOU CHECKED YES, INDICATE THOSE WHICH ARE IN ACCORD WITH YOUR PRESENT THINKING.							
Accounting	164	84	80	65	59	19	21
Architectural drafting	232	217	15	164	9	53	6
Banking	86	33	53	24	34	9	19
Chemical technology	103	67	36	50	27	17	9
Dental assisting	160	22	138	17	98	5	40
Drafting	381	364	17	283	12	81	5
Electronic data processing	149	124	25	100	16	24	9
Electronics technology	220	207	13	157	7	50	6
Laboratory technology	184	74	110	47	77	27	33
Medical technology	135	42	93	24	62	18	31
Mechanical technology	250	226	14	169	11	57	3
Nursing	559	22	537	16	366	6	171
Radio-television technology	69	64	5	47	5	17	0
Refrigeration & air conditioning technology	34	33	1	22	1	11	0
Retail selling	72	36	36	24	28	12	8
Secretarial	815	31	784	24	565	7	219
Surveying	23	22	1	12	1	10	0
Undecided	624	366	258	259	175	107	83
Other	354	134	220	97	142	37	78
ARE YOU INTERESTED IN YOUR CHILD'S PREPARING FOR A PROFESSIONAL CAREER?							
Yes	3292	1663	1629	1206	1157	457	472
No	3014	1362	1652	1034	1187	328	465
IF YOU ARE INTERESTED IN YOUR CHILD'S ATTENDING COLLEGE, CHECK THE ITEMS WHICH DESCRIBE YOUR PLAN TO FINANCE HIS (HER) COLLEGE EDUCATION.							
No plan at present.	1384	613	771	438	541	175	230
Am leaving it up to the child.	366	174	192	129	142	45	50
Have a definite educational savings program.	820	426	394	332	311	94	83
Will help child to work his way through.	1863	997	866	717	580	280	286
Expect child to win scholarship.	119	63	56	53	44	10	12
Expect child to get training at government expense (Armed Service Schools).	36	28	8	22	7	6	1
Expect a low-cost community college program to be available.	443	196	247	145	181	51	66
Other	118	63	55	50	44	13	11
BY THE TIME YOUR PRESENT EIGHTH GRADE CHILD GRADUATES FROM HIGH SCHOOL, MACOMB COUNTY COMMUNITY COLLEGE WILL HAVE CLASSES WITHIN DRIVING DISTANCE OF THE RESIDENTS OF THE COUNTY. A WIDE VARIETY OF OCCUPATIONAL PROGRAMS AND THE FIRST TWO YEARS OF FOUR-YEAR COLLEGE PROGRAMS WILL BE OFFERED. PLEASE ANSWER THE FOLLOWING QUESTIONS:							
I definitely would plan to send my child to a community college for one of the occupational programs checked above in items 7 & 10.	1517	723	794	537	594	186	200
I definitely would plan to send my child to the community college for a two-year college program so he (she) could then transfer to a university or four-year college.	1419	720	706	540	507	180	199
I plan to send my children directly to a university or four-year college.	1373	710	663	493	446	217	217
My children will probably not go beyond high school.	804	306	498	251	371	55	127
DOES YOUR EIGHTH GRADE CHILD HAVE FAIRLY DEFINITE PLANS FOR HIS FUTURE OCCUPATION?							
Yes	3374	1396	1978	1033	1413	363	565
No	2683	1483	1200	1100	861	363	339
DO YOU AGREE THAT THIS IS A WISE CHOICE FROM WHAT YOU KNOW OF YOUR CHILD'S ABILITIES AND SCHOOL PERFORMANCE SO FAR?							
Yes	4271	1918	2353	1424	1675	494	678
No	475	245	230	198	191	47	39

4

PARENTS' RESPONSES TO QUESTIONNAIRE TO DETERMINE EDUCATIONAL PLANS

FOR FURTHER EDUCATION OF PRESENT EIGHTH GRADE STUDENTS IN MACON COUNTY SCHOOLS
(Percent of Parents Responding by Groups)

	TOTAL RESPONSES	ALL		PUBLIC SCHOOLS		PRIVATE SCHOOLS	
		BOYS	GIRLS	BOYS	GIRLS	BOYS	GIRLS
NUMBER OF PARENTS SURVEYED	6306	3025	3281	2210	2344	785	937
	100%	100%	100%	100%	100%	100%	100%
HOW MUCH FORMAL (in school) EDUCATION DID YOU HAVE?							
FATHER							
Eighth grade education or less.	15.3	14.6	16.0	14.8	16.6	13.9	14.7
Some high school.	27.0	27.4	26.7	28.3	27.2	25.1	25.4
Graduated from high school.	32.2	32.5	31.9	30.7	31.0	37.7	34.0
Some college.	14.6	15.0	14.3	15.2	13.9	11.4	15.3
Graduated from college.	8.7	8.2	9.1	8.7	9.1	7.0	9.1
No response	2.2	2.3	2.0	2.3	2.2	1.9	1.5
MOTHER							
Eighth grade education or less.	10.3	10.2	10.3	10.2	9.9	10.2	11.3
Some high school.	27.2	26.8	27.5	29.6	29.5	19.1	22.6
Graduated from high school.	47.8	47.4	48.2	44.3	45.7	56.2	54.3
Some college.	9.3	9.8	8.9	10.0	9.4	9.0	7.6
Graduated from college.	4.2	4.4	4.1	4.5	4.3	4.1	3.6
No response.	1.2	1.4	1.0	1.4	1.2	1.4	.6
IN VIEW OF YOUR CHILD'S SCHOLARSHIP RECORD SO FAR, HOW MUCH FURTHER EDUCATION DO YOU PLAN FOR HIM (HER) TO COMPLETE?							
High school, with college preparatory major.	14.0	12.7	15.2	11.2	13.5	16.9	19.3
High school, with a vocational emphasis.	15.4	13.5	17.2	13.7	17.7	12.8	16.0
Community college, technical, or occupational program.	15.1	16.4	14.0	17.2	14.7	14.1	12.3
Four-year college or university.	34.2	38.5	30.2	38.4	30.0	38.9	30.8
Undecided	19.3	17.2	21.2	17.9	21.6	15.2	20.4
No response	2.0	1.7	2.2	1.6	2.5	2.1	1.2
ARE YOU INTERESTED IN YOUR CHILD'S PREPARING FOR ENTRY INTO A SKILLED TRADE?							
Yes	50.3	52.1	48.6	52.9	49.4	49.7	46.6
No	39.4	37.0	41.6	35.8	40.9	40.6	43.3
No response	10.3	10.9	9.8	11.3	9.7	9.7	10.1
IF YOU CHECKED YES, INDICATE THOSE FIELDS OF WORK WHICH ARE IN ACCORD WITH YOUR PRESENT THINKING.	Percent of YES responses to previous question						
Air conditioning and refrigeration.	2.5	4.8	.3	5.0	.3	4.4	.2
Auto mechanic	11.0	21.5	.6	22.2	.6	19.2	.7
Cook, commercial	2.9	1.5	4.3	1.7	4.3	1.0	4.1
Cosmetology	2.9	.8	14.9	.9	15.4	.3	13.7
Dressmaker, tailor	3.2	.3	6.1	.3	6.4	.3	5.3
Electrician	8.6	16.6	.8	17.1	.6	15.1	1.1
Plumber	1.4	2.6	.3	2.5	.3	2.8	.2
Practical nurse	12.7	1.1	24.1	1.3	23.3	.5	26.1
Printer	1.0	1.8	.1	1.6	.2	2.6	—
Radio & TV repairman	2.7	5.3	.3	4.8	.3	6.7	.2
Welder	1.6	3.0	.2	3.1	.3	2.8	—
Other	30.8	23.1	38.3	23.0	38.1	23.3	38.9
Undecided	29.5	35.1	24.0	33.8	23.9	39.0	24.3
Machinist	6.1	12.1	.2	12.3	.3	11.5	—
HOW CERTAIN ARE YOU THAT YOUR EIGHTH GRADE CHILD WILL ATTEND COLLEGE?							
Definitely plan on his (her) attending.	36.1	41.8	30.8	41.0	30.8	44.1	30.6
Probably attend	25.5	24.2	26.7	23.5	26.5	26.2	27.0
Uncertain	24.4	22.4	26.3	22.9	25.1	21.3	29.1
Probably not attend	5.0	3.9	6.0	3.8	5.8	3.9	7.0
No response	9.0	7.7	10.2	8.8	12.0	4.5	6.3
ARE YOU INTERESTED IN YOUR CHILD'S PREPARING FOR ENTRY INTO SEMI-PROFESSIONAL, TECHNICAL, OR BUSINESS OCCUPATIONS?							
Yes	51.5	48.6	54.1	48.6	53.5	48.5	55.7
No	36.3	36.9	35.8	36.6	36.3	37.7	34.3
No response	12.2	14.5	10.1	14.8	10.2	13.8	10.0

PARENTS' RESPONSES TO QUESTIONNAIRE TO DETERMINE THEIR PLANS

FOR FURTHER EDUCATION OF PRESENT EIGHTH GRADE STUDENTS IN MACOMB COUNTY SCHOOLS
(Percent of Parents Responding by Groups)

	TOTAL RESPONSES	ALL		PUBLIC SCHOOLS		PRIVATE SCHOOLS	
		BOYS	GIRLS	BOYS	GIRLS	BOYS	GIRLS
NUMBER OF PARENTS SURVEYED	6306	3025	3281	2260	2344	765	937
	100%	100%	100%	100%	100%	100%	100%
IF YOU CHECKED YES, INDICATE THOSE WHICH ARE IN ACCORD WITH YOUR PRESENT THINKING.	Percent of YES responses to previous question						
Accounting	5.1	5.7	4.5	6.0	4.7	5.0	4.0
Architectural drafting	7.1	14.8	.8	15.1	.7	13.9	1.1
Banking	2.7	2.2	3.0	2.2	2.7	2.4	3.6
Chemical technology	3.2	4.6	2.0	4.6	2.2	4.5	1.7
Dental assisting	4.9	1.5	7.8	1.6	7.8	1.3	7.7
Drafting	11.7	24.8	1.0	26.0	1.0	21.3	1.0
Electronic data processing	4.6	8.4	1.4	9.2	1.3	6.3	1.7
Electronics technology	6.8	14.1	.7	14.4	.6	13.1	1.1
Laboratory technology	5.7	5.0	6.2	4.3	6.1	7.1	6.3
Medical technology	4.2	2.9	5.2	2.2	4.9	4.7	5.9
Mechanical technology	7.7	15.4	.8	15.5	.9	15.0	.6
Nursing	17.2	1.5	30.2	1.5	29.2	1.6	32.8
Radio-television technology	2.1	4.4	.3	4.3	.4	4.5	--
Refrigeration & air conditioning technology	1.0	2.2	.1	2.0	.1	2.9	--
Retail selling	2.2	2.4	2.0	2.2	2.2	3.1	1.5
Secretarial	25.1	2.1	44.1	2.2	45.1	1.8	42.0
Surveying	.7	1.5	.1	1.1	.1	2.6	--
Undecided	19.2	24.9	14.5	23.8	14.0	26.1	15.9
Other	10.9	9.1	12.4	8.9	11.3	9.7	14.9
ARE YOU INTERESTED IN YOUR CHILD'S PREPARING FOR A PROFESSIONAL CAREER?							
Yes	52.2	55.0	49.6	53.8	49.4	58.2	50.4
No	47.8	45.0	50.4	46.2	50.6	41.8	49.6
IF YOU ARE INTERESTED IN YOUR CHILD'S ATTENDING COLLEGE, CHECK THE ITEMS WHICH DESCRIBE YOUR PLAN TO FINANCE HIS (HER) COLLEGE EDUCATION.	Percent of YES responses to previous question						
No plan at present	42.0	36.9	47.3	36.3	46.8	38.2	48.7
Am leaving it up to the child	11.1	10.5	11.8	10.7	12.3	9.8	10.6
Have a definite educational savings program	24.9	25.6	24.2	27.5	26.9	20.6	17.6
Will help child to work his way through	56.6	60.0	53.2	59.5	50.1	61.3	60.6
Expect child to win scholarship	3.6	3.8	3.4	4.4	3.8	2.2	2.5
Expect child to get training at government expense (Armed Service Schools).	1.1	1.7	.5	1.8	.6	1.3	.2
Expect a low-cost community college program to be available	13.5	11.8	15.2	12.0	15.6	11.2	14.0
Other	3.6	3.8	3.4	4.1	3.8	2.8	2.3
BY THE TIME YOUR PRESENT EIGHTH GRADE CHILD GRADUATES FROM HIGH SCHOOL, MACOMB COUNTY COMMUNITY COLLEGE WILL HAVE CLASSES WITHIN DRIVING DISTANCE OF THE RESIDENTS OF THE COUNTY. A WIDE VARIETY OF OCCUPATIONAL PROGRAMS AND THE FIRST TWO YEARS OF FOUR-YEAR COLLEGE PROGRAMS WILL BE OFFERED. PLEASE ANSWER THE FOLLOWING QUESTIONS:							
I definitely would plan to send my child to a community college for one of the occupational programs checked above.	24.1	23.9	24.2	24.0	25.3	23.7	21.3
I definitely would plan to send my child to the community college for a two-year college program so he (she) could then transfer to a university or four-year college.	22.6	23.8	21.5	24.1	21.6	22.9	21.2
I plan to send my children directly to a university or four-year college.	21.8	23.5	20.2	22.0	19.0	27.6	23.2
My children will probably not go beyond high school.	12.7	10.1	15.2	11.2	15.8	7.0	13.6
No response	18.8	18.7	18.9	18.7	18.3	18.8	20.7
DOES YOUR EIGHTH GRADE CHILD HAVE FAIRLY DEFINITE PLANS FOR HIS FUTURE OCCUPATION?							
Yes	53.5	46.1	60.3	46.1	60.3	46.2	60.3
No	42.5	49.0	36.6	49.1	36.7	48.8	36.2
No Response	4.0	4.9	3.1	4.8	3.0	5.0	3.5
DO YOU AGREE THAT THIS IS A WISE CHOICE FROM WHAT YOU KNOW OF YOUR CHILD'S ABILITIES AND SCHOOL PERFORMANCE SO FAR?							
Yes	67.7	63.4	71.7	63.6	71.5	62.9	72.4
No	7.5	8.1	7.0	8.8	8.1	6.0	4.2
No response	24.8	28.5	21.3	27.6	20.4	31.1	23.4

S U M M A R Y

I. Macomb County is unique in its agricultural specialization, rapid urbanization, manufacturing productivity, and leadership in automotive styling and engineering. Until recently, County residents turned to the city of Detroit for much of their needs in banking, retail sales, hospital care, professional services, college education, press and radio, entertainment, and recreation. Today, a fast-diversifying local economy makes these services available within the County.

These exceptional and rapid developments are overshadowed by another characteristic which has drawn nation-wide notice to Macomb County - the phenomenal growth in population which has occurred during the past thirty years and which will continue into the foreseeable future. An exceptionally young and fertile population will contribute to the continuation of this growth, but the present resident population and continued in-migration by themselves will double the 15 to 19 age group in the County by 1975. High school capacity will need to be more than doubled, for a greater proportion of the population will continue in school, at least until high school completion. County population growth will overtax the resources of those school districts which will experience the bulk of the future increases. The predictable result will be curtailed and starved school programs. Yet this need not and should not occur, for the valuation of Macomb County's property makes it one of the wealthiest counties in the nation.

The demands upon the Community College are not so readily predictable. These will be measured by the resourcefulness of the college staff to develop realistic occupational programs and the willingness of the public to provide the needed financial support. The latter is less a problem than the former, for the Community College is an area school with the needs and resources of the entire County available for Community College development.

II. The most important local influence upon the Detroit area economy may be the determination and ability of public education to provide training in the advanced skills which are required in the increasingly complex local economy. The mobility of ideas and people creates regional competition for the emerging industrial, commercial, and government investments and installations. An educational system which can supply the area needs for semi-professional, technical, and mid-management skills will also insure job opportunities at all skill levels.

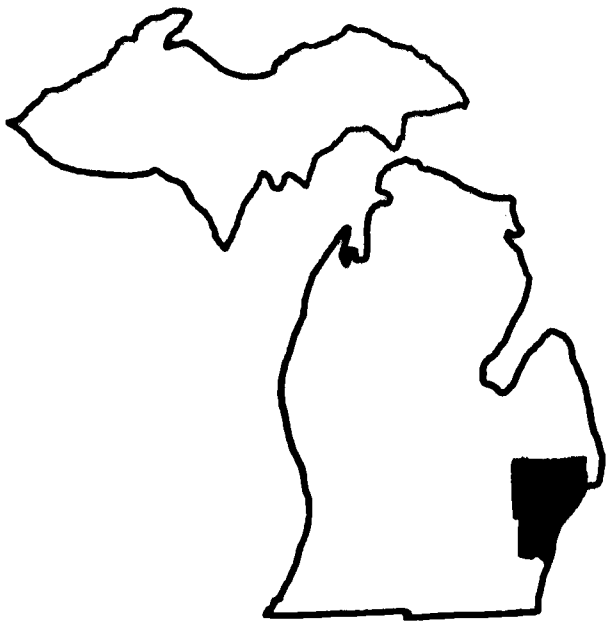
III. The problem of vocational education in Macomb County high schools is more critical. One of every five persons who enters high school terminates his education before graduation. One of every four in-school persons is not identified with a career goal for which a school program is available to him. While one of every three high school students is following a plan designed to prepare him for entry employment, only one-third of these vocational students are enrolled in a program which meets the state minimum for reimbursement. Evidence gathered by this Survey indicates that the local school district cannot, on present resources, provide true vocational education which will meet the skills needs of the emerging technology.

Of the possible alternatives, a continuation of the presently inadequate services is unthinkable, for this policy ignores the accepted principle that the public school has an obligation to assist each person to attain his socially acceptable career goals. A sharing of resources, leadership, and staffs to serve vocational education needs on an area basis is the legitimate and logical alternative, and one which has found wide acceptance in other states. Offering at least the more complex and expensive vocational programs on an area basis will insure the quality of such programs and give equal educational opportunities to all residents of the County.

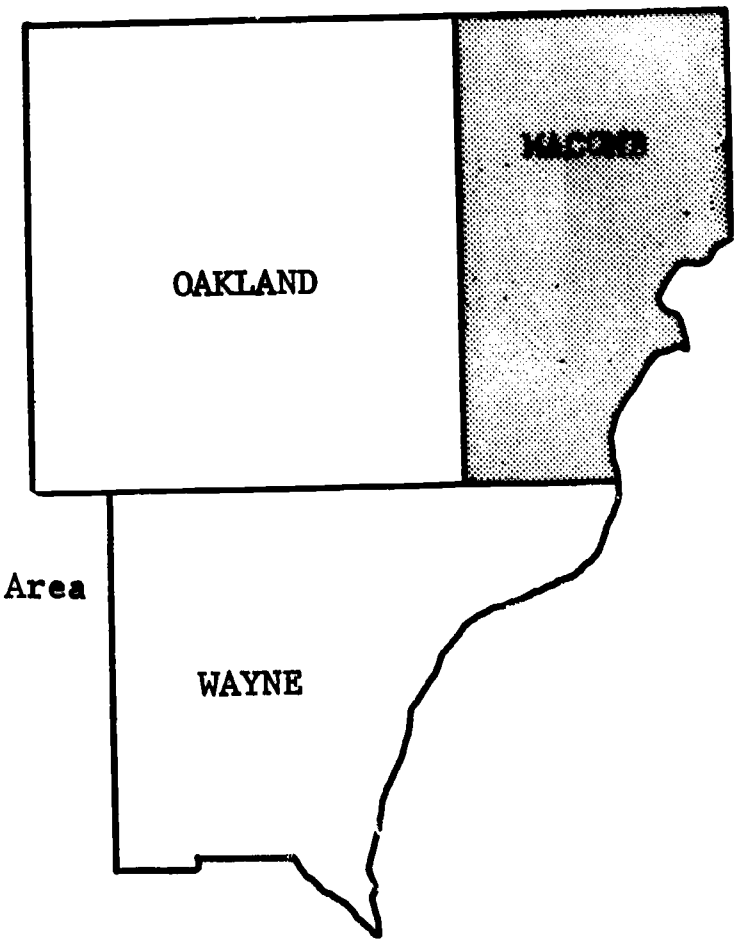
High school students capable of success in the advanced occupational programs in the Community College will need to be identified and counselled into high school programs which are preparatory to the Community College programs.

IV. Local education must accept quality control as an integral function. Students must be provided with objective information about their own aptitudes and how these can be matched with opportunities within the occupational spectrum. Follow-up studies of graduates and early school leavers, the assessments of employers, and the active participation of occupationally-qualified persons must be incorporated into program development and evaluation.

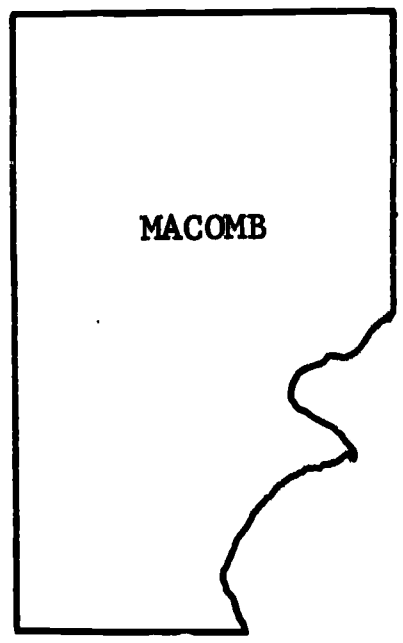
V. The occupational education needs of the entire County must be the concern of all local education institutions. Early school leavers must be identified and brought back into the educational stream at levels appropriate to their abilities. Opportunities must be created for the mentally and physically handicapped, and displaced workers to acquire occupational competence. Schools must cooperate with other government agencies to serve the occupational training needs of all persons for whom the schools' services are appropriate.



The State provides leadership and financial assistance.



The Detroit Metropolitan Area offers job opportunities.



Macomb County has the responsibility for providing educational opportunities.