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Accessibility of community colleges in Michigan: A comparison of state population distribution with state funding distribution

Marinoni, Ann, Ph.D.

Michigan State University, 1992

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ACCESSIBILITY OF COMMUNITY COLLEGES IN MICHIGAN: A COMPARISON OF STATE POPULATION DISTRIBUTION WITH STATE FUNDING DISTRIBUTION

By

Ann Marinoni

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Teacher Education

1992

ABSTRACT

ACCESSIBILITY OF COMMUNITY COLLEGES IN MICHIGAN:
A COMPARISON OF STATE POPULATION DISTRIBUTION
WITH STATE FUNDING DISTRIBUTION

By

Ann Marinoni

The problem of this study was the need to compare population distribution and State funding of community colleges in Michigan using distance as a measure of access. This was done to determine accessibility of community colleges in Michigan.

Each of the 29 community colleges and 1,627 localities was identified as x,y coordinates. A computer program using the Pythagorean Theorem measured all of the possible combinations. The results listed localities in three ranges: community college/s within 25 miles, within 26-50 miles, and beyond 50 miles.

Per-capita county values of State funding provided to community colleges were calculated to compare counties. Each county's per-capita value was the quotient of the amount of 1990 State funds provided to community colleges within accessible distance divided by the county population.

Sources of operating revenues were studied to determine the changes in community college funding over the last 20 years (newest community college established in

1969). Population and funding shifts that might have an effect on accessibility were also studied.

The major findings and conclusions of this study were as follows:

1. State funding among the 29 community colleges in 1990 ranged from 21% to 64% of operating revenues. Local tax support among the colleges ranged from 4% to 48%. Tuition revenues ranged from 15% to 38%. The variation among the schools has increased from 1970 to 1990. In the absence of local taxation, increased State funding and tuition are the compensating revenue sources.

2. In Michigan, 92.7% of the population live within 25 miles of a community college and another 4.9% live within 50 miles of a community college; however, only 74% of the localities in Michigan are within 25 miles of a community college, with 92% of the localities within 50 miles.

3. Per-capita values, based on the distribution of state funding, vary among the counties from 0 to $1,071.62. Some residents have no community college within 50 miles, while others have as many as 11. Local tax revenue sources to support community colleges do not coincide with per-capita values.

4. State funding and population shifts during the last 20 years may have affected accessibility.

To my mother and father, Iva (Raymond) Rynberg and Lawrence Rynberg, for their strong desire to learn and to pursue goals against unusual barriers; to my daughter, Colleen Cleary, may this fervor for learning and perseverence be a driving force and value; and to my supportive and caring husband, Mario.

ACKNOWLEDGMENTS

The completion of this dissertation marks the final requirement for the Doctor of Philosophy degree. It has taken many years of study to reach this point, but it probably will not be my last research study. It will be remembered, I am sure, as the most difficult to complete. Living 300 miles from the campus of Michigan State University presented challenges. Several faculty and staff members at Michigan State University have encouraged and supported me in my doctoral program.

The leadership of Dr. Charles Blackman in the off-campus doctoral studies program in the Upper Peninsula made it possible for me to take weekend classes with my colleagues--Dr. Bruce Harger, Dr. Dixie Light, and Prof. Liz Foley. They made the long hours on the road both enjoyable and enriching, thank you. I also appreciate the support and direction received from Dr. Blackman as a member of my guidance committee and class instructor.

Dr. Robert Poland, my committee Chairperson, was preceded by his national reputation as a leader in business education. It was an honor to be able to work with him. I am grateful for his agreeing to work with me both on campus and across the miles in completing this research study.

Thank you to Dr. Paul Slocum and to Dr. Richard Gardner for serving on my committee, suggesting needed revisions, and providing directions.

Several students assisted with data input, requesting information from the community colleges, and the graphic production of tables and figures: Sharon Anderson, Brian Shuell, David Rose, Mary Cannello, Colleen Cleary, and Linda LaLonde. I would like to thank my colleague, Dr. Mary Adams, and Ms. Patti Goforth for their assistance with the final copy. The support I received from the administrators at Lake Superior State University helped me reach this goal.

Numerous contacts with staff members in the Michigan Department of Education, and the Department of Management and Budget assisted in providing the requested documents and background information. I especially want to acknowledge the assistance of James Folkening and Karen Pawlovich, who were very helpful and took the time to understand my research problem and purpose.

This research would have been completed with less precision if it were not for the support and assistance of Jeff Chaney who wrote the computer program. He is a master communicator; it was an unexpected pleasure to be able to work with him in completing the data input and output.

Both my husband and daughter have strongly supported me in my studies and this research. I hope I can "turn the tables" to their favor and be ever mindful of all they have invested of themselves for me to achieve this academic goal.

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CHAPTER 1

Introduction to the Study

Introduction

Funding and accessibility are two major issues facing community colleges. When community colleges were locally funded, accessibility was a motivator and a local issue. As community colleges were established, beginning in the United States in the early 1900s, it was a local concern as to whether or not a school system or community wanted to support a community college (Cohen and Brawer, 1989).

State legislation enabled the establishment of a community college, but the decision to fund and the request to establish a community college were rooted by local desire to provide post-secondary education. Most early community colleges in the United States were extensions of K-12 school systems. In 1914 and in 1930 the percentages of revenues to support community colleges received from local taxation were 94 and 85 respectively (Cohen and Brawer, 1989). Martorana (1978, p. 5) concluded, "As recently as twenty years ago [late 50s] the localities served were the predominant source of operating revenue." Thus, post-secondary accessibility was a local concern--if a school system or community wanted to pay for a two-year college (usually by referendum), the establishment of a college was pursued.

In 1978 Martorana stated the following in his article, "Shifting Patterns of Financial Support":

> Of particular interest is the direction in which community colleges are moving in relation to each of the main sources of support for their operations. A review of available studies reveals that the percentage of [state] support had moved from an average of slightly over a third, across the nation in 1955-56 to 54 percent in 1967-68; during that time the percentage borne by the student increased at a much lower rate, from 20 to 22 percent. The percentage carried by local tax sources decreased considerably, from 37 to 20 percent on the average nationwide. On the bases of these data, the conclusion was drawn that state governments are moving toward the position of providing more of the funds for community colleges than local governments, while the students' proportionate share is changing only slightly. (p. 4)

In 1986 the national average of state aid was 47 percent of public, two-year college revenues (Cowen and Brawer, 1989). Cowen and Brawer quoted a growth in state aid from 34 percent in 1969 to 45 percent in 1975, lower figures than reported by Martorana, but still a significant percentage increase in state aid.

State networks of community colleges and the increase in state funding have intensified the accessibility issue at the state level and have made intrastate equity an issue (Folkening, 1990). The growth of state authority over funding seems to target resolution of accessibility, funding, and access equity as a state rather than a local issue.

Providing accessible, post-secondary education at a low cost and fulfilling communities' educational needs are the

major functions of community colleges. Monroe (1972) explained the following:

> In answer to the question: what is a community college? It may be impossible to give a definition which covers all community colleges. Since community colleges can vary greatly from place to place in student-body size, objectives, and faculties, it is difficult to generalize. However, it may be said that a community college is the fulfillment of the American promise to its citizens for universal education: it offers two years of education at a comparative low cost to the student, but not necessarily low cost to the public. (p. 25)

The current issues of geographic access and minimizing cost are interdependent--if a campus is closer, education costs less in dollar and time consumption for the student. The effects of transferring public support directly to students in the form of financial aid rather than channeling public funds to institutions is another factor. This further complicates the issues of cost, access, and equity.

Funding sources and geographic accessibility are part of the complex problems of efficiently meeting the educational needs of Michigan's citizens. Several proposals have been made in the last 20 years to improve accessibility to community colleges in Michigan. None of these proposals has been adopted (Folkening, 1990). State funding provisions have changed, but the current formula is not fully funded, altering the intended amount of state support (Bernthal, 1991). Each year categorical grants are distributed to community colleges by the State of Michigan, exclusive of the formula (Pawlovich, 1991).

The complexity of the accessibility and funding issues appears to have been a major contributor to the lack of effective action (Folkening, 1990). Community college operations are funded by local taxes (millage), state appropriations, tuition, and other sources. Other sources constitute only five percent, mostly bequests/gifts, foundation support, and federal funding for vocational-education equipment (Michigan State Board of Education, 1990). In Michigan, state support increased from none in 1914 (first established community college) to 48 percent in 1980. During the 80s state support declined slightly and averaged 40 percent for the state as a whole. Within the State, however, the 29 community colleges received varying state appropriations as a percentage of the general funds--in 1990 this ranged from a low of 21 percent to a high of 64 percent (Michigan State Board of Education, Activity Classification Structure, 1990, p. 43).

Statement of the Problem

The focal problem of this study was the need to compare state population distribution and state funding distribution for community colleges. This has not been a research topic, and resolution should provide needed information. Geographic access to low-cost education cannot be realized without knowing which populations have access and the degree to which some are lacking access.

In addition, as state funding for community colleges has increased, the lack of information concerning state

funding distribution compared to population distribution has made it difficult to address the issue of equitable distribution. Michigan's 29 public community colleges were established between 1914 and 1969. State funding data for these colleges are reported through the Community College Services Unit of the Michigan Department of Education. State community college funding data are reported by college. This traditional reporting method focuses on what is provided--the supply side of the service. Potential demand focuses on the need or desire for services. Before the accessibility issue and the possible need or desire for community college services in a state can be effectively addressed, it is necessary to know which people have access and which people do not have access, and to what degree.

One way of providing this information is to focus on the location of the people with respect to community college locations and the amounts of state funds provided to the colleges.

A comparison of population distribution data with state funding distribution data provides a picture of per-capita support for community college services based on place of residence. Such a comparison of accessibility focuses on the demand side. These data comparisons are relevant because of the function of community colleges to offer accessible, post-secondary education.

In 1972, M. J. Cohen studied the relationship between the number of community colleges in a state, the state's

population density and its area. His findings were published in the article, "Junior College Growth," in Change. A. M. Cohen and Brawer (1989) referred to this article and stated, "He found that community colleges tended to be built so that 90 - 95 percent of the state's population lived within reasonable commuting distance, about 25 miles. When the colleges reached this ratio, the state had a mature community college system, and few additional colleges were built (p. 12)." Cohen's study further stated that Michigan was one of the states classified as having a mature system in the 70s. The others were California, Florida, Illinois, Washington, and Ohio. In the seven states he found the denser the population, the smaller the area served by each college and the higher the per-campus enrollment. Cohen's study looked at each state as a whole--total state population and total state area.

Purpose of the Study

The purpose of this study was to determine accessibility of community colleges in Michigan using distance as a measure of access and to determine the distribution of State funding as related to accessibility. Although the focus is on a single state, the approach used may serve as a model for study of accessibility in other states.

The research findings and conclusions relative to the factors of population and funding distribution may serve the purpose of providing information for addressing major issues

facing educators and taxpayers today and in the future. Some of these issues are accessibility of community colleges, equity of funding, the possible need for additional community college locations, or possibile duplication of community college services.

While the purpose of the research did not originally extend to making recommendations, the findings and conclusions lead to recommendations and suggestions for further research.

Funding and accessibility determine who can attend a community college, where a person may take classes and to some extent when these classes may be taken. The Michigan prescription for community colleges has to take into account the types of programs to be offered and the needs for student services.

Types of programming and student services are the variables that determine what students study and why they are attending college. A plethora of possibilities, coupled with the unique needs of Michigan communities indicates that funding and accessibility are state-wide issues, while programming may differ among communities.

Need for the Study

Committees and task forces in the Department of Education and the State legislature have been dealing with the access issue for many years. In 1989 a Community College Geographic Access Committee was formed by the Michigan Department of Education (Folkening, 1990). This

committee studied service areas and proposed a statewide redistricting plan which would be supported by statewide millage; 2 to 2.5 mills were discussed for a 1992 State referendum. The State Board of Education in the spring of 1991 asked that other alternatives be studied to provide statewide accessibility, since it was doubtful that a statewide millage proposal would be approved (Pawlovich and Bernthal, 1991). Funding patterns and accessibility are timely issues.

Although none of the proposals since 1970 for new community colleges or redistricting has been adopted, recent changes occurred locally. In June, 1991, the Grand Rapids Junior College district, by referendum, was extended to include the entire Grand Rapids Intermediate School district. Also, a small area (a few city blocks) adjoining Oakland Community College was annexed to that college's district (Bernthal, 1991).

Maps showing the location of community colleges and districts are available, but community college access and population distribution are not portrayed on a map showing only where the colleges are located. Although community college revenue data have been available in a data base since 1981 and from reports and budgets written prior to 1981, these data have not been centralized and compared with demographics.

National studies have been done to compare state systems, and many studies have been done to describe the

role of community colleges and community college governance and control. Few financial studies have been done. Questions of financing policy quickly become entangled in broader questions of educational purpose and priorities (Breneman, 1988). Glenny (1976) wrote, "Scholarship on state budget development [higher education] and evaluation remains in a prenatal state. Political scientists generally have given little attention to the research on the states and even less to their budget practices. This condition is gradually changing as scholars and taxpayers find the federal government unable to solve all problems, and must refocus on the vital role the states still play" (p. 6).

The 1984 report, "Putting our Minds Together: New Directions for Michigan Higher Education," stated that in-district community college programming--the issue of equal access to community colleges--needed to be addressed. "Currently residents of counties outside of community college districts are charged an out-of-district rate to attend classes in a neighboring county. The commission recommends that the State Board of Education examine ways to expand in-district programming and make recommendations to the Governor and the State Legislature" (The Governor's Commission on the Future of Higher Education in Michigan, 1984, p. 3).

Another perspective from Public Sector Consultants, Inc. (Headley, 1990, p. 11) states, "At present, community college districts contain less than half of the state's land

area and only 77 percent of the total state equalized value (SEV) of real and personal property. In lay terms, that means not everyone in Michigan is paying for the many benefits the state reaps from these institutions." Headley's report goes on to point out how funding would be increased by redistricting. Her findings are explained in the review of related literature.

A review of the factors determining the amount of State funding and the related issues is needed to understand the current issues which affect funding and accessibility. It is hoped that the review of related literature and research findings will provide insight into community college accessibility and efficiency (meeting objectives at the lowest cost) of State appropriations. Current needs assessments require the centralization of concise background information and comparative funding data.

Population distribution has changed since 1969, and funding sources have changed since 1969 (the year the newest community college was established in Michigan). The effects of these changes on acccessibility are unknown.

In addition to the need for comparative funding and population data analysis, from state staff members it was learned that the history of community colleges in Michigan is incomplete and fragmented. The Michigan Department of Education has considered an historic compilation. One of the trustees at Wayne County Community College has been gathering background information on Michigan community

colleges for the last few years. While this research covers state funding and accessibility issues rather than comprehending the history of community colleges, perhaps one study outcome will be to underscore the importance of such a history. To provide a context for this research, background summaries of each of the 29 community colleges are provided by the researcher and appear in Appendix A.

Intrastate equity stems from the accessibility factors: state funding distribution and population distribution. The review of literature and findings of this study may serve to fill the void: centralized information for critical and effective consideration of funding alternatives and access alternatives. The objective of equitable state fund distribution can be achieved only with objective geographic access information. It is believed that using distance from a community college to a person's residence as the uniform determinant of geographic access may help to simplify the accessibility issue. The distribution of State dollars may be an effective way to analyze the equity issue.

This study was committed to providing useful, centralized information to assist educators, public officials, and interested taxpayers, in identifying the most effective and efficient alternatives for funding and providing accessible community college programs in Michigan. Centralizing information assists decision makers in using the information as a readily available tool, rather than one which must be engineered and constructed before it can be

used. The approach and methods used in this study may be of value for comparative studies in other states.

Research Questions

How does the distribution of state funding of community colleges compare with population distribution in Michigan? This was the overarching research question of this study. Answering this question describes which localities and populations have access and which are lacking access to community colleges. Access was measured by distance between a locality and a community college.

To answer this overarching question required collecting community college operating revenues data and population data, comparing these data, and analyzing the information generated from the comparisons. The subquestions were classified into five categories: (1) Michigan community colleges operating revenues, (2) Michigan population distribution and community college access, (3) counties per-capita state funding for accessible community colleges, (4) community colleges per-capita state funding for populations with access, and (5) state funding and population shifts during the last 20 years affecting access.

Michigan Community Colleges Operating Revenues

1. What dollar amounts of operating funds were received by each community college in Michigan in 1970, 1980, and 1990?

    A. What percentage of funding (general fund) for each school came from the State?

B. What percentages of funding for each school came from sources other than the State (local tax, tuition, and "other")?
C. What percentage of students for each school paid "in-district" tuition?

Michigan Population Distribution and Community College Access

II. What was the population distribution by county and localities in 1990?

A. To which community college/s in 1990 did the residents of each county and the localities have access within 25 miles?
B. To which community college/s in 1990 did the residents of each county and the localities have access by extending the distance to within 50 miles?

Counties Per-capita State Funding for Accessible Community Colleges

III. What was the Michigan per-capita dollar amount of State funds for all 29 community colleges in 1990?
IV. What were the county per-capita amounts of State funds for each of the 83 counties in Michigan for 1990? What was the deviation from the mean for each county?

Community Colleges Per-capita State Funding for Populations with Access

V. What was the per-capita funding of each of the 29 community colleges for populations within 25 miles and 50 miles of each college? What was the deviation from the mean for each community college?

State Funding and Population Shifts during the Last 20 Years Affecting Access

VI. Have any significant shifts occurred from 1970 to 1990 in State population distribution or State funding distribution which may have affected accessibility?

Delimitations

The following are delimitations of the study:

1. Private two-year colleges and other proprietary schools are not a part of this study. While such institutions may provide overlapping services or may have been instituted to fill gaps where community college services were not extended, they do not receive state support and thus were not included here.

2. This study includes only those schools receiving community college funding from the State of Michigan. Thus, four-year institutions which may provide common or similar programs to community colleges were not included. The four-year universities do not receive any State community college funds, restrict enrollment, have higher tuition/fees, and do not qualify for the State categorical community college grants (Pawlovich, 1991). None of the four-year universities was used in the data analysis of this study to describe the distribution of community colleges and State funding compared with population distribution. Their role in filling a community college service void, however, is acknowledged in this study and in the conclusions drawn. As explained in the review of literature, findings, and conclusions, the inclusion of some four-year schools may be a contributing factor for contradictory accessibility data.

3. The funding and acessibility data analyzed in this study were limited to the State of Michigan. No perceived extension of the findings to other states exists. One of

the needs for this research is grounded in the uniqueness of state community college programs and the need for information in Michigan. The marketing philosophy (looking at the demand side) and methods employed in this research may serve as a model for analyzing accessibility in other states.

Limitations

1. This study was not intended to imply by the research questions that community college services should be equally distributed. The question of equity compared with equality of distribution of funds and accessibility is one of the major issues discussed with the data analysis and conclusions.

2. The State funding data reported and analyzed were drawn from records of the Michigan Department of Education, the Department of Management and Budget, and legislative records. United States 1990 Census data for counties and localities were used for demographics. The accuracy of this information is dependent on the methods employed by their researchers and reporters. Some of the reports originate with the individual community colleges in Michigan. Auditing standards are imposed for control, but the accuracy of the reports received and the review to which the reports are subjected are at the scrutiny of the Department of Education, the Department of Management and Budget, and the other reporting agencies.

3. Public aid to education in recent years has been channeled directly to students in addition to institutions. The effects of direct aid to students are not included in the tuition revenue data. Direct aid to students affects all sources of funding and is discussed in the data analysis and conclusions of this study.

Definition of Terms

JUNIOR COLLEGE: Two-year schools which were an extension of a high-school or schools established by the public school district/s. The first two-year institutions were titled junior colleges. Only one public, two-year college in Michigan uses "Junior College" in its name, Grand Rapids Junior College. Junior colleges are included in the current term "community colleges." Junior colleges were originally extensions of K-12 systems.

COMMUNITY COLLEGE: Two-year schools offering post-secondary education. The name reflects the trend to offer more than post-secondary education as an extension of a K-12 system (Diener, 1986). These schools have expanded to include the delivery of technical training programs,job-training programs, adult education programs, community-enrichment courses, and

programs targeted to specific groups such as single-parent programs and women's centers.

ACCESSIBLE: Geographic location within commuting distance. Distances of 25 miles and 50 miles from the location of a community college to a county/locality of residency were used to derive two sets of accessibility data. Many factors other than distance affect accessibility. These factors are discussed, along with the derivation of the 25-mile and 50-mile measures in the design and findings of this study. The term accessible, itself, is subjective and depends on many variables as discussed in the findings of this study.

PUBLIC COLLEGES: Control and funding sources from tax revenues including local, state, and federal taxation. Schools are classified as either public or private; the latter being funded and controlled by sources other than public tax revenues and public officials.

EFFECTIVE: That which meets stated objectives.

EFFICIENT: That which meets the intended objectives at the lowest possible cost.

EQUITY: Fairness based on agreed-upon criteria. Equity and equality are not synonymous.

EQUALITY: Two or more factors of the same value based on determinants.

FUNDING: To support with resources; a fiscal sanctioning.

GENERAL FUND: The account or collection of accounts in which the revenues and expenses of an agency are reported. The general funds of community colleges are credited for the revenues received from public sources and tuition/fees and debited for operating expenses.

LOCALITY: A city, village, or township. To be consistent with available United States census data, it was necessary to use city and township (includes villages) political boundaries, rather than geographic townships.

Organization and Overview of the Study

In Chapter One an introduction to the topic of community college state funding and accessibility was followed by a statement of the research problem, the research questions, an explanation of the need for the study, the delimitations and limitations of the study, and a definition of terms.

Chapter Two contains a review of the literature related to the research problem. The literature review includes a background of community colleges in the United States and in Michigan with emphasis on the development of the accessibility issue and funding. A synopsis of services offered by community colleges and the trends in program offerings are included.

Community college trends in other states are included to show how Michigan's two-year colleges compare with other states. A review of the limited research conducted relative to accessibility to community colleges and trends in financing community colleges is included. Background statements on each of the 29 community colleges are in Appendix A.

In Chapter Three the research design and methodology are presented. How the background information, demographic and funding data were collected and analyzed is reported. Worksheets were used for computer data entry. The data entry worksheet for the 29 community colleges and a sample data entry worksheet for the counties and localities in Michigan are in Appendix B. Documentation for the computer program follows in Appendix C.

The research findings and data analysis are in Chapter Four. The summary tables and charts generated from this research comparing distribution of State funds for community colleges with population distribution are included in Chapter Four. The computer printouts for each of the

counties/localities and community colleges in Michigan required over 400 pages. Therefore, the summary tables are presented, but the computer printouts remain in files with the researcher. Copies were given to the Michigan Department of Education, Community Colleges Service Unit, and the Department of Management and Budget, Community Colleges Unit. Samples of the computer printouts are in Appendix B.

Chapter Five contains a summary of the research, conclusions, recommendations, and recommendations for further research.

CHAPTER 2

Review of the Literature

Introduction

The study of community college access and state funding distribution is based on the tenet that community colleges serve the purpose of providing post-secondary education within commuting distance at a low cost to the student (Monroe, 1972 and Root, 1990). The development of this principle and a review of related research follow.

First, the purpose and growth of community colleges in the United States is traced. The growth of community colleges, called "The Great American Invention" (Diener, 1985), and the expanded role of community colleges have required changes in financing sources. The "community" role of community colleges and related research show the current, multi-faceted comprehensive community college. Examples cite the variety of services, beyond traditional post-secondary education, which are available to people with access to community college campuses.

Next, the development of community colleges and research related to accessibility in Michigan have been summarized. Last, national and state trends in financing community colleges are summarized, and research studies related to funding are reported.

The Purpose and Growth of Community Colleges in the United States

The two great innovations in higher education in the United States according to Deegan (1985) have been the land-grant movement of the nineteenth century and the community college movement of the twentieth century. The conclusions of Deegan and Tillery defined the accessibility objective:

> It became national policy for higher education to be open to able young persons from all segments of the population. . . . The community college movement began the great transformation into a learning society in which each person who wishes to do so can study almost any subject in almost any geographical community. (p. vii)

Community college institutions have developed through five generations: The extension of the high school (1900 - 1930), the junior college generation (1930 - 1950), the community college generation (1950 - 1970), and the comprehensive community college (1970 - mid 1980s). The current fifth generation is described by Deegan and Tillery, in their descriptive research to compare the five generations, as a period of reexamination of the community college paradigm and a generation of reconceptualization.

The First Generation

In 1851, Henry Tappan, President of the University of Michigan insisted, "Universities would not become true research and professional development centers until they relinquished their lower division preparatory work" (Cowen and Brawer, p. 6). Tappan was supported by William Folwell,

President of the University of Minnesota, and William Mitchell, a University of Georgia trustee.

> William Folwell contended that youths should be permitted to reside in their homes until they had 'reached a point, say, somewhere near the end of the sophomore year' (quoted in Koos, 1924, p. 343). Arguments in favor of a new institution to accommodate students through their freshman and sophomore years were fueled by the belief that the transition from adolescence to adulthood typically occurred at the end of a person's teens (Cohen and Brawer, p. 9).

Thus community colleges were bred from a variety of commitments, one of which was access from residence.

The first junior colleges were encouraged by a group of university presidents, led by William Rainey Harper of the University of Chicago. In 1900, the University dubbed the lower division of the new university a "junior college."

Michigan, Minnesota, and California University presidents joined with Harper to encourage high schools to offer postgraduate courses which would free the universities for advanced study and encourage broader post-secondary education for the people. Harper might now be described as an elitist. He wrote, "Students not really fitted by nature could stop naturally and honorably at the end of the sophomore year" (1900, p.37, quoted in Deegan and Tillery, p. 5). This same quote was attributed to Eells (1931), by Cohen and Brawer (p. 9).

Cohen and Brawer claim that these attitudes account for the growth of higher education branching off into two-year institutions. Their research showed that the states could have accommodated most of the people seeking college

attendance by expanding universities' capacities, and that is what some states did. The increase in demand for post-secondary education forced expansion. Through the evolution of community colleges, a high percentage of this demand was met.

> The 30 percent of the age group graduating from high school in 1924 grew to 75 percent by 1960 . . . 60 percent of the 1960 graduates entered college. . . 45 percent [60 percent of 75 percent] of the eighteen-year-olds entered college in 1960, up from 5 percent in 1910. . . high-school graduation rates stabilized at 72-75 percent in the 70s and 1980s. (p. 5)

In the early years it is also noteworthy that private, two-year schools outnumbered public (59 percent private in 1929-30), but that trend reversed in 1947-48, and in 1986-87, only 13 percent were private (Palmer, 1987).

During these early years, Breneman and Nelson (1981) reported various educators proposed a "6-4-4" plan for public schooling which would have added two years beyond grades 11 and 12 and emphasized vocational education in years 11 and 12.

Breneman and Nelson explained that two-year institutions evolved in a bewildering variety of ways:

> One result of this diversity in form and function is that disagreement exists over such basic questions as what constitutes a community college and how many of them there are. In addition to free-standing, public, two-year colleges, there are technical institutes and two-year branches of university campuses. Some argue that the latter two groups should not be counted as community colleges. Reporting practices of the states

> differ on these matters and the two main sources of national data, the National Center for Educational Statistics (NCES) and the American Association of Community and Junior Colleges (AACJC) follow different definitions. The result is a substantial discrepancy in reported data from these two sources, with the AACJC figures being most inclusive. (p. 7)

The foregoing helped to explain the conflicting data often encountered by this researcher in the literature relative to community college growth and programs.

The colleges of the early 1900s used high-school facilities, and teachers taught in a manner similar to high-school teaching. Local school boards had authority under several legislative and administrative patterns (Deegan and Tillery, 1985).

The first doctoral dissertation describing the junior college movement was written in 1919 by McDowell, and he found that junior colleges were either growths of high schools to grades 13 and 14 or served to divert freshmen and sophomores from universities (Cohen and Brawer, p. 8).

Remedial education was a function of the early junior colleges. Many students stayed in school to make up for deficiencies and improve writing and mathematics skills. Other students needed vocational instruction, without plans for transferring to senior colleges or universities. The high school extension colleges were serving new students (Deegan, p. 7).

The first generation was summarized by Koos and reported by Deegan and Tillery (1985) as a period of modest

and hesitant development during which foundations for the future were established:

> The idea of the intermediate colleges was conceived by some of America's greatest educators; communities and states recognized the growing demand for access to higher education; and community services, so dear to the fourth generation, found their roots in the traditions of the community schools. (p. 8)

Public, two-year colleges grew in number from zero in 1900 to 178 in 1930 (Cohen and Brawer, 1989).

The Second Generation

From 1930 to 1950, California, Michigan, Illinois, and Texas had major junior college developments. Eells book, The Junior College, was used by states and localities as a guideline for establishing community colleges. The American Association of Community Colleges' professional and lobbying services served to further the two-year schools' goals. Koos and Whitney analyzed the purposes of junior colleges and Kemp (1930) summarized the goals as follows:

1. The offering of two years of work acceptable to the university;
2. The providing of occupational programs of junior college grade;
3. The completing of education for students not going on;
4. The popularizing of higher education through propinquity of opportunity for higher education at less cost to parents;
5. The offering of work which meets local needs;
6. The continuing of the home influence during immaturity. (p. 189)

After World War I, curriculum emphasis was "popularized" in junior colleges by concentrating on improvement of instruction over that available in universities, training for social leadership, and increased attention to the individual needs and interests of students (Palinczak, p. 30).

Decreased enrollments caused by the Great Depression and the involvement of human resources and spending for World War II efforts, according to Palinczak, left the democratization of higher education dormant. But, the democratization of higher education suddenly became a reality at the end of World War II. Organized labor supported junior colleges:

> At its 1943 convention in Boston, the American Federation of Labor adopted the following resolutions: Resolved, that the American Federation of Labor go on record in favor of the junior college as a means of offering opportunity for higher education to all young people of this nation with limited resources; and be it futher resolved, that the American Federation of Labor promote suitable activities tending to encourage the establishment of such educational facilities throughout the entire nation (Johnson, 1944, as quoted in Palinczak, p. 31).

After World War II, Palinczak found that junior college programs began to reflect an involvement with public need and community service and they served the needs of veterans. These needs encouraged more comprehensive programs and multi-purpose junior colleges.

Strayer in 1948, Survey of the Needs of California in Higher education, stated the goals and objectives of two-year colleges as social policy. The doctrine for the

mission of public two-year colleges included "(1) terminal education, (2) general education, (3) transfer and career orientation and guidance, (4) lower-division preparation, (5) adult education, and (6) removal of matriculation deficiencies" (Deegan and Tillery, p. 9). Deegan and Tillery refer to California as a leader in the development of two-year schools and state that not only did the language of the objectives of junior colleges change, but so did the priorities in institutional missions and practices.

From 1930 to 1950 general education, student services, and guidance grew in importance in community colleges. A 1937 study of students entering junior colleges showed that 75 percent of the students did not continue beyond the sophomore year (Eells, 1941). These were termed "terminal students." Tillery's studies (1970) showed that transfer rates barely represented minimal estimates because of the "stop-out" patterns of junior college attendance. Deegan and Tillery (1985) believed that these trends continued and that local availability affected two-year college programs and transfer rates. It was easier for students to study, temporarily concentrate on something else, then revert to study as time and circumstances permitted.

The Third Generation

The period of 1950 to 1970 marked the period of greatest growth and expansion. The mission of community colleges broadened. The expansion of the junior college and

emergence of community colleges was described by Palinczak (1973) as follows:

> The community college is not a junior college--it is more. Designed to provide educational services to all people, not just the academically fit. This institution operates in the public interest with an equal access philosophy that is in need of further development and analysis. . . . The community college is a direct manifestation of public will and it owes its allegiance to citizens and taxpayers. It attempts to fill an educational void not filled by other institutions and, in so doing, becomes a social agency with an open door to further the democratization of society. (p. 3)

The Carnegie Commission on Higher Education (1970) stated, "The most striking recent structural development in higher education has been the phenomenal growth of the community college" (p. 3). The number of students in two-year colleges grew from 500,000 to 2,000,000 in the United States from 1950 to 1970 (Deegan and Tillery, p. 12). The number of public, two-year colleges grew from 328 in 1950 to 847 in 1970 (AACJC, Palmer, 1987, as cited in Cohen and Brawer, p. 11).

In 1971 Medsker and Tillery stated that the phenomenal growth of two-year colleges had resulted in a category of uniquely American institutions. They stated that community colleges were unique in that they all received tax support, while junior colleges were both private and public (p. 1). They termed the growth of community colleges as ranging from "expansion" in the first fifty years of the twentieth century to "explosion" during the 1960s and 70s:

> Their location close to the homes of potential students, their nonselective admissions policies,

> and their tendency to offer a variety of programs (many of which lead directly to employment rather than to a baccalaureate degree) have made community colleges the most significant of all higher institutions in extending educational opportunity. The presence of a public two-year college in a community means that a much higher proportion of high school graduates from lower socioeconomic or ability levels can continue their education than could in a community with no college at all. For some students, community colleges provide a "second chance" and, by their (presumably) nontraditional approach, a variety of programs. Such colleges now [1971] enroll a far greater number of student groups hitherto underrepresented in higher education than do other types of colleges, and they will soon assume a decidedly more important role in this regard. (p. 11)

Medsker and Tillery believed that during the 1950s and 60s the two-year college became known as the "people's college" but became part of an educational network.

> The vague and lingering distinctions made between postsecondary and higher education now served only as bureaucratic conveniences for state and local agencies of education. . . . The public two-year college merged its parochial efforts with those of four-year institutions to bring to the local community the full thrust of comprehensive postsecondary education. (p. 15)

Both programming and enrollments increased nationally during the 1950s and 60s, but it is important to note that the seven "pacesetter states" (including Michigan) accounted for most of this growth.

> The geographic development of community colleges in the United states has been very uneven and heavily concentrated in relatively few states. . . Nevertheless, all the 50 states have public two-year colleges. Seven states (California, New York, Illinois, Michigan, Florida, Texas, and Washington) acccounted for more than two-thirds of all enrollments in 1968 and over one-third of all public community colleges (Medsker and Tillery, 1971, p. 22).

Medsker and Tillery's research showed that in these seven states, two-year colleges accounted for over 30 percent of total post-secondary college/university enrollment. Fourteen other states had substantial development, with 20 to 30 percent of enrollment in two-year schools: Arizona, Georgia, Iowa, Kansas, Maryland, Massachusetts, Mississippi, Missouri, North Carolina, Ohio, Oregon, Pennsylvania, Virginia, and Wyoming. Approximately 16 of the remaining states had made a start in community college development with 10 to 20 percent enrollments in two-year colleges.

Thirteen states had done little toward developing public, two-year colleges. Nevada, South Dakota, Maine, New Hampshire and Indiana had between 0 and 5 percent two-year enrollment; while Alaska, District of Columbia, New Mexico, Tennessee, Arkansas, Utah, West Virginia, Nebraska, and Louisiana had from 6 to 10 percent of two-year college enrollments.

Medsker and Tillery's research, reported in Breaking the Access Barriers (1971), was conducted to determine the need for additional community colleges in the United states. They reported the following and recommended 500 additional community colleges:

> If there is to be a community college within commuting distance of every potential student, except in sparsely populated areas, new colleges will have to be established in all but three states during the 1970s paralleling that of the previous decade. This would mean that new campuses would open at the rate of about one each week unless the two-year branch campuses of public

> universities in several states develop truly comprehensive curricula. (p. 32)

Eight to nine additional community colleges were recommended for Michigan; none have been added since 1970.

The Fourth Generation

The three major functions of community colleges--collegiate, career, and community--were expanded during the development of the comprehensive community college from 1970 through the mid 80s (Zwerling, 1986). From these traditional functions, however, several social functions became apparent. Many of these have been criticized. The more comprehensive goals, according to some researchers, have been defeated; thus, requiring a reexamination of the roles of community colleges.

The investment of public funds in community colleges has supported far more than collegiate and career objectives. The expansion of the community role began in the late 1960s and continued through the 70s and mid 80s.

The community and social roles of comprehensive community colleges can be seen specifically through some of the research findings. Jerome Karabel summarized his research findings in his article, "Community Colleges and Social Stratification in the 1980's" (1984):

> Some individuals who would otherwise have been excluded from higher education have used the community college for upward mobility. Yet the overall impact of the community college has been to accentuate rather than to reduce prevailing patterns of social and class inequality. (p. 13)

Karabel listed among his key findings that "community colleges constituted the bottom track of higher education's class-based system of interinstitutional stratification" (p. 15). He found attending a community college had the effect of reducing the probability that a given individual would obtain a bachelor's degree; and that the impact of attending a two-year college, as opposed to a four-year college, on income and occupational status was negative. He concluded that open-access community colleges accentuated existing class differences because of the disproportionate high number of working class and minority students. He acknowledged that community colleges made attendance possible for some individuals who would otherwise never have enrolled in higher education, but he found that existing class differences had been reproduced during community college expansion. He termed the growing prominence of vocational education the "community college transformation."

Fred Pincus stated in his article, "Vocational Education: More False Promises," (1984) that vocational programs were more apt to benefit local businesses' interests than students' interests. Pincus cited Breneman and Nelson's 1981 national study of high school graduates. They found that attending community colleges increased chances of being employed but decreased occupational status.

Wilm's (1980) research in four metropolitan areas showed that women in lower-status programs (secretary, dental assistant, and cosmetology) had an increased

likelihood of placement in jobs for which they were trained. Women enrolled in higher status programs (accounting, computer programming, and electronic technology) had not been placed in one related position, and only a minority of the men were placed in related positions.

Community college supporters argue that these studies look only at vocational students, not transfer students and that the transfer-vocational/terminal distinction is obsolete.

Most importantly, over 20 studies cited by Zwerling show the community development and social functions of community college programming in serving the needs of the disadvantaged. Businesses benefit from being near a community college. State funding and federal vocational funds for social programs are channeled to community colleges for minority programs, single-parent programs, child-care subsidies, and economic development programs. The latter are often connected with job training, retraining, and placement. Community college facilities in many states house program administrative offices.

The 1963 Vocational Education Act and the amendments of 1968 and 1972 augmented the federal funds available to community colleges.

> The Carl D. Perkins Vocational Education Act of 1984 modified the guidelines further, primarily to determine the state responsibility for administering the funds and to expand the programs directed to handicapped and disadvantaged students (Cohen and Brawer, 1989, p. 206).

Cohen and Brawer summarized community education as follows:

> The broadest of all community college functions, embraces adult education, adult basic education, continued education, contract training, community services, and community based education. . . . Community education may be sponsored by the college, by some other agency using college facilities, or jointly. . . . Various forms of community education usually are fully supported by participant fees, grants, or contract with external organizations. Participants tend to have short-term goals . . . they are usually older than traditional students . . . many have never completed high school . . . many of them hold baccalaureate or graduate degrees. They usually attend the course or activities intermittently and part-time . . . program managers design activities accordingly. (p. 257)

The AACJC (American Association for Community and Junior Colleges) Commission on higher education issued the following statement in 1988, as quoted by Cohen and Brawer:

> The community college, at its best, can be a center for problem-solving in adult illiteracy or the education of the disabled. It can be a center for leadership training, too. It can also be the place where education and business leaders meet to talk about the problems of displaced workers. It can bring together agencies to strengthen services for minorities, working women, single parent heads of households, and unwed teenage parents. It can coordinate efforts to provide day care, transportation, and financial aid. The community college can take the lead in long-range planning for community development. And it can serve as the focal point for improving the quality of life in the inner city. (p. 259)

Cohen and Brawer say that this is a large order, but the Commission is dedicated to fostering community colleges as centers of community life. Many of the 77 recommendations in the Commission's 1988 report follow the theme of community. "The term community should be defined

not only as a region to be served, but also as a climate to be created" (p. 3), the commission said.

The Fifth Generation

During the last five years, community colleges have continued to operate comprehensively. Cohen and Brawer (1988) concluded:

> The overarching concept of community education is certainly justifiable; few would quibble with the intent of an institution to upgrade its entire community rather than merely to provide a limited array of courses for people aged eighteen to twenty-one. However, the total seems less than the sum of its parts. The components of community education must be addressed separately in order to understand its scope and effect. Are all segments of equal value? Who decides what shall be presented and who shall pay for it? (p. 160)

The recommendations of AACJC just cited show the myriad of community college programs and the choices to be made. The issue of geographic access to community colleges gains impetus when viewed from the standpoint of all that is or may be centered at a community college campus.

Michigan is viewed as a strong community college state (Deegan and Tillery, 1985 and Palinczak, 1973). Next, the issue of access and development of community colleges in Michigan is presented with related research.

Community Colleges in Michigan

Michigan's community colleges have developed from an integrated effort: Individual school districts, citizens' groups, independent study groups, the State of Michigan

Department of Public Instruction (Department of Education), the Governor's office, and community college organizations. Background statements on the 29 community colleges in Michigan are in Appendix A. All of Michigan's community colleges were established between 1914 and 1969 (Michigan Department of Education, 1990).

1900 to 1930

Grand Rapids Junior College was the first public, two-year college in Michigan. It was established in 1914 and was located in the Grand Rapids Central High School building. The founding followed a resolution passed by the faculty of the University of Michigan encouraging the establishment of junior colleges in larger cities (1989-90 College Catalog, Grand Rapids Junior College, p. 9).

By 1940 nine junior colleges were established by school districts: Grand Rapids, Highland Park, Bay City, Port Huron, Flint, Muskegon, Jackson, Gogebic, and Henry Ford (Dearborn). Wayne State University established a two-year branch which received community college appropriations beginning in 1933, but this branch was not separately classified as a community college (Russell, 1957).

The first enabling act by the Michigan Legislature was passed in 1917. The people of Highland Park were strong in their support of this legislation (Dunbar, 1963). The law authorized the Board of Education in any school district with a population or 30,000 or more to offer advanced

courses to high-school graduates (Public Acts of 1917, No. 146). Public Acts 230 and 295 of 1929 set this number at 25,000, (Public Acts of 1923, No. 138 had temporarily set the number at 18,000) but also provided for establishing a junior college by referendum in cities or districts of less than 25,000, if petitioned by 10 percent of the city's voters. In 1955 the population requirement was changed to 10,000 for school board authorization (Public Act 269).

The University of Michigan was instrumental in the development of the Bay City Junior College in 1922 by authorizing a junior college accreditation committee to approve courses and instructors and provide for students' admission to the University as juniors (Dunbar, 1963).

The role of junior colleges in Michigan was to provide students with two years of preparatory work to transfer to a senior university. This paralleled the national concept.

1930 to 1950

The Great Depression hampered expansion during the 30s. From 1940 to 1957 only five additional schools were established: Community College and Technical Institute (Benton Harbor), Northwestern Michigan College (Traverse City), Alpena Community College, South Macomb Community College, and Battle Creek Community College (Russell, 1957).

Growth in Michigan was spurred by several factors following World War II. According to McLean and Porter (1979) the concept of community colleges in Michigan was attributed to national influence from the President's

Commission on Higher Education. In 1947 the Commission broadened the purpose of junior colleges to community junior colleges:

> Whatever form the community college takes, its purpose is educational service to the entire community, and this purpose requires a variety of functions and programs. It will provide college education for the youth of the community, so as to remove geographical and economic barriers to educational opportunities and discover individual talents at low cost and easy access. In addition, the community college will attempt to meet the total post-secondary school needs of its community. (p. 2)

This definition was used by the Michigan Department of Public Instruction as the foundation for defining the three basic elements of community colleges:

> (1) equal access to education for all persons in the community, (2) the removal of geographic and economic barriers which prohibit persons from benefiting from the services, and (3) the reasonable opportunity for the individual to discover and develop his or her talents at low cost. (p. 2)

In their 1979 document, "Statewide Community College Services," Porter (Superintendent of Public Instruction) and McLean (Chairperson of the State Board for Public Community and Junior Colleges), attributed the rapid development of community colleges during the 50s and 60s and the more comprehensive nature of community colleges to the Michigan's adoption of these three objectives.

1950 to 1970

Act No. 189, 1951, changed the title from "junior" to "community" colleges and recognized the functions of vocational and terminal programs. From 1956 to 1969

fourteen community colleges were established, bringing the total to 29, the same number operating in 1990.

The Russell Study of 1957 and 1958 was published in a 1958 report, The Survey of Public Education in Michigan. Russell's report strongly supported community college development and expansion to address the need for increased access. Staff Study No. 1, a 210-page, preliminary report by Russell, published in 1957 analyzed all two-year public institution enrollments and accessibility in Michigan. Russell used 25-mile radii in Southern Michigan and 35-mile radii in Northern Michigan (north of Clare) to determine accessibility. Six access studies were cited by Russell showing decreased likelihood of college attendance beginning at a 15-mile distance (pp. 67 - 72).

Russell's recommendations in 1958 used three criteria to determine demand: county population along with the number of people aged 18-22 (1,000+ 18 - 19 and 2,000+ 19 - 22) and size of school district (800+ students in grades 9 - 12). The location of public schools was considered next, and those counties in which supply fell short of demand and geographic access was a barrier were listed with recommendations for establishing a community college. These criteria assumed that the most likely community college students were of traditional high-school graduation age.

Russell's recommendations included the following:

> Whatever the number of new community colleges might finally be, this survey recommends that the long-range goal of educational planning in the

> state be the location of a community college where a concentration of population without adequate service of the community college sort is sufficiently large to warrant establishing one. As a general rule the evidence in Michigan is that minimum concentration of population can be determined by application of the three criteria in this survey. (p.112)

Two priority groupings listed the counties' needs. Group number one with schools, but needing additional locations--Macomb County (Mt. Clemens), Oakland County (one in Pontiac and one in Royal Oak), Wayne County (one in Livonia, Grosse Pte., Royal Oak, and Lincoln Park, and three more in Detroit City). Also in group number one without schools were Lapeer, Midland, Monroe, and Saginaw counties. Chippewa County met all three criteria and had only a branch of Michigan College of Mining and Technology.

Russell noted, "The analysis of programs of less-than-bachelor's degree length that was made as a part of the Survey showed that neither the Sault Ste. Marie Branch nor its parent institution had done much to develop these programs. In this sense, it is falling short of its potential of becoming a fully effective community college" (1979, p. 117).

Russell further recommended that a study be done to determine the need for either a community college operating under the community college laws of the State or the expansion of the branch in Chippewa County.

Nine other counties met two of the three criteria: Allegan, Clinton, Delta, Huron, Ionia, St. Joseph, Sanilac,

Tuscola, and Van Buren. Allegan /VanBuren and Ionia/Clinton are adjoining pairs, and Russell recommended only one school for each of the pairs of counties. One college was recommended for the adjoining thumb counties of Huron, Tuscola, and Sanilac; and Owosso county had only a private college and met all three criteria.

A second priority grouping took into account school districts with over 800 students and without a community college, and geographic areas too far from a community college (Emmet/Charlevoix/Cheboygan/Otsego, Mason/ Manistee/Oceana, and Wexford/Missaukee/Osceola). He recommended one school for each of these adjoining sets of counties. In total Russell recommended 23 additional community colleges to be in the first priority grouping to serve 27 counties in Michigan, and an additional 13 desirable locations or locations requiring further study for the second priority grouping.

Russell's study was by far the most comprehensive study of community college accessibility that has been done in Michigan. After Russell's study 15 community colleges were established. It is difficult to compare these with his recommendations because of the extension of existing community college districts. The counties still without a community college which he recommended be established or studied are shown in the findings of this research.

Russell's findings and recommendations are cited extensively in most of the Michigan reports on community

college organizations, administration, and funding. The notes of constitutional convention delegates working on the 1963 Michigan Constitution reflect the importance of his study.

State Legislation and Proposals

The Michigan Constitution of 1963 (Article 8, Section 7) and Public Act 331, 1966 (The Community College Act) were most significant in forming the concepts of community college services. The Constitution created a State Board for Public Community and Junior Colleges to advise the State Board of Education on the supervision, planning, and appropriations for support of community colleges. The constitution also provided for locally elected Boards to supervise and control college operations. The Community College Act replaced 15 prior community college laws in Michigan (Michigan Compiled Laws, Annotated, 1988, p. 865).

The 1908 Michigan Constitution did not require or provide for the creation of community colleges, but the 1963 Michigan Constitution mandated state-supported community colleges and provided for taxation to support the community colleges, with the maximum rate approved by voters. The tuition rates were to be established by the locally elected Boards.

The Community College Act provided for the cooperative effort of school districts and/or counties not already in a community college district to join with others and by

referendum and authorization of the State Board of Education establish a community college.

Following the Community College Act, the State Board for Public Community and Junior Colleges published a position statement that served as a foundation for State Board of Education policies and proposals. These were expressed in the 1969 State Plan for Higher Education. The policy statement as cited by McLean and Porter follows:

> It is the policy of the State Board of Education that all its policies, positions, and decisions affecting comprehensive community college services shall be done with the advice and assistance of the State Board for Public Community and Junior Colleges and after consultation with the local boards of the public community and junior colleges. The State Board of Education should continue to request the advice and assistance of the State Board for Public Community and Junior colleges concerning general supervision, planning, and annual appropriations for the support of the institutions' services. This should include, but not be limited to:
>
> --Institutional Access
> Open Door Admissions Policies
> Low Tuition
> Geographical Barriers
> --Comprehensive Community College Programs
> Occupational Education
> General Education and the Liberal Arts
> Developmental Education
> Continuing and Community Service Education
> Professional Development
> --Finance. (pp. 5 - 6)

In 1968 the State Board for Community and Junior Colleges, based on the Community College Act (331 of 1966) recommended that no more than 32 districts be established using the following guidelines: existing districts should be enlarged before establishing new districts, Lower

Peninsula's districts should have a minimum full-time equated enrollment of 1,000 students, minimum local tax per student should be $400, a significant population center should be in each district, access highways to college campuses should be improved, colleges should be within reasonable commuting distance, overlapping service areas should be avoided, districts should be based on cultural ties and socio-economic ties to the community. The 29 community colleges were expected to serve most of the Lower Peninsula. (Exceptions were made for Huron/Tuscola/ Sanilac counties and Ottawa/Allegan counties.)

The McLean and Porter report, "Statewide Community College Services," listed several policy statements. The statement specifically related to access follows: "Every resident of the State should have access to community college services. All geographical areas of the State should be included in independent community college districts and no Michigan resident should be subjected to non-resident or out-of-district tuition or fee charges at any community college the student elects to attend" (p.14).

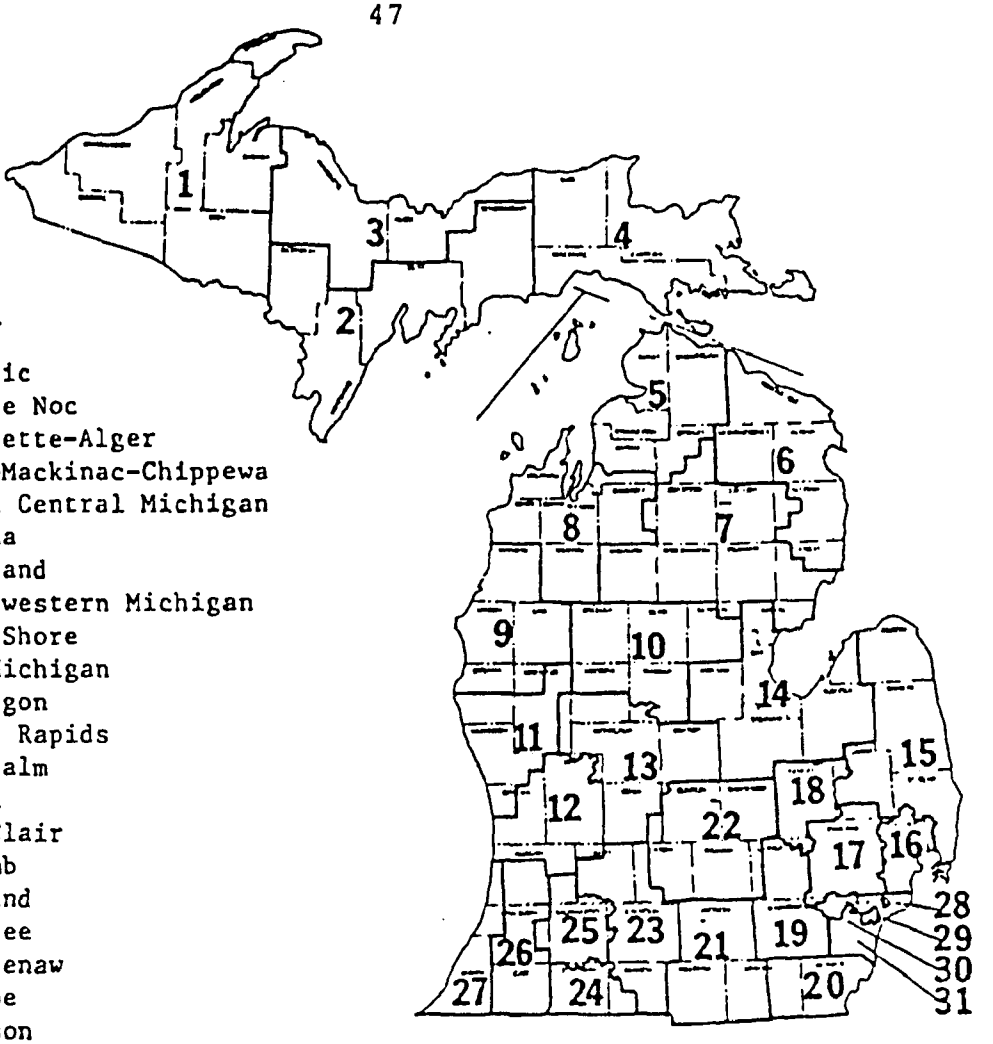
Their report also stated the following policy regarding open admissions: "Community and junior colleges should admit any high school graduate or person eighteen years of age and any other out-of school person and counsel with him or her about the programs or courses for which the student is prepared and may benefit" (p. 10). This open-door policy

was cited by McLean and Porter from the 1970 State Plan for Education, and this characteristic differentiates the junior/community college from public, four-year institutions with specific entrance requirements.

In 1971 the Michigan Community College Association issued a report, "Statewide Community College Services in Michigan." This reported the research conducted and recommendations for redistricting in Michigan. The recommendations were as follows: to place all areas of the state within identified community college districts, to maintain the integrity and independence of the existing 29 districts except in cases of mutual agreement between districts to realign service areas, and that two community college districts be added in Marquette/Alger counties and in Chippewa/Mackinac/Luce counties. All other district recommendations involved extending the existing boundaries of the 29 community colleges.

A copy of the recommended community college districts, Figure 1, is on the following page as reproduced from the 1971 Michigan Community College Association's report. This redistricting plan and its recommendations are important because several legislative proposals were based on them: Senate Bill 1302 of 1972, Senate Bill 346 of 1973, Senate Bill 1080 (and substitute Bill 1060) of 1975, and Senate Bill 45/House Bill 4240 of 1977.

Senate Bill 346 aligned the proposed 31 districts with political boundaries. None of these bills was passed.



Districts

1. Gogebic
2. Bay de Noc
3. Marquette-Alger
4. Luce-Mackinac-Chippewa
5. North Central Michigan
6. Alpena
7. Kirtland
8. Northwestern Michigan
9. West Shore
10. Mid Michigan
11. Muskegon
12. Grand Rapids
13. Montcalm
14. Delta
15. St. Clair
16. Macomb
17. Oakland
18. Genesee
19. Washtenaw
20. Monroe
21. Jackson
22. Lansing
23. Kellogg
24. Glen Oaks
25. Kalamazoo Valley
26. Southwestern Michigan
27. Lake Michigan
28. Highland Park
29. Henry Ford
30. Schoolcraft
31. Wayne County

Figure 1

Recommended Statewide Community College Districts

Therefore, the Community College Act of 1966 remains in effect for community college districting and organizing (Folkening, 1991).

Opposition to these bills varied. The requirement for community college boundaries to be coterminous with intermediate school district boundaries was one problem for some districts. Local boundary disputes were also a problem.

Two different statewide millages of one mill (Senate Bill 45) and two mills (Senate Bill 346 and House Bill 4240) also met with opposition. Senate Bill 346 contained a "grandfather clause," which covered community colleges that already had more than a two-mill levy. The level of needed funding was disputed. Also, community college redistricting in the 70s was not a high legislative priority. The specification that community colleges have sole responsibility for vocational, post-secondary education in Senate Bill 1302 caused conflict between some secondary schools and colleges (Michigan Department of Education, 1990).

The 1984 report, "Putting Our Minds Together: New Directions for Michigan Higher Education," issued by the Governor's (Blanchard) Commission on the Future of Higher Education in Michigan, again highlighted the importance of community college access:

> The issue of equal access to community colleges needs to be addressed. Currently, residents of counties outside of community college districts

> are charged an out-of district rate to attend classes in a neighboring county. The commission recommends that the State Board of Education examine ways to expand in-district progamming, and make recommendations to the Governor and the State Legislature. (p.3)

The 1985 Senate Select Committee on Higher Education, chaired by William A. Sederburg, placed a high priority on the contribution of community colleges in the areas of economic development and adult remedial education, but stated that the role of community colleges was becoming blurred with that of some K-12 functions and remedial programs at four-year institutions. The Committee report summary recommended that vocational education and remedial education be delegated to the community college in districts where one was present.

In 1988 the State board for Public Community and Junior Colleges again focused on accessibility as a major issue. State Director of the Department of Education, Higher Education Management Services, Ronald Root, directed a study to determine "to what degree Michigan's citizens have equal access to postsecondary education." In his July 11, 1989, letter to community college presidents, Root referred to "community college districts and service areas." He stated, "As a result of their discussions, the Board has asked that data be collected and analyzed regarding Michigan's community college districts and service areas. . . .To our knowledge, complete information of this nature has not been available for 15-20 years, and then only at a superficial level of analysis."

Thus, a research study was commenced. "District" is defined statewide, but the term "service area" is defined by each school in accordance with its impressions of student sources. Neither measures accessibility by a uniform distance from a community college (Folkening, 1991).

A Geographic Access Committee was formed and met during 1990. A June 8, 1990, memo and initial draft of a "Statewide Community College Services" report to committee members from Ronald Root stated the following:

> Why is the availability of a community college education so important?
>
> - 52% of all new jobs in the next decade will require some level of postsecondary education, yet only 31% of Michigan's adults have 13 or more years of schooling.
>
> -The average worker will need to be retrained at least three times during his/her work-life; community colleges are preferred for retraining because they are close to home.
>
> -The average tuition charge to non-resident community college students is 32% higher than to residents of the district.
>
> -The average age of a community college student is 29;p most of these students have occupational or family commitments which necessitate that they remain at home.
>
> -Some national experts estimate that 20% of all adults are functionally illiterate, a figure that translates to 1.3 million citizens in Michigan; community colleges are prepared to serve this need.
>
> -Michigan community colleges serve the broadest range of students, from ages 18 to 80 and including students of all racial, ethnic and socio-economic backgrounds.
>
> Who is left out?
>
> - Approximately 50% of the geographic area of the state is not covered by a community college district.
>
> -21% of Michigan's citizens live outside a community college district.

> -48% of Michigan's school districts are not in a community college district.
> -138,837 students each year attend a community college and pay the higher non-resident tuition rates.
> - 22% of the state's property tax base is not included in a community college district. (pp. 3 - 4)

A statewide, two-mill levy was recommended by the Geographical Access Committee, with statewide redistricting along city, county, and township political boundaries, without affecting current boundaries. Five exceptions to this were required to align with city, county, and township boundaries, and all but four community colleges would have gained new territory. This plan did not recommend any new districts, but branches of existing community colleges were recommended to meet the needs of those geographic areas too far from an existing community college. As an example two branches of North Central Community College in Petoskey were recommended in Cheboygan and Sault Ste. Marie.

In another preliminary report, March 6, 1990, prepared by the Michigan Department of Education, Higher Education Management Services, an "arbitrary measure of forty (40) miles was chosen to represent a reasonable driving distance to a comprehensive community college campus (p. 11)."

A 30-mile radius circle was drawn around each of the 29 community colleges, to allow for driving variances with airline mileage. Three four-year state universities were added to the 29 community colleges, with the substantiation that these three universities--Ferris State, Lake Superior

State, and Northern Michigan University--were serving community college functions. These three universities have admissions requirements (not open-door admission) as verified with admissions officers at all three schools and the 1989-90 catalogs. Also, the self-defined term "service areas" was used in reference to community college access.

A copy of the Michigan map with 30-mile radii of the community colleges and three universities, Figure 2, is on Page 53. It is important to note that these circles do not indicate districts. A district map, Figure 3, follows on Page 54. A map of self-defined "service areas" is not available (Folkening, 1991).

The question still remains as to the number of people and identification of localities in Michigan within reasonable commuting distance or not within reasonable commuting distance. It is toward this need that the efforts and findings of this study were focused.

The Geographic Access Committee's work at the point of the writing of this dissertation was discontinued or at the least interrupted. It was believed by state education administrators that a statewide millage proposal would not receive the required support (Folkening, Pawlovich, and Bernthal, 1991).

The closing paragraph of the Committee's draft recommendations follows:

> The overriding goal of the state should be to continue progress toward achieving comprehensive community college services statewide. These

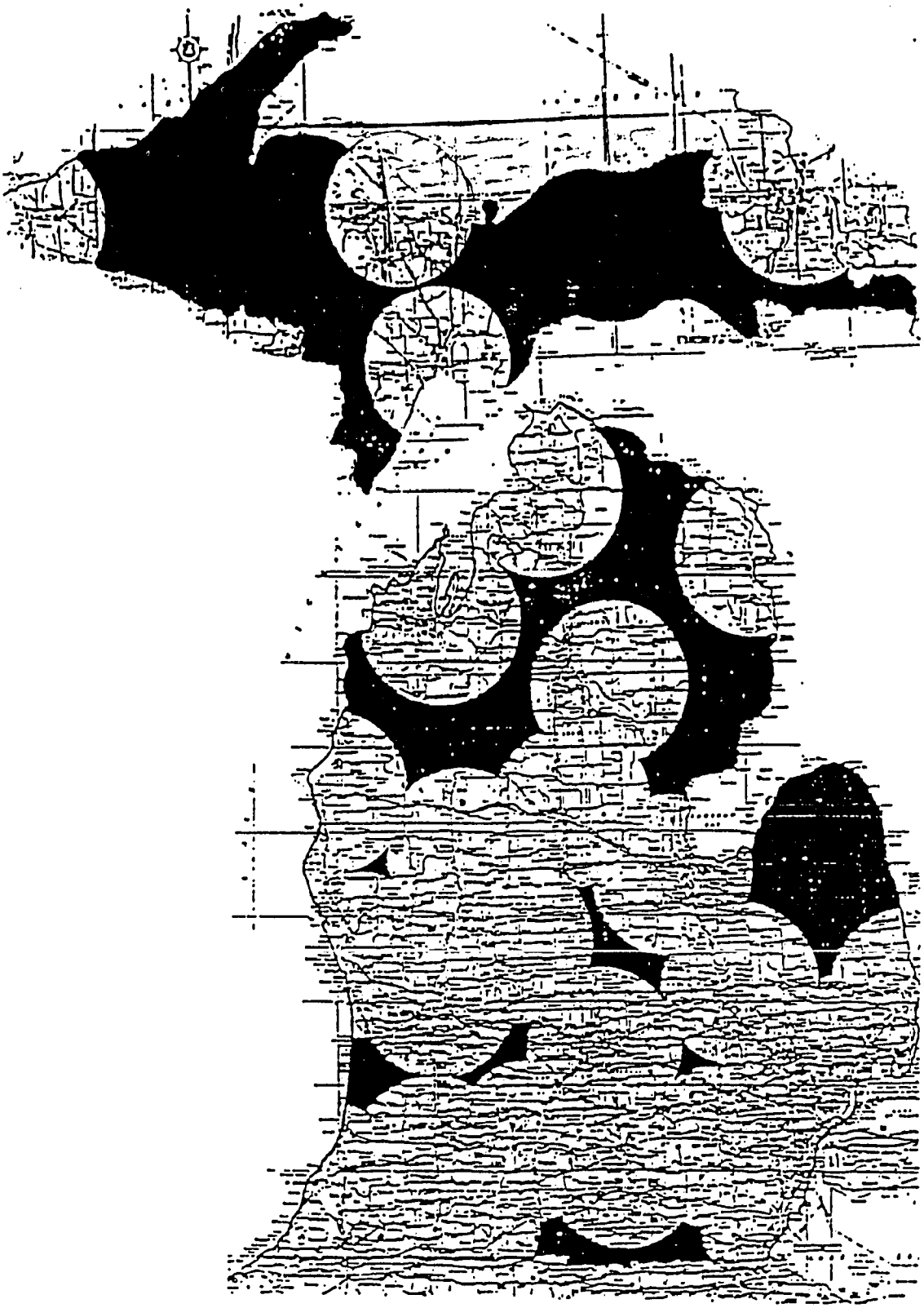
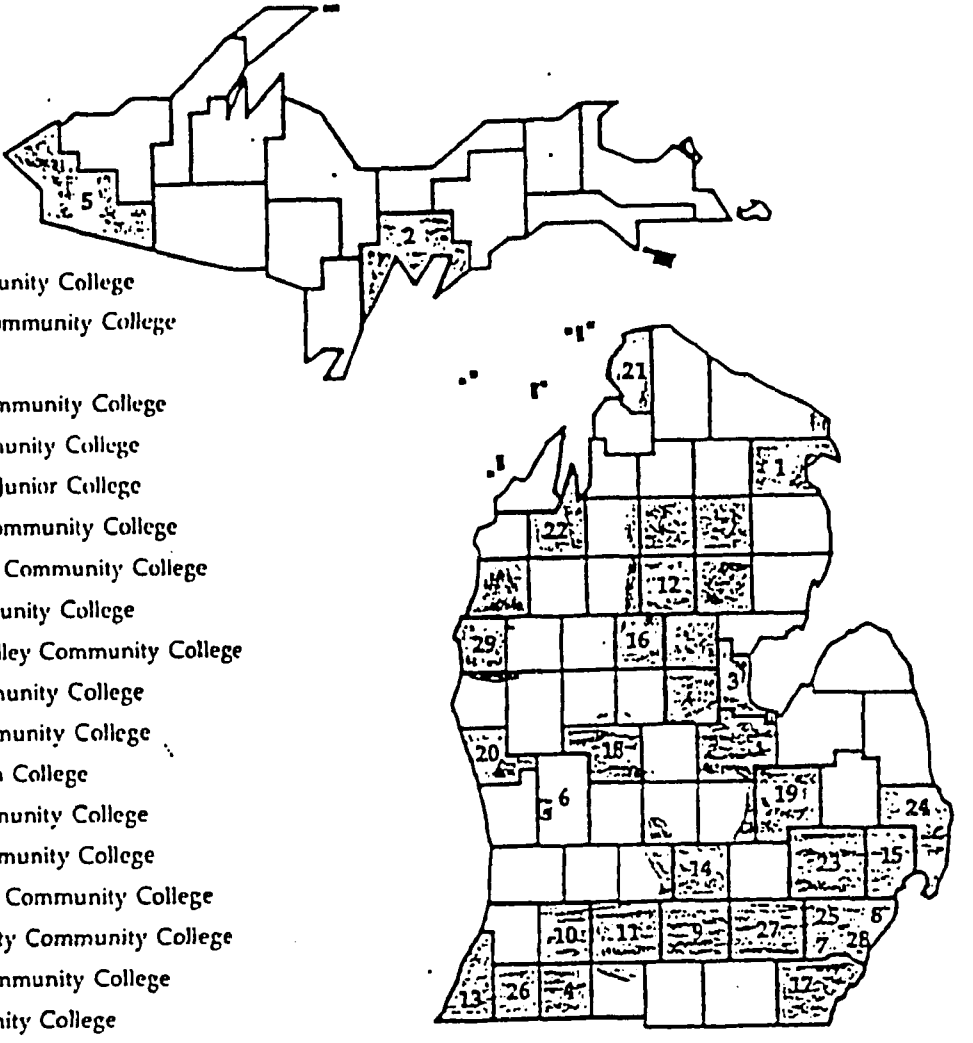


Figure 2

Area Beyond 30-Mile Radii of a Michigan Community College (Including Ferris, NMU, LSSU)



1 Alpena Community College
2 Bay de Noc Community College
3 Delta College
4 Glen Oaks Community College
5 Gogebic Community College
6 Grand Rapids Junior College
7 Henry Ford Community College
8 Highland Park Community College
9 Jackson Community College
10 Kalamazoo Valley Community College
11 Kellogg Community College
12 Kirtland Community College
13 Lake Michigan College
14 Lansing Community College
15 Macomb Community College
16 Mid Michigan Community College
17 Monroe County Community College
18 Montcalm Community College
19 Mott Community College
20 Muskegon Community College
21 North Central Michigan College
22 Northwestern Michigan College
23 Oakland Community College
24 St. Clair County Community College
25 Schoolcraft College
26 Southwestern Michigan College
27 Washtenaw Community College
28 Wayne County Community College
29 West Shore Community College.

Figure 3

Community College Districts 1990

> comprehensive services would contain three basic elements: (1) equal access to educational services for all persons in the community; (2) the removal of geographic and economic barriers which prohibit persons from benefiting from the services; and (3) the reasonable opportunity for the individual to discover and develop his or her talents at low cost. (p. 19)

National and State Trends in Financing Community Colleges

Community college financing has elements from both higher education and K-12 systems. The first public community colleges were extensions of a local public school system and were financed the same way as the school system (Garms, 1977).

Cohen and Brawer's 1988 historic, national research showed that state aid and federal aid were at 0% in 1918 and 1930 surveys. By 1942 state aid was 28% of revenues, and this figure increased to 47% by 1986.

Federal aid grew from 2% in 1942 to 10% in 1986. (This includes all funding, not just operating funds.) Local aid was reported at 94% in 1918, 85% in 1930, and this steadily decreased to 17% in 1986. Tuition and fees grew from 6% of revenues in 1918 to 16% in 1986 (p. 128).

The trend of shifting support from local aid to state support and increasing tuition and fees is evident. This trend accounts for the emphasis on the issue of distribution of funds within a state. Cohen and Brawer cited studies by Augenblick in 1978, Richardson and Leslie in 1981 and Eells in 1931 to substantiate these trends.

The trend in the early development of junior colleges as extensions of secondary schools was a provision of an established amount per pupil from local tax revenues and public schools' budgets. A state adjustment became common to minimize the differences among districts of varying wealth. The public colleges have always operated in a political arena (Cowen and Brawer, 1988).

Garms studied the 36 states and Puerto Rico for the years 1971-72. The 36 states accounted for 96% of the nation's community college students. At that time community college revenues were comprised of 5% federal funding, 44% state support, 33% local support, 14% tuition and fees, and 4% from other sources.

Garms stated that these figures were comparatively misleading because of the inclusion of California, with the most developed community college system, and the only state not charging tuition. Adjusting for the inclusion of California, resulted in 20% of revenues from tuition and fees. Statistics vary depending on the inclusion of revenues for capital expenditures and auxililary service expenditures along with operating revenues or the reporting of only operating revenues.

The inclusion of California skews data means because of their highly developed system. As an example, in 1985-86 data listed in a study by Wattenbarger and Mercer (1988) showed that the operating revenues of community colleges in

California were $1.7 billion; the second highest state, Texas, was $757 million. Michigan ranked fifth with $413 million, and the amounts decreased rapidly to $314 million for the sixth ranked state to $14 million for West Virginia and none for South Dakota, the only state without community colleges. Wattenbarger and Mercer's comprehensive research is discussed in more detail later.

During 1971-72 Michigan's community college revenues were accounted for as follows: 3% federal, 40% State, 26% local, 26% tuition, and 5% from other sources. The means reported by 44 states and Puerto Rico were 6% federal, 51% state, 19% local, 20% tuition, and 4% from other sources. Although only California charged no tuition, three other states received less than 10% of their revenues from tuition--Arizona, 4%; North Carolina, 7%; and Wisconsin 6%.

Sixteen states reported no local tax revenue supporting community colleges. In those states, financing plans for community colleges followed more closely the plans for four-year institutions with an increase in revenues from the states.

Garms' research showed that California community colleges received 58% of their support from local taxes, and four other states received over 40% of their revenues from local sources.

In 1988 Wattenbarger and Mercer conducted another comprehensive study with the states by questionnaire to

compare policies and procedures in financing community colleges. Using 1985-86 data, the means for the 43 reporting states (7 states comprising 3% of national community college enrollment did not respond) were as follows: state, 59%; local 16%; tuition and fees, 19%; federal and other sources 6%.

All 43 reporting states provide support to community colleges, but only 26 states reported local tax support of community colleges. The 16% is the mean for all 43. If the 17 receiving no local tax support, are disregarded, the mean for the 26 remaining is 24.5%.

All reporting states showed revenue from tuition and fees. California by 1985-86 was reporting 4% of its community college revenues from student fees (pp. 9 - 10).

Financing of junior colleges in the early years was done on a K-12, per-pupil basis for those schools with junior colleges. In 1947, the legislature included in the school aid act an appropriation of $650,000 to school districts maintaining a college. The amount was distributed on a full-time enrollment (FTE) basis (Dunbar, 1963). This increased to $800,000 by 1954, and by 1960 almost 60 percent of the operating income was coming from state appropriations.

In 1956 legislation, Act No. 156 and Act No. 226, affected the funding of community colleges. The first

provided for $190 per FTE, and the latter provided for capital outlays for community colleges (Dunbar, 1963).

Philip J. Gannon summarized the reasons for the growing financial support of community colleges in Michigan in his article, "Fifty Years of Community Involvement in Michigan," in Junior Colleges: 50 States/50 Years, published in 1969 by the American Association of Junior Colleges. Gannon stated that George Romney, who had been a delegate to the Constitutional Convention, was elected governor of Michigan in 1962. His commitment to higher education and the recommendations of the citizens' committee he appointed resulted in a $7 million appropriation for the operation of community colleges in 1965, with $4 million for capital outlay. This equaled $234 per FTE student, and this was increased to $275 the following year, with over $11 million appropriated.

In the 50s, as previously cited, legislation provided for the formation of school districts in establishing community colleges. This, plus the importance of community colleges in the 60s, gained from the revision of state laws through the 1963 Community College Act, resulted in growing state financial support. The impact of the Russell study in 1957 and 1958 also drew attention to the funding of community colleges. Of Russell's 45 recommendations for higher education in Michigan, 18 dealt with the need for additional community college services and funding.

The rapid rise in tuition was a trend contrary to the philosophy of community colleges. This affected the legislature's support of increased state financing (Gannon, 1969).

State support grew to 47% in 1979-80, but between 1980 and 1982, when Michigan experienced a sharp downturn in its economy, "state aid allocations to community colleges plummeted. The state's appropriation per full-time student dropped from $1,149 to $1,025 and from 47% to only 36% of total community college revenue" (Headley, 1990, p. 8). The legislature gradually reversed this, but in 1990 state support was 38% of total community college operating revenues (Michigan State Board of Education). The specific figures and comparison of revenue sources for Michigan for 1970, 1980, and 1990 are listed and graphically compared in the findings of this study.

With headcount attendance at over 200,000 (in a single semester) in 1990 and FYES (fiscal-year equated students) at 117,652, revenue sources in Michigan seem to be exhausted. According to Headley's findings in her 1990 study of Michigan's community colleges for Public Sector Consultants, Inc., located in Lansing, Michigan, tuition rates averaged 189% of the national average, and local tax support exceeded the national average by 106% (p. 9).

Public Sector Consultants recommended redistricting as an option because in 1990 the community college districts contained less than 50% of the state's land area and only

77% of the total state equalized value (SEV) of real and personal property. Redrawing existing borders to include all areas of the state would (1) increase the amount of funds available to two-year institutions by as much as an extimated $40.5 million, (2) make post-secondary education more accessible by removing higher out-of-district tuition, and (3) strengthen the system by promoting cooperation instead of competition. These recommendations would result in statewide taxation. Increased emphasis on endowments and investments was recommended. The fiscal recommendations were combined with program recommendation, such as televideo classes and cooperative programs with business and industry to more efficiently use resources. Including the entire state in community college districts would provide community college services to the entire state.

The access issue and state funding remain an important issue in Michigan. According to Breneman and Nelson (1981), accessibility and low tuition are the most substantiating factor for community colleges.

> Undoubtedly, community colleges attract some students away from senior colleges, and some of these students would have been better off if they had not been diverted to a community college [instead of a senior university]. On the other hand, for many the community college is the only effective option for postsecondary education--it is that or nothing at all. This is particularly true for older part-time students. Community colleges' contribution to equity in higher education then requires balancing the gains for many in providing access to any college. . . . Low tuition has traditionally been the cornerstone of financing policies designed to attract low-income students to community colleges. . . . With

> rising costs and tightening state budgets, pricing policy remains a controversial subject in all states and poses what arguably is the most important equity issue in community college finance. (pp. 102 - 103)

As community colleges have become less aligned with a single school district and traditional funding sources resist expansion, Michigan is challenged with the access and low-tuition objectives. Attempts to redistrict have been clouded by an assortment of ways of expressing access--in-district, service area, and community college services of some four-year universities. Research to identify accessibility based on residence within a uniform distance had not been done.

Another concern in Michigan is the complexity of State community college funding. The formula being used is not fully funded, and this alters the amounts being received by each community college from the intended appropriation. Michigan's formula is summarized by Wattenbarger and Mercer (1988).

> Michigan does not collect or analyze 'program' costs in terms of degree or certificate programs. Costs are collected through the Activities Classification Structure which looks at activities versus programs. The activities are clustered in 34 instructional activities by common disciplines of instructional intent. A formula is used to determine state aid for community colleges. The formula for general fund instructional activities is based on contact hours. The base year for funding 1986-87 [as an example] is based on 1984 enrollment. Student services funds are based on a rate per student headcount rather than contact hour or credit hour or FTE enrollments. Administrative costs are funded on fiscal year equated student enrollment according to a percentage based on size of college enrollment.

> The state appropriations also have an equalization factor for district tax variability. In 1985, the state enacted special grant funds for energy conservation and educaiton purposes. There is a minimum amount allotted for each institution. (pp. 55 - 56)

This review of literature, related to accessibility and funding of community colleges, shows the national and state trends and concern for optimal geographic access with low tuition.

The comprehensive roles which have developed for community colleges means that a community without a community college is affected by the lack of accessible programs and community identity. Business and industry gain from access to the training programs along with the general population. Economic development has been integrated into the community colleges' roles. The summary statements in Appendix A show the community involvement and social roles of the public community colleges. Much more is at stake than the first two-years of college--child-care programs are emphasized, remedial adult education programs are available, and counseling services are aimed at personal and professional development.

The findings of this study show which residents of Michigan have access to community colleges using two measures of distance, 25 miles and 50 miles, and which residents do not have access using these same distances. The methods used and the information generated may be of value for Michigan community college funding decisions and as a guideline for similar studies in other states.

CHAPTER 3

Research Design and Procedures

Introduction

The research design and procedures employed in collecting and analyzing the data to answer the research questions are described in this chapter. The explanations are arranged in the order of the research questions.

Michigan Community Colleges Operating Revenues

Research question one: What dollar amounts of general funds were received by each community college in Michigan in 1970, 1980 and 1990? Subtopics of this question include the following: What percentage of funding for each college came from the State? What percentages of funding for each school came from sources other than the State (local taxes, tuition, and "other")? What percentage of students for each school paid "in-district" tuition?

Each year the Community College Services Unit of the State of Michigan State Board of Education publishes a data book, Activities Classification Structure Data Book (ACS). This publication commenced with the academic year 1981-82. The development of a data base was mandated by Act 419, P.A. 1978, and was to be compatible with the Michigan Manual for Uniform Financial Reporting (Michigan State Board of Education, 1985). The ACS Data Books from 1981-82 through

1989-90 reported Community College revenues from all sources, as well as expenditures.

Each report provided the data on which the next year's appropriations were based. From these books the amounts of revenue and the sources of the revenue were drawn. For the years 1969-70 through 1980-81 State of Michigan Fiscal Budgets and reports were used to compare the amounts of revenue and the sources of revenue for each of the 29 community colleges.

The ACS Data Books were obtained from the Community College Services Unit of the State Department of Education in Lansing, and the State of Michigan Budgets were obtained from the State of Michigan Library in Lansing.

The revenue data for the years 1970, 1980, and 1990 are included in the findings of this study. These data are presented in four tables listing the following for each of the 29 community colleges:

Name of the community college and total revenue for 1970, 1980, and 1990

Dollar amounts and percentage of total revenue from the state for 1970, 1980, and 1990

Dollar amounts, number of mills, and percentage of total revenue from local millage for 1970, 1980, and 1990

Dollar amounts, per-credit tuition, and percentage of total revenue from tuition for 1970, 1980, and 1990

Dollar amounts, and percentage of total revenue from other sources for 1970, 1980, and 1990.

Dollar amounts were rounded to the nearest thousand for easier analysis. The amounts for each college and the differences among the colleges for each revenue source were analyzed and displayed in charts for years 1970, 1980, and 1990. Bar charts compare revenue sources for the 29 community colleges, and pie charts compare the revenue sources for the state as a whole.

Michigan Population Distribution and Community College Access

Research question two: What was the population distribution by counties and localities in 1990? These population statistics were required to answer the following: To which community college/s in 1990 did the residents of each county and the localities have access within 25 miles? To which community college/s did the residents of each county and the localities have access within 50 miles?

United States census statistics were obtained from the State of Michigan Library to complete the tables listing each of the 83 counties followed by the localities (cities and townships). The populations for 1990 are listed following the names of the counties and localities.

The tables listing the names of the counties, localities, and 1990 population continue with the names of the accessible community college/s for each locality, the distance from the locality to the college/s and the amount of state funding appropriated for the accessible community

college/s. Three ranges were used for distance: 0 through 25 miles (Range A), 26 through 50 miles (Range B), and beyond 50 miles (Range C).

Accessibility was determined by identifying each locality and each community college in Michigan as Cartesian (x,y) coordinates. The Pythagorean theorem was then used to calculate the distance between the locality and a community college:

$$d = \sqrt{(y_2-y_1)^2 + (x_2-x_1)^2}$$

The distance in x,y units was then multiplied by a units-to-miles conversion ratio, which for this application was 1:10. Using the 1:10 conversion factor made it easy to convert from units to miles by just moving the decimal point.

A transparent grid was placed over a map of the state of Michigan to first identify a county as x,y coordinates. A copy of the map and grid segment follow on Page 68, Figure 4. The southwest corner of each county was used as a point of reference. (As an example, the x,y coordinates for Washtenaw County are $x_{29.5}, y_{2.8}$.)

From this state map another grid was applied to each county. A transparency of this grid and Washtenaw County as an example follow on Page 69, Figure 5.

Use of localities was necessary because of the large size of the counties. Some residents of a county might reside within 20 miles of a community college, while others might reside more than 60 miles from a community college.

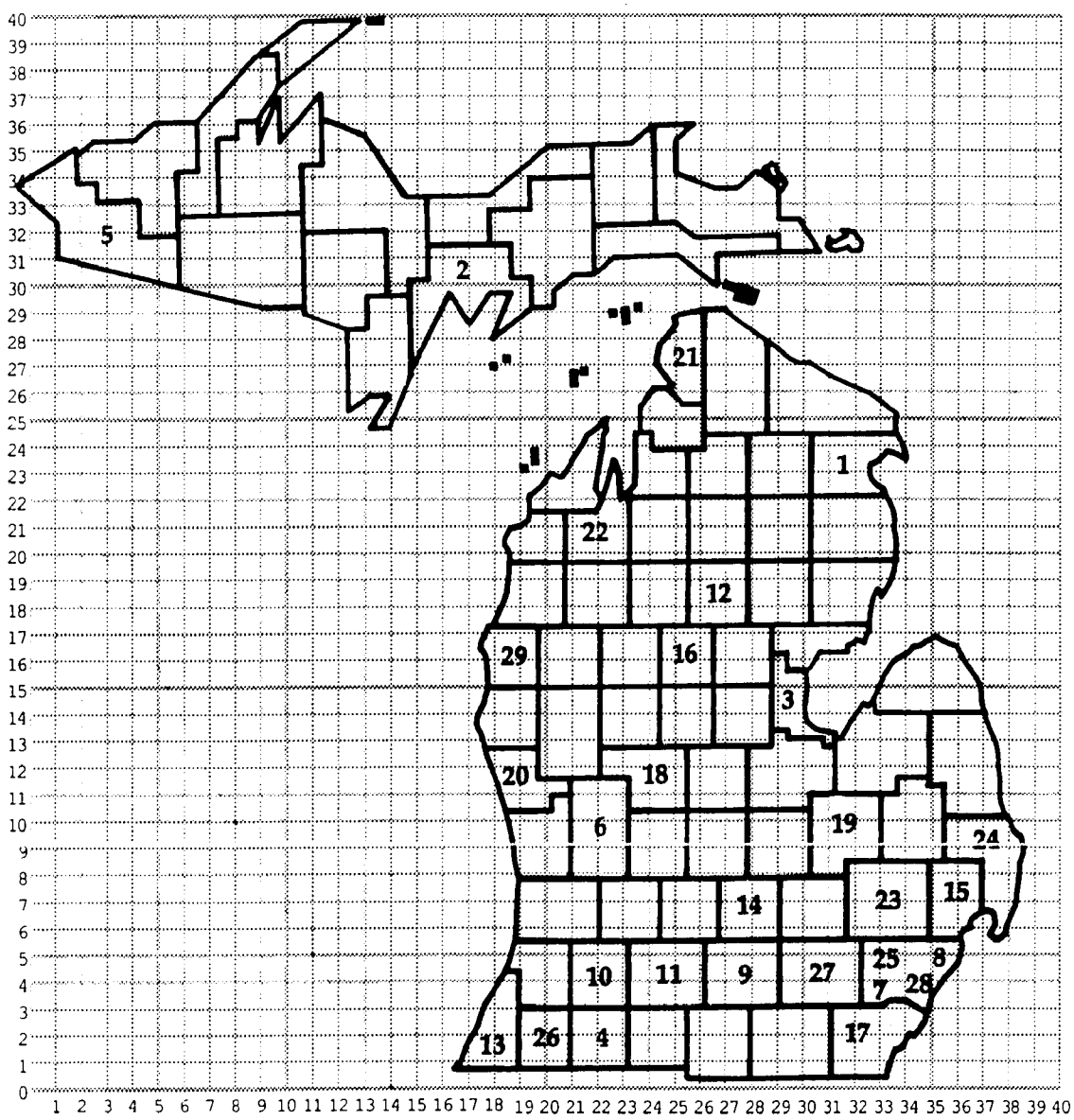


Figure 4

Michigan State Map and Grid Segment

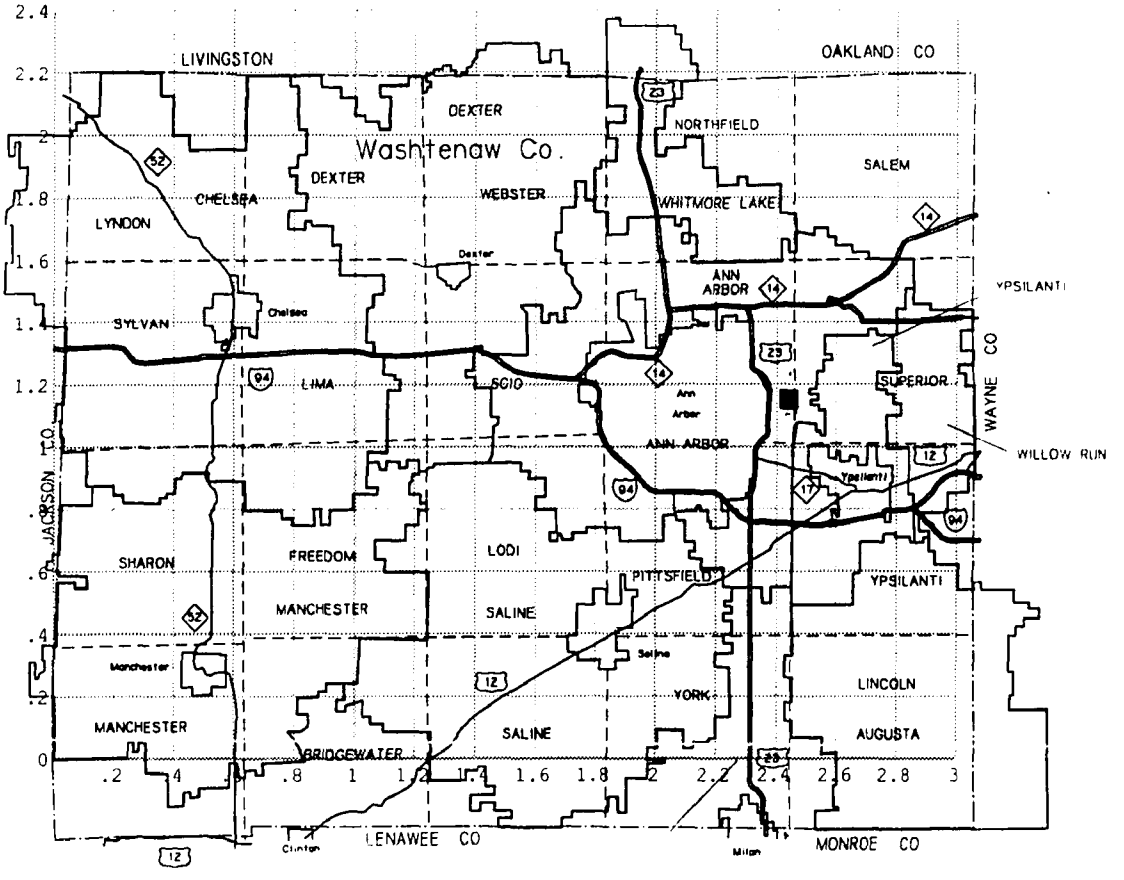


Figure 5

County Map and Grid Segment

Population statistics are available for localities (cities townships), and locality names are easily recognized.

Within Washtenaw County are 24 localities. This is higher than the average of 19 (1,627 localities in 83 counties). A copy of a county data input form is shown on Page 71, Figure 6. Worksheets were used for data entry--x,y locality coordinates; 1990 locality population; name of locality, and name of county in which locality is located. Counties were coded as the first two digits of a locality name, and the data were sorted during the processing on these two digits to group localities in the correct counties.

The point of a locality closest to the in-district community college or the nearest community college for a locality not in a community college district was used as the x,y coordinates.

Three community colleges have more than one campus: Macomb has three campuses all less than 5 miles apart, Oakland has five campuses 3 - 12 miles apart, and Wayne has five campuses 5 - 12 miles apart. For these three colleges the main campus was designated as the x,y coordinates. The short distances among the campuses is believed to be insignificant in determining accessibility; and if it were a factor, the main campus with the administrative offices is believed to be the most important location for access.

The scale on the state map grid is 10 linear miles for each x and y coordinate and 1/6" equals 10 miles. The scale

Data Input

Washtenaw County
Population: 282,937
Southwest Corner: X29.5, Y2.8

Population	Locality	X	Y
109,592	Ann Arbor city	31.9	4.2
3,793	Ann Arbor township	31.9	4.2
4,415	Augusta township	31.9	3.4
1,304	Bridgewater township	30.7	3.4
4,407	Dexter township	30.7	4.6
1,486	Freedom township	30.7	4.0
2,585	Lima township	30.7	4.2
3,902	Lodi township	31.3	4.1
2,228	Lyndon township	30.1	4.6
3,492	Manchester township	30.1	3.4
4,040	Milan city	31.8	2.9
6,732	Northfield township	31.9	4.6
17,668	Pittsfield township	31.9	4.0
3,734	Salem township	31.9	4.6
6,660	Saline city	31.4	3.6
1,276	Saline township	31.3	3.6
11,077	Scio township	31.3	4.2
1,366	Sharon township	30.1	4.0
8,720	Superior township	31.9	4.2
5,827	Sylvan township	30.1	4.4
3,235	Webster township	31.3	4.6
6,225	York township	31.9	3.4
24,846	Ypsilanti city	32.6	4.0
45,307	Ypsilanti township	31.9	4.0

Figure 6

Sample Data Input Form

on the county map grid remains 10 linear miles for each x and y coordinate, but 2 1/2" equals 10 miles, making the location of townships and cities more accurate.

Since the closest point of a township or city to a community college was used as the x,y coordinates, and the coordinates are 10 miles apart, it should be noted that a person within a locality could live from 0 to 10 miles from the coordinate point. Geographic townships are six miles square, but political townships vary. Cities and villages vary in size. The fact that a person may live on the farther side of a city or township is believed to be an insignificant factor in determining accessibility.

It also should be noted that distance was measured linearly; therefore, road mileage would vary. Again, because the coordinates are only 10 miles apart, it is believed that the road mileage differences over such a short interval would be insignificant for the purpose of this study.

Forty x and forty y coordinates at 10-mile intervals were charted to plot Michigan, which is 390 miles long and 373 miles wide.

Each community college was identified as an x,y coordinate. As an example, Washtenaw Community College is $x_{31.9}y_{4.2}$. The x,y coordinates and the state appropriations for each community college for 1990 were input to the computer program.

The computer program used three measurements of distance: Range A, 0 through 25 miles; Range B, 26 through 50 miles; and Range C, beyond 50 miles. The computer program was written to permit five ranges in the event the program is used for measuring other distances or in the event shorter ranges are desired for future research. The program will also permit varying values based on a decrease or an increase of distance within a range.

The computer program, "Distance.EXE," was written in dBase. The program was written to accept the inputs of x,y coordinates, funding and population, to sort the input data--combinations of 29 community colleges and 1,627 localities, and print out the distances between a locality and community college falling within Ranges A, B, and C. The output was then transferred to WordPerfect for report printing. The documentation for the computer program is included in Appendix C. Jeff Chaney, who wrote the program was employed in the Computer Information Services Department of Lake Superior State University until October, 1991, when he moved to Southeastern Michigan to work in computer programming for a private employer.

The output of the computer program lists in nine columns the localities by county, the distance from the community college/s, the name of community college/s within Range A and the name of community college/s within Range B, the amount of state funding for the community college/s, the per-capita value for Range A colleges and Range B colleges

for each locality, and the total per-capita value of state funding for the county.

The per-capita values for the individual localities have little meaning because of the small numbers in some of the townships and cities, but collectively the data by localities provide more accurate county data. The consideration of localities rather than a county as a whole takes into account that access to community colleges varies within a county.

The data were first sorted by counties and then by localities within each county. The county summary information is presented in a table in Chapter Four by counties. A county per-capita amount was calculated as a weighted average (percentage of people in a county residing within 50 miles of a community college (Ranges A and B).

The data were sorted again and printed by community college. This report was formulated into a summary table for inclusion in Chapter Four. This permitted the calculation of a per-capita amount for each community college of state funding based on the number of people living within 50 miles of the college (Ranges A and B). The summary chart by community college is in Chapter Four.

The number of residents within 50 miles was also compared with enrollment to determine enrollment at each of the community colleges as a percentage of population served (within 50 miles).

Counties Per-capita State Funding for Accessible Community Colleges

Research question three: What was the Michigan per-capita dollar amount of State funds for all 29 community colleges in Michigan in 1990?

This amount was calculated from the state total funding for community colleges and the total state population. These numbers were available from answering questions one and two. The State dollar amount per-capita of funding was needed to answer research questions four and five.

Research question four: What were the county per-capita amounts of State funds for each of the 83 counties in Michigan for 1990? What was the deviation from the State mean for each county?

The per-capita amounts of state funding for each of the counties were calculated by dividing the sum of the amounts of state funding provided to the community colleges within 50 miles of a county's population by the total county population. These values for each county were compared with the statewide mean. The deviation from the mean for each county was then calculated. An analysis of findings and tables in Chapter Four report the results.

Community Colleges Per-capita Funding for Populations with Access

Research question five: What was the per-capita funding of each of the 29 community colleges for populations within 25 miles and 50 miles of each college?

The per-capita values of state funding for each of the community colleges were taken from the computer printout showing the population within 25 miles and the population within 50 miles. The deviation from the statewide mean was calculated to compare the 29 schools. A comparative table and summary chart in Chapter Four show the results.

State Funding and Population shifts during the Last 20 Years Affecting Access

Research question six: Have any significant shifts occurred from 1970 to 1990 in state population distribution or state funding distribution which may have affected accessibility?

Counties with a 10 percent or greater change in population and colleges with a 10 percent or greater change in funding amount (after adjustment for percentage change for all schools' funding and state population) from 1970 to 1990 were listed. These changes were analyzed and are reported in Chapter Four. It was not within the scope of this research to analyze these changes in detail. Several other factors besides the population being served might affect the amounts of state funding; however, significant population shifts may have affected accessibility.

Chapter Five presents the conclusions from the findings. The conclusions summarize the comparative value of accessible community college services based on the location of a person's residence. It is believed that this information along with the background information of this

study may be of use to state decision makers in funding recommendations for community college services.

CHAPTER 4

Research Findings

Introduction

The problem of this study was to compare population distribution in Michigan with the distribution of State funding of community colleges. The purposes of the study were to determine accessibility of community colleges in Michigan using distance as a measure of access and to determine state funding as related to accessibility.

The research findings are presented in accordance with the research questions. The six research questions were classified and captioned as follows:

Michigan Community Colleges Operating Revenues
(Research Question I)

Michigan Population Distribution and Community College Access
(Research Question II)

Counties Per-capita State Funding for Accessible Community Colleges
(Research Questions III and IV)

Community Colleges Per-capita State Funding for Populations with Access
(Research Question V)

State Funding and Population Shifts during the Last 20 Years Affecting Access
(Research Question VI)

The research questions are answered through the use of tables and charts with required explanations and

pertinent discussion. The conclusions drawn from this information and recommendations follow in Chapter Five.

Michigan Community Colleges Operating Revenues

Research Question I: What dollar amounts of operating funds were received by each community college in Michigan in 1970, 1980, and 1990? Tables 1, 2, 3, and 4 on Pages 84 through 87 list the operating funds (general fund) received by each community college in 1970, 1980, and 1990.

The 1990 amounts were taken from the 1989-90 Activities Classification Structure Data Book (Michigan State Board of Education, 1990). The 1980 amounts were taken from raw data on a printout for 1979-80 obtained from the Community Colleges Unit of the Michigan Department of Education (Jenkins, 1991). The 1970 amounts were calculated from the 1970-71 Detail of Current Operations of the Executive Budget for the Fiscal Year ending June 30, 1971, (State of Michigan, 1971, pp. J61 - J65). The budget detail showed the budgeted amounts for 1970-71 and the change from 1969-70. The use of these figures for actual expenditures was verified with the Department of Management and Budget (Pawlovich, 1991). The percentages shown in all four tables were computer calculated and rounded to the nearest whole percent.

Summary calculations from Tables 1, 2, 3, and 4 show the following: In 1990 community colleges in Michigan received 95 percent of their operating revenues from three

major sources--the State, local taxes, and tuition. The revenue category, "other," including donations and foundation contributions and some federal funds for vocational education, provided 5 percent of their operating revenues in 1990. The three major sources accounted for 97 percent of operating revenues in 1980 and 94 percent in 1970.

Research Question I. A: What percentage of funding (general fund) for each school came from the State? Table 1 on Page 84 lists the amounts of State funding provided to each community college for operations. The amounts and percentages of total operating revenue received from the State by each of the 29 community colleges in 1970, 1980, and 1990 are listed. The wide ranges of variation among the colleges in 1970, 1980, and 1990 are evident.

State funding increased to 42% in 1970, 47% in 1980, and then decreased to 38% in 1990. The percentage of change from 1980 to 1990 (9%) was compensated by an increase of 4% from tuition, 2% from local tax operating revenues, and 2% from "other" sources.

Research Question I. B: What percentages of funding for each school came from sources other than the State (local tax, tuition, and "other")? Table 2, Page 85, lists the amounts and percentages of funding received from local taxes; Table 3, Page 86, lists the amounts and percentages of funding from tuition; and Table 4, Page 87, lists the amounts and percentages from "other" sources.

The percentages of revenue from each of the sources for the State as a whole have varied only from three to nine percent during the past 20 years, but among the schools the range is great. Pie charts, Figure 7 on Page 88, compare the revenue sources for the State as a whole for 1970, 1980, and 1990. Bar charts, Figures 8, 9, and 10, on Pages 89 through 91 show the variance among the schools in revenue sources for 1970, 1980, and 1990 (data from Tables 1, 2, and 3).

Table 2 shows operating millage only. Some colleges are supported by separate millage factors for buildings and site or for debt retirement. In 1990 eight colleges had .5 mill or less for buildings and site, and 20 colleges had from .06 to .75 mill for debt retirement (Michigan State Board of Education, 1990, p. 48).

The analyses at the bottom of Tables 1, 2, and 3, show the wide ranges among the colleges in sources of revenue. The final measure, the Coefficient of Variation, compares for 1970, 1980, and 1990, the degree of variability among the colleges. The Coefficient of Variation expresses the standard deviation as a percentage of the mean to compare the variation of two sets of data with different means (VanMatre and Gilbreath, 1983).

Local tax support had the greatest variation among the 29 community colleges: from Table 2, Page 85, a range of 44 in 1990 (4% to 48%), a range of 42 in 1980 (3% to 45%), and a range of 30 in 1970 (7% to 39%).

An increase in variability is evident among the schools in State funding comparing 1970, 1980, and 1990, but it is second to local tax support. From Table 1, Page 84, State funding had a range of 43 in 1990 (21% to 64%), a range of 35 in 1980 (34% to 69%), and a range of 34 in 1970 (25% to 59%).

The least amount of variation among the colleges' three main operating revenue sources is tuition; still, from 1980 to 1990 the variation increased. The ranges of support from tuition can be seen in Table 3, Page 86: a range of 23 in 1990 (15% to 38%), a range of 18 in 1980 (17% to 35%), and a range of 25 in 1970 (21% to 46%).

Research Question I. C: What percentage of students for each school paid "in-district" tuition? The in-district and out-of-district tuition figures and percentages of enrollment for 1970 and 1990 follow on Page 92, Table 5. This information supplements Table 3, and partially substantiates the greater variation in tuition revenue among the colleges in 1990 than in 1970. Figure 11 on Page 93 charts the variation. In-district enrollment in 1990 ranged from 16% to 96%, with a State mean of 70%.

Table 6, Page 94, compares FYES (fiscal year equated students) and total headcount in 1990. These figures are analyzed later in Table 15 which compares FYES and total headcount to the percentage of population being served (Research Question III), but alone the numbers in Table 6

show the number of students comprising an "FYES." The high number of part-time students is significant when considering the issue of accessibility. The range of headcount per FYES is wide, 1.94 to 5.44. The range is less significant than the fact that in 1990 it took from 1.94 students to 5.44 students to comprise a full-time student (31 semester credits).

For the purposes of this study, headcount is important; it represents number of students, a figure which can be directly compared to the population. Both FYES and total headcount were used in the comparison of enrollment as a percentage of population served which follows and relates to Research Question III as well as Question I. C.

The 1990 amounts in Tables 5 and 6 and Figure 11 were taken from the 1989-90 Activities Classification Structure Data Book (Michigan State Board of Education, 1990); 1970 amounts were calculated from the 1970-71 Detail of Current Operations of the Executive Budget, Fiscal Year ending June 30, 1971,(State of Michigan, 1971, pp. J61-J65).

[Text continued on Page 95.]

Table 1

Michigan Community Colleges Revenue from State Funding

Name of College	Total Revenue (thousands)			State Funding (thousands)					
	1990	1980	1970	1990	%	1980	%	1970	%
Alpena	$6,494	$3,391	$1,197	$3,090	48%	$1,930	57%	$511	43%
Bay de Noc	5,935	2,486	791	2,561	43%	1,465	59%	420	53%
Delta	28,422	16,281	5,406	9,125	32%	5,539	34%	1,817	34%
Glen Oaks	4,500	2,069	963	1,313	29%	843	41%	495	51%
Gogebic	4,546	2,655	605	2,904	64%	1,843	69%	356	59%
Grand Rapids	30,266	13,321	4,007	12,609	42%	7,151	54%	1,937	48%
Henry Ford	34,694	19,129	6,780	14,386	41%	9,830	51%	3,083	45%
Highland Park	7,975	5,638	3,380	5,029	63%	3,426	61%	1,533	45%
Jackson	17,884	9,860	3,056	8,784	49%	5,754	58%	1,584	52%
Kalamazoo	16,485	7,709	1,682	6,032	37%	3,575	46%	421	25%
Kellogg	13,941	6,929	2,317	5,570	40%	3,345	48%	1,132	49%
Kirtland	4,567	2,602	504	2,114	46%	1,450	56%	198	39%
Lake Michigan	10,419	4,652	1,631	3,023	29%	1,813	39%	657	40%
Lansing	51,580	23,019	4,715	19,945	39%	11,728	51%	2,024	43%
Macomb	58,503	28,859	11,082	22,108	38%	14,304	50%	4,145	37%
Mid Michigan	5,475	2,720	562	2,415	44%	1,515	56%	288	51%
Monroe	10,742	4,008	1,796	2,226	21%	1,423	36%	738	41%
Montcalm	6,098	2,162	823	2,042	33%	1,341	62%	317	39%
Mott	28,407	15,684	6,466	10,067	35%	6,531	42%	2,392	37%
Muskegon	13,588	7,651	3,050	5,878	43%	4,062	53%	997	33%
North Central	4,419	2,422	640	1,854	42%	1,155	48%	308	48%
Northwestern	14,217	5,577	1,330	5,254	37%	3,048	55%	582	44%
Oakland	58,444	26,879	12,762	15,048	26%	9,011	34%	5,302	42%
St. Clair	12,278	6,707	2,736	4,602	37%	3,039	45%	1,468	54%
Schoolcraft	26,166	12,535	4,662	7,471	29%	5,116	41%	1,949	42%
Southwestern	6,874	3,498	1,007	3,634	53%	2,002	57%	499	50%
Washtenaw	27,189	12,083	3,947	6,773	25%	4,079	34%	1,448	37%
Wayne	36,020	27,464	2,745	22,224	62%	15,333	56%	1,477	54%
West Shore	4,895	2,396	444	1,399	29%	946	39%	139	31%
Totals	$551,023	$280,386	$91,086	$209,480	38%	$132,597	47%	$38,217	42%

ANALYSIS

	1990	1980	1970
RANGE	43 (21-64%)	35 (34-69%)	34 (25-59%)
MEAN μ	38	47	42
SUM OF SQUARED DEVIATIONS $\Sigma(X - \mu)^2$	3,738	2,690	1,732
VARIANCE σ^2	128.90	92.75	59.72
STANDARD DEVIATION σ	11.35	9.63	7.73
COEFFICIENT OF VARIATION V	29.86	27.51	22.74

Table 2

Michigan Community Colleges Revenue from Local Tax with Operating Millage

Name of College	Total Revenue (thousands)			Local Tax Revenue (thousands)								
	1990	1980	1970	1990	%	Mills *	1980	%	Mills *	1970	%	Mills *
Alpena	$6,494	$3,391	$1,197	$1,042	16%	2.500	$0	0%	1.500 **	$246	20%	1.800
Bay de Noc	5,935	2,486	791	854	14%	1.815	501	20%	1.900	90	11%	1.100
Delta	28,422	16,281	5,406	8,734	31%	1.600	6,283	39%	1.600	1,535	28%	0.900
Glen Oaks	4,500	2,069	963	2,100	46%	3.000	675	33%	1.500	143	15%	0.700
Gogebic	4,546	2,655	605	559	12%	1.500	179	7%	1.473	46	7%	1.500
Grand Rapids	30,266	13,321	4,007	5,271	17%	2.917	2,147	16%	2.200	862	21%	1.310
Henry Ford	34,694	19,129	6,780	5,447	16%	2.219	3,312	17%	2.150	1,779	26%	2.120
Highland Park	7,975	5,638	3,380	289	4%	1.600	148	3%	1.000	322	9%	1.840
Jackson	17,884	9,860	3,056	1,993	11%	1.303	1,321	13%	1.330	612	20%	1.330
Kalamazoo	16,485	7,709	1,682	5,062	31%	2.500	1,952	25%	1.200	597	35%	0.750
Kellogg	13,941	6,929	2,317	4,310	31%	2.950	1,977	29%	1.775	262	11%	1.400
Kirtland	4,567	2,602	504	1,020	22%	1.000	610	23%	0.979	166	32%	1.000
Lake Michigan	10,419	4,652	1,631	4,592	44%	1.721	1,605	35%	1.000	483	29%	0.840
Lansing	51,580	23,019	4,715	13,124	25%	2.839	4,631	20%	2.000	1,132	24%	1.000
Macomb	58,503	28,859	11,082	14,099	24%	1.330	5,691	20%	1.000	2,484	22%	1.000
Mid Michigan	5,475	2,720	562	929	17%	1.500	486	18%	1.231	134	23%	1.050
Monroe	10,742	4,008	1,796	6,543	61%	2.250	1,754	44%	1.241	535	30%	1.250
Montcalm	6,098	2,162	823	1,230	20%	1.750	355	16%	0.835	161	19%	1.000
Mott	28,407	15,684	6,466	7,719	27%	1.400	4,766	30%	NA	1,344	21%	1.600
Muskegon	13,588	7,651	3,050	3,740	27%	2.400	1,932	25%	2.020	1,125	37%	2.500
North Central	4,419	2,422	640	996	22%	1.750	541	22%	0.989	66	10%	0.750
Northwestern	14,217	5,577	1,330	2,245	16%	2.000	546	10%	0.968	101	7%	0.800
Oakland	58,444	26,879	12,762	20,065	34%	1.000	9,500	35%	0.979	3,956	31%	1.000
St. Clair	12,278	6,707	2,736	3,371	27%	1.500	1,856	28%	1.495	398	14%	0.800
Schoolcraft	26,166	12,535	4,662	10,287	39%	2.270	4,118	33%	1.770	1,192	25%	1.120
Southwestern	6,874	3,498	1,007	973	14%	1.500	403	12%	1.000	131	13%	1.000
Washtenaw	27,189	12,083	3,947	13,194	48%	2.950	5,428	45%	2.250	1,224	31%	1.250
Wayne	36,020	27,464	2,745	3,669	10%	0.250	2,807	10%	0.250	0	0%	0.000
West Shore	4,895	2,396	444	2,266	46%	2.250	921	38%	1.453	124	27%	0.680
Totals	$551,023	$280,386	$91,086	$145,723	26%		$66,445	24%		$21,250	23%	

* Operating Mills Only

** Alpena local funding in 1980 was shown in "other" and as a part of State funding because of a change from K-14 to a community college district during the year. The sum of the percentages from state, tuition, and "other" is 100.

ANALYSIS

	1990	1980	1970
RANGE	44 (4-48%)	42*(3-45%)	30*(7-39%)
MEAN μ	26	24	23
SUM OF SQUARED DEVIATIONS $\Sigma(X-\mu)^2$	5,128	3,415	1,973
VARIANCE σ^2	176.83	121.96	70.46
STANDARD DEVIATION σ	13.30	11.04	8.39
COEFFICIENT OF VARIATION V	51.15	39.44	29.97
		*ALPENA EXCLUDED	*WAYNE EXCLUDED

Table 3

Michigan Community Colleges Revenue from Tuition

Name of College	Total Revenue (thousands)			District Tuition (thousands)					
	1990	1980	1970	1990	%	1980	%	1970	%
Alpena	$6,494	$3,391	$1,197	$2,123	33%	$914	27%	$322	27%
Bay de Noc	5,935	2,486	791	2,244	38%	520	21%	167	21%
Delta	28,422	16,281	5,406	10,021	35%	4,137	25%	1,456	27%
Glen Oaks	4,500	2,069	963	893	20%	438	21%	321	33%
Gogebic	4,546	2,655	605	749	16%	561	21%	166	27%
Grand Rapids	30,266	13,321	4,007	11,027	36%	3,558	27%	1,176	29%
Henry Ford	34,694	19,129	6,780	12,983	37%	5,383	28%	1,591	23%
Highland Park	7,975	5,638	3,380	2,497	31%	1,595	28%	1,042	31%
Jackson	17,884	9,860	3,056	5,260	29%	2,545	26%	719	23%
Kalamazoo	16,485	7,709	1,682	4,299	26%	1,836	24%	636	38%
Kellogg	13,941	6,929	2,317	3,177	23%	1,607	23%	750	32%
Kirtland	4,567	2,602	504	1,107	24%	455	17%	112	22%
Lake Michigan	10,419	4,652	1,631	2,008	19%	949	20%	436	27%
Lansing	51,580	23,019	4,715	16,374	32%	6,186	27%	1,375	29%
Macomb	58,503	28,859	11,082	19,990	34%	7,833	27%	4,080	37%
Mid Michigan	5,475	2,720	562	1,931	35%	666	24%	140	24%
Monroe	10,742	4,008	1,796	1,591	15%	719	18%	445	25%
Montcalm	6,098	2,162	823	1,365	22%	393	18%	234	28%
Mott	28,407	15,684	6,466	8,644	30%	4,167	27%	1,730	27%
Muskegon	13,588	7,651	3,050	3,173	23%	1,357	18%	801	26%
North Central	4,419	2,422	640	1,147	26%	501	21%	195	30%
Northwestern	14,217	5,577	1,330	5,662	40%	1,936	35%	549	41%
Oakland	58,444	26,879	12,762	20,867	36%	7,503	28%	3,113	24%
St. Clair	12,278	6,707	2,736	4,008	33%	1,639	24%	718	26%
Schoolcraft	26,166	12,535	4,662	7,701	29%	3,036	24%	1,318	28%
Southwestern	6,874	3,498	1,007	1,997	29%	929	27%	342	34%
Washtenaw	27,189	12,083	3,947	5,705	21%	2,119	18%	967	24%
Wayne	36,020	27,464	2,745	7,758	22%	8,296	30%	1,268	46%
West Shore	4,895	2,396	444	766	16%	421	18%	112	25%
Totals	$551,023	$280,386	$91,086	$167,067	30%	$72,199	26%	$26,281	29%

ANALYSIS

	1990	1980	1970
RANGE	23 (15-38)	18 (17-35)	25*(21-41)
MEAN μ	30	26	29
SUM OF SQUARED DEVIATIONS $\Sigma(X - \mu)^2$	1,827	678	676
VARIANCE σ^2	63	23.38	24.14
STANDARD DEVIATION σ	7.93	4.84	4.91
COEFFICIENT OF VARIATION V	27.36	16.67	17.55

*WAYNE EXCLUDED (SEE TABLE 2)

Table 4

Michigan Community Colleges Revenue from Other Sources

Name of College	Total Revenue (thousands)			Other Revenue (thousands)					
	1990	1980	1970	1990	%	1980	%	1970	%
Alpena	$6,494	$3,391	$1,197	$239	4%	$547	16%	$118	10%
Bay de Noc	5,935	2,486	791	276	5%	0	0%	114	14%
Delta	28,422	16,281	5,406	542	2%	322	2%	598	11%
Glen Oaks	4,500	2,069	963	194	4%	113	5%	4	0%
Gogebic	4,546	2,655	605	334	7%	72	3%	37	6%
Grand Rapids	30,266	13,321	4,007	1,359	4%	465	3%	32	1%
Henry Ford	34,694	19,129	6,780	1,878	5%	604	3%	327	5%
Highland Park	7,975	5,638	3,380	160	2%	469	8%	483	14%
Jackson	17,884	9,860	3,056	1,847	10%	240	2%	141	5%
Kalamazoo	16,485	7,709	1,682	1,092	7%	346	4%	28	2%
Kellogg	13,941	6,929	2,317	884	6%	0	0%	173	7%
Kirtland	4,567	2,602	504	326	7%	87	3%	28	5%
Lake Michigan	10,419	4,652	1,631	796	8%	285	6%	55	3%
Lansing	51,580	23,019	4,715	2,137	4%	474	2%	184	4%
Macomb	58,503	28,859	11,082	2,306	4%	1,031	4%	373	3%
Mid Michigan	5,475	2,720	562	200	4%	53	2%	0	0%
Monroe	10,742	4,008	1,796	382	4%	112	2%	78	4%
Montcalm	6,098	2,162	823	1,461	24%	73	3%	111	13%
Mott	28,407	15,684	6,466	1,977	7%	220	1%	1,000	15%
Muskegon	13,588	7,651	3,050	797	6%	300	4%	127	4%
North Central	4,419	2,422	640	422	9%	225	9%	71	11%
Northwestern	14,217	5,577	1,330	1,056	7%	47	1%	98	7%
Oakland	58,444	26,879	12,762	2,464	4%	865	3%	391	3%
St. Clair	12,278	6,707	2,736	297	2%	173	2%	152	6%
Schoolcraft	26,166	12,535	4,662	707	3%	265	2%	203	4%
Southwestern	6,874	3,498	1,007	270	4%	164	5%	35	3%
Washtenaw	27,189	12,083	3,947	1,517	6%	457	3%	308	8%
Wayne	36,020	27,464	2,745	2,369	7%	1,028	5%	0	0%
West Shore	4,895	2,396	444	464	9%	108	4%	69	15%
Totals	$551,023	$280,386	$91,086	$28,753	5%	$9,145	3%	$5,338	6%

Revenue Sources

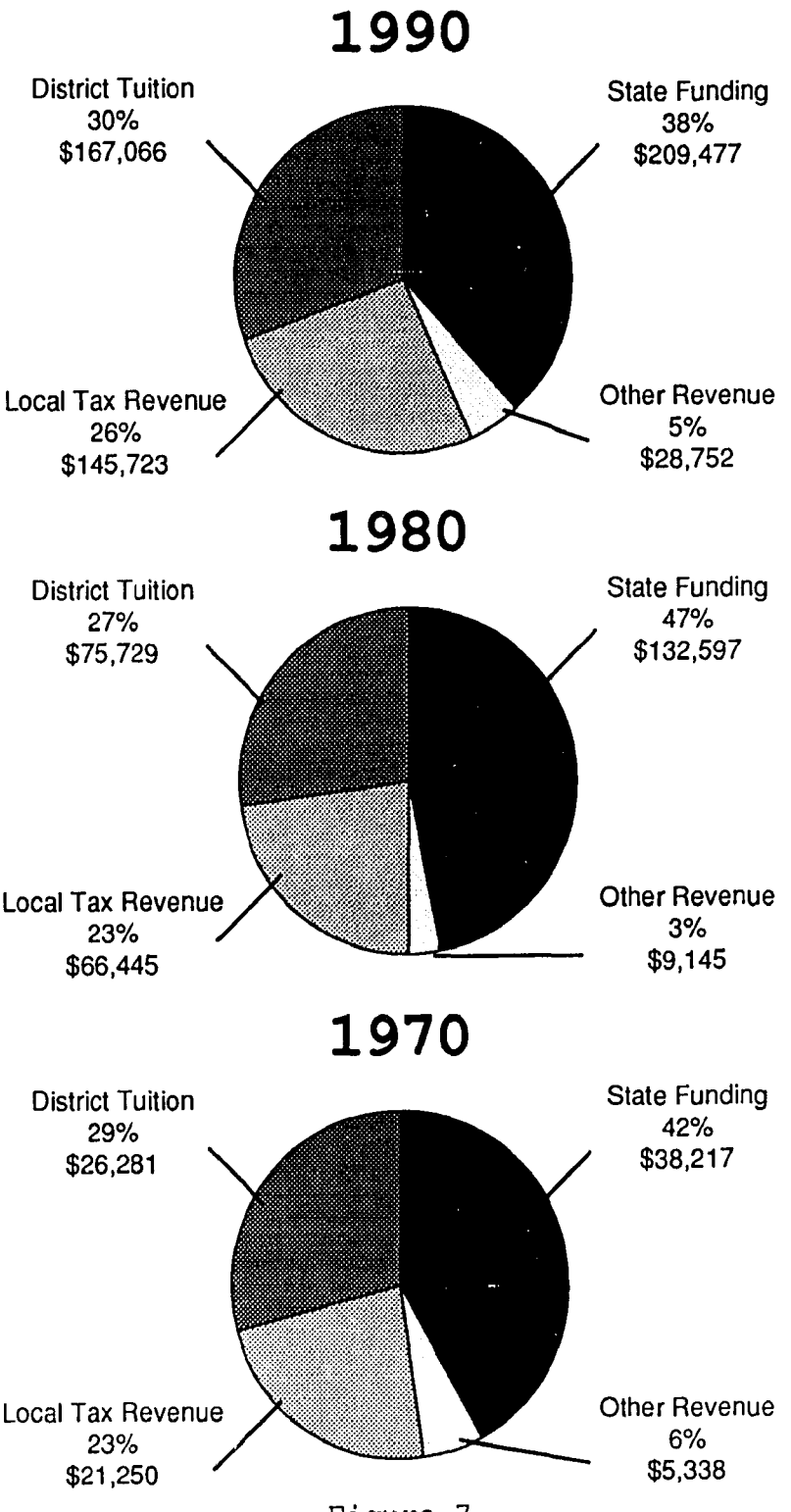


Figure 7

Community Colleges Revenue Sources, 1990, 1980, 1970

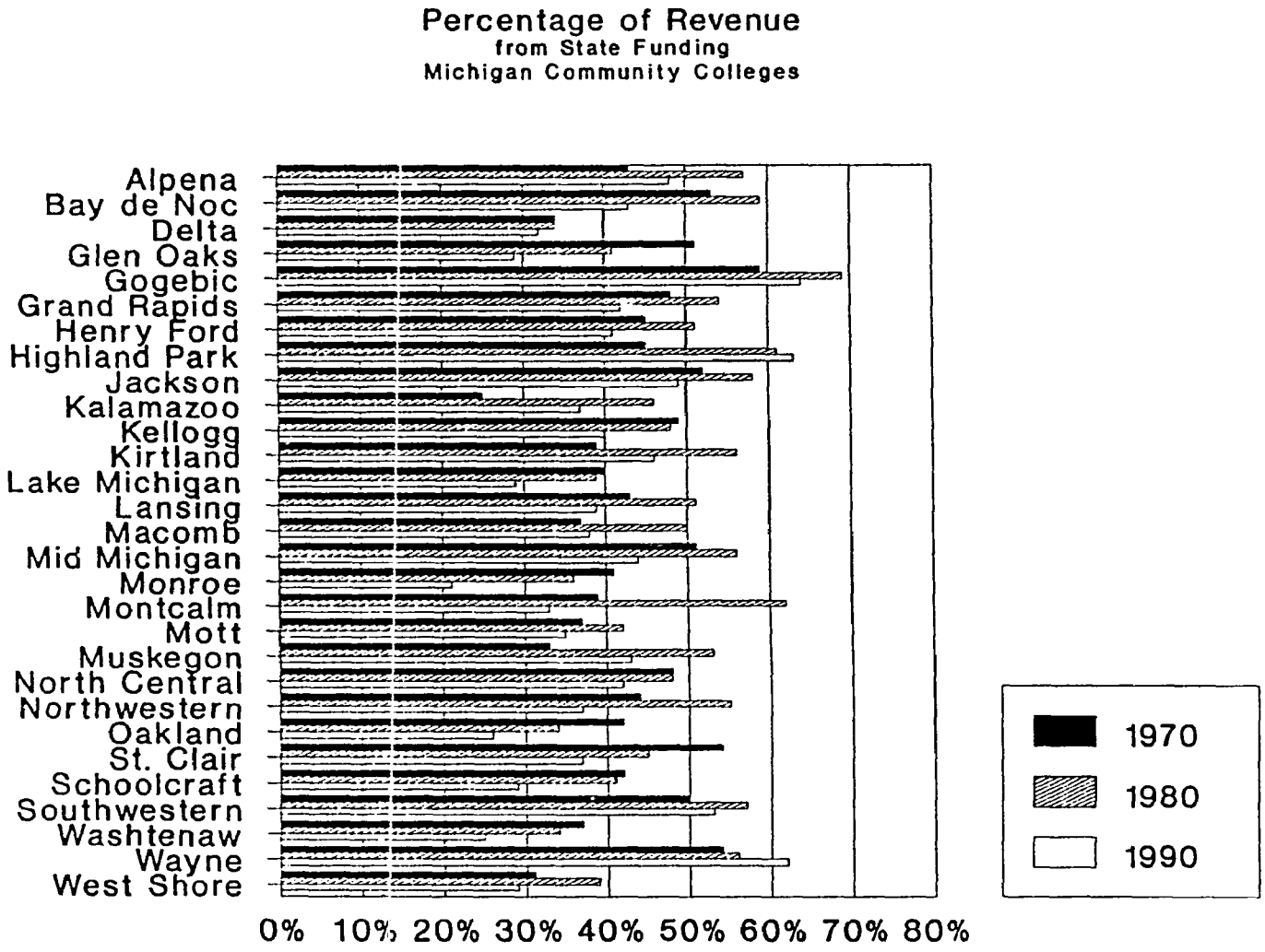


Figure 8

Michigan Community Colleges State Funding Revenues Comparisons

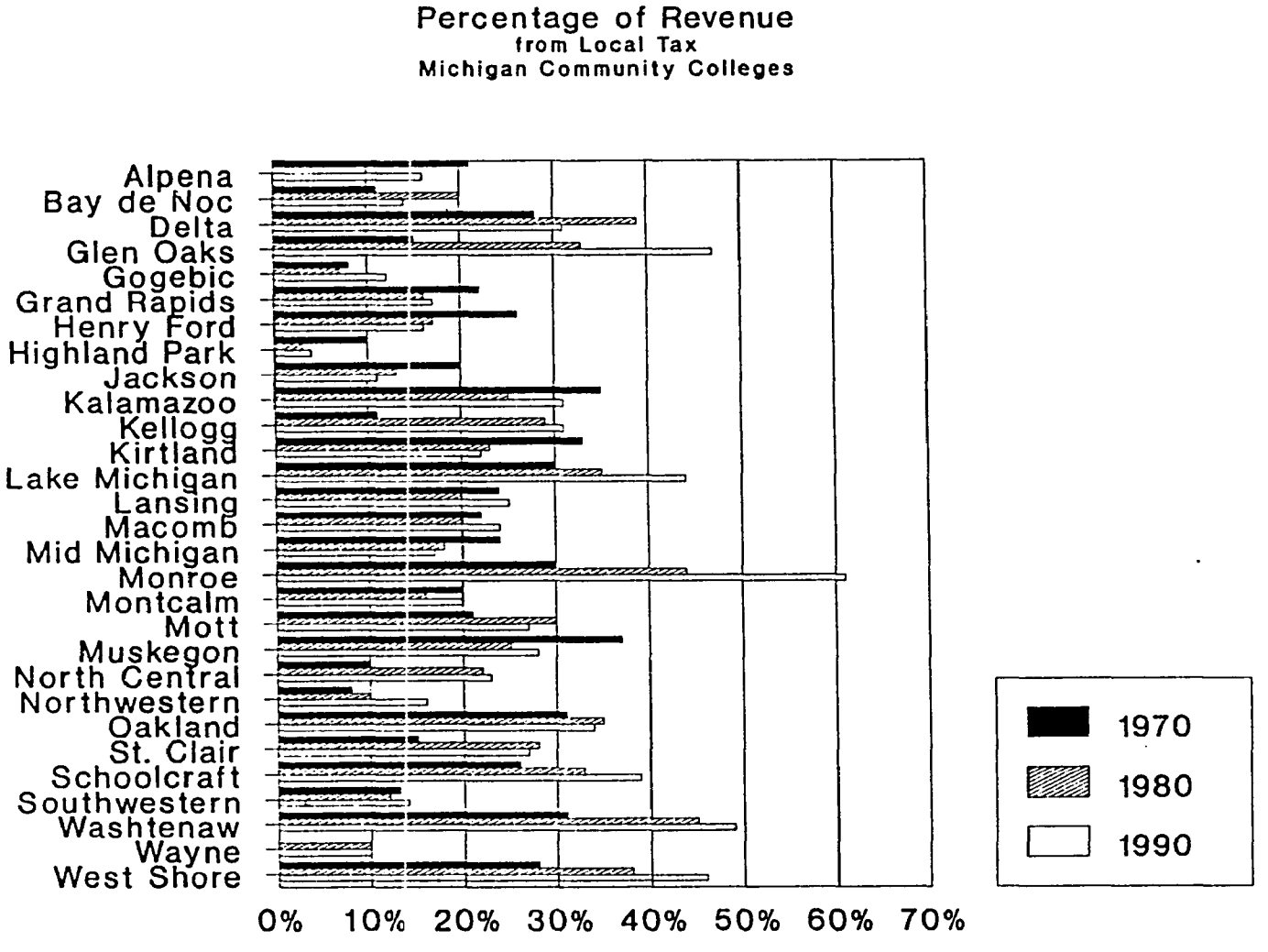


Figure 9

Michigan Community Colleges Local Tax Revenues Comparisons

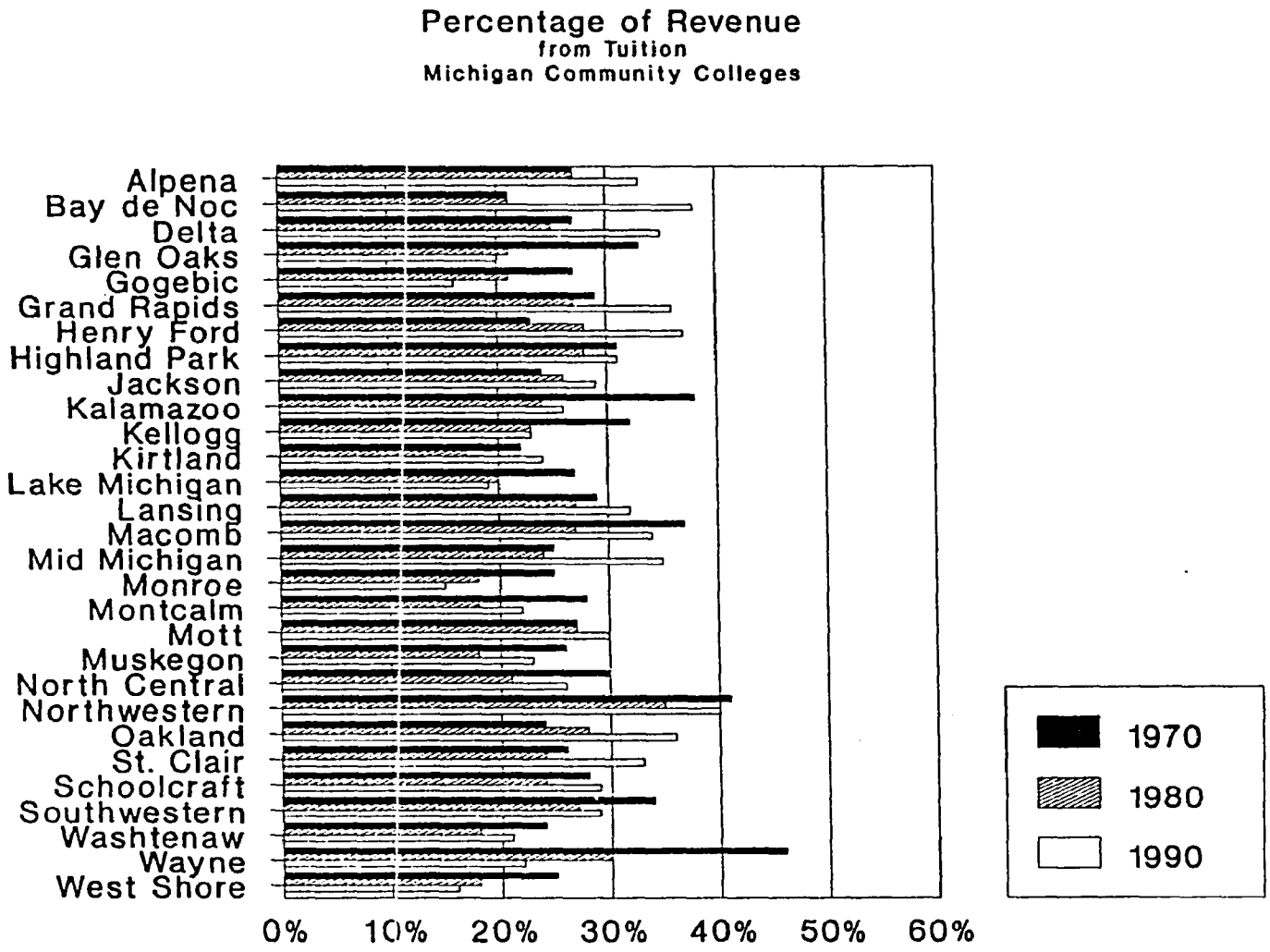


Figure 10

Michigan Community Colleges Tuition Revenues Comparison

Table 5

Twenty-year Comparison of In-district and Out-of-district Enrollment and Tuition

	1990				1970			
Name of College	% In District	Total FYES	In District Tuition	Out of District Tuition	% In District	Total FYES	In District Tuition	Out of District Tuition
Alpena	55.5%	1,445	$33.00	$45.00	59.0%	896	$10.00	$20.00
Bay de Noc	58.8%	1,603	35.00	48.50	78.8%	631	10.00	15.00
Delta	91.3%	7,054	40.00	59.00	90.3%	4,013	10.00	20.00
Glen Oaks	89.1%	788	30.00	44.00	80.5%	623	10.00	20.00
Gogebic	52.4%	749	22.00	34.00	76.4%	525	10.00	15.00
Grand Rapids	32.4%	6,987	37.00	57.00	58.3%	4,128	10.00	20.00
Henry Ford	18.7%	7,571	34.00	48.00	49.0%	6,007	10.00	20.00
Highland Park	16.4%	1,314	40.00	50.00	13.9%	2,699	10.00	20.00
Jackson	57.8%	2,970	37.00	47.00	84.1%	2,221	16.00	24.00
Kalamazoo	80.0%	4,849	25.00	46.00	78.8%	1,370	10.00	20.00
Kellogg	73.9%	2,886	26.50	44.53	78.0%	1,818	11.00	18.50
Kirtland	71.2%	846	30.00	42.50	98.4%	138	10.00	15.00
Lake Michigan	86.2%	1,728	30.00	40.00	94.3%	1,482	10.00	20.00
Lansing	66.0%	12,087	33.00	46.50	75.9%	4,040	10.50	19.50
Macomb	86.8%	14,335	36.00	57.00	75.0%	10,100	10.00	20.00
Mid Michigan	53.0%	1,351	32.00	48.00	58.7%	400	10.00	15.00
Monroe	88.3%	1,754	23.00	34.00	71.6%	1,162	10.00	20.00
Montcalm	43.2%	1,136	30.00	45.00	85.2%	572	11.00	16.00
Mott	89.5%	5,902	38.00	45.00	92.6%	4,366	10.00	20.00
Muskegon	71.9%	2,811	32.00	53.00	82.0%	2,565	10.00	20.00
North Central	40.9%	923	33.50	42.50	46.1%	570	10.00	15.00
Northwestern	49.6%	3,136	39.00	64.50	51.3%	1,129	16.20	20.60
Oakland	85.6%	15,965	35.00	59.00	82.4%	8,580	10.00	20.00
St. Clair	78.4%	2,567	37.00	58.00	74.2%	2,264	12.00	17.00
Schoolcraft	65.6%	5,338	33.50	47.00	68.0%	3,745	10.00	20.00
Southwestern	40.6%	1,717	32.00	42.00	54.0%	701	12.00	18.00
Washtenaw	73.7%	5,300	31.00	48.00	77.0%	2,489	12.50	25.00
Wayne	96.2%	5,500	35.00	52.50	95.0%	3,064	10.00	15.00
West Shore	93.0%	722	30.00	46.00	92.2%	224	12.00	19.50

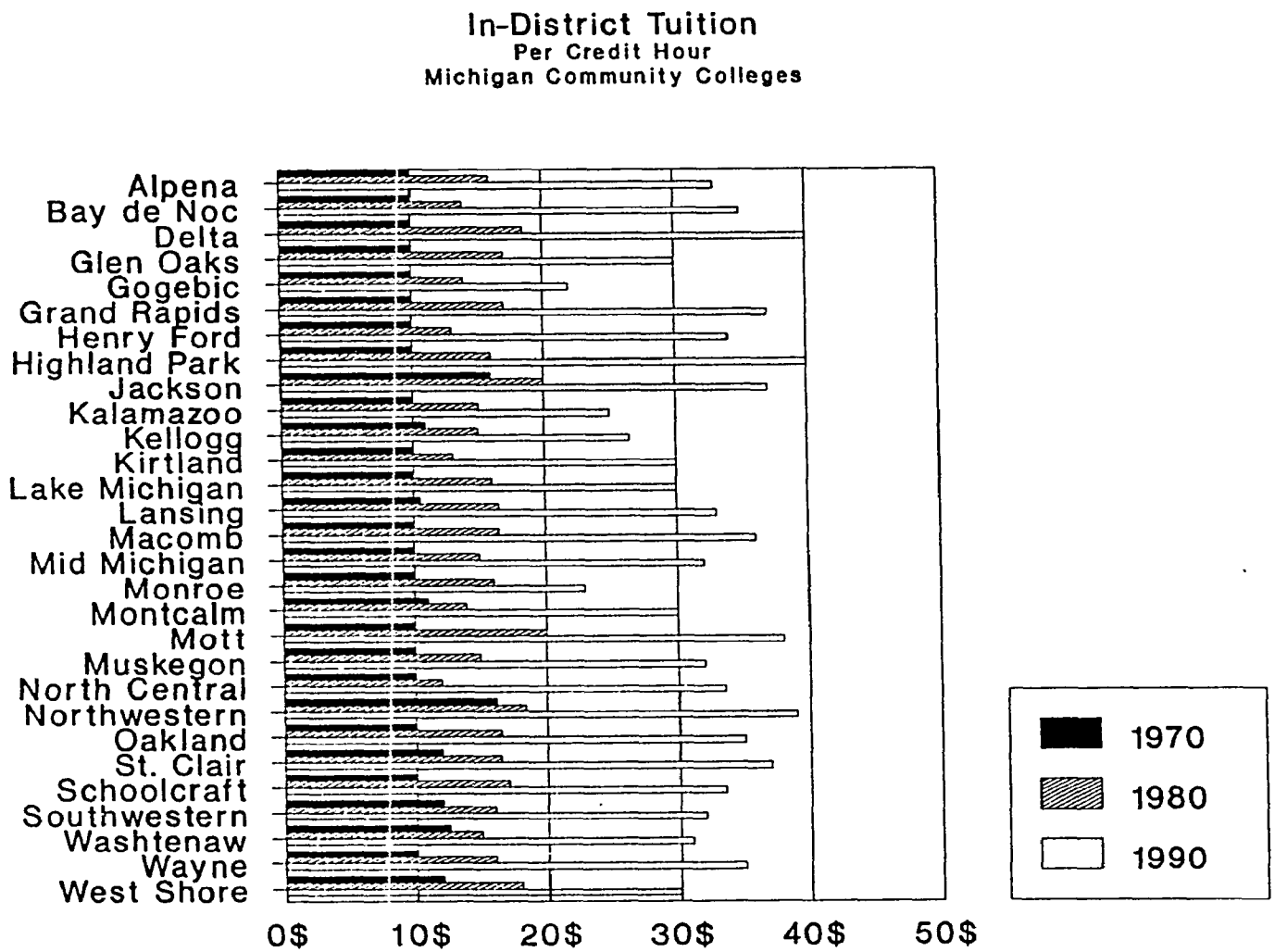


Figure 11

Comparison of In-District Tuition rates for 1970, 1980, and 1990

Table 6

1990 Comparison of FYES and Total Headcount

Name of College	FYES	Total Headcount	Headcount per FYES
Alpena	1,445	3,843	2.66
Bay de Noc	1,603	3,664	2.29
Delta	7,054	17,399	2.47
Glen Oaks	788	2,280	2.89
Gogebic	749	1,450	1.94
Grand Rapids	6,987	26,574	3.80
Henry Ford	7,571	23,729	3.13
Highland Park	1,314	6,278	4.78
Jackson	2,970	12,905	4.35
Kalamazoo	4,849	16,854	3.48
Kellogg	2,886	13,201	4.57
Kirtland	846	2,654	3.14
Lake Michigan	1,728	7,768	4.50
Lansing	12,087	48,071	3.98
Macomb	14,335	50,410	3.52
Mid Michigan	1,351	4,839	3.58
Monroe	1,754	7,359	4.20
Montcalm	1,136	6,176	5.44
Mott	5,902	23,960	4.06
Muskegon	2,811	10,995	3.91
North Central	923	2,733	2.96
Northwestern	3,136	12,742	4.06
Oakland	15,965	51,424	3.22
St. Clair	2,567	11,388	4.44
Schoolcraft	5,338	25,497	4.78
Southwestern	1,717	5,215	3.04
Washtenaw	5,300	21,309	4.02
Wayne	5,500	17,788	3.23
West Shore	722	1,855	2.57

Michigan Population Distribution and Community College Access

Research Question II: What was the population distribution by county and localities in 1990? The locations (x,y coordinates) of each of the community colleges and each of the localities in Michigan were entered into the computer. Table 8 on Pages 97 through 104 lists county populations in the second column. Tables 9, 10, and 11 on Pages 105 through 136 list the populations of the individual localities in the third column.

The populations of counties and localities were used to answer Research Questions II. A.: To which community college/s in 1990 did the residents of each county and the localities have access within 25 miles? And, Research Question II. B.: To which community college/s in 1990 did the residents of each county and the localities have access within 50 miles? Tables 9, 10, and 11 list each of the localities first without a community college within 50 miles (Table 9), next with a community college between 25 miles and 50 miles (Table 10), and last with a community college within 25 miles of residence (Table 11).

Sixteen of the eighty-three counties in Michigan have some localities without a community college within 50 miles (Table 9, Range C). Forty-two of the eighty-three counties in Michigan have some localities with community colleges beyond 25 linear miles but within 50 miles only (Table 10, Range B).

The localities with less accessibility are those with lower populations, accounting for only 7.3 percent of the State's population. Range C is comprised of 124 localities; Range B, 298 localities. Together Ranges B and C (422) account for 26 percent of the 1,627 localities of Michigan beyond 25 linear miles of a community college.

Table 7 below summarizes accessibility for the state. Tables 9, 10, and 11 on Pages 105 through 136 show the counties and localities in each Range.

Table 7

Michigan Community College Accessibility

	Population	Percent
Range A (within 25 miles)	8,624,609	92.7
Range B (26 to 50 miles)	456,651	4.9
Range C (beyond 50 miles)	214,037	2.4
Total population	9,295,297	100%

Each of the 83 Michigan counties, the county populations, and the percentages of populations in both Ranges A and B (within 50 miles) are listed in Table 8 on Pages 97 through 104.

Distance was measured linearly; road mileage distances vary and should be considered in data interpretation. In three instances, airline/linear mileage made a significant

[Text continued on Page 137.]

Table 8

State Community College Funding by County - Summary

County	Population	Per Capita Value of Accessible State Funding	Contributing Schools	State Funding	% of Pop.
Alcona	10,145	$310.58	Alpena	$3,090,394	100%
			Kirtland	2,113,575	3
Alger	8,972	268.64	Bay De Noc	2,561,277	94
Allegan	90,509	396.92	Glen Oaks	1,312,600	66
			Grand Rapids	12,608,479	100
			Kalamazoo	6,032,017	100
			Kellogg	5,570,050	100
			Lake Michigan	3,022,625	60
			Lansing	19,944,700	22
			Montcalm	2,041,625	16
			Muskegon	5,877,650	28
			Southwestern	3,634,363	75
Alpena	30,605	100.98	Alpena	3,090,394	100
Antrim	18,185	438.09	Kirtland	2,113,575	41
			North Central	1,854,000	100
			Northwestern	5,253,822	100
Arenac	14,931	342.64	Alpena	3,090,394	16
			Delta	9,124,620	37
			Kirtland	2,113,575	49
			Mid Michigan	2,415,100	8
Baraga	7,954	0.00			
Barry	50,057	1,005.12	Glen Oaks	1,312,600	47
			Grand Rapids	12,608,479	90
			Jackson	8,783,500	58
			Kalamazoo	6,032,017	100
			Kellogg	5,570,050	100
			Lansing	19,944,700	100
			Montcalm	2,041,625	53
			Southwestern	3,634,363	19
Bay	111,723	185.81	Delta	9,124,620	100
			Kirtland	2,113,575	11
			Mid Michigan	2,415,100	100
			Mott	10,066,950	89
Benzie	12,200	488.52	Northwestern	5,253,822	100
			West Shore	1,398,825	50
Berrien	161,378	85.43	Glen Oaks	1,312,600	97
			Kalamazoo	6,032,017	97
			Lake Michigan	3,022,625	100
			Southwestern	3,634,363	100
Branch	41,502	856.12	Glen Oaks	1,312,600	100
			Jackson	8,783,500	100
			Kalamazoo	6,032,017	94
			Kellogg	5,570,050	100
			Lansing	19,944,700	68
			Southwestern	3,634,363	18

Table 8 continued

State Community College Funding by County - Summary

County	Population	Per Capita Value of Accessible State Funding	Contributing Schools	State Funding	% of Pop.
Calhoun	135,982	$308.07	Glen Oaks	$1,312,600	100%
			Jackson	8,783,500	100
			Kalamazoo	6,032,017	100
			Kellogg	5,570,050	100
			Lansing	19,944,700	100
			Southwestern	3,634,363	7
Cass	49,477	372.67	Glen Oaks	1,312,600	100
			Kalamazoo	6,032,017	100
			Kellogg	5,570,050	80
			Lake Michigan	3,022,625	100
			Southwestern	3,634,363	100
Charlevoix	21,468	305.54	North Central	1,854,000	100
			Northwestern	5,253,822	90
Cheboygan	21,398	95.42	Alpena	3,090,394	6
			North Central	1,854,000	100
Chippewa	34,604	0.00			
Clare	24,952	573.51	Delta	9,124,620	94
			Kirtland	2,113,575	100
			Mid Michigan	2,415,100	100
			Montcalm	2,041,625	58
Clinton	57,883	760.45	Delta	9,124,620	17
			Grand Rapids	12,608,479	4
			Jackson	8,783,500	85
			Kellogg	5,570,050	42
			Lansing	19,944,700	100
			Montcalm	2,041,625	89
			Mott	10,066,950	96
			Washtenaw	6,772,975	11
Crawford	12,260	242.76	Alpena	3,090,394	3
			Kirtland	2,113,575	100
			Mid Michigan	2,415,100	31
Delta	37,780	67.79	Bay De Noc	2,561,277	100
Dickinson	26,831	95.46	Bay De Noc	2,561,277	100
Eaton	92,879	456.61	Glen Oaks	1,312,600	5
			Grand Rapids	12,608,479	10
			Jackson	8,783,500	100
			Kalamazoo	6,032,017	19
			Kellogg	5,570,050	100
			Lansing	19,944,700	100
			Montcalm	2,041,625	20
			Mott	10,066,950	40
			Washtenaw	6,772,975	18
Emmet	25,040	74.04	North Central	1,854,000	100

Table 8 continued

State Community College Funding by County - Summary

County	Population	Per Capita Value of Accessible State Funding	Contributing Schools	State Funding	% of Pop.
Genesee	430,459	$161.59	Delta	$9,124,620	91%
			Henry Ford	14,386,175	7
			Highland Park	5,029,082	15
			Lansing	19,944,700	93
			Macomb	22,107,775	20
			Mott	10,066,950	100
			Oakland	15,047,870	100
			Schoolcraft	7,471,350	66
			Washtenaw	6,772,975	91
			Wayne	22,224,133	2
Gladwin	21,896	630.48	Delta	9,124,620	100
			Kirtland	2,113,575	100
			Mid Michigan	2,415,100	100
			Montcalm	2,041,625	7
Gogebic	18,052	160.86	Gogebic	2,903,775	100
Grand Traverse	64,273	82.43	Kirtland	2,113,575	2
			Northwestern	5,253,822	100
Gratiot	38,982	1,062.99	Delta	9,124,620	100
			Grand Rapids	12,608,479	2
			Lansing	19,944,700	100
			Mid Michigan	2,415,100	60
			Montcalm	2,041,625	100
			Mott	10,066,950	86
Hillsdale	43,431	640.83	Glen Oaks	1,312,600	30
			Jackson	8,783,500	100
			Kellogg	5,570,050	90
			Lansing	19,944,700	36
			Monroe	2,225,700	70
			Schoolcraft	7,471,350	8
			Washtenaw	6,772,975	65
Houghton	35,446	0.00			
Huron	34,951	86.03	Delta	9,124,620	33
Ingham	281,912	166.76	Jackson	8,783,500	100
			Kellogg	5,570,050	98
			Lansing	19,944,700	100
			Mott	10,066,950	98
			Oakland	15,047,870	3
			Schoolcraft	7,471,350	1
			Washtenaw	6,772,975	35
Ionia	57,024	785.63	Grand Rapids	12,608,479	100
			Jackson	8,783,500	47
			Kalamazoo	6,032,017	24
			Kellogg	5,570,050	84
			Lansing	19,944,700	100
			Montcalm	2,041,625	100
Iosco	30,209	119.71	Alpena	3,090,394	53
			Delta	9,124,620	13
			Kirtland	2,113,575	34
			Mid Michigan	2,415,100	4

Table 8 continued

State Community College Funding by County - Summary

County	Population	Per Capita Value of Accessible State Funding	Contributing Schools	State Funding	% of Pop.
Iron	13,175	$0.00			
Isabella	54,624	358.11	Delta	$9,124,620	100%
			Grand Rapids	12,608,479	4
			Kirtland	2,113,575	60
			Lansing	19,944,700	18
			Mid Michigan	2,415,100	100
			Montcalm	2,041,625	100
			Mott	10,066,950	5
Jackson	149,756	317.01	Glen Oaks	1,312,600	3
			Henry Ford	14,386,175	6
			Jackson	8,783,500	100
			Kellogg	5,570,050	100
			Lansing	19,944,700	100
			Monroe	2,225,700	24
			Oakland	15,047,870	6
			Schoolcraft	7,471,350	54
			Washtenaw	6,772,975	100
Kalamazoo	223,411	132.20	Glen Oaks	1,312,600	100
			Grand Rapids	12,608,479	76
			Kalamazoo	6,032,017	100
			Kellogg	5,570,050	100
			Lake Michigan	3,022,625	100
			Lansing	19,944,700	2
			Southwestern	3,634,363	100
Kalkaska	13,497	660.21	Kirtland	2,113,575	85
			Mid Michigan	2,415,100	21
			North Central	1,854,000	72
			Northwestern	5,253,822	100
Kent	500,631	56.10	Grand Rapids	12,608,479	100
			Kalamazoo	6,032,017	82
			Kellogg	5,570,050	40
			Lansing	19,944,700	2
			Montcalm	2,041,625	100
			Muskegon	5,877,650	100
Keweenaw	1,701	0.00			
Lake	8,583	767.78	Mid Michigan	2,415,100	47
			Montcalm	2,041,625	40
			Muskegon	5,877,650	49
			Northwestern	5,253,822	6
			West Shore	1,398,825	100
Lapeer	74,768	910.80	Delta	9,124,620	15
			Henry Ford	14,386,175	26
			Highland Park	5,029,082	55
			Macomb	22,107,775	91
			Mott	10,066,950	100
			Oakland	15,047,870	94
			Schoolcraft	7,471,350	48
			St. Clair	4,601,758	86
			Washtenaw	6,772,975	38
			Wayne	22,224,133	26

Table 8 continued

State Community College Funding by County - Summary

County	Population	Per Capita Value of Accessible State Funding	Contributing Schools	State Funding	% of Pop.
Leelanau	16,527	$355.13	North Central	$1,854,000	33%
			Northwestern	5,253,822	100
Lenawee	91,476	812.85	Henry Ford	14,386,175	94
			Highland Park	5,029,082	79
			Jackson	8,783,500	100
			Lansing	19,944,700	11
			Monroe	2,225,700	100
			Oakland	15,047,870	77
			Schoolcraft	7,471,350	97
			Washtenaw	6,772,975	100
			Wayne	22,224,133	81
Livingston	115,645	1,071.62	Henry Ford	14,386,175	100
			Highland Park	5,029,082	98
			Jackson	8,783,500	100
			Lansing	19,944,700	100
			Macomb	22,107,775	64
			Monroe	2,225,700	42
			Mott	10,066,950	100
			Oakland	15,047,870	100
			Schoolcraft	7,471,350	100
			Washtenaw	6,772,975	100
			Wayne	22,224,133	96
Luce	5,763	0.00			
Mackinaw	10,674	153.38	North Central	1,854,000	88
Macomb	717,400	137.89	Henry Ford	14,386,175	100
			Highland Park	5,029,082	100
			Macomb	22,107,775	100
			Mott	10,066,950	15
			Oakland	15,047,870	100
			Schoolcraft	7,471,350	100
			St. Clair	4,601,758	100
			Washtenaw	6,772,975	97
			Wayne	22,224,133	100
Manistee	21,265	169.47	Northwestern	5,253,822	42
			West Shore	1,398,825	100
Marquette	70,887	6.39	Bay De Noc	2,561,277	18
Mason	25,537	269.16	Muskegon	5,877,650	93
			West Shore	1,398,825	100
Mecosta	37,308	311.49	Delta	9,124,620	6
			Grand Rapids	12,608,479	39
			Kirtland	2,113,575	9
			Mid Michigan	2,415,100	96
			Montcalm	2,041,625	100
			Muskegon	5,877,650	27
Menominee	24,920	47.70	Bay De Noc	2,561,277	46

Table 8 continued

State Community College Funding by County - Summary

County	Population	Per Capita Value of Accessible State Funding	Contributing Schools	State Funding	% of Pop.
Midland	75,651	$258.35	Delta	$9,124,620	100%
			Kirtland	2,113,575	27
			Mid Michigan	2,415,100	100
			Montcalm	2,041,625	32
			Mott	10,066,950	67
Missaukee	12,147	768.92	Kirtland	2,113,575	100
			Mid Michigan	2,415,100	100
			Northwestern	5,253,822	92
Monroe	133,600	579.36	Henry Ford	14,386,175	100
			Highland Park	5,029,082	100
			Jackson	8,783,500	21
			Macomb	22,107,775	11
			Monroe	2,225,700	100
			Oakland	15,047,870	100
			Schoolcraft	7,471,350	100
			Washtenaw	6,772,975	100
			Wayne	22,224,133	100
Montcalm	53,059	406.42	Delta	9,124,620	4
			Grand Rapids	12,608,479	100
			Lansing	19,944,700	13
			Mid Michigan	2,415,100	43
			Montcalm	2,041,625	100
			Muskegon	5,877,650	49
Montmorency	8,936	417.17	Alpena	3,090,394	100
			Kirtland	2,113,575	26
			North Central	1,854,000	5
Muskegon	158,983	123.54	Grand Rapids	12,608,479	100
			Montcalm	2,041,625	20
			Muskegon	5,877,650	100
			West Shore	1,398,825	53
Newaygo	38,202	541.44	Grand Rapids	12,608,479	96
			Mid Michigan	2,415,100	6
			Montcalm	2,041,625	100
			Muskegon	5,877,650	100
			West Shore	1,398,825	37
Oakland	1,083,592	97.54	Henry Ford	14,386,175	100
			Highland Park	5,029,082	100
			Jackson	8,783,500	2
			Lansing	19,944,700	1
			Macomb	22,107,775	100
			Monroe	2,225,700	89
			Mott	10,066,950	100
			Oakland	15,047,870	100
			Schoolcraft	7,471,350	100
			St. Clair	4,601,758	7
			Washtenaw	6,772,975	100
			Wayne	22,224,133	100

Table 8 continued

State Community College Funding by County - Summary

County	Population	Per Capita Value of Accessible State Funding	Contributing Schools	State Funding	% of Pop.
Oceana	22,454	$660.07	Grand Rapids	$12,608,479	56%
			Montcalm	2,041,625	24
			Muskegon	5,877,650	100
			West Shore	1,398,825	100
Ogemaw	18,681	667.39	Delta	9,124,620	88
			Kirtland	2,113,575	100
			Mid Michigan	2,415,100	98
Ontonagon	8,854	237.43	Gogebic	2,903,775	72
Osceola	20,146	328.53	Delta	9,124,620	3
			Kirtland	2,113,575	80
			Mid Michigan	2,415,100	100
			Montcalm	2,041,625	100
			West Shore	1,398,825	12
Oscoda	7,842	676.22	Alpena	3,090,394	65
			Kirtland	2,113,575	100
			Mid Michigan	2,415,100	49
Otsego	17,957	398.88	Alpena	3,090,394	5
			Kirtland	2,113,575	92
			North Central	1,854,000	100
			Northwestern	5,253,822	61
Ottawa	187,768	150.08	Grand Rapids	12,608,479	100
			Kalamazoo	6,032,017	70
			Kellogg	5,570,050	65
			Montcalm	2,041,625	91
			Muskegon	5,877,650	100
Presque Isle	13,743	256.23	Alpena	3,090,394	100
			North Central	1,854,000	23
Roscommon	19,776	234.25	Delta	9,124,620	1
			Kirtland	2,113,575	100
			Mid Michigan	2,415,100	100
Saginaw	211,946	99.00	Delta	9,124,620	100
			Lansing	19,944,700	9
			Mid Michigan	2,415,100	1
			Montcalm	2,041,625	2
			Mott	10,066,950	100
Sanilac	39,928	242.32	Macomb	22,107,775	14
			Mott	10,066,950	20
			St. Clair	4,601,758	98
Schoolcraft	8,302	273.84	Bay De Noc	2,561,277	89

Table 8 continued

State Community College Funding by County ~ Summary

County	Population	Per Capita Value of Accessible State Funding	Contributing Schools	State Funding	% of Pop.
Shiawassee	69,770	$907.85	Delta	$9,124,620	70%
			Henry Ford	14,386,175	4
			Highland Park	5,029,082	4
			Jackson	8,783,500	24
			Lansing	19,944,700	100
			Mott	10,066,950	100
			Oakland	15,047,870	95
			Schoolcraft	7,471,350	45
			Washtenaw	6,772,975	95
St. Clair	145,607	266.85	Henry Ford	14,386,175	13
			Highland Park	5,029,082	30
			Macomb	22,107,775	100
			Mott	10,066,950	4
			Oakland	15,047,870	31
			St. Clair	4,601,758	100
			Wayne	22,224,133	16
St. Joseph	58,913	332.21	Glen Oaks	1,312,600	100
			Kalamazoo	6,032,017	100
			Kellogg	5,570,050	100
			Lake Michigan	3,022,625	100
			Southwestern	3,634,363	100
Tuscola	55,498	379.40	Delta	9,124,620	97
			Mott	10,066,950	100
			Oakland	15,047,870	11
			St. Clair	4,601,758	8
Van Buren	70,060	400.84	Glen Oaks	1,312,600	100
			Grand Rapids	12,608,479	68
			Kalamazoo	6,032,017	100
			Kellogg	5,570,050	100
			Lake Michigan	3,022,625	100
			Southwestern	3,634,363	100
Washtenaw	282,937	407.90	Henry Ford	14,386,175	100
			Highland Park	5,029,082	100
			Jackson	8,783,500	100
			Lansing	19,944,700	19
			Macomb	22,107,775	94
			Monroe	2,225,700	100
			Mott	10,066,950	90
			Oakland	15,047,870	100
			Schoolcraft	7,471,350	100
			Washtenaw	6,772,975	100
			Wayne	22,224,133	100
Wayne	2,111,687	45.17	Henry Ford	14,386,175	100
			Highland Park	5,029,082	100
			Jackson	8,783,500	1
			Macomb	22,107,775	100
			Monroe	2,225,700	100
			Mott	10,066,950	1
			Oakland	15,047,870	100
			Schoolcraft	7,471,350	100
			Washtenaw	6,772,975	100
			Wayne	22,224,133	100
Wexford	26,360	371.60	Kirtland	2,113,575	90
			Mid Michigan	2,415,100	98
			Northwestern	5,253,822	100
			West Shore	1,398,825	20

Table 9

Localities with no Community College within 50 Miles

County	Locality	Population	Closest School	(d)
Alger	Burt township	508	Bay De Noc	62
	Grand Island town	21	Bay De Noc	56
Arenac	Au Gres city	838	Delta	54
	Au Gres township	1,007	Delta	54
	Sims township	836	Alpena	52
	Standish city	1,377	Delta	54
	Standish township	1,945	Delta	54
	Whitney township	981	Alpena	52
Baraga	Arvon township	422	Bay De Noc	90
	Baraga township	2,832	Gogebic	78
	Covington townshi	651	Gogebic	77
	L'Anse township	3,818	Bay De Noc	85
	Spurr township	231	Bay De Noc	72
Chippewa	Bay Mills townshi	787	North Central	66
	Bruce township	1,610	North Central	64
	Chippewa township	279	North Central	58
	Dafter township	1,083	North Central	55
	Detour township	806	North Central	59
	Drummond township	835	Alpena	65
	Hulbert township	208	North Central	52
	Kinross township	6,566	North Central	64
	Pickford township	1,360	North Central	56
	Raber township	569	North Central	55
	Rudyard township	1,270	North Central	54
	Sault Ste Marie city	14,689	North Central	69
	Soo township	2,165	North Central	69
	Sugar Island town	441	North Central	74
	Superior township	990	North Central	61
	Trout Lake townsh	429	North Central	53
	Whitefish townshi	517	North Central	64
Houghton	Adams township	2,388	Gogebic	89
	Calumet township	7,015	Gogebic	99
	Chassell township	1,686	Gogebic	91
	Duncan township	304	Gogebic	63
	Elm River townshi	159	Gogebic	68
	Franklin township	1,164	Gogebic	93
	Hancock city	4,547	Gogebic	89
	Hancock township	287	Gogebic	88
	Houghton city	7,498	Gogebic	90
	Laird township	582	Gogebic	62
	Osceola township	1,878	Gogebic	94
	Portage township	2,941	Gogebic	81
	Quincy township	223	Gogebic	87
	Schoolcraft towns	2,037	Gogebic	102
	Stanton township	1,184	Gogebic	70
	Torch Lake townsh	1,553	Gogebic	95
Huron	Bad Axe city	3,484	Delta	63
	Bingham township	1,617	Delta	60
	Bloomfield townsh	563	Delta	68
	Chandler township	509	Delta	54

Table 9 continued

Localities with no Community College within 50 Miles

County	Locality	Population	Closest School	(d)
Huron continued	Colfax township	1,936	Delta	55
	Dwight township	917	Delta	64
	Gore township	125	St. Clair	67
	Grant township	778	Delta	53
	Harbor Beach city	2,089	St. Clair	65
	Hume township	714	Delta	59
	Huron Township	376	Delta	70
	Lake township	800	Delta	59
	Lincoln township	868	Delta	65
	Meade township	777	Delta	57
	Paris township	624	St. Clair	60
	Pointe Aux Barque	15	Delta	62
	Port Austin towns	1,474	Delta	66
	Rubicon township	766	St. Clair	69
	Sand Beach townsh	1,358	St. Clair	58
	Sheridan township	694	Delta	56
	Sherman township	1,155	St. Clair	59
	Sigel township	599	St. Clair	62
	Verona township	1,196	St. Clair	64
Iosco	Au Sable township	2,312	Alpena	54
	Baldwin township	1,670	Delta	52
	Tawas City city	2,009	Alpena	53
	Tawas township	1,465	Alpena	52
Iron	Bates township	966	Bay De Noc	73
	Caspian city	1,031	Bay De Noc	75
	Crystal Falls city	1,922	Bay De Noc	64
	Crystal Falls tow	1,614	Bay De Noc	64
	Gaastra city	376	Bay De Noc	75
	Hematite township	366	Bay De Noc	77
	Iron River city	2,095	Gogebic	79
	Iron River townsh	1,398	Gogebic	79
	Mansfield townshi	248	Bay De Noc	69
	Mastodon township	654	Bay De Noc	62
	Stambaugh city	1,281	Gogebic	75
	Stambaugh townshi	1,224	Gogebic	76
Keweenaw	Allouez township	1,422	Gogebic	96
	Eagle Harbor town	82	Gogebic	109
	Grant township	104	Gogebic	101
	Houghton township	54	Gogebic	100
	Sherman township	39	Gogebic	93
Luce	Columbus township	218	Bay De Noc	71
	Lakefield townshi	869	Bay De Noc	69
	McMillan township	2,961	North Central	75
	Pentland township	1,715	North Central	60
Mackinaw	Newton township	358	North Central	56
	Portage township	890	Bay De Noc	63
Marquette	Champion township	346	Bay De Noc	70
	Chocolay township	6,025	Bay De Noc	59
	Ely township	1,946	Bay De Noc	60

Table 9 continued

Localities with no Community College within 50 Miles

County	Locality	Population	Closest School	(d)
Marquette continued	Humboldt township	500	Bay De Noc	61
	Ishpeming city	7,200	Bay De Noc	62
	Ishpeming townshi	3,515	Bay De Noc	62
	Marquette city	21,977	Bay De Noc	62
	Marquette townshi	2,757	Bay De Noc	62
	Michigamme townsh	339	Bay De Noc	77
	Negaunee city	4,741	Bay De Noc	65
	Negaunee township	2,368	Bay De Noc	66
	Powell township	660	Bay De Noc	85
	Republic township	1,170	Bay De Noc	65
	Richmond township	1,095	Bay De Noc	58
	Sands township	2,696	Bay De Noc	53
	Tilden township	1,010	Bay De Noc	57
Menominee	Menominee city	9,398	Bay De Noc	52
	Menominee townshi	3,956	Bay De Noc	53
Ontonagon	Bohemia township	90	Gogebic	53
	Greenland townshi	1,001	Gogebic	56
	Interior township	480	Gogebic	56
	Stannard township	873	Gogebic	52
Sanilac	Greenleaf townshi	667	St. Clair	51
Schoolcraft	Germfask township	542	Bay De Noc	55
	Mueller township	206	Bay De Noc	51
	Seney township	185	Bay De Noc	52
	TOTAL	214,037		

Table 10

Localities with a Community College 26 to 50 Miles

County	Locality	Population	Closest School	(d)
Alcona	Curtis township	1,128	Alpena	32
	Greenbush townshp	1,373	Alpena	33
	Gustin township	823	Alpena	26
	Harrisville city	470	Alpena	27
	Harrisville towns	1,315	Alpena	29
	Mikado township	852	Alpena	32
	Millen township	417	Alpena	26
Alger	Au Train township	1,047	Bay De Noc	38
	Limestone townshi	334	Bay De Noc	30
	Mathias township	563	Bay De Noc	36
	Munising city	2,783	Bay De Noc	51
	Munising township	2,193	Bay De Noc	40
	Onota township	244	Bay De Noc	47
	Rock River townsh	1,279	Bay De Noc	40
Allegan	Laketown township	4,888	Grand Rapids	26
	Saugatuck city	954	Kalamazoo	27
	Saugatuck townshi	2,916	Kalamazoo	27
Antrim	Banks township	1,513	North Central	28
	Central Lake town	1,919	Northwestern	29
	Chestonia townshi	401	Northwestern	32
	Echo township	766	Northwestern	29
	Jordan township	583	Northwestern	29
	Kearney township	1,487	Northwestern	27
	Star township	575	North Central	38
	Warner township	287	North Central	32
Arenac	Adams township	417	Kirtland	31
	Arenac township	921	Kirtland	50
	Clayton township	908	Kirtland	49
	Deep River townsh	2,074	Kirtland	44
	Lincoln township	969	Delta	43
	Mason township	865	Kirtland	49
	Moffatt township	780	Kirtland	31
	Omer city	385	Kirtland	50
	Turner township	628	Alpena	50
Barry	Carlton township	2,067	Grand Rapids	29
	Woodland township	2,025	Lansing	27
Benzie	Gilmore township	794	Northwestern	27
	Joyfield township	626	Northwestern	27
Branch	Algansee township	1,859	Jackson	27
	California townsh	797	Jackson	32
	Kinderhook townsh	1,292	Glen Oaks	29
Cheboygan	Aloha township	707	North Central	32
	Benton township	2,388	North Central	34
	Forest township	929	North Central	33
	Grant township	686	North Central	34
	Koehler township	722	North Central	26
	Mackinaw township	604	North Central	26

Table 10 continued

Localities with a Community College 26 to 50 Miles

County	Locality	Population	Closest School	(d)
Cheboygan continued	Walker township	256	North Central	27
	Waverly township	371	North Central	32
Crawford	Lovells township	420	Kirtland	29
	Maple Forest town	407	Kirtland	29
Dickinson	Breen township	464	Bay De Noc	30
	Breitung township	5,483	Bay De Noc	43
	Felch township	705	Bay De Noc	40
	Iron Mountain city	8,525	Bay De Noc	48
	Kingsford city	5,480	Bay De Noc	48
	Norway city	2,910	Bay De Noc	43
	Norway township	1,325	Bay De Noc	39
	Sagola township	1,166	Bay De Noc	47
	Waucedah township	693	Bay De Noc	38
	Westbranch townsh	80	Bay De Noc	38
Gratiot	Alma city	9,034	Montcalm	27
	Arcada township	1,660	Montcalm	29
	Elba township	1,390	Lansing	31
	Emerson township	1,003	Delta	30
	Fulton township	2,114	Lansing	28
	Hamilton township	489	Delta	30
	Ithaca city	3,009	Montcalm	31
	Lafayette townshi	683	Delta	28
	Newark township	1,138	Montcalm	31
	North Shade towns	758	Montcalm	27
	North Star townsh	1,055	Delta	33
	Pine River townsh	2,064	Montcalm	28
	Seville township	2,217	Montcalm	27
	St. Louis city	3,828	Delta	27
	Washington townsh	1,029	Montcalm	29
Hillsdale	Camden township	1,984	Jackson	30
	Woodbridge townsh	1,160	Jackson	26
Huron	Brookfield townsh	947	Delta	41
	Caseville townshi	2,139	Delta	49
	Fairhaven townshi	1,250	Delta	37
	McKinley township	527	Delta	48
	Oliver township	1,685	Delta	48
	Sebewaing townshi	2,937	Delta	36
	Windsor township	2,032	Delta	48
Ionia	Berlin township	3,610	Grand Rapids	29
	Boston township	4,313	Grand Rapids	27
	Campbell township	1,814	Grand Rapids	28
	Ionia city	5,935	Lansing	27
Iosco	Alabaster townshi	394	Delta	48
	Burleigh township	695	Kirtland	37
	East Tawas city	2,887	Kirtland	45
	Grant township	1,154	Kirtland	36
	Oscoda township	11,958	Alpena	45
	Plainfield townsh	3,490	Kirtland	35

Table 10 continued

Localities with a Community College 26 to 50 Miles

County	Locality	Population	Closest School	(d)
Iosco continued	Reno township	572	Kirtland	36
	Sherman township	502	Kirtland	40
	Whittemore city	463	Kirtland	41
	Wilber township	638	Kirtland	45
Isabella	Chippewa township	4,130	Delta	26
	Coe township	2,967	Delta	26
	Lincoln township	1,794	Montcalm	28
Kalkaska	Bear Lake townshi	639	Kirtland	32
	Blue Lake townshi	378	Kirtland	37
	Cold Springs town	1,073	Northwestern	32
	Excelsior townshi	714	Northwestern	31
	Kalkaska township	4,269	Northwestern	27
	Oliver township	291	Kirtland	31
	Orange township	885	Northwestern	27
	Springfield towns	871	Northwestern	31
Lake	Chase township	999	Mid Michigan	36
	Cherry Valley tow	248	West Shore	34
	Dover township	318	Mid Michigan	39
	Eden township	235	West Shore	33
	Ellsworth townshi	622	Mid Michigan	39
	Lake township	700	West Shore	26
	Newkirk township	586	West Shore	38
	Pinora township	414	Mid Michigan	38
	Pleasant Plains tow	1,464	West Shore	29
	Yates township	585	West Shore	40
Lapeer	Arcadia township	2,448	Mott	33
	Attica township	3,873	Mott	27
	Brown city	9	St. Clair	31
	Burlington townsh	1,495	Mott	37
	Burnside township	1,753	Mott	36
	Dryden township	3,399	Macomb	26
	Goodland township	1,476	St. Clair	33
	Imlay City city	2,921	St. Clair	33
	Imlay township	2,143	St. Clair	28
	North Branch town	3,006	Mott	32
	Rich township	1,162	Mott	31
Lenawee	Dover township	1,811	Jackson	29
	Hudson city	2,580	Jackson	26
	Hudson township	1,481	Jackson	26
	Medina township	1,368	Jackson	32
	Seneca township	1,289	Monroe	27
Livingston	Handy township	5,488	Lansing	27
	Iosco township	1,567	Washtenaw	27
	Oceola township	4,825	Washtenaw	26
Mackinaw	Brevort township	484	North Central	39
	Clark township	2,012	North Central	44
	Garfield township	1,156	North Central	49
	Hendricks townshi	161	North Central	41

. Table 10 continued

Localities with a Community College 26 to 50 Miles

County	Locality	Population	Closest School	(d)
Mackinaw continued	Hudson township	197	North Central	45
	Mackinac Island city	469	North Central	32
	Marquette townshi	550	North Central	44
	Moran township	838	North Central	39
	St. Ignace city	2,568	North Central	31
	St. Ignace townsh	932	North Central	29
Manistee	Arcadia township	553	Northwestern	31
	Bear Lake townshi	1,419	West Shore	33
	Dickson township	735	West Shore	28
	Maple Grove towns	1,123	Northwestern	31
	Marilla township	268	Northwestern	28
	Pleasanton townsh	573	Northwestern	28
Marquette	Ewing township	156	Bay De Noc	28
	Forsyth township	8,775	Bay De Noc	46
	Skandia township	933	Bay De Noc	49
	Turin township	156	Bay De Noc	36
	Wells township	281	Bay De Noc	33
	West Branch towns	2,241	Bay De Noc	51
Mecosta	Big Rapids city	12,603	Montcalm	27
	Big Rapids townsh	3,100	Montcalm	29
	Colfax township	1,915	Mid Michigan	28
	Grant township	644	Mid Michigan	28
	Green township	2,833	Mid Michigan	32
Menominee	Cedarville townsh	185	Bay De Noc	27
	Daggett township	745	Bay De Noc	33
	Faithorn township	213	Bay De Noc	38
	Holmes township	292	Bay De Noc	38
	Ingallston townsh	1,055	Bay De Noc	36
	Lake township	603	Bay De Noc	48
	Mellen township	1,183	Bay De Noc	43
	Nadeau township	1,161	Bay De Noc	30
	Stephenson city	904	Bay De Noc	34
	Stephenson townsh	695	Bay De Noc	34
Missaukee	Bloomfield townsh	390	Northwestern	32
	Caldwell township	1,104	Mid Michigan	34
	Forest township	878	Mid Michigan	34
	Lake City city	858	Kirtland	26
	Lake township	1,980	Mid Michigan	27
	Pioneer township	388	Kirtland	30
	Reeder township	772	Mid Michigan	27
	Richland township	1,236	Mid Michigan	26
Montmorency	Albert township	2,097	Alpena	32
	Avery township	579	Alpena	27
	Briley township	1,831	Alpena	31
	Loud township	220	Alpena	27
	Vienna township	431	Alpena	36
Newaygo	Barton township	624	Montcalm	36
	Beaver township	417	Muskegon	26

Table 10 continued

Localities with a Community College 26 to 50 Miles

County	Locality	Population	Closest School	(d)
Newaygo continued	Home township	202	Montcalm	38
	Lilley township	565	West Shore	32
	Merrill township	451	Muskegon	31
	Monroe township	247	Montcalm	35
	Norwich township	499	Montcalm	30
	Troy township	173	West Shore	33
	Wilcox township	831	Montcalm	31
Oceana	Leavitt township	804	West Shore	29
Ogemaw	Goodar township	381	Kirtland	30
	Hill township	1,546	Kirtland	30
	Logan township	547	Kirtland	30
	Richland township	856	Kirtland	31
Ontonagon	Haight township	218	Gogebic	44
	Matchwood townshi	122	Gogebic	35
	McMillan township	650	Gogebic	44
	Ontonagon townshi	3,238	Gogebic	38
	Rockland township	371	Gogebic	43
Osceola	Burdell township	1,153	Mid Michigan	27
	LeRoy township	958	Mid Michigan	28
	Lincoln township	1,228	Mid Michigan	28
	Reed City city	2,379	Mid Michigan	34
	Richmond township	1,722	Mid Michigan	29
Oscoda	Clinton township	447	Kirtland	33
	Comins township	1,785	Kirtland	30
	Elmer township	854	Kirtland	28
Otsego	Bagley township	4,929	North Central	38
	Charlton township	913	North Central	38
	Chester township	934	North Central	41
	Corwith township	1,416	North Central	27
	Dover township	485	North Central	35
	Elmira township	1,038	North Central	30
	Gaylord city	3,256	North Central	39
	Hayes township	1,437	North Central	37
	Livingston townsh	1,755	North Central	31
	Otsego Lake towns	1,794	Kirtland	38
Presque Isle	Allis township	887	Alpena	35
	Bearinger townshi	246	Alpena	40
	Metz township	403	Alpena	31
	Moltke township	309	Alpena	29
	North Allis towns	502	Alpena	37
	Ocqueoc township	521	Alpena	32
	Onaway city	1,039	North Central	39
	Presque Isle town	1,312	Alpena	28
	Rogers City city	3,642	Alpena	27
Sanilac	Argyle township	820	St. Clair	43
	Austin township	639	St. Clair	50
	Bridgehampton tow	845	St. Clair	32

Table 10 continued

Localities with a Community College 26 to 50 Miles

County	Locality	Population	Closest School	(d)
Sanilac continued	Brown City city	1,235	St. Clair	31
	Custer township	1,018	St. Clair	35
	Delaware township	961	St. Clair	45
	Elk township	1,465	St. Clair	26
	Elmer township	774	St. Clair	33
	Evergreen townshi	907	St. Clair	48
	Flynn township	914	St. Clair	30
	Forester township	919	St. Clair	36
	Lamotte township	949	St. Clair	42
	Marion township	1,831	St. Clair	39
	Marlette city	1,924	St. Clair	40
	Marlette township	1,910	St. Clair	35
	Minden township	670	St. Clair	46
	Moore township	1,238	St. Clair	38
	Sandusky city	2,403	St. Clair	36
	Sanilac township	2,362	St. Clair	27
	Washington townsh	1,557	St. Clair	28
	Watertown townshi	1,235	St. Clair	31
	Wheatland townshi	513	St. Clair	41
Schoolcraft	Doyle township	616	Bay De Noc	45
	Hiawatha township	1,279	Bay De Noc	32
	Inwood township	638	Bay De Noc	28
	Manistique city	3,456	Bay De Noc	39
	Manistique townsh	916	Bay De Noc	39
	Thompson township	464	Bay De Noc	28
Tuscola	Akron township	1,609	Delta	31
	Almer township	2,628	Delta	36
	Columbia township	1,383	Delta	36
	Dayton township	1,706	Mott	31
	Denmark township	3,369	Delta	27
	Elkland township	3,430	Mott	48
	Ellington townshi	1,215	Delta	43
	Elmwood township	1,260	Delta	43
	Fairgrove townshi	1,743	Delta	31
	Fremont township	3,153	Mott	28
	Indianfields town	6,699	Mott	37
	Juniata township	1,666	Delta	30
	Kingston township	1,498	Mott	40
	Koylton township	1,446	Mott	36
	Novesta township	1,464	Mott	48
	Tuscola township	2,144	Mott	27
	Vassar city	2,559	Mott	26
	Vassar township	3,866	Mott	27
	Wells township	1,528	Mott	35
Wexford	Antioch township	671	Northwestern	30
	Boon township	562	Northwestern	36
	Cadillac city	10,104	Mid Michigan	29
	Cedar Creek towns	1,013	Northwestern	32
	Cherry Grove town	1,763	Mid Michigan	37
	Clam Lake townshi	1,739	Mid Michigan	31
	Colfax township	556	Northwestern	32
	Haring township	2,501	Mid Michigan	33

Table 10 continued

Localities with a Community College 26 to 50 Miles

County	Locality	Population	Closest School	(d)
Wexford continued	Henderson townshi	162	Mid Michigan	40
	Liberty township	641	Northwestern	27
	Manton city	1,161	Northwestern	33
	Selma township	1,607	Northwestern	36
	Slagle township	470	Northwestern	35
	South Branch town	306	Northwestern	41
	Springville towns	1,339	Northwestern	29
	TOTAL	456,651		

Table 11

Localities with a Community College within 25 Miles

County	Locality	Population	Closest School	(d)
Alcona	Alcona township	906	Alpena	16
	Caledonia townshp	987	Alpena	14
	Hawes township	1,035	Alpena	20
	Haynes township	549	Alpena	21
	Mitchell township	290	Alpena	22
Allegan	Allegan city	4,547	Kalamazoo	16
	Allegan township	3,976	Kalamazoo	16
	Casco township	2,856	Kalamazoo	18
	Cheshire township	1,967	Kalamazoo	10
	Clyde township	2,001	Kalamazoo	18
	Dorr township	5,453	Grand Rapids	21
	Fennville city	1,023	Kalamazoo	24
	Fillmore township	2,710	Grand Rapids	23
	Ganges township	2,124	Kalamazoo	21
	Gunplain township	4,754	Kellogg	14
	Heath township	2,297	Kalamazoo	22
	Holland city	5,659	Grand Rapids	14
	Hopkins township	2,350	Kalamazoo	24
	Lee township	2,672	Kalamazoo	13
	Leighton township	3,069	Grand Rapids	24
	Manlius township	1,776	Kalamazoo	24
	Martin township	2,487	Kellogg	18
	Monterey township	1,534	Kalamazoo	22
	Otsego city	3,937	Kalamazoo	13
	Otsego township	4,780	Kalamazoo	14
	Overisel township	2,324	Grand Rapids	23
	Plainwell city	4,057	Kellogg	14
	Salem township	2,708	Grand Rapids	20
	Trowbridge townsh	2,328	Kalamazoo	10
	Valley township	1,145	Kalamazoo	16
	Watson township	1,897	Kalamazoo	18
	Wayland city	2,751	Kellogg	22
	Wayland township	2,569	Kellogg	22
Alpena	Alpena city	11,354	Alpena	0
	Alpena township	9,602	Alpena	0
	Green township	1,095	Alpena	11
	Long Rapids towns	1,021	Alpena	9
	Maple Ridge towns	1,514	Alpena	4
	Ossineke township	1,652	Alpena	8
	Sanborn township	2,196	Alpena	7
	Wellington townsh	269	Alpena	14
	Wilson township	1,902	Alpena	4
Antrim	Custer township	630	Northwestern	25
	Elk Rapids townsh	2,374	Northwestern	13
	Forest Home towns	1,410	Northwestern	21
	Helena township	837	Northwestern	19
	Mancelona townshi	3,173	Northwestern	25
	Milton township	1,468	Northwestern	13
	Torch Lake townsh	762	Northwestern	21
Barry	Assyria township	1,799	Kellogg	9
	Baltimore townshi	1,701	Kellogg	1

Table 11 continued

Localities with a Community College within 25 Miles

County	Locality	Population	Closest School	(d)
Barry continued	Barry township	3,190	Kellogg	9
	Castleton townshi	3,379	Kellogg	6
	Hastings city	6,549	Kellogg	25
	Hastings township	2,830	Kellogg	25
	Hope township	2,993	Kellogg	14
	Irving township	1,905	Grand Rapids	24
	Johnstown townshi	2,932	Kellogg	7
	Maple Grove towns	1,398	Kellogg	14
	Orangeville towns	2,880	Kellogg	18
	Prairieville town	3,409	Kellogg	14
	Rutland township	2,797	Kellogg	26
	Thornapple townsh	5,226	Grand Rapids	19
	Yankee Springs to	2,977	Grand Rapids	24
Bay	Auburn city	1,855	Delta	2
	Bangor township	16,028	Delta	2
	Bay City city	38,936	Delta	2
	Beaver township	2,810	Delta	3
	Essexville city	4,088	Delta	4
	Frankenlust towns	2,281	Delta	0
	Fraser township	3,680	Delta	6
	Garfield township	1,736	Delta	6
	Gibson township	1,090	Delta	12
	Hampton township	9,520	Delta	3
	Kawkawlin townshp	4,852	Delta	3
	Merritt township	1,510	Delta	6
	Midland city	234	Delta	1
	Monitor township	9,512	Delta	0
	Mount Forest town	1,457	Delta	9
	Pinconning city	1,291	Delta	10
	Pinconning townsh	2,647	Delta	9
	Portsmouth townsh	3,918	Delta	3
	Williams township	4,278	Delta	2
Benzie	Almira township	1,449	Northwestern	6
	Benzonia township	2,405	Northwestern	17
	Blaine township	424	Northwestern	10
	Colfax township	415	Northwestern	16
	Crystal Lake town	759	Northwestern	19
	Frankfort city	1,546	Northwestern	19
	Homestead townshi	1,477	Northwestern	19
	Inland township	1,096	Northwestern	10
	Lake township	508	Northwestern	19
	Platte township	253	Northwestern	14
	Weldon township	448	Northwestern	24
Berrien	Bainbridge towns	2,865	Lake Michigan	2
	Baroda township	2,731	Lake Michigan	8
	Benton Charter to	17,163	Lake Michigan	0
	Benton Harbor cit	12,818	Lake Michigan	0
	Berrien township	4,697	Lake Michigan	7
	Bertrand township	2,228	Lake Michigan	16
	Bridgman city	2,140	Lake Michigan	11
	Buchanan city	4,992	Southwestern	14
	Buchanan township	3,402	Lake Michigan	11

Table 11 continued

Localities with a Community College within 25 Miles

County	Locality	Population	Closest School	(d)
Berrien continued	Chikaming townshi	3,717	Lake Michigan	14
	Coloma city	1,679	Lake Michigan	4
	Coloma township	5,123	Lake Michigan	2
	Galien township	1,591	Lake Michigan	16
	Hagar township	4,113	Lake Michigan	2
	Lake Charter town	2,487	Lake Michigan	13
	Lincoln township	13,604	Lake Michigan	4
	New Buffalo city	2,317	Lake Michigan	22
	New Buffalo towns	2,419	Lake Michigan	19
	Niles city	12,456	Southwestern	11
	Niles township	12,828	Southwestern	11
	Oronoko township	9,819	Lake Michigan	8
	Pipestone townshi	2,303	Lake Michigan	2
	Royalton township	3,135	Lake Michigan	6
	Sodus township	2,065	Lake Michigan	2
	St. Joseph Charte	9,613	Lake Michigan	3
	St. Joseph city	9,214	Lake Michigan	3
	Three Oaks townsh	2,952	Lake Michigan	17
	Watervliet city	1,867	Lake Michigan	6
	Watervliet townsh	2,926	Lake Michigan	5
	Weesaw township	2,114	Lake Michigan	11
Branch	Batavia township	1,522	Kellogg	21
	Bethel township	1,279	Glen Oaks	22
	Bronson city	2,342	Glen Oaks	16
	Bronson township	1,228	Glen Oaks	16
	Butler township	1,191	Kellogg	21
	Coldwater city	9,607	Jackson	23
	Coldwater townshi	4,795	Jackson	23
	Gilead township	688	Glen Oaks	24
	Girard township	1,800	Kellogg	21
	Matteson township	1,231	Glen Oaks	16
	Noble township	479	Glen Oaks	18
	Ovid township	2,103	Kellogg	26
	Quincy township	4,003	Jackson	23
	Sherwood township	2,310	Kellogg	11
	Union township	2,976	Kellogg	13
Calhoun	Albion city	10,066	Kellogg	19
	Albion township	1,256	Kellogg	17
	Athens township	2,515	Kellogg	10
	Battle Creek city	53,540	Kellogg	0
	Bedford township	9,810	Kellogg	0
	Burlington townsh	1,773	Kellogg	10
	Clarence township	2,051	Kellogg	16
	Clarendon townshp	1,100	Kellogg	15
	Convis township	1,739	Kellogg	5
	Eckford township	1,217	Kellogg	11
	Emmett township	10,764	Kellogg	0
	Fredonia township	1,741	Kellogg	7
	Homer township	2,875	Kellogg	19
	Lee township	1,281	Kellogg	10
	Leroy township	3,026	Kellogg	5
	Marengo township	1,801	Kellogg	10
	Marshall city	6,891	Kellogg	9

Table 11 continued

Localities with a Community College within 25 Miles

County	Locality	Population	Closest School	(d)
Calhoun continued	Marshall township	2,655	Kellogg	5
	Newton township	2,025	Kellogg	5
	Pennfield townshi	8,386	Kellogg	0
	Sheridan township	2,139	Kellogg	16
	Springfield city	5,582	Kellogg	0
	Tekonsha township	1,749	Kellogg	12
Cass	Calvin township	1,813	Southwestern	11
	Dowagiac city	6,409	Southwestern	2
	Howard township	6,378	Southwestern	6
	Jefferson townshi	2,112	Southwestern	6
	LaGrange township	3,406	Southwestern	3
	Marcellus townshi	2,569	Southwestern	16
	Mason township	2,450	Southwestern	15
	Milton township	2,284	Southwestern	12
	Newberg township	1,627	Southwestern	16
	Niles city	2	Southwestern	11
	Ontwa township	5,592	Southwestern	12
	Penn township	1,877	Southwestern	10
	Pokagon township	2,188	Southwestern	0
	Porter township	3,857	Glen Oaks	15
	Silver Creek town	3,101	Southwestern	3
	Volinia township	1,032	Southwestern	10
	Wayne township	2,780	Southwestern	5
Charlevoix	Bay township	825	North Central	8
	Boyne City city	3,478	North Central	22
	Boyne Valley town	1,102	North Central	22
	Chandler township	182	North Central	16
	Charlevoix city	3,116	North Central	17
	Charlevoix townsh	1,016	North Central	17
	East Jordan city	2,240	North Central	22
	Evangeline townsh	646	North Central	14
	Eveline township	1,100	North Central	14
	Hayes township	1,317	North Central	15
	Hudson township	481	North Central	22
	Marion township	1,130	North Central	15
	Melrose township	1,106	North Central	16
	Norwood township	516	North Central	17
	Peaine township	128	North Central	8
	South Arm townshi	1,418	North Central	20
	St. James townshi	276	North Central	20
	Wilson township	1,391	North Central	20
Cheboygan	Beaugrand townshi	1,004	North Central	22
	Burt township	533	North Central	15
	Cheboygan city	4,999	North Central	26
	Ellis township	345	North Central	22
	Hebron township	202	North Central	21
	Inverness townshi	1,952	North Central	22
	Mentor township	518	North Central	16
	Mullett township	1,056	North Central	20
	Munro township	512	North Central	15
	Nunda township	725	North Central	24
	Tuscarora townsh	2,297	North Central	14

Table 11 continued

Localities with a Community College within 25 Miles

County	Locality	Population	Closest School	(d)
Cheboygan continued	Wilmot township	592	North Central	20
Clare	Arthur township	544	Mid Michigan	1
	Clare city	3,013	Mid Michigan	8
	Franklin township	600	Mid Michigan	6
	Freeman township	613	Mid Michigan	9
	Frost township	826	Mid Michigan	6
	Garfield township	1,477	Mid Michigan	10
	Grant township	2,636	Mid Michigan	4
	Greenwood townshi	718	Mid Michigan	4
	Hamilton township	1,546	Mid Michigan	1
	Harrison city	1,835	Mid Michigan	2
	Hatton township	673	Mid Michigan	2
	Hayes township	3,811	Mid Michigan	1
	Lincoln township	1,253	Mid Michigan	4
	Redding township	448	Mid Michigan	9
	Sheridan township	1,051	Mid Michigan	4
	Summerfield towns	316	Mid Michigan	7
	Surrey township	3,221	Mid Michigan	6
	Winterfield towns	371	Mid Michigan	11
Clinton	Bath township	6,387	Lansing	10
	Bengal township	989	Lansing	17
	Bingham township	2,546	Lansing	17
	Dallas township	2,146	Lansing	19
	De Witt city	3,964	Lansing	6
	De Witt township	10,448	Lansing	6
	Duplain township	2,235	Lansing	25
	Eagle township	2,151	Lansing	6
	Essex township	1,677	Lansing	23
	Greenbush townshi	2,028	Lansing	25
	Lebanon township	644	Lansing	23
	Olive township	2,122	Lansing	17
	Ovid township	3,105	Lansing	19
	Riley township	1,543	Lansing	11
	St. Johns city	7,284	Lansing	17
	Victor township	2,784	Lansing	14
	Watertown townshi	3,731	Lansing	6
	Westphalia townsh	2,099	Lansing	11
Crawford	Beaver Creek town	1,175	Kirtland	12
	Frederic township	1,287	Kirtland	22
	Grayling city	1,944	Kirtland	23
	Grayling township	5,647	Kirtland	23
	South Branch town	1,380	Kirtland	16
Delta	Baldwin township	726	Bay De Noc	5
	Bark River townsh	1,548	Bay De Noc	4
	Bay de Noc townsh	320	Bay De Noc	3
	Brampton township	1,142	Bay De Noc	4
	Cornell township	529	Bay De Noc	4
	Ensign township	669	Bay De Noc	3
	Escanaba city	13,659	Bay De Noc	0
	Escanaba township	3,340	Bay De Noc	2
	Fairbanks townshi	309	Bay De Noc	14

. Table 11 continued

Localities with a Community College within 25 Miles

County	Locality	Population	Closest School	(d)
Delta continued	Ford River townsh	2,002	Bay De Noc	2
	Garden township	783	Bay De Noc	14
	Gladstone city	4,565	Bay De Noc	2
	Maple Ridge towns	829	Bay De Noc	8
	Masonville townsh	1,709	Bay De Noc	5
	Nahma township	491	Bay De Noc	9
	Wells township	5,159	Bay De Noc	0
Eaton	Bellevue township	2,938	Kellogg	17
	Benton township	2,528	Lansing	6
	Brookfield townsh	1,331	Lansing	17
	Carmel township	2,433	Lansing	16
	Charlotte city	8,083	Lansing	16
	Chester township	1,602	Lansing	14
	Delta township	26,129	Lansing	0
	Eaton Rapids city	4,695	Lansing	10
	Eaton Rapids town	3,003	Lansing	10
	Eaton township	3,492	Lansing	13
	Grand Ledge city	7,579	Lansing	9
	Hamlin township	2,351	Lansing	13
	Kalamo township	1,665	Lansing	21
	Lansing city	4,621	Lansing	0
	Olivet city	1,604	Lansing	20
	Oneida Charter tow	3,228	Lansing	10
	Potterville city	1,523	Lansing	9
	Roxand township	1,903	Lansing	14
	Sunfield township	2,086	Lansing	16
	Vermontville town	1,896	Lansing	19
	Walton township	1,729	Kellogg	20
	Windsor township	6,460	Lansing	7
Emmet	Bear Creek townsh	3,469	North Central	0
	Bliss township	483	North Central	16
	Carp Lake townshi	597	North Central	16
	Center township	517	North Central	14
	Cross Village tow	201	North Central	15
	Friendship townsh	591	North Central	7
	Harbor Springs city	1,540	North Central	4
	Little Traverse tow	1,805	North Central	5
	Littlefield towns	2,310	North Central	5
	Maple River towns	743	North Central	6
	McKinley township	1,080	North Central	12
	Petoskey city	6,056	North Central	0
	Pleasant View tow	375	North Central	5
	Readmond township	374	North Central	14
	Resort township	2,068	North Central	1
	Springvale townsh	1,300	North Central	5
	Wawatam township	563	North Central	21
	West Traverse tow	968	North Central	4
Genesee	Argentine townshi	4,651	Mott	11
	Atlas township	5,551	Mott	6
	Burton city	27,617	Mott	2
	Clayton township	7,368	Mott	6
	Clio city	2,629	Mott	8

Table 11 continued

Localities with a Community College within 25 Miles

County	Locality	Population	Closest School	(d)
Genesee continued	Davison city	5,693	Mott	6
	Davison township	14,671	Mott	4
	Fenton city	8,444	Mott	12
	Fenton township	10,055	Mott	9
	Flint city	140,761	Mott	0
	Flint township	34,081	Mott	3
	Flushing city	8,542	Mott	6
	Flushing township	9,223	Mott	6
	Forest township	4,409	Mott	7
	Gaines township	5,391	Mott	7
	Genesee township	24,093	Mott	3
	Grand Blanc city	7,760	Mott	5
	Grand Blanc towns	25,392	Mott	4
	Linden city	2,415	Mott	12
	Montrose city	1,811	Mott	12
	Montrose township	6,236	Mott	8
	Mount Morris city	3,292	Mott	5
	Mount Morris town	25,198	Mott	3
	Mundy township	11,511	Mott	4
	Richfield townshi	7,271	Mott	4
	Swartz Creek city	4,851	Mott	6
	Thetford township	8,333	Mott	6
	Vienna township	13,210	Mott	6
Gladwin	Beaverton city	1,150	Mid Michigan	22
	Beaverton townshi	1,671	Mid Michigan	22
	Bentley township	751	Delta	24
	Billings township	2,305	Mid Michigan	25
	Bourret township	400	Kirtland	22
	Buckeye township	996	Mid Michigan	21
	Butman township	1,188	Kirtland	18
	Clement township	822	Kirtland	23
	Gladwin city	2,682	Mid Michigan	19
	Gladwin township	916	Mid Michigan	19
	Grim township	100	Kirtland	23
	Grout township	1,626	Mid Michigan	14
	Hay township	1,173	Delta	22
	Sage township	2,177	Mid Michigan	12
	Secord township	914	Kirtland	23
	Sherman township	796	Kirtland	12
	Tobacco township	2,229	Mid Michigan	19
Gogebic	Bessemer city	2,272	Gogebic	6
	Bessemer township	1,374	Gogebic	1
	Erwin township	477	Gogebic	0
	Ironwood city	6,849	Gogebic	0
	Ironwood township	2,303	Gogebic	0
	Marenisco townshi	959	Gogebic	7
	Wakefield city	2,318	Gogebic	7
	Wakefield townshi	452	Gogebic	4
	Watersmeet townsh	1,048	Gogebic	18
Grand Traverse	Acme township	3,447	Northwestern	4
	Blair township	5,249	Northwestern	5
	East Bay township	8,307	Northwestern	3

Table 11 continued

Localities with a Community College within 25 Miles

County	Locality	Population	Closest School	(d)
Grand Traverse continued	Fife Lake townshi	1,344	Northwestern	14
	Garfield township	10,516	Northwestern	0
	Grant township	745	Northwestern	13
	Green Lake townsh	3,677	Northwestern	7
	Long Lake townshi	5,977	Northwestern	5
	Mayfield township	967	Northwestern	12
	Paradise township	2,508	Northwestern	9
	Peninsula townshi	4,340	Northwestern	0
	Traverse City city	15,116	Northwestern	0
	Union township	255	Northwestern	9
	Whitewater townsh	1,825	Northwestern	9
Gratiot	Bethany township	1,814	Delta	25
	New Haven townshi	972	Montcalm	24
	Sumner township	1,799	Montcalm	22
	Wheeler township	2,926	Delta	23
Hillsdale	Adams township	2,339	Jackson	17
	Allen township	1,412	Jackson	21
	Amboy township	978	Jackson	24
	Cambria township	2,372	Jackson	24
	Fayette township	3,190	Jackson	17
	Hillsdale city	8,170	Jackson	19
	Hillsdale townshi	1,786	Jackson	19
	Jefferson townshi	3,083	Jackson	21
	Litchfield city	1,317	Jackson	17
	Litchfield townsh	957	Jackson	18
	Moscow township	1,353	Jackson	9
	Pittsford townshi	1,595	Jackson	22
	Ransom township	911	Jackson	24
	Reading city	1,127	Jackson	22
	Reading township	1,768	Jackson	22
	Scipio township	1,479	Jackson	11
	Somerset township	3,416	Jackson	13
	Wheatland townshi	1,225	Jackson	19
	Wright township	1,809	Jackson	24
Ingham	Alaiedon township	3,173	Lansing	2
	Aurelius township	2,686	Lansing	5
	Bunker Hill towns	1,888	Lansing	12
	Delhi Charter tow	19,190	Lansing	2
	East Lansing city	50,677	Lansing	0
	Ingham township	1,942	Lansing	9
	Lansing city	122,700	Lansing	0
	Lansing township	8,919	Lansing	0
	Leroy township	3,561	Lansing	11
	Leslie city	1,872	Lansing	14
	Leslie township	2,436	Lansing	10
	Locke township	1,521	Lansing	11
	Mason city	6,768	Lansing	3
	Meridian township	35,644	Lansing	2
	Onondaga township	2,444	Lansing	10
	Stockbridge towns	2,971	Lansing	15
	Vevay township	3,668	Lansing	5
	Wheatfield townsh	1,571	Lansing	7

Table 11 continued

Localities with a Community College within 25 Miles

County	Locality	Population	Closest School	(d)
Ingham continued	White Oak townshi	1,074	Lansing	12
	Williamston city	2,922	Lansing	9
	Williamston towns	4,285	Lansing	7
Ionia	Belding city	5,969	Montcalm	16
	Danby township	2,371	Lansing	15
	Easton township	5,384	Lansing	23
	Ionia township	3,153	Lansing	24
	Keene township	1,376	Grand Rapids	25
	Lyons township	3,276	Lansing	15
	North Plains town	1,333	Montcalm	23
	Odessa township	3,885	Lansing	25
	Orange township	1,047	Lansing	22
	Orleans township	2,548	Montcalm	22
	Otisco township	1,863	Montcalm	16
	Portland city	3,889	Lansing	13
	Portland township	2,383	Lansing	12
	Ronald township	1,715	Montcalm	25
	Sebewa township	1,160	Lansing	16
Isabella	Broomfield townsh	1,266	Montcalm	14
	Clare city	8	Mid Michigan	8
	Coldwater townshi	732	Mid Michigan	17
	Deerfield townshi	2,598	Montcalm	20
	Denver township	1,019	Delta	23
	Fremont township	1,217	Montcalm	18
	Gilmore township	1,072	Mid Michigan	14
	Isabella township	2,025	Mid Michigan	22
	Mount Pleasant ci	23,285	Mid Michigan	24
	Nottawa township	1,968	Mid Michigan	22
	Rolland township	1,138	Montcalm	12
	Sherman township	1,725	Mid Michigan	24
	Union township	5,139	Montcalm	23
	Vernon township	1,308	Mid Michigan	12
	Wise township	1,233	Mid Michigan	18
Jackson	Blackman township	20,492	Jackson	5
	Columbia township	6,308	Jackson	2
	Concord township	2,408	Jackson	9
	Grass Lake townsh	3,774	Jackson	8
	Hanover township	3,710	Jackson	3
	Henrietta townshi	3,858	Jackson	9
	Jackson city	37,446	Jackson	2
	Leoni township	13,435	Jackson	3
	Liberty township	2,452	Jackson	0
	Napoleon township	6,273	Jackson	2
	Norvell township	2,657	Jackson	9
	Parma township	2,491	Jackson	10
	Pulaski township	1,816	Jackson	9
	Rives township	4,026	Jackson	10
	Sandstone townshi	3,300	Jackson	6
	Spring Arbor town	6,939	Jackson	3
	Springport townsh	2,090	Jackson	14
	Summit township	21,130	Jackson	0
	Tompkins township	2,321	Jackson	12

Table 11 continued

Localities with a Community College within 25 Miles

County	Locality	Population	Closest School	(d)
Jackson continued	Waterloo township	2,830	Jackson	12
Kalamazoo	Alamo township	3,276	Kalamazoo	8
	Brady township	3,857	Kalamazoo	9
	Charleston townsh	1,776	Kellogg	13
	Climax township	2,221	Kellogg	13
	Comstock township	11,834	Kalamazoo	8
	Cooper township	8,442	Kalamazoo	8
	Galesburg city	1,863	Kellogg	13
	Kalamazoo city	80,277	Kalamazoo	4
	Kalamazoo townshi	20,976	Kalamazoo	4
	Oshtemo township	13,401	Kalamazoo	4
	Parchment city	1,958	Kalamazoo	9
	Pavilion township	5,500	Kalamazoo	8
	Portage city	41,042	Kalamazoo	7
	Prairie Ronde tow	1,365	Kalamazoo	5
	Richland township	5,099	Kalamazoo	14
	Ross township	4,730	Kellogg	14
	Schoolcraft towns	6,705	Kalamazoo	5
	Texas township	7,711	Kalamazoo	0
	Wakeshma township	1,378	Kalamazoo	15
Kalkaska	Boardman township	1,076	Northwestern	22
	Clearwater townsh	1,959	Northwestern	18
	Garfield township	596	Kirtland	23
	Rapid River towns	746	Northwestern	25
Kent	Ada township	7,578	Grand Rapids	5
	Algoma township	5,496	Grand Rapids	9
	Alpine township	9,863	Grand Rapids	4
	Bowne township	1,907	Grand Rapids	12
	Byron township	13,235	Grand Rapids	6
	Caledonia townshi	6,254	Grand Rapids	8
	Cannon township	7,928	Grand Rapids	6
	Cascade township	12,869	Grand Rapids	5
	Cedar Springs city	2,600	Grand Rapids	15
	Courtland townshi	3,950	Grand Rapids	10
	East Grand Rapids	10,807	Grand Rapids	2
	Gaines township	14,533	Grand Rapids	6
	Grand Rapids Char	10,760	Grand Rapids	0
	Grand Rapids city	189,126	Grand Rapids	0
	Grandville city	15,624	Grand Rapids	4
	Grattan township	2,876	Grand Rapids	11
	Kentwood city	37,826	Grand Rapids	4
	Lowell city	3,983	Grand Rapids	12
	Lowell township	4,774	Grand Rapids	10
	Nelson township	3,406	Grand Rapids	15
	Oakfield township	3,842	Grand Rapids	13
	Plainfield townsh	24,946	Grand Rapids	4
	Rockford city	3,750	Grand Rapids	10
	Solon township	3,648	Grand Rapids	14
	Sparta township	8,447	Grand Rapids	9
	Spencer township	3,184	Montcalm	11
	Tyrone township	3,757	Grand Rapids	17
	Vergennes townshi	2,492	Grand Rapids	19

Table 11 continued

Localities with a Community College within 25 Miles

County	Locality	Population	Closest School	(d)
Kent continued	Walker city	17,279	Grand Rapids	4
	Wyoming city	63,891	Grand Rapids	9
Lake	Elk township	580	West Shore	20
	Peacock township	344	West Shore	25
	Sauble township	297	West Shore	23
	Sweetwater townsh	223	West Shore	24
	Webber township	968	West Shore	25
Lapeer	Almont township	4,660	Macomb	23
	Deerfield townshi	4,903	Mott	26
	Elba township	4,536	Mott	18
	Hadley township	3,830	Mott	20
	Lapeer city	7,759	Mott	22
	Lapeer township	4,519	Mott	24
	Marathon township	4,286	Mott	21
	Mayfield township	7,133	Mott	26
	Metamora township	3,544	Mott	26
	Oregon township	5,913	Mott	15
Leelanau	Bingham township	2,051	Northwestern	7
	Centerville towns	836	Northwestern	6
	Cleveland townshi	783	Northwestern	8
	Elmwood township	3,427	Northwestern	3
	Empire township	858	Northwestern	14
	Glen Arbor townsh	644	Northwestern	15
	Kasson township	1,135	Northwestern	7
	Leelanau township	1,694	Northwestern	17
	Leland township	1,642	Northwestern	11
	Solon township	1,268	Northwestern	1
	Suttons Bay towns	2,150	Northwestern	12
	Traverse City city	39	Northwestern	0
Lenawee	Adrian city	22,097	Jackson	26
	Adrian township	4,336	Jackson	25
	Blissfield townsh	3,849	Monroe	10
	Cambridge townshi	4,429	Jackson	20
	Clinton township	3,557	Washtenaw	20
	Deerfield townshi	1,659	Monroe	10
	Fairfield townshi	1,883	Monroe	25
	Franklin township	2,473	Jackson	23
	Macon township	1,421	Washtenaw	19
	Madison Charter tow	5,351	Monroe	20
	Morenci city	2,342	Monroe	25
	Ogden township	1,146	Monroe	16
	Palmyra township	2,602	Monroe	15
	Raisin township	5,648	Monroe	17
	Ridgeway township	1,572	Washtenaw	21
	Riga township	1,471	Monroe	13
	Rollin township	3,323	Jackson	24
	Rome township	1,632	Jackson	23
	Tecumseh city	7,462	Monroe	19
	Tecumseh township	1,539	Jackson	24
	Woodstock townshi	3,155	Jackson	15

Table 11 continued

Localities with a Community College within 25 Miles

County	Locality	Population	Closest School	(d)
Livingston continued	Brighton township	14,815	Washtenaw	16
	Cohoctah township	2,693	Mott	24
	Conway township	1,818	Mott	25
	Deerfield townshi	3,000	Mott	20
	Genoa township	10,820	Washtenaw	23
	Green Oak townshi	11,604	Washtenaw	14
	Hamburg township	13,083	Washtenaw	12
	Hartland township	6,860	Mott	23
	Howell city	8,184	Washtenaw	21
	Howell township	4,298	Washtenaw	21
	Marion township	4,918	Washtenaw	24
	Putnam township	6,183	Washtenaw	23
	Tyrone township	6,854	Mott	19
	Unadilla township	2,949	Washtenaw	21
Mackinaw	Bois Blanc townsh	59	North Central	25
Macomb	Armada township	4,491	Macomb	19
	Bruce township	6,012	Macomb	19
	Center Line city	9,026	Macomb	3
	Chesterfield town	25,905	Macomb	10
	Clinton township	85,866	Macomb	0
	East Detroit city	35,283	Macomb	3
	Fraser city	13,899	Macomb	1
	Harrison township	24,685	Macomb	7
	Lake township	105	Macomb	14
	Lenox township	5,400	Macomb	15
	Macomb township	22,714	Macomb	7
	Memphis city	896	St. Clair	15
	Mount Clemens city	18,405	Macomb	6
	New Baltimore city	5,798	Macomb	16
	Ray township	3,230	Macomb	13
	Richmond city	4,141	St. Clair	18
	Richmond township	2,528	Macomb	18
	Roseville city	51,412	Macomb	1
	Shelby township	48,655	Macomb	7
	St. Clair Shores	68,107	Macomb	4
	Sterling Heights	117,810	Macomb	1
	Utica city	5,081	Macomb	7
	Warren city	144,864	Macomb	2
	Washington townsh	13,087	Macomb	13
Manistee	Brown township	588	West Shore	26
	Cleon township	713	Northwestern	22
	Filer township	1,966	West Shore	11
	Manistee city	6,734	West Shore	17
	Manistee township	2,952	West Shore	17
	Norman township	1,189	West Shore	23
	Onekama township	1,266	West Shore	24
	Springdale townsh	498	Northwestern	24
	Stronach township	688	West Shore	13
Mason	Amber township	1,684	West Shore	5
	Branch township	973	West Shore	6
	Custer township	1,176	West Shore	2

Table 11 continued

Localities with a Community College within 25 Miles

County	Locality	Population	Closest School	(d)
Mason continued	Eden township	491	West Shore	5
	Free Soil townshi	860	West Shore	4
	Grant township	749	West Shore	4
	Hamlin township	2,597	West Shore	5
	Logan township	203	West Shore	8
	Ludington city	8,507	West Shore	3
	Meade township	142	West Shore	7
	Pere Marquetter city	2,065	West Shore	1
	Riverton township	1,115	West Shore	4
	Scottville city	1,287	West Shore	3
	Sheridan township	837	West Shore	6
	Sherman township	952	West Shore	2
	Summit township	815	West Shore	5
	Victory township	1,084	West Shore	0
Mecosta	Aetna township	1,622	Montcalm	15
	Austin township	1,102	Montcalm	16
	Chippewa township	1,035	Mid Michigan	21
	Deerfield townshi	1,231	Montcalm	12
	Fork township	1,395	Mid Michigan	16
	Hinton township	995	Montcalm	9
	Martiny township	1,348	Mid Michigan	24
	Mecosta township	1,966	Montcalm	18
	Millbrook townshi	1,012	Montcalm	8
	Morton township	2,122	Montcalm	17
	Sheridan township	1,020	Mid Michigan	20
	Wheatland townshi	1,365	Montcalm	17
Menominee	Gourley township	362	Bay De Noc	23
	Harris township	1,542	Bay De Noc	13
	Meyer township	1,090	Bay De Noc	24
	Spalding township	1,536	Bay De Noc	22
Midland	Coleman city	1,237	Mid Michigan	21
	Edenville townshi	2,367	Delta	16
	Geneva township	1,048	Delta	11
	Greendale townshi	1,495	Delta	18
	Homer township	4,235	Delta	13
	Hope township	1,220	Delta	13
	Ingersoll townshi	2,788	Delta	13
	Jasper township	1,096	Delta	21
	Jerome township	4,470	Delta	11
	Larkin township	3,588	Delta	6
	Lee township	4,017	Delta	14
	Lincoln township	1,807	Delta	12
	Midland city	37,819	Delta	1
	Midland township	2,221	Delta	1
	Mills township	1,635	Delta	11
	Mount Haley towns	1,656	Delta	14
	Porter township	1,140	Delta	16
	Warren township	1,812	Mid Michigan	20
Missaukee	Aetna township	416	Mid Michigan	21
	Butterfield towns	452	Mid Michigan	20
	Clam Union townsh	854	Mid Michigan	18

Table 11 continued

Localities with a Community College within 25 Miles

County	Locality	Population	Closest School	(d)
Missaukee continued	Enterprise townsh	127	Kirtland	21
	Holland township	169	Mid Michigan	15
	McBain city	692	Mid Michigan	21
	Norwich township	505	Kirtland	25
	Riverside townshi	853	Mid Michigan	22
	West Branch towns	473	Kirtland	25
Monroe	Ash township	7,480	Monroe	5
	Bedford township	23,748	Monroe	7
	Berlin township	6,286	Monroe	8
	Dundee township	5,376	Monroe	6
	Erie township	4,492	Monroe	7
	Exeter township	3,253	Monroe	5
	Frenchtown townsh	18,210	Monroe	0
	Ida township	4,554	Monroe	3
	La Salle township	4,985	Monroe	2
	London township	2,915	Monroe	5
	Luna Pier city	1,507	Monroe	7
	Milan city	980	Washtenaw	13
	Milan township	1,659	Monroe	9
	Monroe city	22,902	Monroe	2
	Monroe township	11,909	Monroe	0
	Petersburg city	1,201	Monroe	10
	Raisinville towns	4,634	Monroe	0
	Summerfield towns	3,076	Monroe	8
	Whiteford townshi	4,433	Monroe	10
Montcalm	Belvidere townshi	2,134	Montcalm	7
	Bloomer township	2,922	Montcalm	6
	Bushnell township	1,291	Montcalm	3
	Carson City city	1,158	Montcalm	9
	Cato township	2,500	Montcalm	16
	Crystal township	2,541	Montcalm	5
	Day township	1,196	Montcalm	2
	Douglass township	1,944	Montcalm	2
	Eureka township	2,594	Montcalm	13
	Evergreen townshi	2,531	Montcalm	2
	Fairplain townshi	1,575	Montcalm	3
	Ferris township	1,189	Montcalm	5
	Greenville city	8,101	Montcalm	7
	Home township	2,513	Montcalm	2
	Maple Valley town	1,824	Montcalm	8
	Montcalm township	2,879	Montcalm	15
	Pierson township	2,177	Montcalm	13
	Pine township	1,392	Montcalm	14
	Reynolds township	3,028	Montcalm	15
	Richland township	2,355	Montcalm	9
	Sidney township	2,375	Montcalm	0
	Stanton city	1,504	Montcalm	1
	Winfield township	1,336	Montcalm	11
Montmorency	Hillman township	2,189	Alpena	21
	Montmorency towns	1,075	Alpena	22
	Rust township	514	Alpena	22
Muskegon	Blue Lake townshi	1,235	Muskegon	9

Table 11 continued

Localities with a Community College within 25 Miles

County	Locality	Population	Closest School	(d)
Muskegon continued	Casnovia township	2,361	Muskegon	16
	Cedar Creek towns	2,846	Muskegon	3
	Dalton township	6,276	Muskegon	3
	Egelston township	7,640	Muskegon	3
	Fruitland townshi	4,391	Muskegon	5
	Fruitport township	11,485	Muskegon	6
	Holton township	2,318	Muskegon	8
	Laketon township	6,538	Muskegon	2
	Montague city	2,276	Muskegon	7
	Montague township	1,429	Muskegon	7
	Moorland township	1,543	Muskegon	0
	Muskegon Heights cit	13,176	Muskegon	3
	Muskegon city	40,283	Muskegon	0
	Muskegon township	15,302	Muskegon	2
	North Muskegon city	3,919	Muskegon	2
	Norton Shores city	21,755	Muskegon	2
	Ravenna township	2,354	Muskegon	7
	Roosevelt Park city	3,885	Muskegon	3
	Sullivan township	2,230	Muskegon	3
	White River towns	1,250	Muskegon	11
	Whitehall city	3,027	Muskegon	10
	Whitehall townshi	1,464	Muskegon	9
Newaygo	Ashland township	1,997	Grand Rapids	20
	Big Prairie towns	1,731	Montcalm	22
	Bridgeton townshi	1,574	Muskegon	18
	Brooks township	2,728	Montcalm	23
	Croton township	1,965	Montcalm	24
	Dayton township	1,971	Muskegon	12
	Denver township	1,532	Muskegon	25
	Ensley township	1,984	Montcalm	18
	Everett township	1,519	Montcalm	25
	Fremont city	3,875	Muskegon	17
	Garfield township	2,067	Muskegon	19
	Goodwell township	358	Montcalm	18
	Grant city	764	Muskegon	18
	Grant township	2,558	Grand Rapids	20
	Lincoln township	969	Muskegon	21
	Newaygo city	1,336	Muskegon	20
	Sheridan Charter	2,252	Muskegon	11
	Sherman township	1,866	Muskegon	20
	White Cloud city	1,147	Montcalm	25
Oakland	Addison township	5,142	Oakland	18
	Auburn Hills city	17,076	Oakland	9
	Berkley city	16,960	Oakland	6
	Birmingham city	19,997	Oakland	4
	Bloomfield Hills cit	4,288	Oakland	5
	Bloomfield townsh	42,473	Oakland	2
	Brandon township	12,051	Oakland	17
	Clawson city	13,874	Oakland	8
	Commerce township	26,955	Oakland	4
	Farmington Hills	74,652	Oakland	0
	Farmington city	10,132	Oakland	1
	Ferndale city	25,084	Oakland	8

Table 11 continued

Localities with a Community College within 25 Miles

County	Locality	Population	Closest School	(d)
Oakland continued	Groveland townshi	4,705	Oakland	17
	Hazel Park city	20,051	Highland Park	10
	Highland township	17,941	Oakland	11
	Holly township	8,852	Oakland	19
	Huntington Woods	6,419	Oakland	7
	Independence town	24,722	Oakland	12
	Keego Harbor city	2,932	Oakland	6
	Lake Angelus city	328	Oakland	10
	Lathrup Village city	4,329	Oakland	5
	Lyon township	9,450	Oakland	0
	Madison Heights city	32,196	Highland Park	10
	Milford township	12,121	Oakland	8
	Northville city	3,367	Schoolcraft	2
	Novi city	32,998	Oakland	5
	Novi township	150	Oakland	4
	Oak Park city	30,462	Oakland	6
	Oakland Charter town	8,227	Oakland	7
	Orchard Lake Village	2,286	Oakland	2
	Orion township	24,076	Oakland	12
	Oxford township	11,933	Oakland	17
	Pleasant Ridge city	2,775	Oakland	8
	Pontiac city	71,166	Oakland	7
	Rochester Hills city	61,766	Oakland	9
	Rochester city	7,130	Oakland	13
	Rose township	4,926	Oakland	14
	Royal Oak city	65,410	Oakland	6
	Royal Oak townshi	5,011	Oakland	7
	South Lyon city	5,857	Washtenaw	10
	Southfield city	75,728	Oakland	3
	Southfield townsh	14,255	Oakland	3
	Springfield towns	9,927	Oakland	12
	Sylvan Lake city	1,884	Oakland	6
	Troy city	72,884	Oakland	7
	Walled Lake city	6,278	Oakland	4
	Waterford townshi	66,692	Oakland	7
	West Bloomfield town	54,516	Oakland	2
	White Lake townsh	22,608	Oakland	8
	Wixom city	8,550	Oakland	6
Oceana	Benona township	1,133	Muskegon	17
	Claybanks townshi	679	Muskegon	11
	Colfax township	374	West Shore	26
	Crystal township	658	West Shore	21
	Elbridge township	820	West Shore	26
	Ferry township	1,033	Muskegon	20
	Golden township	1,302	West Shore	22
	Grant township	2,578	Muskegon	10
	Greenwood townshi	915	Muskegon	16
	Hart city	1,942	West Shore	25
	Hart township	1,513	West Shore	22
	Newfield township	2,144	Muskegon	22
	Otto township	404	Muskegon	13
	Pentwater townshi	1,422	West Shore	17
	Shelby township	3,692	Muskegon	16
	Weare township	1,041	West Shore	17

Table 11 continued

Localities with a Community College within 25 Miles

County	Locality	Population	Closest School	(d)
Ogemaw	Churchill townshi	1,130	Kirtland	23
	Cumming township	686	Kirtland	23
	Edwards township	1,210	Kirtland	16
	Foster township	719	Kirtland	13
	Horton township	955	Kirtland	21
	Klacking township	430	Kirtland	18
	Mills township	3,174	Kirtland	24
	Ogemaw township	893	Kirtland	13
	Rose City city	686	Kirtland	24
	Rose township	1,260	Kirtland	20
	West Branch city	1,914	Kirtland	20
	West Branch towns	2,294	Kirtland	18
Ontonagon	Bergland tow ip	518	Gogebic	25
	Carp Lake townshi	1,193	Gogebic	20
Osceola	Cedar township	267	Mid Michigan	21
	Evart city	1,744	Mid Michigan	20
	Evart township	1,229	Mid Michigan	18
	Hartwick township	456	Mid Michigan	17
	Hersey township	1,455	Mid Michigan	24
	Highland township	1,012	Mid Michigan	17
	Marion township	1,445	Mid Michigan	10
	Middle Branch tow	701	Mid Michigan	10
	Orient township	692	Mid Michigan	14
	Osceola township	937	Mid Michigan	17
	Rose Lake townshi	968	Mid Michigan	22
	Sherman township	948	Mid Michigan	22
	Sylvan township	852	Mid Michigan	10
Oscoda	Big Creek townshi	2,778	Kirtland	14
	Greenwood townshi	880	Kirtland	24
	Mentor township	1,098	Kirtland	24
Ottawa	Allendale townshi	8,022	Grand Rapids	2
	Blendon township	4,740	Grand Rapids	6
	Chester township	2,133	Grand Rapids	11
	Coopersville city	3,421	Grand Rapids	8
	Crockery township	3,599	Muskegon	17
	Ferrysburg city	2,919	Muskegon	17
	Georgetown townsh	32,672	Grand Rapids	5
	Grand Haven city	11,951	Grand Rapids	17
	Grand Haven towns	9,710	Grand Rapids	17
	Holland city	25,086	Grand Rapids	14
	Holland township	17,523	Grand Rapids	13
	Hudsonville city	6,170	Grand Rapids	7
	Jamestown townshi	4,059	Grand Rapids	11
	Olive township	2,866	Grand Rapids	9
	Park township	13,541	Grand Rapids	16
	Polkton township	2,284	Grand Rapids	11
	Port Sheldon town	2,929	Grand Rapids	17
	Robinson township	3,925	Grand Rapids	12
	Spring Lake towns	10,751	Muskegon	14
	Tallmadge townshi	6,293	Grand Rapids	5

Table 11 continued

Localities with a Community College within 25 Miles

County	Locality	Population	Closest School	(d)
Ottawa continued	Wright township	3,285	Grand Rapids	6
	Zeeland city	5,417	Grand Rapids	14
	Zeeland township	4,472	Grand Rapids	8
Presque Isle	Belknap township	920	Alpena	22
	Bismarck township	319	Alpena	21
	Case township	770	Alpena	26
	Krakow township	617	Alpena	11
	Posen township	972	Alpena	12
	Pulawski township	427	Alpena	17
	Rogers township	857	Alpena	25
Roscommon	AuSable township	231	Kirtland	0
	Backus township	249	Kirtland	8
	Denton township	4,290	Kirtland	11
	Gerrish township	2,421	Kirtland	9
	Higgins township	1,685	Kirtland	6
	Lake township	1,234	Kirtland	12
	Lyon township	1,037	Kirtland	12
	Markey township	1,768	Kirtland	9
	Nester township	225	Kirtland	9
	Richfield townshi	3,413	Kirtland	6
	Roscommon townshi	3,223	Kirtland	13
Saginaw	Albee township	2,402	Mott	19
	Birch Run townshi	5,354	Mott	19
	Blumfield townshi	1,999	Delta	20
	Brady township	2,396	Mott	22
	Brant township	1,942	Delta	23
	Bridgeport townsh	12,747	Delta	22
	Buena Vista Chart	10,900	Delta	18
	Carrollton townsh	6,521	Delta	16
	Chapin township	969	Mott	25
	Chesaning townshi	4,904	Mott	20
	Frankenmuth city	4,408	Mott	21
	Frankenmuth towns	2,122	Mott	24
	Fremont township	2,137	Delta	18
	James township	2,005	Delta	17
	Jonesfield townsh	1,740	Delta	12
	Kochville townshi	2,740	Delta	15
	Lakefield townshi	962	Delta	24
	Maple Grove towns	2,830	Mott	14
	Marion township	928	Delta	24
	Richland township	4,177	Delta	11
	Saginaw city	69,512	Delta	19
	Saginaw township	37,684	Delta	18
	Spaulding townshi	2,662	Delta	21
	St. Charles towns	3,505	Mott	22
	Swan Creek townsh	2,346	Delta	19
	Taymouth township	4,524	Mott	19
	Thomas township	10,971	Delta	25
	Tittabawassee tow	4,627	Delta	9
	Zilwaukee city	1,850	Delta	17
	Zilwaukee townshi	82	Delta	17
Sanilac	Buel township	844	St. Clair	24

Table 11 continued

Localities with a Community College within 25 Miles

County	Locality	Population	Closest School	(d)
Sanilac continued	Croswell city	2,174	St. Clair	24
	Fremont township	787	St. Clair	17
	Lexington townshi	3,028	St. Clair	22
	Maple Valley town	1,022	St. Clair	25
	Speaker township	1,171	St. Clair	21
	Worth township	3,146	St. Clair	15
Shiawassee	Antrim township	1,679	Mott	23
	Bennington townsh	2,726	Mott	22
	Burns township	3,019	Mott	13
	Caledonia townshi	4,514	Mott	12
	Corunna city	3,091	Mott	15
	Durand city	4,283	Mott	11
	Fairfield townshi	790	Mott	23
	Hazelton township	2,294	Mott	7
	Laingsburg city	1,148	Lansing	23
	Middlebury townsh	1,536	Lansing	25
	New Haven townshi	1,286	Mott	13
	Owosso city	16,322	Mott	18
	Owosso township	4,121	Mott	18
	Perry city	2,163	Mott	22
	Perry township	3,698	Lansing	23
	Rush township	1,405	Mott	20
	Sciota township	1,578	Lansing	21
	Shiawassee townsh	2,731	Mott	17
	Venice township	2,812	Mott	7
	Vernon township	4,989	Mott	7
	Woodhull township	3,585	Lansing	18
St. Clair	Algonac city	4,551	St. Clair	22
	Berlin township	2,407	St. Clair	19
	Brockway township	1,609	St. Clair	14
	Burtchville towns	3,559	St. Clair	6
	Casco township	4,552	St. Clair	14
	China township	2,644	St. Clair	11
	Clay township	8,862	St. Clair	21
	Clyde township	5,052	St. Clair	3
	Columbus township	3,235	St. Clair	9
	Cottrellville tow	3,301	St. Clair	16
	East China townsh	3,216	St. Clair	11
	Emmett township	1,816	St. Clair	13
	Fort Gratiot town	8,968	St. Clair	0
	Grant township	1,210	St. Clair	7
	Greenwood townshi	1,037	St. Clair	10
	Ira township	5,587	St. Clair	18
	Kenockee township	1,854	St. Clair	8
	Kimball township	7,247	St. Clair	2
	Lynn township	921	St. Clair	22
	Marine City city	4,556	St. Clair	16
	Marysville city	8,515	St. Clair	3
	Memphis city	325	St. Clair	15
	Mussey township	3,113	St. Clair	19
	Port Huron city	33,694	St. Clair	0
	Port Huron townsh	7,621	St. Clair	0
	Riley township	2,154	St. Clair	13

Table 11 continued

Localities with a Community College within 25 Miles

County	Locality	Population	Closest School	(d)
St. Clair continued	St. Clair city	5,116	St. Clair	9
	St. Clair townshi	4,614	St. Clair	5
	Wales township	2,294	St. Clair	8
	Yale city	1,977	St. Clair	16
St. Joseph	Burr Oak township	2,542	Glen Oaks	6
	Colon township	3,217	Glen Oaks	6
	Constantine towns	4,152	Glen Oaks	7
	Fabius township	3,187	Glen Oaks	7
	Fawn River townsh	1,571	Glen Oaks	9
	Florence township	1,518	Glen Oaks	1
	Flowerfield towns	1,418	Glen Oaks	9
	Leonidas township	1,171	Glen Oaks	7
	Lockport township	3,395	Glen Oaks	1
	Mendon township	2,695	Glen Oaks	5
	Mottville townshi	1,501	Glen Oaks	11
	Nottawa township	3,637	Glen Oaks	0
	Park township	2,769	Glen Oaks	5
	Sherman township	2,978	Glen Oaks	1
	Sturgis city	10,130	Glen Oaks	7
	Sturgis township	1,965	Glen Oaks	7
	Three Rivers city	7,413	Glen Oaks	5
	White Pigeon town	3,654	Glen Oaks	5
Tuscola	Arbela township	3,182	Mott	15
	Gilford township	824	Delta	25
	Millington townsh	4,199	Mott	18
	Watertown townshi	2,132	Mott	22
	Wisner township	795	Delta	24
Van Buren	Almena township	3,581	Kalamazoo	7
	Antwerp township	9,293	Kalamazoo	7
	Arlington townshi	1,929	Kalamazoo	1
	Bangor city	1,922	Kalamazoo	10
	Bangor township	1,948	Kalamazoo	14
	Bloomingdale town	2,854	Kalamazoo	5
	Columbia township	2,552	Kalamazoo	9
	Covert township	2,855	Lake Michigan	16
	Decatur township	3,616	Kalamazoo	14
	Geneva township	3,162	Kalamazoo	15
	Gobles city	769	Kalamazoo	8
	Hamilton township	1,515	Southwestern	13
	Hartford city	2,341	Kalamazoo	4
	Hartford township	3,032	Southwestern	14
	Keeler township	2,344	Southwestern	13
	Lawrence township	3,030	Kalamazoo	10
	Paw Paw township	6,701	Kalamazoo	3
	Pine Grove townsh	2,594	Kalamazoo	9
	Porter township	2,086	Glen Oaks	11
	South Haven city	5,563	Kalamazoo	21
	South Haven towns	4,185	Kalamazoo	20
	Waverly township	2,188	Kalamazoo	3
Washtenaw	Ann Arbor city	109,592	Washtenaw	0
	Ann Arbor townshi	3,793	Washtenaw	0

Table 11 continued

Localities with a Community College within 25 Miles

County	Locality	Population	Closest School	(d)
Washtenaw continued	Augusta township	4,415	Washtenaw	8
	Bridgewater towns	1,304	Washtenaw	14
	Dexter township	4,407	Washtenaw	11
	Freedom township	1,486	Washtenaw	12
	Lima township	2,585	Washtenaw	12
	Lodi township	3,902	Washtenaw	6
	Lyndon township	2,228	Washtenaw	18
	Manchester townsh	3,492	Washtenaw	20
	Milan city	3,060	Washtenaw	13
	Northfield townsh	6,732	Washtenaw	4
	Pittsfield townsh	17,668	Washtenaw	2
	Salem township	3,734	Washtenaw	4
	Saline city	6,660	Washtenaw	8
	Saline township	1,276	Washtenaw	8
	Scio township	11,077	Washtenaw	6
	Sharon township	1,366	Washtenaw	18
	Superior township	8,720	Washtenaw	0
	Sylvan township	5,827	Washtenaw	18
	Webster township	3,235	Washtenaw	7
	York township	6,225	Washtenaw	8
	Ypsilanti city	24,846	Schoolcraft	4
	Ypsilanti townshi	45,307	Washtenaw	2
Wayne	Allen Park city	31,092	Henry Ford	3
	Belleville city	3,270	Schoolcraft	9
	Brownstown townsh	18,811	Henry Ford	8
	Canton township	57,040	Schoolcraft	7
	Dearborn Heights	60,838	Henry Ford	0
	Dearborn city	89,286	Henry Ford	0
	Detroit city	1,027,974	Wayne	0
	Ecorse city	12,180	Wayne	4
	Flat Rock city	7,290	Henry Ford	11
	Garden City city	31,846	Henry Ford	2
	Gilbraltar city	4,297	Henry Ford	11
	Grosse Ile townsh	9,781	Wayne	5
	Grosse Pointe Farms	10,092	Highland Park	8
	Grosse Pointe Park	12,857	Highland Park	7
	Grosse Pointe Wood	17,715	Highland Park	8
	Grosse Pointe city	5,681	Highland Park	8
	Grosse Pointe tow	2,850	Highland Park	7
	Hamtramck city	18,372	Schoolcraft	4
	Harper Woods city	14,903	Highland Park	6
	Highland Park city	20,121	Highland Park	1
	Huron township	10,447	Henry Ford	8
	Inkster city	30,772	Henry Ford	2
	Lincoln Park city	41,832	Henry Ford	4
	Livonia city	100,850	Henry Ford	4
	Melvindale city	11,216	Henry Ford	3
	Northville city	2,859	Schoolcraft	2
	Northville townsh	17,313	Schoolcraft	0
	Plymouth city	9,560	Schoolcraft	2
	Plymouth township	23,648	Schoolcraft	2
	Redford township	54,387	Henry Ford	1
	River Rouge city	11,314	Wayne	1
	Riverview city	13,894	Henry Ford	7

Table 11 continued

Localities with a Community College within 25 Miles

County	Locality	Population	Closest School	(d)
Wayne continued	Rockwood city	3,141	Henry Ford	12
	Romulus city	22,897	Henry Ford	4
	Southgate city	30,771	Henry Ford	3
	Sumpter township	10,891	Henry Ford	10
	Taylor city	70,811	Henry Ford	3
	Trenton city	20,586	Wayne	9
	Van Buren townshi	21,010	Schoolcraft	7
	Wayne city	19,899	Schoolcraft	4
	Westland city	84,724	Henry Ford	4
	Woodhaven city	11,631	Wayne	9
	Wyandotte city	30,938	Wayne	5
Wexford	Greenwood townshi	372	Northwestern	24
	Hanover township	826	Northwestern	23
	Wexford township	567	Northwestern	23
	TOTAL	8,624,609		

difference in distance measurement because of the Great Lakes. Those three situations occurred in listing localities in Mackinaw County in proximity to North Central Community College, linearly across the Straits of Mackinac; Huron County in proximity to Delta College, linearly across Saginaw Bay; and Leelanau County in proximity to Northwestern Michigan College, linearly across Traverse Bay. The data was not adjusted in any way, but examination of these three counties permits an easy adjustment, if desired.

Table 8 on Pages 97 through 104 also contains the counties per-capita State funding amounts relative to Research Questions III and IV which follow.

Counties Per-Capita State Funding for Accessible Community Colleges

Research Question III: What was the Michigan per-capita dollar amount of State funds for all 29 community colleges in 1990? With a total 1990 state population of 9,295,297 and total State funding of $209,480,000, the per-capita funding is $22.64. This amount counts each person only once and does not take into account that some people in Michigan have access to several community colleges, thereby able to benefit from State funding for each within accessible distance. The mean per-capita State funds for each of the 83 counties referred to in Research Question IV takes into account the multiplicity of access.

Research Question IV: What were the county per-capita amounts of State funds for each of the 83 counties in

Michigan for 1990? What was the deviation from the mean for each county? The per-capita amounts from Table 8 (Pages 97 through 104) are summarized in Table 12 on Page 139. In Table 8 the per-capita values were calculated by multiplying the percentages of the populations within Ranges A and B by the amount of State funding for the accessible schools and dividing by the county population. This information was not previously available. The per-capita county amounts range from 0 to $1,071.62. The amount for each county is a function of county population and number of accessible community colleges with the associated State funding. The number of accessible schools for a county's population varies from 0 to 11.

The higher per-capita amounts result from counties with several community colleges nearby. The three highest counties--Barry, Gratiot, and Livingston--interestingly have no community college in their own counties but have close access to many schools receiving a high amount of State funding. The counties with the lowest values have no accessible community colleges (within 50 linear miles) or access for only a portion of the population.

Table 12 on Page 139 shows the State mean of county per-capita community college funding, $338.76, and the deviation from the mean for each of the counties for 1990. [Text continued on Page 140.]

Table 12

Comparison of County Per-capita Amounts of Accessible State Funds, 1990

State Mean $338.76

County	Per-Capita Funding	Deviation from Mean
Alcona	$310.58	-28.18
Alger	268.64	-70.12
Allegan	396.92	58.16
Alpena	100.98	-237.78
Antrim	438.09	99.33
Arenac	342.64	3.88
Baraga	0.00	-338.76
Barry	1,005.12	666.36
Bay	185.81	-152.95
Benzie	488.52	149.76
Berrien	85.43	-253.33
Branch	856.12	517.36
Calhoun	308.07	-30.69
Cass	372.67	33.91
Charlevoix	305.54	-33.22
Cheboygan	95.42	-243.34
Chippewa	0.00	-338.76
Clare	573.51	234.75
Clinton	760.45	421.69
Crawford	242.76	-96.00
Delta	67.79	-270.97
Dickinson	95.46	-243.30
Eaton	456.61	117.85
Emmet	74.04	-264.72
Genesee	161.59	-177.17
Gladwin	630.48	291.72
Gogebic	160.86	-177.90
Grand Traverse	82.43	-256.33
Gratiot	1,062.99	724.23
Hillsdale	640.83	302.07
Houghton	0.00	-338.76
Huron	86.03	-252.73
Ingham	$166.76	-172.00
Ionia	785.63	446.87
Iosca	119.71	-219.05
Iron	0.00	-338.76
Isabella	358.11	19.35
Jackson	317.01	-21.75
Kalamazoo	132.20	-206.56
Kalkaska	660.21	321.45
Kent	56.10	-282.66
Keweenaw	0.00	-338.76
Lake	767.78	429.02
Lapeer	910.80	572.04
Leelanau	355.13	16.37
Lenawee	812.85	474.09
Livingston	1,071.62	732.86
Luce	0.00	-338.76
Mackinaw	153.38	-185.38
Macomb	137.89	-200.87
Manistee	169.47	-169.29
Marquette	6.39	-332.37
Mason	269.16	-69.60
Mecosta	311.49	-27.27
Menominee	47.70	-291.06
Midland	258.35	-80.41
Missaukee	768.92	430.16
Monroe	579.36	240.60
Montcalm	406.42	67.66
Montmorency	417.17	78.41
Muskegon	123.54	-215.22
Newaygo	541.44	202.68
Oakland	97.54	-241.22
Oceana	660.07	321.31
Ogemaw	$667.39	328.63
Ontonagen	237.43	-101.33
Osceola	328.53	-10.23
Oscoda	676.22	337.46
Otsego	398.88	60.12
Ottawa	150.08	-188.68
Presque Isle	256.23	-82.53
Roscommon	234.25	-104.51
Saginaw	99.00	-239.76
Sanilac	242.32	-96.44
Schoolcraft	273.84	-64.92
Shiawassee	907.85	569.09
St. Clair	266.85	-71.91
St. Joseph	332.21	-6.55
Tuscola	379.40	40.64
Van Buren	400.84	62.08
Washtenaw	407.90	69.14
Wayne	45.17	-293.59
Wexford	371.60	32.84

Community Colleges Per-capita State Funding for Populations with Access

Research Question V: What was the per-capita funding of each of the 29 community colleges for populations within 25 miles and within 50 miles of each college? What was the deviation from the mean for each community college? Table 13 on Page 141 lists the 29 community colleges, the number of people within Ranges A and B of each college, the state funding for each community college, and the FYES (fiscal-year equated students). The per-capita value of state funding was calculated for the population in Ranges A and B. FYES enrollment as a percentage of the population served was also calculated.

Table 14 on Page 142 shows the mean, $11.33, and deviation from the mean for each of the community colleges. The summary of the deviations from the mean of State funding distribution for each community college (Table 14) was intended to measure the efficiency of State funding based on the number of people within accessible distance and, therefore, capable of being served. The lower per-capita values suggest greater efficiency if the only variable being measured is number of people within 50 linear miles. The colleges with the five highest per-capita values are those with lower populations and a minimum of multiple schools access.

Comparing the other schools shows that factors other than number of people capable of being served determine the

[Text continued on Page 143.]

Table 13

Community College Per-capita Funding — Summary 1990

Community College	Population within 25 miles	Population 26 to 50 mi.	Total Population	Total FYES	State Funding	Per Capita Value of Accessible State Funding	FYES as % of Pop Served
Alpena	43,032	46,581	89,613	1,445	$3,090,394	$34.49	1.6%
Bay de Noc	42,310	62,221	104,531	1,603	2,561,277	24.50	1.5
Delta	385,992	710,510	1,096,502	7,054	9,124,620	8.32	0.6
Glen Oaks	209,557	631,745	841,302	788	1,312,600	1.56	0.1
Gogebic	19,863	4,599	24,462	749	2,903,775	118.71	3.1
Grand Rapids	738,366	649,133	1,387,499	6,987	12,608,479	9.09	0.5
Henry Ford	3,400,784	1,210,930	4,611,714	7,571	14,386,175	3.12	0.2
Highland Pk.	3,900,123	767,000	4,667,123	1,314	5,029,082	1.08	0.0
Jackson	310,318	1,101,197	1,411,515	2,970	8,783,500	6.22	0.2
Kalamazoo	412,371	1,037,423	1,449,794	4,849	6,032,017	4.16	0.3
Kellogg	495,472	1,169,299	1,664,771	2,886	5,570,050	3.35	0.2
Kirtland	60,454	222,643	283,097	846	2,113,575	7.47	0.3
Lake Mich.	224,873	393,018	617,891	1,728	3,022,625	4.89	0.3
Lansing	485,788	1,142,830	1,628,618	12,087	19,944,700	12.25	0.7
Macomb	2,755,758	1,817,064	4,572,822	14,335	22,107,775	4.83	0.3
Mid Mich.	120,085	368,094	488,179	1,351	2,415,100	4.95	0.3
Monroe	578,041	3,125,389	3,703,430	1,754	2,225,700	0.60	0.0
Montcalm	119,028	1,047,121	1,166,149	1,136	2,041,625	1.75	0.1
Mott	620,404	2,372,123	2,992,527	5,902	10,166,950	3.36	0.2
Muskegon	243,480	753,386	996,866	2,811	5,877,650	5.90	0.3
North Central	61,302	71,062	132,364	923	1,854,000	14.01	0.7
Northwestern	108,991	92,833	201,824	3,136	5,253,822	26.03	1.6
Oakland	3,975,489	1,175,396	5,150,885	15,965	15,047,870	2.92	0.3
Schoolcraft	3,477,689	1,492,810	4,970,499	5,338	7,471,350	1.50	0.1
Southwestern	248,746	409,201	657,947	1,717	3,634,363	5.52	0.3
St. Clair	176,542	868,983	1,045,525	2,567	4,601,758	4.40	0.2
Washtenaw	3,346,377	1,956,548	5,302,925	5,300	6,772,975	1.28	0.1
Wayne	3,742,079	824,025	4,566,104	5,500	22,224,133	4.87	0.1
West Shore	52,404	137,814	190,218	722	1,398,825	7.35	0.4

Table 14

Comparison of Community College Funding, 1990

Name of College	Per-Capita Funding	Deviation from Mean
Alpena	$34.49	23.16
Bay de Noc	24.50	13.17
Delta	8.32	-3.01
Glen Oaks	1.56	-.977
Gogebic	118.71	107.38
Grand Rapids	9.09	-2.24
Henry Ford	3.12	-8.21
Highland Park	1.08	-10.25
Jackson	6.22	-5.11
Kalamazoo	4.16	-7.17
Kellogg	3.35	-7.98
Kirtland	7.47	-3.86
Lake Michigan	4.89	-6.44
Lansing	12.25	0.92
Macomb	4.83	-6.50
Mid Michigan	4.95	-6.38
Monroe	0.60	-10.73
Moncalm	1.75	-9.58
Mott	3.36	-7.97
Muskegon	5.90	-5.43
North Central	14.01	2.68
Northwestern	26.03	14.70
Oakland	2.92	-8.41
Schoolcraft	1.50	-9.83
Southwestern	5.52	-5.81
St. Clair	4.40	-6.93
Washtenaw	1.28	-10.05
Wayne	4.87	-6.46
West Shore	7.35	-3.98
Mean		$11.33

distribution of State funding. The multiplicity of access greatly affects per-capita value, especially when extending the access distance from 25 miles to 50 miles. As an example, Monroe Community College, with the lowest per-capita value of $ .60 shows that the number of people within 50 miles is high (3,703,430), but those people can conceivably choose among 10 other community colleges. People living within 50 miles of Monroe Community College have 10 other colleges within 50 miles, and these 10 colleges are not all the same for the people in this county.

The per-capita summary amounts cannot be compared without taking into consideration the multiple access options. Also, the per-capita amounts would be far different if the 25-miles measurement (Range A) was considered separately. This is further discussed with the recommendations for further research. The per-capita values for community college funding based on the population with access are more difficult to analyze as the distance is increased and people have additional choices of community colleges.

To be more useful, the per-capita values by community college could be summed by geographic region of the state, but this would require further processing of the data to accurately describe the multiplicity of access regions. To measure efficiency of State funding would mean looking at all of the "nests" of multiple access in the state and summing both the State funding for the accessible colleges

and the populations with access. This is discussed further with the recommendations for further research.

Examination of localities by amounts and shorter distances from community colleges might enable the classification of localities most likely to be served by a college. This is further discussed with the recommendations for further research.

Table 15 on Page 146, comparing FYES and total headcount as a percentage of population being served, shows higher percentages of enrollment for the schools where multiple access is minimal. For total headcount, the percentage of enrollment ranged from .13% to 6.31% in 1990. Total headcount is a more significant standard than FYES when considering the issue of access because it counts number of people, regardless of the number of credit hours or courses being taken.

The percentage of enrollment of population being served shows the effects of multiple access. Table 5 on page 92 shows the wide range of in-district (16 - 96% in 1990) versus out-of-district enrollment. This same table compared in-district and out-of-district tuition. Access may have a higher cost for a person not being "in-district," but attendance is possible.

All of the different combinations of access and differences in amounts of tuition complicate the meaningfulness of per-capita value for each community college based on number of people capable of being served.

The variables contributing to choice are numerous with multiple-access options. Some of the variables might be tuition amount, programming, and transportation, as well as geographic location.

At the onset of this research it was believed that multiple access was a factor which might not be accounted for. It was not anticipated that the number of accessibile community colleges could be as high as 11. The research findings show the affects of multiple access. Although these research results have accounted for multiple access, the per-capita community college amounts for the populations capable of being served (Tables 13 and 14) are less applicable and require more analysis than the per-capita county amounts of community college services (Tables 8 and 12).

[Text continued on Page 147.]

Table 15

Comparison of FYES and Headcount as a Percentage of Population Served, 1990

Name of College	Population Served	FYES	% of Pop. Served	Headcount	% of Pop. Served
Alpena	89,613	1,445	1.61%	3,843	4.29%
Bay de Noc	104,531	1,603	1.53%	3,664	3.51%
Delta	1,096,502	7,054	0.64%	17,399	1.59%
Glen Oaks	841,302	788	0.09%	2,280	0.27%
Gogebic	24,462	749	3.06%	1,450	5.93%
Grand Rapids	1,387,499	6,987	0.50%	26,574	1.92%
Henry Ford	4,611,714	7,571	0.16%	23,729	0.51%
Highland Park	4,667,123	1,314	0.03%	6,278	0.13%
Jackson	1,411,515	2,970	0.21%	12,905	0.91%
Kalamazoo	1,449,794	4,849	0.33%	16,854	1.16%
Kellogg	1,664,771	2,886	0.17%	13,201	0.79%
Kirtland	283,097	846	0.30%	2,654	0.94%
Lake Michigan	617,891	1,728	0.28%	7,768	1.26%
Lansing	1,628,618	12,087	0.74%	48,071	2.95%
Macomb	4,572,822	14,335	0.31%	50,410	1.10
Mid Michigan	488,179	1,351	0.28%	4,839	0.99%
Monroe	3,703,430	1,754	0.05%	7,359	0.20%
Moncalm	1,166,149	1,136	0.10%	6,176	0.53%
Mott	2,992,527	5,902	0.20%	23,960	0.80%
Muskegon	996,866	2,811	0.28%	10,995	1.10%
North Central	132,364	923	0.70%	2,733	2.06%
Northwestern	201,824	3,136	1.55%	12,742	6.31%
Oakland	5,150,885	15,965	0.31%	51,424	1.00%
St. Clair	1,045,525	2,567	0.25%	11,388	1.09%
Schoolcraft	4,970,499	5,338	0.11%	25,497	0.51%
Southwestern	657,947	1,717	0.26%	5,215	0.79%
Washtenaw	5,302,925	5,300	0.10%	21,309	0.40%
Wayne	4,566,104	5,500	0.12%	17,788	0.39%
West Shore	190,218	722	0.38%	1,855	0.98%

State Funding and Population Shifts during the Last 20 Years Affecting Access

Research Question VI: Have any significant shifts occurred from 1970 to 1990 in state population distribution or State funding distribution which may have affected accessibility? According to the U.S. Census Bureau's listings of states and counties (1990 and 1970), the population of Michigan increased 4.6% from 1970 to 1990 (from 8,881,826 to 9,295,297).

In comparing the counties, only 12 counties had a decrease in population. The remaining 71 counties had an increase. Only four of the 12 counties with a decrease had a change 10% greater than the State as a whole: Gogebic County 12.6%, 2,624; Luce County, 15.1%, 5,655; Keewenau, 24%, 563; and Wayne 20.8%, 555,064. Clearly, the change that might have the greatest effect on accessibility and funding would be the decrease in Wayne County. This decrease was compensated by increases in other counties to account for the net increase of 4.6% in the State.

Four other counties had noticeable number decreases: Bay with a decrease of 5,616; Calhoun, 5,981; Genesee, 13,882; and Saginaw 7,797. These four, however, had decreases of only 1 to 3%.

Of the 71 counties with increases, 45 had increases 10% greater than the State as a whole. To analyze each of these 43 counties individually is beyond the scope of this research and is discussed later with the recommendations for

further research. These increases are listed in Table 16 on the following page. A review of the Table shows the increases in county populations that compensated for the decrease of over half a million people in Wayne County.

Table 1 on Page 83 shows the increase in State funding from 1970 to 1990. A calculation of these increases showed that the State funding for the entire state increased 448% over that 20-year period. The percentages of change for each of the community colleges was calculated. Eight colleges deviated more from the percentage change for the state as a whole than the State trend: Wayne County Community College with a 1,405% increase, Kalamazoo with a 1,322% increase, Kirtland with a 968% increase, West Shore with a 906% increase, Lansing with an increase of 885%, Northwestern with an increase of 802%, Mid Michigan with an increase of 739%, and Gogebic with an increase of 715%.

The Consumer Price Index (CPI) went from 38.8 in 1970 to 180.7 in 1990, an increase of 337% (U. S. Government Printing Office, 1991). Comparing this general level of price changes with State funding of community colleges in Michigan shows that spending for the state as a whole exceeded general prices by 111%. All the remaining schools had increases from 1970 to 1990 in the range of 339% to 655%.

Many factors other than population within accessible distance could have affected State spending. Therefore,

[Text continued on Page 150.]

Table 16

Significant County Population Increases

County	% Change	Number of People
Alcona	42.6	3.032
Allegan	35.9	23,934
Antrim	44.1	5,573
Arenac	33.9	3,782
Barry	31.1	11,891
Benzie	41.9	3,607
Charlevoix	29.7	16,541
Cheboygan	29.1	4,825
Clare	49.4	8,257
Clinton	19.3	9,391
Crawford	89.1	5,778
Eaton	34.8	23,987
Emmet	36.5	6,709
Gladwin	62.5	8,425
Grand Traverse	64.0	25,098
Hillsdale	16.8	6,260
Ionia	24.3	11,176
Iosco	21.2	5,304
Isabella	22.4	10,030
Kalkaska	156.0	8,225
Kent	21.7	89,590
Lake	51.6	2,922
Lapeer	42.9	22,451
Leelanau	52.0	5,655
Livingston	96.1	56,678
Macomb	14.7	92,091
Mecosta	33.2	9,316
Midland	18.6	11,882
Missaukee	70.4	5,021
Montcalm	33.7	13,399
Montmorency	70.3	3,689
Newaygo	36.4	10,210
Oakland	19.3	175,721
Oceana	24.8	4,470
Ogemaw	56.9	6,778
Osceola	35.7	5,308
Oscoda	65.9	3,116
Otsego	72.2	7,535
Ottawa	46.4	59,587
Roscommon	99.9	9,884
St. Clair	21.1	25,432
VanBuren	24.7	13,887
Washtenaw	20.9	48,834
Wexford	33.6	6,643

the population and State funding changes cited indicate that these shifts may have mutually or exclusively affected accessibility. The changes from 1970 to 1990 were examined because the newest community college was established in 1969; however, several district changes have occurred since 1970, and to apply the effect of these population and funding shifts would require further examination into programming and other factors which might have affected State funding.

CHAPTER 5

Summary, Conclusions, and Recommendations

Summary

This study was done to compare population distribution and State funding of community colleges in Michigan using distance as a measure of access. The research findings and conclusions relative to the factors of population and funding distribution may be of use in decisions involving several issues: Accessibility of community colleges, equity of State funding, the possible need for additional community college locations, or the possibility of duplication of community college services.

Although the data which were gathered and analyzed focused on Michigan, the methodology employed may serve as a model for studying accessibility and related issues in other states.

The review of literature has shown that community colleges were originally established to provide the first two years of university study. The five generations of community college development in the United States and Michigan evolved to include additional academic and vocational objectives. During the last 20 years, the community college role has expanded, and public funds support far more than collegiate and career objectives.

The community and social roles of community colleges have expanded these institutions to more comprehensive roles. This has intensified the community college accessibility issue and funding equity issue. The access issue traditionally has focused on potential students, but the expanded role of community colleges means that not only individuals may be without access to a community college, but communities and area businesses may not have access to developmental and social services.

The brief summaries in Appendix A for each of the community colleges show some of the community and social services administered by community colleges which are associated with the expanded role of two-year, public institutions. Examples include business development services, training programs specifically designed for community business and industry, single-parent programs, child-care services, and programs related to the aging and retired people in communities.

Data was gathered from State of Michigan Department of Education reports and from Executive Budget Detail reports to summarize the operating revenue sources of community colleges during the last 20 years. State funding was the focus of this study, but it was necessary to look at the other major sources of operating revenues--local taxes, tuition, and "other"--to understand the complements of state funding support. These data were analyzed to compare the 29

community colleges in Michigan in 1990 and the trends in funding during the last 20 years.

The localities in Michigan and the community colleges were identified as x,y coordinates and input to a computer program written specifically for this research study. The program was written to calculate the distances among the 29 community colleges and the 1,627 localities in 83 counties. The output of the computer program provided listings of accessible community colleges using three ranges of distance--25 miles, 26 to 50 miles, and beyond 50 miles--for each of Michigan's localities and summarized these localities by county. This facilitated the calculation of a per-capita value of community college State funding for each locality and a per-capita value of State funding for each community college based on the population living within accessible distance of the college.

The summary of findings is organized in accordance with the research questions.

Michigan Community Colleges Operating Revenues

I. What dollar amounts of operating funds were received by each community college in Michigan in 1970, 1980, and 1990?
   A. What percentage of funding (general fund) for each school came from the State?
   B. What percentages of funding for each school came from sources other than the State (local tax, tuition, and "other")?

C. What percentage of students for each school paid "in-district" tuition?

The dollar amounts of operating funds increased from $91 million in 1970, to $280 million in 1980, and $551,023 in 1990. Of these total revenues 95 percent came from the State, local taxes, and tuition in 1990, compared with 97 percent in 1980 and 94 percent in 1970. The revenue category, "other," which includes donations, foundation contributions, and some federal funds for vocational equipment accounted for the remaining 5, 3, and 6 percents, respectively.

The percentages of revenue from each of the sources for the state as a whole have varied only from 3% to 9% during the past 20 years. The variance among the schools, however, is much greater. The range increased from 1970 to 1980 and increased again from 1980 to 1990.

State funding ranged from 21% to 64% in 1990 for the 29 community colleges; local tax support ranged from 4% to 48% of operating revenues, and tuition support ranged from 15% to 38%.

State funding for Michigan as a whole increased to 42% in 1970 and 47% in 1980 before decreasing to 38% in 1990. Tuition revenues increased the most, 5%, and local tax revenues and "other" sources increased by 2% each.

Students paying in-district tuition ranged from 16% to 96% among the colleges in 1990. The entire State of

Michigan had 70% in-district enrollment, leaving 30% enrolled in out-of-district community colleges. These findings indicate that forces besides the lower cost of in-district tuition are affecting community college choice.

The wide range of out-of-district enrollment and the 30% statewide figure of out-of-district enrollment are more easily understood from the findings of this study. The findings show that the differences between in-district and out-of-district tuition rates may be insignificant, and in some counties a person may reside closer to an out-of-district community college than his or her own district college. Tuition differences among the colleges accessible to a student may also encourage out-of-district enrollment.

Michigan Population Distribution and Community College Access

II. What was the population distribution by county and localities in 1990?

   A. To which community college's in 1990 did the residents of each county and the localities have access within 25 miles?

   B. To which community college/s in 1990 did the residents of each county and the localities have access within 50 miles?

It was found that 92.7% of the State population live within 25 miles of a community college; another 4.9% live from 26 to 50 miles of a community college, and only 2.4% live 51 or more miles from a community college. More

important than these summary statistics is the specific identification of the localities with respect to access. The findings of this study listed accessibility by counties and the specific localities within the counties.

The findings which report the localities within accessible distance are far different. Only 74% of the State's 1,627 localities are within 25 miles of a community college; 298 are from 26 to 50 miles of a community college; and 124 localities are 51 miles and beyond. This is an important issue in view of the extended community development and support roles of community colleges.

Counties Per-capita State Funding for Accessible Community Colleges

III. What was the Michigan per-capita dollar amount of State funds for all 29 community colleges in 1990?

IV. What were the county per-capita amounts of State funds for each of the 83 counties in Michigan for 1990? What was the deviation from the mean for each county?

The State per-capita dollar amount of State funding for all 29 community colleges in 1990 was $22.64 ($209,480,000 State funding divided by State population of 9,295,297). The per-capita values of accessible funds by county ranged from 0 to $1,071.62. The mean for all 83 counties was $338.76. The State per-capita figure of $22.64 cannot be compared with the county mean, because the county mean

includes the State funding for each accessible community college. Several counties have access to the same community college and portions of a county's population may be within 50 miles of 0 to 11 community colleges. Thus, State funding for a community college is shown as a value for each county's population within accessible distance. The per-capita value by county was the method used to compare the counties.

Community Colleges Per-capita State Funding for Populations with Access

V. What was the per-capita funding of each of the 29 community colleges for populations within 25 miles and within 50 miles of each college? What was the deviation from the mean for each community college?

The mean value for the colleges was $11.33, and the range for the colleges was from $.60 to $118.71. The wide range is accounted for by denser populations with multiple access and the other extreme of only one college in a sparsely populated area. A significant finding was the degree to which residents of some counties have multiple access.

The per-capita figure is of little meaning without further analysis to define specifically the effects of multiple access. The specific computer listings of each college with a list of populations within accessible distance is useful in defining potential students for each college and for examining further the effects of multiple

access. This is discussed further with the conclusions and recommendations for further research.

State Funding and Population Shifts during the Last 20 Years Affecting Access

VI. Have any significant shifts occurred from 1970 to 1990 in state population distribution or State funding distribution which may have affected accessibility?

Significant shifts were defined in Chapter 3 as increases or decreases 10% greater than the change in population or funding for the entire State from 1970 to 1990. Four counties had significant percentage decreases in population and 45 counties had significant increases.

State funding increased 448% for the State from 1970 to 1990. The percentage of change for each of the community colleges was calculated. Eight colleges deviated more from the percentage change for the State as a whole than the State trend.

These changes suggest that accessibility has been affected, but several factors other than population changes and number of students being served affect State funding. To apply the effect of the population and funding shifts would require further examination into the other factors affecting accessibility as discussed with recommendations for further research.

Conclusions

Based on the findings of this study, the following conclusions were drawn:

1. For the State as a whole, funding sources for community college operations has remained relatively stable. State funding has varied only 9% during the last 20 years as the percentage of operating revenues of community colleges. State funding for the entire state in 1990 was 38% of operating revenues. State funding steadily increased to 42% in 1970 and 47% in 1980 before decreasing to 38% in 1990. Tuition revenues increased the most, 5% (rounded to 4% in Table 3), followed by local tax revenues and "other" sources at 2% each from 1980 to 1990, compensating for the 9% decrease in State funding.

2. The 29 community colleges vary greatly in their sources of revenue. State funding is unevenly distributed among the 29 community colleges. In 1990 the range of local tax support among the colleges was from 4% to 48% of operating revenues. Tuition support ranged from 15% to 38%. State funding ranged from 21% to 64%. The variation among the colleges has increased during the last 20 years. For schools with low percentages of local support or no local support, State funding has been the compensating revenue source. The State funding is provided from State revenues collected Statewide. The increase in operating revenues from tuition has been Statewide.

3. Factors other than the district in which a person resides affect the decision to attend a community college. The students paying in-district tuition ranged from 16% to 96% among the colleges, with a State mean of 70%; therefore, some students select a school based on factors other than the district in which they reside. Other students pay out-of-district tuition to attend a community college when one is not available in their localities. This also means that local tax support for out-of-district students does not contribute to the college a person is attending. In effect, if a student does not live in a community college district, the compensation for local tax support is the burden on the student of paying out-of-district tuition rates. State funding also compensates for the lack of local tax support.

4. The population of Michigan is served well by community colleges when considering the more densely populated areas. The percentage of population within accessible distance is high. The number of localities and land area is significantly lower. In Michigan, 92.7% of the population live within 25 miles (Range A) of a community college. Another 4.9% live from 26 to 50 miles (Range B) from a community college, and 2.4% of the population live 51 or more miles (Range C) from a community college. Although 92.7% of the people live in Range A, this includes only 74% of the State's 1,627 localities. Ranges B and C account for 298 and 124 localities, respectively.

The lack of community development and support services which have grown to be associated with community colleges may be a concern for localities without community college identity. It is possible that other organizations may serve to compensate for the lack of community college services. The extent to which substitution of other services may exist is discussed with recomendations for further research.

The accessibility statistics by distance from a community college differ from in-district and out-of-district statistics. Headley's research (1990) showed that 7.2 of Michigan's 9.2 million people (79%) lived in a community college district, providing local tax support. Less than half of the state's land area and only 77% of the SEV (State equalized value) for local tax support were included in community college districts (pp. 8 - 11). The effect is that 92.7% of the people in Michigan live within 25 linear miles of a community college (findings from this research), but only 77% provide tax support (Headley's findings). The difference between in-district and out-of-district tuition can be a compensating factor, but only if a person has an accessible community college.

5. Per-capita values of accessible funding vary from 0 to $1,071.62. The variation of accessible community colleges in both Ranges A and B (within 50 miles) is from 1 to 11 colleges. Some people are beyond 50 miles of a community college and do not directly benefit from State community college funding, while others can choose among 11

colleges. This multiplicity of access was much greater than envisioned at the onset of this research. High per-capita values resulted from multiplicity of access or sparsely populated counties with access to one community college.

6. The per-capita values of State funding by community colleges for populations within 50 miles are greatly affected by multiplicity of access. The supporting data is informative and permits the identification of specific localities and population in Ranges A and B, but the per-capita values cannot be compared without further research to quantify the regional areas where residents have access to many community colleges. Per-capita amounts in 1990 ranged from $.60 to $118.71.

7. Population shifts in Michigan during the last 20 years may have affected accessibility. The greatest shift was the 21% decrease in Wayne County population. The State's population increased only 4.6% (8.8 to 9.2 million) from 1970 to 1990. The Wayne County decrease amounted to 555,064 people or 6% of the total state population in 1990. Forty-five counties exceeded the State increase in population (4.6%) by more than 10% (14.6% or greater increase).

In comparing the changes in State funding from 1970 to 1990 for the 29 community colleges, all colleges' State support increased. Eight community colleges had increases significantly greater than the State as a whole. Wayne County Community College increased the most, 14.05 times or

1,405% compared to a 3.368 or 336% increase in the Consumer Price Index (U.S. Government Printing Office). Other factors besides population being served could account for this increase in funding. The extreme inverse relationship between the decreased population being served and increased state funding might warrant further investigation to determine the programming and enrollment that warranted the increase in State funding.

Recommendations

The findings of this study and the researcher's experiences lead to the following recommendations:

1. A Statewide millage would increase community college revenues and decrease the disparity among colleges is State support. It is recommended that this millage would establish a minimum amount, and localities could increase community college revenues by local referendum or by retaining the present millage if the rate were higher than the proposed statewide millage. Although it is believed by State administrators that this would be difficult to pass, it appears to be the logical means to distributing funds more equally throughout the state.

2. Standardized tuition among the community colleges in the state might be a part of the millage proposal. If this tuition amount was lower for the voters, it might be a more politically feasible proposition than just a statewide millage.

3. Four areas in the State stand out as needing community college services: Huron County and the northern localities of the thumb-area of Michigan, the Eastern Upper Peninsula, the Central Upper Peninsula, and the Northwestern Upper Peninsula. Because of the sparse population in the Upper Peninsula, perhaps extension campuses could be established from existing community colleges. It seems that this would still provide for community identity with community college services. The Cheboygan area in Northern Lower Michigan might also be considered.

4. The community college role being fulfilled by some four-year universities should be examined. Perhaps a separate community college division to serve the geographic areas would lead to the extension of State funds for community colleges to those areas and also provide the community services currently associated with community colleges.

5. The multiple-access areas and the forces which cause the high percentages of out-of-district enrollment should be examined by the individual community colleges and State education administrators to determine if administrative costs might be decreased by possibly combining overlapping services.

Further research is needed and may serve to answer many of the questions and issues derived from the findings of this study. These recommendations for further research follow.

Recommendations for Further Research

The following recommendations are made for further research:

1. The population shifts and funding changes from 1970 to 1990 were more significant than envisioned when this research was commenced. More detailed analysis could be done to study the change in funding for each of the community colleges and the change in populations for the localities served by each community college. This should take into account the residence localities of current students at each college.

2. The variation in community college revenue sources was compared in percentages; another approach would be to compare dollar amounts of changes in funding in relation to the Consumer Price Index.

3. The multiplicity of access issue should be researched further to determine the factors which affect the decision of college to attend when several colleges are within daily commuting distance. The multiplicity of access was much greater than expected at the beginning of this research. It is believed that this greatly affects the efficiency of State funding.

4. Research could be done to compare the location of a person's residence with the community college in which they are enrolled. This information is not available from any State reports. It is believed that this might help to determine the number of people attending community colleges

for specific, unique programs. It might also provide information as to how the populations without community colleges within an accessible distance are meeting their needs for typical community college programs. This would include examining the three, four-year Universities which are described in some State studies as serving a community college role. The effect of this as compared to the presence of several four-year universities in regions where 11 community colleges are accessible has not been explained.

5. A more detailed analysis of the services offered by community colleges other than traditional programming might help to determine different delivery methods for these services to people without access to a community college. It is because of the expanded economic development and community services role of community colleges that accessibility has gained importance.

6. Last, the methodology employed in this research has the potential for several applications. The use of the Pythagorean Theorem in computer programming to determine distance as a variable compared to another variable proved to be an accurate and expeditious procedure. This research could be replicated in other states to compare intrastate access to community colleges or any other distributive services.

APPENDICES

APPENDIX A

Alpena Community College 1952
Alpena, Michigan--Alpena County
1989-90 Headcount 3,843 and FYES 1,445

Alpena Community College was founded in 1952 and was incorporated into the Alpena School district making it a K-14 system. In 1979 voters approved separation of the college from the public school district. The vote levied a 1.5 charter millage and established the Alpena Community College Board of Trustees to govern the institution.

Alpena Community College offered classes in the former Alpena High School and the first graduation class in 1954 numbered 23 students. The campus moved to its current site in 1957. The construction of what is now Van Lare Hall was the first community college classroom building in the state to be financed jointly by the State of Michigan and the local school district.

In addition to offering associates in arts, commerce and science degrees, AAS in Concrete Technology is a program unique to Alpena Community College. It is a two-year curriculum with specialized courses covering all aspects of the concrete manufacturing industry.

Although the Alpena Community College district is in Alpena County, the college offers both credit and non-credit programs in its service area which also includes the counties of Alcona, Iosco, Montmorency, and Presque Isle. The college offers some off-campus classes.

Source: 1989-90 Catalog, pp. 12, 17, 78.

Bay de Noc Community College 1962
Escanaba, Michigan--Delta County
1989-90 Headcount 3,664 and FYES 1,603

Bay de Noc Community College was established in 1962 by the voters of Delta County. It began serving students the following fall in the old Escanaba Area High School. Today the campus consists of eight buildings located on a 150-acre site at the northeast corner of the city of Escanaba.

When the College opened its doors in 1963, it enrolled approximately 200 students. The number of students has increased ten fold with enrollment in programs of study that include occupational, transfer, and community service curricula.

The college has a Special Needs Office and a Learning Resources Center.

Source: 1989-90 Catalog, pp. iii, 9.

Delta College 1957
University Center, Michigan--Bay County
1989-90 Headcount 17,339 and FYES 7,054

The institution now known as Delta College was established in 1957. The voters in Bay, Saginaw, and Midland counties formed a new community college district and authorized a levy of 1.5 mills for the facility and operation.

The region had formerly been served by Bay City Junior College. However, as demand grew in the tri-county area, the percent of students from outside the Bay City Public School District grew to the point that non-resident enrollment equaled that which was in-district. This prompted community leaders in Bay, Saginaw, and Midland counties to form an organization to study the needs of higher education in the Saginaw Valley area. The final result was Delta College opening its doors to students in 1961.

The college campus at University Center, Michigan, in Bay County is situated almost midway between the tri-counties' major cities of Bay City, Saginaw, and Midland. This area is one of the major concentrations of population within the state.

Delta's enrollment has increased steadily since opening in 1961. Delta currently provides educational courses and programs on campus and throughout 30 neighborhood centers.

Source: 1989-90 Catalog, p. 12.

Glen Oaks Community College 1965
Centreville, Michigan--St. Joseph County
1989-90 Total Headcount 2,280 and FYES 861

Glen Oaks Community College was established in 1965 by the voters of St. Joseph County. Voters elected a board of trustees and approved a charter millage for its operation and support.

The college opened its doors in the fall of 1967. It was housed in temporary facilities at White Pigeon High School until February of 1969 when it moved to its permanent campus of over 300 acres. The campus consists of one large, architectually modern all-purpose building. It was designed for easy expansion to facilitate student population growth and to meet changing educational needs. In 1971 a vocational addition was constructed to house modern instructional facilities and equipment for a wide variety of post-secondary technical programs. In 1977-78, tennis courts, a baseball field, and a softball field were added.

Glen Oaks is located in the center of St. Joseph County, its in-district area. However, it has an only slightly higher tuition rate for students residing in what is considered its service area. The service area includes Elkkart, La George and, Steuben Counties in Indiana; Branch County, Michigan, and White Pigeon; Three Rivers and Constance High School Districts in Cass County, Michigan.

Source: 1989-90 Catalog, p. 1.

Gogebic Community College 1965
Ironwood, Michigan--Gogebic County
1989-90 Headcount 1,450 and FYES 751

Voters first approved the formation of Ironwood Junior College in 1932. Then in 1965, they approved the Gogebic Community College District of Gogebic County.

As the college ceased to be part of the Ironwood Public Schools in July 1966, there was an immediate need to develop adequate facilities to accommodate growing enrollment. Existing programs were housed in the high school building and in rented space within the community. By February 1970, a General Academic Core Building was completed at the new campus site at Mt. Zion. In the fall of 1973, a new Vocational-Technical Center was built to house expanded career occupational programs.

The campus is located on the mountain side in "Big Snow Country" and offers a program in Ski Facilities Management. The school provides housing rental at $1,100 a school year per student for a six-person apartment (1990). The housing accommodates students living beyond driving distance in sparsely populated areas. The location on the Wisconsin border attracts Wisconsin students who pay the same tuition rate as in-state, out-of-district students ($34 per credit hour, 1990).

Source: 1989-90 Catalog, pp. 11 and catalog insert page on costs.

Grand Rapids Junior College 1914
Grand Rapids, Michigan--Kent County
1989-90 Headcount 26,574 and FYES 6,987

Grand Rapids Junior College was established in 1914 by the Grand Rapids Board of Education and was the first junior college in Michigan. Its founding followed a resolution passed by the faculty of the University of Michigan which encouraged the establishment of junior colleges in the larger cities of the state.

The college was located in the Grand Rapids Central High School building. It consisted of a faculty of eight who taught courses in rhetoric and composition, mathematics, history, biology, physics, Latin, and German.

In 1990 the campus consisted of four classroom buildings, a learning center and library, a student center, and a technical education center. The college utilizes several off-campus facilities for instruction throughout the Grand Rapids area.

The curriculum has grown to include more than 1,000 liberal arts and occupational courses, as well as nearly that many community service offerings, seminars, workshops, and other educational activities. In 1950 the college offered one occupational curriculum in practical nursing. This has been expanded to the current occupational curriculum offerings that number 45.

The college has grown from a first-year graduating class of 49 to 1,100 students in 1988 that earned degrees

and certificates. Each year 20,000 students utilize the College services.

Although the college has not changed its name from junior to community college in keeping with the evolution of two-year college movement; its purpose, function, and role are very much community centered.

Source: 1989-90 Catalog, p. 9.

Henry Ford Community College 1938
Dearborn, Michigan--Wayne County
1989-90 Headcount 23,729 and FYES 7,571

Henry Ford Community College was founded in 1938 as Fordson Community College. It began as a junior college division of the old Fordson School District.

Classes were held in the Fordson High School for an enrollment of less than twenty students. During the latter years of World War II classes were suspended, and the school districts in the City of Dearborn were annexed by the Fordson School District. The new district became the School District of the City of Dearborn, and in January, 1946, the name Dearborn Junior College was adopted.

The Dearborn Board of Education was given funds realized from the liquidation of assets of Henry Ford Trade School. The school was being closed and the Board of Education was to use the money to expand technical and scientific education at the community college level. The name of Dearborn Junior College was changed to Henry Ford Community College in September, 1952.

In 1956 the Ford Motor Company donated 75 acres of land to the college. Subsequently, the voters of Dearborn approved a special millage to raise funds for the construction of buildings on the new campus site. Most of the planned construction has been completed including a fine arts center and auditorium which were opened in 1981. Over 900 courses are offered at Henry Ford Community College.

Source: 1989-90 Catalog, pp. 7, 8.

Highland Park Community College 1918
Highland Park, Michigan--Wayne County
1989-90 Headcount 6,278 and FYES 1,314

Established in 1918, Highland Park Community College is the second oldest community college in Michigan. It was authorized by a vote of the people of the Highland Park school district and since that time has remained an intregral part of that system.

In the years following World War II, the college began to expand its services to those outside the boundaries of the city. It has enrolled increasingly large numbers of students from all parts of the Detroit area, as well as those from out-state Michigan, from other states, and foreign countries.

In September, 1962, the Board of Education changed its designation from "junior college" to "community college" in keeping with the current development in post-secondary education.

Highland Park strives to balance course offerings so that educational opportunity shall be open to all students according to need, interest, and ability. One method of obtaining this balance is that the same courses and services are offered in the late afternoon, evening, and Saturday mornings as are offered on week days.

Source: 1989-90 Catalog, p. 4.

Jackson Community College 1928
Jackson, Michigan--Jackson County
1989-90 Headcount 12,906 and 3,687 FYES

Jackson Junior College was established in 1928 and was affiliated with the Union School District of Jackson (now Jackson Public Schools). In 1962, voters approved the establishment of Jackson Community College which made the existing Junior College independent of the school district. Voters approved millage for the operation of the college in 1964, and in July, 1965, the leadership of the institution was entrusted to the Jackson Community College Board of Trustees.

In the early years, programs concentrated in the arts and sciences. Later, the scope of the curriculum was broadened to include programs of a technical, occupational, continuing education, and general nature.

Michigan School of the Arts was established at Jackson Community College to offer music and theatre programs. The Community and Business Services Division includes a Conference office, a Job Training Institute, a Personnel Development Institute, an Entrepreneurial Training Program and a Small Business Center.

Source: 1989-90 Catalog, pp. 4, 41, 83, 84.

Kalamazoo Valley Community College 1966
Kalamazoo, Michigan--Kalamazoo County
1989-90 Headcount 16,854 and FYES 4,849

On August 1, 1966, the voters of the nine school districts in the Kalamazoo Valley Intermediate School District approved the establishment of Kalamazoo Valley Community College, elected a Board of Trustees, and approved a 1.5 mill tax. The College opened in September, 1968, offering its first class of 1,518 students a wide range of courses including vocational, technical, health services, social services, general education, liberal arts, and community service programs.

The College campus has undergone continued growth and development. A significant expansion of service and facilities occurred in the fall of 1983 when the college renovated an 8,700-square-foot facility in downtown Kalamazoo, which was designed to meet the training and retraining needs of business and industry. Additionally, a number of other facilities are utilized throughout the community to provide easy access for all who desire it.

In the fall of 1987, the voters approved a 1 mill tax increase for the support of the college. Kalamazoo Valley Community College will use this additional support for the continuing growth and improvement of its services and facilities.

Source: 1989-90 Catalog, pp. 9, 10.

Kellogg Community College 1956
Battle Creek, Michigan--Calhoun County
1989-90 Headcount 13,201 and FYES 2,961

This public, two-year college was founded in 1956. It is situated in one of the most picturesque sections of Battle Creek. The campus recently received the White House Award of Merit for Landscape Design and Development. The campus features rolling hills, small lakes, covered walkways, a permanent central mall with a fountain and reflecting pools on three levels.

The campus includes seven academic complexes with computer centers, a Learning Resource Center, industrial and technological labs and broadcast studios--in addition to classrooms, labs, and learning clinics.

Source: 1990 College folder and packet, Pages not numbered.

Kirtland Community College 1966
Roscommon, Michigan--Roscommon County
1989-90 Headcount 2,654 and FYES 956

Kirtland Community College was established in 1966 by the electorate from six local K-12 school districts (Crawford-AuSable, Fairview, Gerrish-Higgins, Houghton Lake, Mio-AuSable, and West Branch-Rose City.) This favorable vote formed Michigan's largest community college district. The district consists of all or part of nine counties and covers 2,500 square miles.

Kirtland opened its doors in the fall of 1968, serving 160 students. At the time, the 160-acre, wooded campus consisted of a partially completed Student Center and six portable classrooms. In June, 1970, 44 students earning associate degrees comprised its first graduating class.

The college now serves over 2,400 students in both credit and non-credit courses. The campus has grown to 180 acres, five large buildings and a nature/fitness trail.

The college offers many community-service programs including a Retired Senior Volunteer Program (R.S.V.P.), and a Volunteer Incentive Service Credit Account Program (VISCAP), which is being piloted in Michigan through Kirtland. VISCAP in intended to provide volunteer respite and support services to the elderly, to provide a State volunteer credit banking system, and to offer credit redemption to volunteers for those in need of services.

Source: 1989-90 Catalog, pp. 5, 25, 26.

Lake Michigan College 1946
Benton Harbor, Michigan--Berrien County
1989-90 Headcount 7,768 and FYES 1,728

This public, two-year college was organized as the Junior College of Benton Harbor in 1946. In 1963 the name was changed to Lake Michigan College. The school offers classes in Benton Harbor and in Niles. Extension centers in four high-school buildings in the district also offer classes.

The college offers corporate and community services. The Executive Director of this service center lists the primary missions as follows:

1. To provide on-site or on-campus training customized to the exact needs of business and industry.

2. To assist businesses in obtaining funds appropriate for training from state and federal government sources.

3. To produce instructional materials such as training workbooks and video tapes.

4. To develop and produce installation, maintenance and operating instructional manuals.

5. To host teleconferences to keep businesses informed of the latest technological innovations.

The college has separate offices for a Small Business Services Center, Conference Services, Continuing Education Services, and a Learning Resources Center.

Source: 1989-91 Catalog, pp. 7 - 14.

Lansing Community College 1957
Lansing, Michigan--Ingham County
1989-90 Headcount 48,071 and FYES 12,087

Lansing Community College was established in April of 1957 by the Lansing Public Schools. It opened its doors that fall with an enrollment of 425 students. Its curriculum included courses in civil, mechanical and electronics technologies, practical nursing and apprenticeship programs.

In 1964 the Lansing Community College District was formed by a vote of the area's citizens. A six-member Board of Trustees was also elected to govern the institution.

The 14-acre campus has 9 buildings. The campus houses several service organizations and community development offices including a Small Business Development Center, a Management Development Center, a Business and Industry Institute, and a Business Development Services Center. An Asian Resource Center operates as part of the international studies programs. New programs in fine arts and commercial art are offered by departments of media and performing arts.

The following organizations and agencies operate at Lansing Community College: The Center for Aging Education, Student Development Services, Women's Resource Center, Career Exploration and Assessment Center, and a Department of Academic Enrichment Services, which offers developmental programs.

Source: 1989-90 Catalog, pp. 2, 7, 80 - 130.

Macomb Community College 1954
Warren, Michigan--Macomb County
1989-90 Headcount 50,410 and FYES 14,335

The citizens of Macomb County organized to establish a community college. Classes were first offered in 1954. The South campus opened in 1965.

The Macomb Center for the Performing Arts is located at the college; and the Macombers, a show choir ensemble is composed of students enrolled at Macomb Community College. Their two-fold purpose encompasses both instruction and community service.

The college has a Single Parent/Homemaker Personal Support Office which offers classes to prepare the students to make informed educational and career decisions.

The Professional and Continuing Education (PACE) program offers courses for skills upgrading, licensing certification or renewal, job improvement, advancement and personal enrichment. An Economic Development/Community Small Business Development Office operates on campus.

Senior Citizens receive a 10 percent discount on all college services. A Special Services Department provides advocacy services. A Speakers' Bureau of administrators and faculty members is available for public speaking engagements.

Source: 1988-90 Catalog, pp. 7, 13 - 18.

Mid Michigan Community College 1964
Harrison, Michigan--Clare County
1989-90 Headcount 4,839 and FYES 1,351

In 1964, a Citizens Advisory Council was formed to determine the feasibility of establishing a community college in the Clare/Gladwin County area. A year later a report completed by the Council recommended the formation of a local community college and was submitted to the Michigan Department of Public Institution for its approval.

Michigan's 25th community college was established in September, 1965, by the voters. A governing Board of Trustees was elected, and a 1.5 mills construction and operating levy was approved.

Construction of the new instructional facility began in May, 1968, on a 560-acre site located in the rural environment of northern Michigan between the cities of Harrison and Clare.

The college opened its doors to students in the fall of 1968. Its first classes were housed in temporary facilities throughout the area. By November 1969, all classes were moved to the present campus location.

Since the college opened its doors to 196 students in 1968, it has continued to provide services to an ever-growing student population.

Source: 1989-90 Catalog, pp. 8, 9.

Monroe County Community College 1964
Monroe, Michigan--Monroe County
1989-90 Headcount 7,359 and FYES, 1,754

Voters formed the Monroe County Community College District in June, 1964, to provide educational opportunities for the residents of Monroe County.

The college began serving students in October, 1967. It provides a comprehensive education program for transfer to senior institutions, associate degrees in many occupational areas, training and retraining for business and industry, a number of student support services, and other courses and services to meet the educational needs of Monroe County residents.

Monroe County is unique in that it is near many major universities. Within easy driving distance is the University of Michigan (40 miles), Eastern Michigan University (35 miles), University of Toledo (20 miles), Wayne State University (35 miles), and the University of Detroit (35 miles).

The campus has recently undergone a major renovation project allowing for state-of-the-art teaching facilities in the technology areas. This project also included an addition to house classrooms, the art studio, and administrative offices.

A long-range campus development plan includes buildings for physical education and performing arts.

Source: 1989-90 Catalog pp. 2, 3.

Montcalm Community College 1965
Sidney, Michigan--Montcalm County
1989-90 Headcount 6,176 and FYES 1,617

Montcalm Community College was established in March, 1965, by a vote of the people of Montcalm County. The first Board of Trustees was also elected and a one-mill tax was levied for the College's financial support.

Montcalm Community College began liberal arts instruction in fall 1966 at Central Montcalm High School. Construction on the first buildings to be located on the campus site began in October, 1966. In September, 1967, these buildings were dedicated by Lt. Gov. William Milliken and the first classes were held on campus.

A part of the mission statement of Montcalm Community college is to provide a center and resources for community services--educational, health, recreation, cultural, and economical development.

Source: 1989-90 Catalog, p. 1.

Mott Community College 1923
Flint, Michigan--Genesee County
1989-90 Headcount 23,960 and FYES 5,902

Mott Community College opened its doors in 1923 as Flint Junior College. At that time it was governed by the Flint Board of Education. It occupied classrooms in Central High School until 1931, when it was moved to an adjacent building. The campus remained housed in this building until 1955 when it moved to its present location. In 1960, its name was changed to Flint Community Junior College.

In 1969, voters of the Genesee Intermediate School District approved the expansion of the college district, elected a seven-member board of trustees and approved a 1.4 operating levy for the new district. A few months later, governing of the institution was transferred from the Flint Board of Education to the Board of Trustees of Genesee Community College.

The name was changed again in February 1973 upon the death of Charles Stewart Mott, an area philanthropist.

The campus consists of 12 buildings including a vocational training and job placement center named in honor of the late labor leader, Walter P. Reuther. Of exceptional benefit to the college is the Cultural Center which is located adjacent to the campus. This multi-million dollar center includes an art center, planetarium, theater, museum, technology center, and music center.

Source: 1989-90 Catalog, p. 6.

Muskegon Community College 1926
Muskegon, Michigan--Muskegon County
1989-90 Headcount 10,995 and FYES 2,934

Muskegon Junior College was established in 1926 by the Muskegon Board of Education. It was part of the pioneering movement in two-year institutions since only a few others existed in Michigan at the time.

Classes were first held in the Muskegon Senior High School, but by 1934 enrollment had grown beyond the building's capacity. The college moved to the old Hackley building in downtown Muskegon. This site remained the center of campus activity for a period of about 17 years when Muskegon Junior College's primary focus was a "college transfer" program. Its curriculum was geared to those students intending to complete at least four years of college.

Then in June of 1951, after the passage of the Act 189, the name and scope of the college was changed. Its name changed to Muskegon Community College and the nature of its programs broadened to reflect a larger number of student interests and needs. Courses were added in retailing, the vocations, the technical fields, public health and the trades. These curriculum additions were reflections of the movement within the county to enable young people to prepare for a specific field of employment in two years of training beyond high school.

As enrollment continued to climb, the Muskegon Board of Education, which still operated the college, utilized space in many of the buildings as well as other community facilities. By the early 1960s classes were operating full-time in three buildings and part-time in eight others. The needs of the college had clearly outgrown current facilities.

A special Citizens Committee was formed by the Board of Education to study the district's entire community college program. The study resulted in the following recommendations: that the college be separate from the public school system, that a county-wide community college district be created, that a board of trustees be elected to plan, build, and operate the school, and that millage be voted to build and operate the college.

In April 1963, the county's voters approved the recommendations of the committee and immediate steps were taken to purchase the current 111-acre campus site. By the fall of 1967 the entire campus complex was completed and placed in service.

When the new district was created, the name of the college was changed to Muskegon County Community College. However, in 1969, at the request of the Board of Trustees, the State Board of Education approved changing the name back to the original Muskegon Community College.

Source: 1989-90 Catalog, pp. 7, 8.

North Central Michigan College 1958
Petoskey, Michigan--Emmet County
1989-90 Headcount 2,733 and FYES 923

North Central Michigan College was established in 1958 to meet the needs of the people in North-central Michigan. The philosophy and mission statement of the college states that it is committed to the inherent right of all citizens to benefit from post-secondary education at a reasonable cost and in geographic proximity to their homes.

The college serves the community by providing resource persons and facilities and plays a leadership role in the educational advancement of the area. The mission of the college is to facilitate and provide academic and occupational education as well as to serve as a resource to the community.

An evening college program operates for students working full time during the day. Upper division classes are offered on campus in the evening and on weekends by Michigan State University, Eastern Michigan University, Central Michigan University, and Lake Superior State University.

Source: 1989-91 Catalog, p. 2.

Northwestern Michigan College 1951
Traverse City, Michigan--Grand Traverse County
1989-90 Headcount 12,742 and 3,136 FYES

Northwestern Michigan College was founded in 1951 by a group of local citizens who wanted to provide access to affordable college education for area residents. They first attempted to establish a four-year college.

When it opened in the fall of 1951 the college was under the control of the Traverse City Board of Education. Liberal arts and pre-professional courses of the freshman and sophomore level were offered; in addition, the curricula included a wide variety of vocational programs and part-time courses geared to the needs of the community such as engineering, business, secretarial, agriculture, conservation and civil technology.

Legislation allowing districts to combine to support a community college was a direct result of the movement of the people of the Grand Traverse area to broaden the basis for support of their college. Thus, Northwestern Michigan College became the first community college under the Michigan Community College Act.

NMC is unique with its Great Lakes Maritime Academy, which trains ship officers in a three-year program. The Center for Business and Industry is actively involved in providing consultants for businesses.

Sources: 1989-90 Catalog, pp. 12, 13.

Oakland Community College 1964
Auburn Heights, Michigan--Oakland County
1989-90 Headcount 51,424 and FYES 15,965

The college is a multi-campus complex with the main campus and administrative offices in Auburn Heights. Four other campuses--Highland Lakes, Royal Oak, Southfield, and Farmington Hills (Orchard Ridge Campus) serve a variety of interests and community needs. The district is coterminal with the Intermediate School District boundaries.

Some of the newer facilities include a General Assembly building; a Science Building; a Central Service Facility; a Student Union with a cafeteria, student lounge, and offices for student organizations.

The college surves both urban and rural towns. The college offers some unique programs in Aviation Flight technology and Publication Production Technology. Also, basic police training courses are available in cooperation with the police academy and Marygrove College. Several Allied Health programs of study and Child Development programs originated at Oakland Community College.

Oakland Community College has the highest headcount and FYES of all the community colleges in Michigan.

Source: College Blue Book, 1989, pp. 326, 327.

Schoolcraft College 1961
Livonia, Michigan--Wayne County
1989-90 Headcount 25,497 and FYES 5,411

Schoolcraft College was founded in October, 1961, to serve the people of northwest Wayne County. The College opened for classes in 1964 with an enrollment of 2,018 students. Since that time, over 300,000 persons have studied at Schoolcraft.

The college district is composed of five public school districts: Clarenceville, Garden City, Livonia, Northville, Plymouth-Canton, and a part of the Novi Community Schools. The main campus, consisting of nine buildings, is located on a 183-acre site at the western edge of the City of Livonia.

College centers exist in two other locations in the district: Radcliff Center serves Garden City and other nearby areas, and classes at the Plymouth-Canton High School serve the area, making evening classes available.

The college offers several programs of assistance to businesses including contract education, apprenticeship and journey-persons programs. The Procurement Program is a new, innovative business agency, which assists businesses in acquiring government contracts.

Source: 1989-90 Catalog, pp. 5, 6, 23, 24.

Southwestern Michigan College 1964
Dowagiac, Michigan--Cass County
1989-90 Headcount 5,215 and 1,723 FYES

In May, 1964, an advisory committee report was submitted to the Lewis Cass Intermediate Board of Education which recommended the establishment of a community college in Cass County. The Board approved the Advisory Committee's report and submitted an application to organize the college to the Michigan Department of Education.

The application was approved, and in November, 1964, the electorate of Cass County approved the establishment of Southwestern Michigan College and a 1.5 mill property tax to finance the institution.

Construction of the new campus began in September, 1965, on the 158-acre site in La Grange Township chosen by the Board of Trustees. Doors opened the following September with the completion of the Arts and Science Buildings, and the library.

In 1975, the size of the campus was increased with the gift of an 80-acre wooded area by Everett Claspy of Dowagiac. This area is used for biological studies, as a nature preserve, and for outdoor sports and recreation.

Several buildings have been added to the campus since the original construction in 1965. A total of nine buildings make up the current campus site which has a history of continuing growth and increasing enrollment.

Source: 1989-90 Catalog, pp. 14, 15.

St. Clair County Community College 1923
Port Huron, Michigan--St. Clair County
1989-90 Headcount 11,388 and FYES 2,567

St. Clair Community College began as the junior college department of the Port Huron School District. It was then called Port Huron Junior College. It was established in 1923 by an act of the Board of Education of the Port Huron School District.

The St. Clair County Community College District was established in 1967 by a vote of the people. This act formed an independent, county-wide community college, and final authorization was given by the State Board of Education in January, 1968.

During the early years, the college curriculum was largely academic. Port Huron Junior College had developed a tradition of academic excellence. Since 1954, a variety of vocational and technical programs have been added in keeping with the college's revised mission, "to provide a broad range of post-secondary educational opportunities."

The Community and Business Services Division offers customized training programs, business and professional development programs, and apprenticeship programs.

Source: 1989-90 Catalog, p. 10.

Washtenaw Community College 1965
Ann Arbor, Michigan--Washtenaw County
1989-90 Headcount 21,309 and FYES 5,300

Washtenaw Community College was established in January, 1965, by a vote of the citizens of Washtenaw County.

In Septembe,r 1966, classes began with 1,200 students enrolled in 30 different programs. Temporary facilities were utilized in the Willow Run area during construction of the main campus. Classes were held in an old elementary school, a fire station and a bowling alley. Health programs were taught in the basement of a church. However, in 1969, the permanent, 235-acre campus opened with the Technical and Industrial, Liberal Arts and Science Buildings.

An Activities Building, the Occupatioanl Education Building and the Student Center Building have been added to the campus as well as a Family Education Building which houses a child-care facility for children of WCC students and staff.

Scheduled for completion in the mid-1990s, a 75,000-square-foot Job Skills Education and Campus Events Building will include classrooms, an auditorium, exhibition space, and instructional space for art, drama, music, and speech.

In addition to the facilities and classes held on the main campus, classes are offered at five regional centers throughout the district.

Source: 1989-90 Catalog, pp. 4, 5.

Wayne County Community College 1967
Detroit, Michigan--Wayne County
1989-90 Headcount 17,788 and FYES 5,500

In 1967 the State Legislature authorized the establishment of Wayne County Community College and granted $1 million to commence operations. Another $300,000 stipend came from New Detroit, Inc. Classrooms were made available by local school boards throughout Wayne County. In 1969 the elected Board of Trustees ordered classes to begin. Wayne County Community College is not shown in the State operating data until 1970. Wayne County Community College is the last public community college to be established in Michigan.

The Downtown Campus and administration building is located on West Fort in Detroit; the Eastern Campus is on Conner Avenue; the Downriver Campus is in Taylor; the Northwest Campus is on Greenfield Road; and the Western Campus is in Belleville.

The college is in Michigan's most industrialized area, with about 45 percent of the State's total employment opportunities. Since the area accounts for a major share of Michigan's technical and skilled occupations, occupational/career programs are a major endeavor, in addition to traditional college and university transfer programs.

Source: 1986-87 Catalog, pp. 13, 14.

West Shore Community College 1967
Scottville, Michigan--Mason County
1989-90 Headcount 1,855 and FYES 722

The people of the area voted to establish West Shore Community College in 1967. The college district includes the sparsely populated region including all of Mason County, most of Manistee County, and parts of Lake, Newaygo, and Oceana Counties.

Because of its small population base, West Shore is among Michigan's smallest community colleges. However, it provides services to its entire district by offering programs at several locations throughout its service area. "Home base" is a 360-acre campus located near Scottsville in Mason County.

West Shore Community College lists among its objectives educational programming related to economic and employment realities in the area served; cooperation with area business and industry; technical assistance to area business and industry; and a community center for recreation, meetings, workshops, and other activities.

In-district students over 60 years of age are offered a scholarship for tuition and fees.

Source: 1989-90 Catalog, pp. 3 - 5, 17.

APPENDIX B

Community College Coordinates

Community College	1990 State Funding	FYES	X	Y
Alpena	$3,090,394	1,445	329	230
Bay De Noc	2,561,277	1,603	158	278
Delta	9,124,620	7,054	297	131
Glen Oaks	1,312,600	788	224	15
Gogebic	2,903,775	749	7	332
Grand Rapids	12,608,479	6,987	215	86
Henry Ford	14,386,175	7,571	337	37
Highland Park	5,029,082	1,314	342	41
Jackson	8,783,500	2,970	279	34
Kalamazoo	6,032,017	4,849	213	38
Kellogg	5,570,050	2,886	240	41
Kirtland	2,113,575	846	275	182
Lake Michigan	3,022,625	1,728	183	24
Lansing	19,944,700	12,087	273	67
Macomb	22,107,775	14,335	357	55
Mid Michigan	2,415,100	1,351	262	157
Monroe	2,225,700	1,754	325	11
Montcalm	2,041,625	1,136	243	110
Mott	10,066,950	5,902	316	89
Muskegon	5,877,650	2,811	191	109
North Central	1,854,000	923	256	260
Northwestern	5,253,822	3,136	221	213
Oakland	15,047,870	15,965	333	53
Schoolcraft	7,471,350	2,567	330	41
Southwestern	3,634,363	5,338	193	19
St. Clair	4,601,758	1,717	383	85
Washtenaw	6,772,975	5,300	319	42
Wayne	22,224,133	5,500	342	36
West Shore	1,398,825	722	182	158

Data Input for All 29 Community Colleges

Michigan Localities Coordinates

County	Locality	Population	X	Y
Alcona	Alcona township	906	336	216
	Caledonia townshp	987	330	216
	Curtis township	1,128	324	198
	Greenbush townshp	1,373	336	198
	Gustin township	823	330	204
	Harrisville city	470	336	204
	Harrisville towns	1,315	342	204
	Hawes township	1,035	330	210
	Haynes township	549	336	210
	Mikado township	852	330	198
	Millen township	417	330	204
	Mitchell township	290	312	216
		10,145		
Alger	Au Train township	1,047	174	312
	Burt township	508	192	330
	Grand Island town	21	180	330
	Limestone townshi	334	168	306
	Mathias township	563	180	306
	Munising city	2,783	180	324
	Munising township	2,193	186	306
	Onota township	244	168	324
	Rock River townsh	1,279	162	318
		8,972		
Allegan	Allegan city	4,547	216	54
	Allegan township	3,976	216	54
	Casco township	2,856	198	48
	Cheshire township	1,967	210	48
	Clyde township	2,001	204	54
	Dorr township	5,453	222	66
	Fennville city	1,023	204	60
	Fillmore township	2,710	204	66
	Ganges township	2,124	200	54
	Gunplain township	4,765	228	54

Note: Counties data input was 30 pages and is available from the researcher's files.

Sample Data Input for the 83 Counties

State Community College Funding by County

County	Locality Name	Population	Community Colleges within 0-25 miles * Name	State Funding	(d)	Community Colleges within 26-50 miles ** Name	State Funding	(d)	Per Capita Value of Accessible State Funding
Alcona	Alcona township	906	Alpena	$3,090,394	16				
	Caledonia townshp	987	Alpena	3,090,394	14				
	Curtis township	1,128				Alpena	3,090,394	32	
	Greenbush townshp	1,373				Alpena	3,090,394	33	
	Gustin township	823				Alpena	3,090,394	26	
	Harrisville city	470				Alpena	3,090,394	27	
	Harrisville towns	1,315				Alpena	3,090,394	29	
	Hawes township	1,035	Alpena	3,090,394	20				
	Haynes township	549	Alpena	3,090,394	21				
	Mikado township	852				Alpena	3,090,394	32	
	Millen township	417				Alpena	3,090,394	26	
	Mitchell township	290	Alpena	3,090,394	22	Kirtland	2,113,575	50	
Alcona Summary:		10,145							$310.58

Note: Counties data output was 280 pages and is available from the researcher's files.

Sample Counties Data Output

Community College	Localities within 25 miles	Population	(d)	Localities between 26 and 50 miles	Population	(d)	Total Population	FYES	FYES as % of Pop	State Funding	Per Capita Value of Accessible State Funding
Alpena	Alcona township	906	16	Curtis township	1,128	32					
	Caledonia township	987	14	Greenbush township	1,373	33					
	Hawes township	1,035	20	Gustin township	823	26					
	Haynes township	549	21	Harrisville city	470	27					
	Mitchell township	290	22	Harrisville towns	1,315	29					
	Alpena city	11,354	0	Mikado township	852	32					
	Alpena township	9,602	0	Millen township	417	26					
	Green township	1,095	11	Clayton township	908	50					
	Long Rapids towns	1,021	9	Mason township	865	50					
	Maple Ridge towns	1,514	4	Turner township	628	50					
	Ossineke township	1,652	8	Forest township	929	47					
	Sanborn township	2,196	7	Waverly township	371	50					
	Wellington townsh	269	14	Lovells township	420	44					
	Wilson township	1,902	4	Oscoda township	11,958	45					
	Hillman township	2,189	21	Plainfield townsh	3,490	48					
	Montmorency towns	1,075	22	Wilber township	638	51					
	Rust township	514	22	Albert township	2,097	32					
	Belknap township	920	22	Avery township	579	27					
	Bismarck township	319	21	Briley township	1,831	31					
	Case township	770	26	Loud township	220	27					
	Krakow township	617	11	Vienna township	431	36					
	Posen township	972	12	Clinton township	447	39					
	Pulawski township	427	17	Comins township	1,785	42					
	Rogers township	857	25	Elmer township	854	45					
				Greenwood townshi	880	50					
				Mentor township	1,098	51					
				Charlton township	913	49					
				Allis township	887	35					
				Bearinger townshi	246	40					
				Metz township	403	31					
				Moltke township	309	29					
				North Allis towns	502	37					
				Ocqueoc township	521	32					
				Onaway city	1,039	40					

(continued on next page)

Community College Per Capita Funding

	Localities within 25 miles	Population	(d)	Localities between 26 and 50 miles	Population	(d)	Total Population	FYES	FYES as % of Pop	State Funding	Per Capita Value of Accessible State Funding
Alpena continued				Presque Isle town	1,312	28					
				Rogers City city	3,642	27					
		43,032			46,581		89,613	1,445	1.6%	$3,090,394.00	$34.49

Note: Community Colleges data output was 80 pages and is available from the researcher's files.

Sample Community Colleges Data Output

APPENDIX C

DISTANCE.EXE
Documentation

By Jeff Chaney

Contents

Introduction

This program was written to perform three functions.

1) To calculate the distance between locales in Michigan and each community college.
2) The distance is then used to separate the community colleges into three ranges: within 25 miles, greater than 25 but within 50 miles and greater than 50 miles.
3) The Per Capita Value of Accessible State Funding is calculated by summing the state funding for the schools in the first two ranges and then dividing by the population of the locale.

The first step is accomplished using a cartesian (x,y) coordinate system. Every locale and school is given an x,y coordinate. The pythagorean theorem is then used to calculate the distance between the locale and a school.

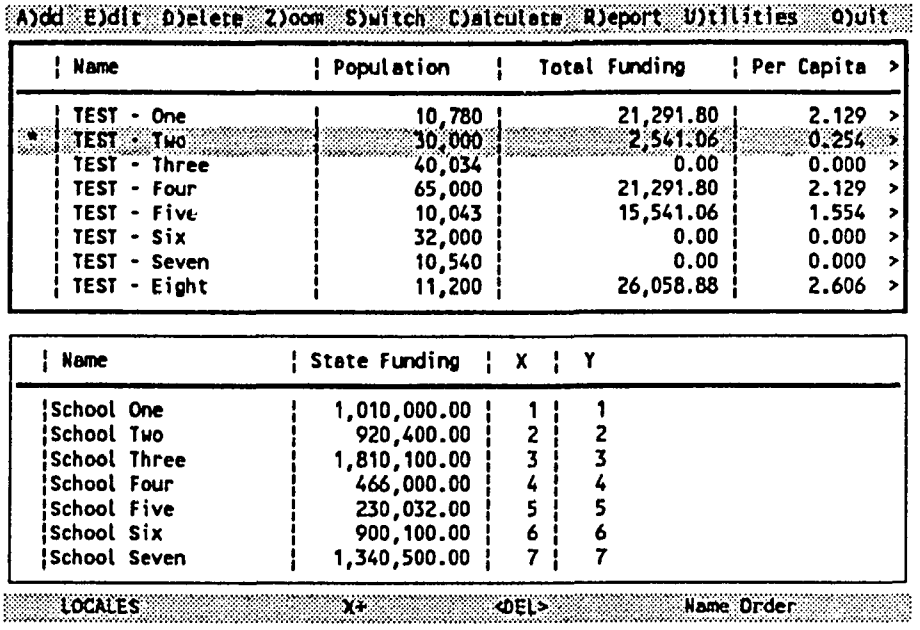
$$d = \sqrt{(y_2 - y_1)^2 + (x_2 - x_1)^2}$$

The distance in x,y units is then multiplied by a units to miles conversion ratio.

The state funding for the schools within 50 miles is totalled. This total is then used in the final step along with the population of the locale to calculate the Per Capita Value of Accessible State Funding available to the the people of a locale.

The Screen and Keys

The screen is divided into two main areas. The locales are listed in the top half and the schools in the bottom. On the very top line of the screen is the Main Menu. The bottom line is used as a status bar giving information about the system in general.



A)dd E)dit D)elete Z)oom S)witch C)alculate R)eport U)tilities Q)uit

	Name	Population	Total Funding	Per Capita
	TEST - One	10,780	21,291.80	2.129
*	TEST - Two	30,000	2,541.06	0.254
	TEST - Three	40,034	0.00	0.000
	TEST - Four	65,000	21,291.80	2.129
	TEST - Five	10,043	15,541.06	1.554
	TEST - Six	32,000	0.00	0.000
	TEST - Seven	10,540	0.00	0.000
	TEST - Eight	11,200	26,058.88	2.606

Name	State Funding	X	Y
School One	1,010,000.00	1	1
School Two	920,400.00	2	2
School Three	1,810,100.00	3	3
School Four	466,000.00	4	4
School Five	230,032.00	5	5
School Six	900,100.00	6	6
School Seven	1,340,500.00	7	7

LOCALES X+ <DEL> Name Order

The status line shows which file is current, the coordinate increment status for adding records, the deletion status of the current record and the current ordering of the file.

The following keys can be used to navigate through the information in the data files:

Key	Action
<DOWN>/<UP>	Advance/Retreat one record.
<PGDN>/<PGUP>	Advance/Retreat a screen-full of records.
<RIGHT>/<LEFT>	Pan right/left to see more information. Available in Locale file only.
<CTRL><PGDN>	Advance to bottom of file.
<CTRL><PGUP>	Retreat to top of file.
<CTRL><END>	Pan to far right of Locale record.
<CTRL><HOME>	Pan to far left of Locale record.

The Menus

The main menu has eight displayed and one non-displayed option.

ADD - Allows you to add a record to the current file. Add can be chosen by pressing "A" or <INS>.

NOTE: When adding a record in the Locales database the calculated fields are not displayed.

EDIT - Allows you to change the currently selected record. Edit can be chosen by pressing "E" or <ENTER>.

NOTE: When editing a record in the Locales database you are not allowed to change the calculated fields.

DELETE - Marks the current record to be deleted at a later time. This option is a toggle and is used to un-mark record previous fated to be deleted. Delete is invoked by pressing "D" or <DELETE>. See also "Optimize Files" in Utilities Submenu.

ZOOM - Increases the size of the window displaying the current file to full screen. Note this option only displays one of the files at a time. Zoom works as a toggle and is chosen a second time to return the windows back to their original size. Zoom is chosen by pressing "Z".

SWITCH - Changes the current file between the Locales and the Schools. The "S" or <TAB> keys will perform the Switch.

CALCULATE - Runs through the Locales and Schools calculating the distances, total funding, and per capita funding for each Locale.

NOTE: Any information previously found using the Calculate will be lost.

REPORT - Enters the Reporting System. In the Reports Menus you can create your own report formats or use existing dBase FRM reports. Pressing "R" chooses the Reporting System. This option is discussed in more detail below.

NOTE: The final reports were printed using an external reporting program.

UTILITIES - From the Utilities Submenu you have five options to choose from:

Optimize Files removes all records marked to be deleted.

Re-Index Files recreates the control indexes on the Locale and School databases. This option should be used if unexplained things start happening.

Increment X/Y changes which coordinate is incremented by one for each new addition in the data files. This option is a toggle.

Miles to Units ratio accepts a decimal number representing the ratio between a Mile and an X,Y Unit.

QUIT - Exits from the DISTANCE program. You can Quit by pressing "Q" or <ESC>.

Creating/Printing Reports

The Reporting System was created to allow flexibility in printing the information contained in the data files. It has two main functions: Creating and Printing information.

NOTE: To keep the Reporting System from getting overly complicated it was limited to reporting on only the Locale file, since this is where the calculated information is stored.

Creating A Report

To create a report you first create pages by choosing the fields to go into each column. The pages are then selected to make up the information to be printed on the report. You can also enter a Title and Sub-Title, choose a specific order and put a condition on the records that will be printed.

Choosing "Create a Report" from the Report Submenu displays a menu for you to choose the database to report from. There is only one choice "Locales". Press <ENTER> and a screen listing page definitions already created is displayed.

You can choose one of these pages, create a new page or create a temporary page that will not be saved. After you choose a page you will be asked if you want to add another page. Answering "Yes" returns you to the list of available pages. "No" continues to the next step in creating a report.

You have six different choices of ordering:

<No Ordering>
<Create Order>
Name Order
Position Order
Total Funding Order
Per Capita Order

After choosing an order the Title and Sub-title can be entered. These will be printed at the top of each page.

Creating a condition is next. If you choose to create a condition you will be given the choice of pre-created conditional statements or creating your own. This is much like choosing pages from the page definition screen.

After the condition you can choose to print Page Numbers or not.

Finally you are asked to name the Report. You have eight characters available and it must be different from any other report you have created. An extension of ".USR" is added to what you enter.

Printing a Report

After choosing a report to be printed, you are given a chance to add a condition onto the records that will be printed, and the destination of the output. You have three choices to send the information to: the Printer on LPT1:, the Screen, and a File.

A list of available reports are displayed after choosing the "Print Report" option from the Report Menu. Choose the report you would like to print.

You are then asked to choose a condition. This is done in the same way as described above in the Create Report Section.

Finally you are asked to choose an output device. If you choose to print to a File you will be prompted for the name of the file. A default of OUTPUT.FIL is provided.

Registering a Form.

If the Reporting System's built in report creation does not provide enough flexibility you can use dBase or a dBase clone to create an "FRM" file. This "FRM" file can then be "Registered" with the Reporting System.

Choose "Register a Form" from the Report Submenu. Choose whether you want to register a Report or a Label. If you choose "Report" a list of available "FRM" files is displayed. Choose the dBase III+ Report form to be used as a basis for the report.

The data file is next to be chosen. A list of available data files is displayed. Only "Locales" is available so just press <ENTER>.

Next you must choose or enter the Ordering, Heading, Condition, Page Number and the Name of the report. The report is saved with an extension of ".REP" and will appear in the list of reports the next time "Print Report" is chosen.

R&R Reports

If you still feel too restricted by the Reporting System you can use the R&R Report Generator (available commercially through stores and mail order) to create a report library for the Locale file. If this library is in the same directory as the DISTANCE program, "DISTANCE.EXE", the reports in the library will be automatically included in Reports List when "Print Report" is chosen.

> **NOTE:** At this point only version 3 and 4 of the R&R Relational Report Writer are known to work. Other versions may work but have not been tested.

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June 1, 1989 Memo Report
To: Occupation Education Contact Persons
From: James H. Folkening
"Information on Community College Grant Allocations to the 1989-90 Michigan State Plan for Education"

March 20, 1990
To: State Board of Education
From: Donald L. Bemis, Supt. Public Instruction
"Information on the Report on the Federal and State Funds Awarded to Post-Secondary Education through the State Board of Education in 1988-89"

May, 1985
To: Interested Parties
From: Senator William A. Sederburg
"Draft of Part 1 of the Senate Select Committee on Higher Education's Recommendations Regarding the Governor's Commission on the Future of Higher Education"

March, 1989
List of Community Colleges Districts as Established by Each Community College
Computer printout Received from Jerry Forrest, Community College Services Unit

May 1989
Copy of a letter sent to Community College Presidents by individual names by Ronald Root regarding the community college access, quality articulation, recruitment and retention, governance, and finance study being undertaken by Community Colleges Service Unit, Sandra Ritter and James Folkening.

June 1, 1990
To: Community College Geographic Access Committee Members
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"June 8, 1990 Geographic Access Committee Meeting and Draft"

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