The Relationship Between Academic Achievement and Perceived Organizational Effectiveness and the Michigan Elementary Exemplary Public School Recognition Program

David L. Ratajik
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The relationship between academic achievement and perceived organizational effectiveness and the Michigan elementary exemplary public school recognition program

Ratajik, David L., Ed.D.
Andrews University, 1988
Andrews University
School of Education

THE RELATIONSHIP BETWEEN ACADEMIC ACHIEVEMENT AND
PERCEIVED ORGANIZATIONAL EFFECTIVENESS AND THE
MICHIGAN ELEMENTARY EXEMPLARY PUBLIC
SCHOOL RECOGNITION PROGRAM

A Dissertation
Presented in Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

by
David L. Ratajik
August 1988
ABSTRACT

THE RELATIONSHIP BETWEEN ACADEMIC ACHIEVEMENT AND PERCEIVED ORGANIZATIONAL EFFECTIVENESS AND THE MICHIGAN ELEMENTARY EXEMPLARY PUBLIC SCHOOL RECOGNITION PROGRAM

by

David L. Ratajik

Chairman: Bernard M. Lall, Ph.D.
ABSTRACT OF GRADUATE STUDENT RESEARCH

Dissertation

Andrews University
School of Education

Title: THE RELATIONSHIP BETWEEN ACADEMIC ACHIEVEMENT AND PERCEIVED ORGANIZATIONAL EFFECTIVENESS AND THE THE MICHIGAN EXEMPLARY PUBLIC ELEMENTARY SCHOOL RECOGNITION PROGRAM

Name of Researcher: David L. Ratajik
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Date completed: August, 1988

Problem
The study is about the selection process used to determine exemplary Michigan public elementary schools. Do those public elementary schools selected for recognition by the Michigan Department of Education represent the highest levels of educational quality within the state?

Method
The study was causal-comparative in design. The sample consisted of the 79 public elementary schools which applied in 1986 for recognition as a Michigan Department of Education exemplary
school. Additionally, the 80 highest academic-achieving Michigan public elementary schools were identified.

Multiple regression analyses were used to determine the relationships between eight sociological elements, while analysis of variance compared the perceived effectiveness between "exemplary" schools, "non-exemplary" schools, and schools which demonstrated highest pupil achievement.

Results

1. Among eight dependent variables there is one statistically significant difference between schools recognized as exemplary, the schools not selected as exemplary, and the schools which demonstrate the highest pupil achievement.

2. Pupils in schools which demonstrate the highest achievement score significantly higher on pupil-achievement tests when compared with pupils in both exemplary and non-exemplary schools.

3. There exists no significant difference when comparing the household income, household education, and school district total per-pupil expenditure in exemplary schools, non-exemplary schools, and schools which demonstrate the highest pupil achievement.

4. Three distinct geographic areas of pupil achievement exist within Michigan.

Conclusions

Exemplary Michigan public elementary schools do not appear to be more organizationally effective than other schools which have applied for recognition or have been identified as top-achieving schools. Moreover, no significant relationship exists between
socioeconomic factors, pupil achievement, organizational conditions, and exemplary school status.

Recommendations

It is recommended that the Michigan Department of Education conduct a review of the recognition program to honor both academic achievement as well as improving schools. The three geographic areas which are highest in pupil academic achievement need analysis to determine why they exist. Since the findings suggest that no significant difference exists between the schools which were studied with regard to school district per-pupil expenditures, the wealth-based formula upon which the state aid act is founded should be questioned.
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ACKNOWLEDGMENTS

The researcher wishes to sincerely thank the following persons: Advisor and Committee Chair, Dr. Bernard M. Lall for his patience, perceptive guidance, and encouragement; Committee Members Dr. William H. Green, Dr. Millie U. Youngberg, and Dr. Edwin F. Buck, Jr., for continual support and timely constructive criticism; Dr. E. A. Streeter and Dr. E. Stanley Chace for professional advice; Dr. Fred A. Richardson for his encouragement and conceptual advice; Dr. Jacob Silver, Dr. Jerome Thayer, Dr. Wilfred Futcher, Mr. Thomas Wallace, and Patsy Callebrese for statistical advice and data retrieval; and Mrs. Ruth Greenway and especially Mrs. Suzanne Carson for word-processing skills.

Finally, this study is dedicated to my wife, Susan; son, Gregory; daughter, Jennifer; and parents, Raymond and Margaret Ratajik, and Nadine Doeppers, for their encouragement and constant support through trying challenges.
CHAPTER I

THE INTRODUCTION

Introduction

Suddenly, in the United States, "exemplary" schools abound. The lack of consistent measurement techniques used in determining which schools were exemplary and which were not indicated the status of effective schools research (ESR).

With a considerable amount of research directed toward analysis of effective schooling, professionals have subjectively chosen what appeared to be most credible, and without consensus have proceeded with categorizing along multi-dimensional, theoretical or atheoretical lines, a myriad of conclusions. Of course, conclusions were often dependent upon perspectives, aims, and purposes. It was the subjective factor of perspective which created a lack of consensus among scholars and practitioners, and reinforced the wide diversity of opinion regarding effectiveness.

From the beginning of formal education, schools have been key elements within the framework of American society. During the 19th century the "rugged individual" theme followed the westward movement and expansion. Human qualities of the Protestant ethic such as perseverance, thrift, hard work, and close family ties were reinforced (Marks, 1930). At that time the common school movement reflected the common societal need for all citizens to achieve the fullest potential
possible. As cultural dimensions became more refined, society began to form into various levels of workers, managers, and owners, each distinct in terms of values. Worker unrest grew. Protective unions and new classes of people were formed. Issues such as equity, equality, and equal opportunity emerged.

Private and parochial schools, as well as specialized academic programs, were initiated to accommodate the differing needs of the growing student population. During World War I, the Army frequently used IQ tests to determine eligibility of officer candidates. At this historic point, a major emphasis as to how individuals were perceived took a radical turn. Differentiation was now possible, and as a result, norm-referenced testing began to replace criterion-referenced testing. During the 1930s substantial funding was provided for E. L. Thorndike by the Carnegie Foundation to further refine the notion of testing (Marks, 1980).

Through 1957, the state of public education generally was perceived to be one of competence and stability. However, when the Russians launched Sputnik in 1957, the American public questioned the lack of scientific and technical content in the school curriculum. The result was yet more differentiation in the character of education provided to American students.

Then, in 1964, Congress authorized the report Equality of Educational Opportunity (Coleman, 1966). Inspired by the 1964 Civil Rights Act, this publication has had a lasting, comprehensive, and eventually favorable effect upon public schools. Congress desired to know whether inequality of resources existed between segregated black and white schools in the South. Some believed this study indicated
that schools did not make a difference in the education of children, since pupil achievement did not appear to be associated with school effectiveness. For 20 years researchers have demonstrated, at least partially, basic research flaws (Madaus et al., 1980). However, the Coleman Report was used by the legislature to justify allocating millions of dollars for federal programs such as Headstart and Title I, rather than support for the total funding base for education. Thus, the combination of the Equality of Educational Opportunity report and political initiatives formed the effective-schools movement and the subsequent progression to the identification and selection of exemplary schools.

Statement of the Problem

As a visible component of effectiveness, both the state and federal departments of education initiated recognition programs in 1986 for public elementary schools which were designed to honor exemplary educational programs. Contrary to the unfavorable conclusions of the Coleman Report, that schools did not make a substantial difference in pupil achievement, professionals in government believed the public needed to know that excellence in education did exist and that schools did in fact "make a difference."

The research problem concentrated on the selection and determination process. Did those public elementary schools selected for recognition as exemplary by the Michigan Department of Education represent the highest levels of quality within the State of Michigan?
Need for the Study

The need to study effective-schools literature, according to Madaus (1980), initially occurred because of the economics of education, social inequities, and the accountability issue. Indeed, Madaus indicated that the most important concern was the lack of exact knowledge. He suggested that researchers focus on developing a more comprehensive understanding of existing educational programs, rather than developing new concepts.

Clark and Astuto (1986) further suggested that the trend toward the identification of educational excellence and exemplary schools had occurred primarily during the decade of the 1980s. Under the leadership of the Reagan administration, the excellence issue emerged as a result of federal deregulation of public education. An interesting comparison showed that pre-1980 education focused on equity, social and welfare concerns, and federal intervention. The post-1980 efforts were redirected toward excellence through performance standards, productivity, parental choice (voucher plans), and state and local initiatives, all within the context of less federal funding (Clark et al., 1984). The impetus for the change appeared to be from outside the educational community spurred by reports such as *A Nation at Risk* and programs designed to recognize exemplary schools and outstanding principals.

The trend toward excellence and away from equity, according to Clark and Astuto, will continue well into the 1990s. Indeed, educators "must launch a nationwide movement as grand in scale as the Marshall Plan which helped to rebuild Europe at the end of W. W. II" (Bell, 1988, p. 400). Particular attention will be paid to competition and
the rights of parents to choose the educational program they feel their children deserve. The implications for some school districts, depending on geographic location and population density, could well be ruinous. The possibility of private versus public competition has caused an awareness that educational deregulation has occurred between private and public education.

Moreover, the Michigan Association for Elementary and Middle School Principals (MEMSPA) also believed the subject of effectiveness was important. Therefore, MEMSPA has both endorsed and sponsored this study.

Purpose of the Study

This study addressed effective schools research from historical, political, and operational perspectives, and attempted to capture the essence of current thinking. A sociological framework (Parsons, 1960) for organizational survival as well as socioeconomic elements was included to give direction and to set parameters. It also reviewed the exemplary public-school recognition program and offered a definition of a Michigan exemplary public elementary school. Finally, a design aimed at identifying definitive elements of effectiveness was formulated. The proposed organizational effectiveness design included a sociological definition based on a combination of five characteristics. The Department of Education construct included all schools which applied for recognition status as an exemplary school.
Statement of Hypotheses

\(H(R)1\). The Parsonian effectiveness characteristics and socioeconomic elements are significantly related to the acceptance or rejection of applicant schools as exemplary.

\(H(R)2\). The socioeconomic elements are significantly related to the acceptance or rejection of applicant schools as exemplary.

\(H(R)3\). The Parsonian effectiveness characteristics are significantly related to the acceptance or rejection of applicant schools as exemplary.

Limitations

The following limitations exist which were beyond the control of the researcher:

1. A limiting factor was the passage of time. In this study, schools were assessed to determine how effective the staff and pupils had become with regard to selected variables. For the short term, the results indicating effectiveness were accurate. However, long-term accuracy (in excess of 5 years) may decline proportionately, since initial variables (such as personnel) will have changed.

Therefore, the implications for long-term identification were less clear than for the short-term identification process. Other researchers have been aware of this particular deficiency in effective schools research. Some authors, such as Gilbert R. Austin (personal correspondence, December 15, 1986) of the University of Maryland, were in the process of further investigation regarding longitudinal studies which were unpublished to date.

2. It was possible that some citizens and professional staff members believed that the 20 schools selected as exemplary were in
fact the best schools when compared with all Michigan public elementary schools. Public media did not generally publicize the fact that the recognized schools were solely chosen from applicants.

3. The factors of home and school could not be separated, though socioeconomic status factors could be controlled statistically.

4. Current recognition programs had few normative or widely held consensual standards and apparently no statistical analysis to ensure content and construct validity.

5. In 1986 only 79 of 2,044 Michigan public elementary schools, or 3.9%, nominated themselves for recognition. This left a significant percentage of schools, 96.1%, not even considered as having exemplary status. It was entirely possible that those school staffs which did not nominate themselves also believed they were exemplary and worthy of recognition using the State of Michigan criteria.

6. Not unlike the system followed in writing successful grants, the process of identifying an exemplary school might generate impressions of worthiness based on how well the application was written. The school which submitted a well written application might or might not have a program of equal quality. Conversely, a school with an application of lesser written quality might have an excellent operational program. This limitation was further complicated by the fact that the on-site visitations were conducted following the elimination of schools based on the initial review of written applications.
Figure 1 presents the current procedure for school recognition selection procedure:

**FIGURE 1**

Existing Michigan Department of Education Model

<table>
<thead>
<tr>
<th>Universe of Schools (2,044)</th>
<th>Applicants (79)</th>
<th>Decision-Making Process</th>
<th>Selection</th>
</tr>
</thead>
</table>

**THE MICHIGAN EXEMPLARY ELEMENTARY SCHOOL SELECTION PROCESS**

**Delimitations**

The following delimitations guided the researcher in this study:

1. The society of the late 1980s was a technological society where competition for growth and progress was keen. The public-school clientele wanted to know that student achievement was occurring and believed the use of test scores to be a valid measure of confirming the quality of education. Therefore, criterion-referenced pupil-test results were used.

2. Because it was unfair to compare wealthy school districts with poor school districts, the variables of per-pupil expenditure, household income, and household education were statistically analyzed in a separate analysis.
3. Since organizational effectiveness was a cultural and multivariate process, a sociological framework was used for the proposed design.

4. Researchers could not study effective schooling in its entirety because of the extremely complex nature of the subject. The question, therefore, concerned which aspects of effective schools research should be utilized or identified. This study concentrated on the Michigan Department of Education public elementary-school recognition program.

5. The study emphasized describing "what is" and was not meant to be predictive.

6. The study was intended to be constructively critical of the school recognition program, but it did not intend to offer significant changes. Rather it was considered a sincere challenge from within the profession to improve and clarify fundamental knowledge regarding effectiveness elements and systems.

7. The study was restricted to those 79 Michigan public elementary schools which had applied for recognition as an exemplary school, and to those 80 elementary schools which demonstrated the highest pupil achievement test scores.

Definition of Terms

1. Cohesion (integration)--the combining and blending of separate and diverse elements into a harmonious, organizational whole.

2. Commitment (latency)--the personal obligation to abide by and carry out organizational policy or action.
3. Criterion-Referenced Test--a test used to measure an individual's status with regard to some predefined performance standard (Alkin, 1974).

4. Educational Resources--those human and material assets which, when available, are believed to enable the achievement of stated organizational goals.

5. Effective--the optimum use of educational resources in the attainment of stated educational goals.

6. Effective Schools Research (ESR)--that body of empirical knowledge which attempts to define and characterize the optimum use of educational resources in the operation of schools.

7. Equality--that process which causes a likeness or sameness in quantity, quality, or status.

8. Equity--a free and reasonable conformity to accepted standards without prejudice or favoritism.

9. Excellence--that which indicates the highest degree of quality worthy of special merit.

10. Innovation (adaptation)--an adjustment to or creation of new environmental conditions as a result of natural or planned selection.

11. Michigan Elementary and Middle School Principals Association (MEMSPA)--the professional organization, comprised of and representing principals, which advocates educational standards and studies of contemporary issues.

12. Michigan Educational Assessment Program (MEAP)--criterion-referenced tests in reading, mathematics, and science which are
administered to all public school 4th, 7th and 10th grade pupils each October.

13. **Michigan Exemplary Public Elementary School**—a school which demonstrates the highest MEAP pupil performance and is characterized by a strong degree of staff innovation, cohesiveness, and commitment. It may serve as a model for others. (This definition of an exemplary school is a working definition for this study only, and does not represent any other definition of exemplary status.)

14. **Michigan Department of Education (MDE)**—a department of the State of Michigan which is responsible for establishing, interpreting, and enforcing applicable policies affecting public and, in some instances, private education.

15. **Per-Pupil Expenditure**—that specific amount of money provided each public-school pupil for a given school year. It is derived from a state-aid formula and may include local, state, and federal funds. It varies from school district to school district depending upon local wealth.

16. **Theoretical Framework**—interrelated but hypothetical sets of concepts which support and lend credibility to a model or plan of action.

**Organization of the Study**

This dissertation is divided into five chapters:

**Chapter I. The Problem.** A description of the background of the problem, including educational trends, is provided. The problem as well as the purpose of the study are identified.

**Chapter II. Review of Related Literature.** The reader is introduced to existing studies, research, and methodology from
pertinent books and journal articles. Historical as well as current materials are featured.

Chapter III. Methodology. The description includes the research approach and design, including the null hypotheses. Also, data collection and processing are defined. This chapter is especially important because of the apparent absence of consistent, quantifiable, objective statistical techniques in the current Department of Education recognition program.

Chapter IV. Findings. Data are analyzed and evaluated. Evidence to reject null hypotheses is submitted, along with respective charts or tables. Sections for hypothesized statistical findings, unhypothesized statistical findings, non-statistical findings, a description of the sampled population, and a brief summary are provided.

Chapter V. Summary, Conclusions, Recommendations. A brief summary of data covered in the first three chapters is outlined along with the findings portion of chapter IV. Recommendations for implementation are provided. Suggestions for additional research are offered.
CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

In this chapter the researcher has reviewed related literature that had direct reference to the topic of effective schools research. The research on effectiveness was significant in both volume and content. Through the reviews of periodicals, books, and ERIC files, an effort was made to identify the literature which had primary bearing upon the study, including contributions of the major thought leaders. The chapter was divided into four sections which address the political implications, the new research effort, theoretical underpinnings, and effectiveness indicators.

A Question of Politics

A Nation At Risk

In 1981, Secretary of Education, Terrance Bell created the Commission on Excellence in Education (Goldberg & Harvey, 1983). On April 26, 1983, President Reagan was presented with the findings. The report, A Nation At Risk, was praised as an important step forward in meeting the challenge faced by American schools in the post-industrial age. The general acceptance of this particular commission report was due primarily to the strong influence of business executives and industrialists upon the ailing public education system. Commission chairman, David Gardner, presented recommendations which were designed
to extend time, curriculum content, and fiscal support as well as increase knowledge of the act of teaching. The Nation At Risk report (Goldberg & Harvey, 1984) was compared to an educational call-to-arms, to which the nation has responded.

Lewis (1984) believed that the surge of awards given to teachers, principals and schools went far beyond honoring education, and suggested that presidential reelection was the primary reason for the recognition program. In support of this notion, Lewis (1988) pointed to Jessie Jackson's comment that "whoever can keep your attention during this debate on education deserves to be your next president." Among key political issues were school prayer and the voucher plan for parents. Furthermore, some educators, such as Cuban (1986), posited that external pressures from elected political officials and business executives were reasons for developing the programs honoring academic excellence. He questioned whether the rewards and recognition had a positive influence on education, concluding that it had, since ACT and SAT scores increased and there was more professional optimism. Cuban anticipated the following future trends: a centralization and standardization of the core-curriculum which will benefit low-income families; teachers and principals again being left to do by themselves once the reform excitement (e.g., Board of Education get-tough policies) subsides; and, protecting the autonomy of the school and classroom from invading political forces.

Poor children and their needs, indicated Mann (1984), while a very strong political element, was but one competing need for federal funding. For example, the public-school poor, the disadvantaged, the
disruptive, and the dropout, according to U. S. Education Secretary William J. Bennett (1988), could be educated for far less. Said Bennett, Catholic schools have programs that have successfully educated disadvantaged students at half the cost of public schools. Thus, the use of tax credits and tuition vouchers could combine with the effectiveness of parochial schools to better educate "America's tough kids." On the other hand, the national Catholic-school organization expressed concern regarding the constitutionality of the separation of church and state. Perhaps Mann (1984) best expressed the influence of politics by indicating that "Federal policy on schools is formed in quiet battles among forces and players far removed from classrooms and children" (p. 31).

Administration threats to do away with the U. S. Department of Education have caused educators and politicians alike to advocate or begin more improvements. Politics may continue to be of primary importance when compared to the current revolution in education, since politicians can be retained or rejected based on popular vote. In turn, then, elected politicians do control some of the funding available for education purposes.

State Initiatives Emerge

While the initial stimulation for educational reform began at the federal level, the current focus of activity appeared to be moving to the state level. Keane (1988) observed that public education has recently been dominated not by local boards of education but by state officials. Governors (Nathan, 1986) have viewed education and highly educated citizens as a key to better economic conditions. "Time For Results: The Governors' 1991 Report on Education" was part of the
first wave of reform which increased state level regulation and
decreased local discretion. Thus, elected officials often found
strong opposition at the grassroots level from citizens who believed
their local autonomy was being threatened. The governors responded by
pointing to dismally recurring education deficiencies (Roueche et al.,
1984) such as 25% of all high-school students not graduating (50% in
some urban areas), and 30-40% of college freshmen reading below a
seventh-grade level. The National Assessment of Educational Progress
(1985) revealed that only 5% of United States 17-year-olds had
cognitive skills which allowed them to synthesize and restructure
concepts. Applebee and Mullis (1986) found that only 20% of 17-year-
olds were able to produce persuasive writing judged to be adequate
while 38% produced detailed and well-organized information
descriptions. Thus, the governors believed they had ample
justification to aggressively establish goals and expectations in
order to force schools to erase the lack of pupil achievement.

As proof of their success, the education panel of the National
Governors' Association issued the first report from "Time For Results"
(Iacocca, 1987). The chairman, Governor Tom Keane of New Jersey, gave
his peers high marks for progress in school reformation. According to
Keane, the "Governors were leading the way in reinventing education."
"There is a revolution going on state by state that is going to have
more importance in our country than anything that is being done on the
banks of the Potomac". He concluded by remarking that the governors
were restructuring the schools in the nation and that "what's going on
should give us confidence in schools".
One example of a state level reformation was the Michigan State Board of Education Commission studying school finance (State Plan, 1987). The Commission, comprised of industrial, business, and professional persons from both the private and public sector, would pit public schools against each other "in a life or death struggle to improve education and attract students." The plan, similar to some programs now used in New York and Maryland, would give financial incentives to adopt a freedom-of-choice concept. The plan gave parents the right to pick and choose which schools their children would attend rather than being forced to attend a neighborhood school based on geography. "By giving parents the right of choice we can unleash much of the creative potential of our schools. This forces each school to compete effectively in order to survive and flourish." However, the plan would be expected to be used in larger, and mainly urban, school districts. The Commission, urging establishment of a $200 million trust fund, believed that their freedom-of-choice proposal encouraged parents to use their most effective tool--taking their business elsewhere.

**Bureaucratic Resources**

Another aspect of political involvement was the legislative process. Adequate resources obtained through the legislature has strengthened effectiveness, reported Anderson and Odden (1986). The resources issue has become even more critical (Burns & Lindner, 1985) and, unless educators produce results, they will lose in a competitive resources fight with transportation, environmental, and urban needs. Economic competition was so important, according to Jennings (1987), that this particular issue was considered the "Sputnik of the
Eighties" (p. 104). By providing a positive state-wide environment, identifying pupil outcomes and providing political support, educators have received more support to achieve effectiveness. Murphy et al. (1984) argued that school-effectiveness research indicated that productivity increased through centralization. It was easier, it was claimed, for a state legislature to align one curriculum than it was for several thousand local school districts to do the same with varying degrees of success. Also, accountability was improved through preparation of annual progress reports—a state report card.

Along with the governors' initiatives of school improvement was a caveat (Darling, Hammond, & Wise, 1985) which mitigated against using state mandated policies to solve problems. Bureaucratic policies can be implemented assuming that end results are attainable, procedures are appropriate to produce conformity, and local school districts establish reciprocal goals and achieve them. The problem, however, was that classroom teaching was not as bureaucratic a function as was large-scale organizational operations. Thus, a breakdown in legislative policy implementation was more likely than in other settings. Standards involved both students (minimal competencies, standardized test scores, basal education) and teachers (competency-based certifications, testing for certification, testing for recertification). Prescriptive policy-making was high risk business which may cause an effect opposite from the one originally intended. Agreeing with the notion of decentralization, Prasch (1984) noted that at the same time industry was dismantling its bureaucracy to achieve more participative management, governors and legislators
wanted to centralize education. Local autonomy and ownership were critical to the most meaningful improvement in schooling.

Impatience with obstinate educators (Brandt, 1984) has caused state-level politicians to become aggressive regarding improvement in education. Thus, they were attempting to seize the initiative to make changes, hoping that the vigorous overtures would attract more votes in the next election. California appeared to be the current reform leader, since plans have been made to standardize curriculum content, textbooks, testing and time allocation.

**The Grassroots Level of Politics**

An insight into the grassroots level of politics occurred during an awards ceremony in a small Michigan community (Radtke, 1987). Several Michigan Department of Education officials presented school district personnel with recognition awards since the high school had been recognized as both a state and a national exemplary school. During the ceremony it was mentioned that the school and community had formed a team with strong leadership and a skilled and enthusiastic staff. The self-study, it was said, was a beneficial process even if an application for nomination had not been submitted.

Moreover, a clear message was given that "you have proven to people that you do not have to belong to a rich community to reach for high expectations." It appeared that this last comment could fall in line with the original intent of the effective schools movement—as a vehicle to give encouragement and hope for the future and as a support, especially for less wealthy schools. As representatives of a state department, and indirectly the governor, their comments were a
most positive, political endorsement seemingly designed to attract grassroots support.

**"The New Research"**

**School Culture Is Important**

Purkey and Smith (1982) clustered effectiveness studies into four classifications—outlier studies, case studies, program evaluation studies, and other studies. Case studies disclosed five factors to be important: (1) strong leadership, (2) high expectations, (3) clear goals, (4) staff development, and (5) student progress monitoring.

Program evaluation analysis identified virtually the same data. Purkey and Smith, however, favored a cultural exploration rather than "recipes" (p. 67). Moreover, they believed that tight organization and control of school cultures may not be a realistic expectation given vested interests (e.g., management, union). They suggested abandoning reliance on easily identifiable factors. Instead, professionals should concentrate on developing social systems through structure, process and normative climates. The nested layer concept portrayed the classroom, school building, and school district as being mutually supportive and interdependent. It was a meaningful concept and should be used in theoretical approaches toward effectiveness study. A point was made that has been made many times previously—that one knows an effective school when one sees one, but cannot its characteristics cannot be described.

In forming recommendations, Purkey and Smith emphasized the problem of loosely coupled schools characterized by ineffective administrative efforts to evaluate teachers and provide direction.
The loosely coupled schools contained teachers and administrators who essentially were not accountable for their behavior and who were not responsive to organizational needs. Furthermore, school administrators did not directly manage or control district teachers. Their cultural model factors included school management, instructional leadership, staff stability, curriculum alignment, schoolwide staff development, parental involvement and support, academic success recognition, maximized learning time, and district support. Ultimately, they believed that the change to effectiveness, because of the social nature of education, will be a messy process.

Firestone and Wilson (1985), like Purkey and Smith, reported that poor linkages and loosely coupled schools were a source of major impediment in achieving effectiveness. Needed was a method to determine a linkage between the school principal, the school, and the school district.

A Classic Study

Madaus, Airsian, and Kellaghan in School Effectiveness (1980) provided one of the comprehensive descriptions of the evidence accumulated thus far. Major outcomes of this volume included:

1. The need to study effective-schools research because of the economics of education and the accountability issue; the social inequities of the 1960s and the burden placed on the public schools to solve societal problems through equal educational opportunities. The equity ideal was emphasized.

2. Effectiveness was defined as those schools which accomplish that which they set out to do. The root of the research problem was stating the school objectives. The biggest single obstacle in this
regard was that local control of schools was a fiercely guarded value. Thus, how could anyone accurately state what the objectives were for all schools? How could comparisons be made? What were the standards?

3. What was the absolute effect of schooling? What were the effects of resource quantities?

4. Regression was the most commonly used form of statistics for studies of effectiveness. A significant problem using this approach was that the full effect of variables was precluded by the order in which they were entered in the analysis.

5. The number, type, and amount of variables which affect effective-schools research was almost unlimited. Numerous problems existed with the selection and measurement of input (independent) variables.

6. What educators did with resources was the key element in effectiveness. Status variables, such as size and physical characteristics, were relatively unimportant.

7. Even though it was difficult to measure school outcomes, the technological age encouraged the use of cognitive and standardized tests as readily accepted proof of achievement.

8. The authors believed ability and achievement were synonymous and therefore it was difficult to differentiate them.

9. The Coleman report results can be changed by reexamining four elements of the research design.

Madaus and his colleagues (1980), in their concluding comments, indicated that the most important concern was the lack of exact knowledge. It was suggested that researchers refrain from studies
which predict, and energize efforts toward obtaining a more comprehensive and clear understanding of "what is."

Schools Make a Difference

Following the Coleman Report (1966), the decade of the 1970s was one of serious introspection for educators and the educational community (Hodgkinson, 1982). MacKenzie (1983) believed that for educators the key breakthrough in the depressed and confusing years following Coleman’s report was Weber’s conclusion (1971) that teachers, principals, and parents did make a difference. Further, the issue of leadership was critical, especially at the building level, and that quantification was possible to permit measurement of progress. The new research movement was characterized by a change in how educational researchers perceived the process of identifying and describing effectiveness.

Following Weber’s lead, researchers began to investigate the teaching process, with emphasis on the school building as an entity. Realizations emerged in regard to the extreme complexity and sociological nature of effectiveness. Any study must treat the identification from a holistic perspective and not from the standpoint of isolated individual variables. In other words, the process was at least as important as any one aspect of efficacy. The salient feature of the new research was that it gave hope and optimism to those who wished to improve productivity and achievement in the schools. An example of this optimism was contained in a statement honoring selected exemplary schools:

All schools and all educators encounter problems in meeting their responsibilities and the exemplary schools are no different in this regard. Poor social-economic
conditions, low attendance, lack of parental support, low achievement, poor facilities, student mobility, and poor discipline are among the many obstacles confronted by these exemplary schools. Yet the staffs of these schools have refused to accept the notion that such conditions are intractable. They have sought solutions rather than excuses. They have creatively planned and implemented programs and policies that have reduced or eliminated obstacles to educational success. They have persevered where others have accepted defeat. Typically these schools involve their staffs in planning, regularly review indicators of quality and carefully evaluate their efforts to improve. They do not stand still. (Wilson & Cocoran, 1986, page 4)

Austin and Garber (1985), in Research on Exemplary Schools, have edited a comprehensive review. Leadership and expectations appeared to stand out as two elements in effective schools. Included in this book was Berliner's classic analysis of the effective elements of the act of teaching. Other chapters were on school climate, the relationship between public and private schools, and the role of the principal in developing effective schooling.

The Outlier Studies

Dryer (1966) has critiqued the statistical method known as the "outlier" technique. This procedure identified highly effective (positive outlier) and highly ineffective (negative outlier) schools through the use of regression analysis. Residual scores were created, based on the difference between achieved and expected scores. The residual, in fact, became the definition of school effectiveness. Regression analysis also was used in conjunction with the socioeconomic status factors such as family education and wealth as well as language usage, all of which had an effect on the student achievement. A socioeconomic status index was formed using weighted categories and, through regression techniques, the factors were held constant. Thus, in effect, socioeconomic status was eliminated from
academic achievement, producing a clearer picture of the effects of remaining variables. This technique has been used in studies in Michigan (1974), New York (1976), and Maryland (1978). Generally, authors were more critical than supportive, however, and cited the facts that outlier studies used small samples, contained errors in the identification of outlier schools, aggregated data at the school level, and used subjective criteria for determining school success.

Effectiveness Is Questioned

Disagreeing with current belief that the school must be the unit of study, Fenstermacher and Berliner (1985) found that staff development has become the focal point for school effectiveness. Their belief was that change occurs from the inside out, and defined staff development as activities which advanced knowledge in a way which caused teachers to change their classroom behavior. The core of the Improvement began with individual change, since teachers could no longer close a door and isolate themselves from the complexities of modern education.

Sirotnik (1985) believed that effective-schools research was but another bandwagon. The usual scenario for effectiveness included selecting politically acceptable criteria such as standardized test scores, identifying schools with scores highly or lowly connected with their socioeconomic status rating, and determining what seemed to be most effective about the higher achieving schools. Because this trend was politically appealing, professionals were adding to the laundry lists which were thought to be steps to the causes of effectiveness. In reality, however, a variety of causes, effects, and local situations required a tailoring of all these elements into that which
was successful in a particular setting. Sirotnik suggested that it was important for educators to remain knowledgeable about current trends and to reflect, using personal values, on what was best for local needs. Professional inquiry must continue. Change must come from within and not from without. Indeed, some researchers (Collard, 1984) have gone so far as to suggest that there was no construct called school effectiveness, and that there were no answers to effective-schools research questions.

In a similar vein, C. Sheffer (personal communication, October 28, 1987) suggested that effective-schools research is a "flashy" concept which has been readily accepted and promulgated by those from outside the education community as a means to stimulate excellent performance. Teacher decision-making power is a prime ingredient of effectiveness as well as clearly stated objectives, staff development, and community involvement. Specifically, Sheffer defined an effective school as one which does not create problem adults such as thieves and murderers but which graduates persons who creatively solve problems within the context of social tolerance. Furthermore, she suggested that like dissecting a cat, the effective-schools research movement is perhaps looking too closely at schools. Therefore, because of the more technical analysis, the educational process may never again be the same. The "little red schoolhouse" has been replaced by an efficient, effective, and systematic educational organization.

The Recognition Programs

Implementing First Lessons (Wilson & Cocoran, 1986) reported an analysis of the 212 public schools which were chosen for national recognition by the U.S. Department of Education. The national
recognition program, upon which the Michigan recognition program was based, culminated the "Year of the Elementary School" (1985-86). Initiated by Secretary of Education William J. Bennett, "The Year of the Elementary School" was a product of the new research intended to correct the image of public-school failure and give educators optimism for the future. The 212 schools, of which 8 were from Michigan, represented the "full diversity of elementary schools" across the nation. All races, community sizes and types, and socioeconomic levels were selected for honors. The reports contained four main outcomes, and provided model guidelines for other schools: community collaboration between parents and schools, focus on the pupil as the bottom line, developing staff professionalism, and high expectations in developing school policies and practices.

Finally, over the past four years the departments of education at both state and federal levels have, as a matter of policy, honored selected elementary and secondary schools with formal recognition programs. In Michigan (1986), the purpose of the elementary-school recognition program was:

to identify and call attention to a group of unusually successful public schools. For a school to be recognized there must be clear evidence that virtually all of its students are developing a solid foundation of academic skills.

Among the criteria are strong leadership and effective working relationships between the schools, parents, and others in the community, an orderly and conducive learning atmosphere in the school and effective resolution of problems that affect student learning and the school's daily operation. (page 1)

In order to be considered for recognition, the elementary school needed to nominate itself by initiating an application consisting of several categories. These categories included school and school district characteristics, eligibility criteria and the quality
indicator of school organization, leadership, instruction, climate, community relations, efforts to improve, and student outcomes.

Eligibility for this program required that a school must meet one of the following criteria:

during each of the last three years, 75% or more of the students must have achieved at or above grade level in mathematics and reading. Or, during each of the last three years, the number of students who achieved at or above grade level in mathematics and reading must have increased by an average of 5% annually, and in the last year 50% or more of the students must have achieved at or above grade level in both areas. Schools which have experienced an enrollment change of 15% or more, excluding the first grade, in one or more of the last three years will be eligible if 65% or more of the students achieved at or above grade level during the year in which enrollment changed.

State or school district definitions of what constitutes achievement 'at grade level' should be used to determine whether a school is eligible for consideration. There are no specific standards to be met in the eight areas listed here. Rather, the quality of each school will be judged in the context of how well its programs are tailored to local circumstances, and its success in meeting local needs. (p. 1)

A school team completed the application and submitted it to the Department of Education for evaluation. The screening was initially performed by a panel of practicing principals, chosen through the Michigan Elementary and Middle School Principals Association (MEMSPA), and selected Department of Education officials. A point system was used to evaluate the categories based on the application content, including the following criteria and possible points:

1. School District Characteristics (size, percentage of low income, significant problems) 0
2. School Characteristics (size, percentage of low income, percentage of immigrants, percentage of special education pupils, staff turnover, significant problems) 15
3. Eligibility Criteria (academic achievement at or above grade level) 5

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4. Quality Indicators
   a. School Organization 15
   b. Leadership 10
   c. Curriculum 15
   d. Instruction 20
   e. School Climate 10
   f. School-Community Relationships 10
   g. Effort to Improve and Maintenance of High Quality 40
   h. Student Outcomes 15

A first cut eliminating some of the 79 schools was made by the evaluators followed by a two-person team which visited on-site to confirm perceptions. The expert panel was reconvened and, along with the visitation perceptions and other factors such as socioeconomic levels and geography, a final recommendation was made to recognize 20 of the 79 schools which chose to apply (F. Philip, personal communication, December 26, 1986).

A Theoretical Framework

A Historical Perspective

The assessment of organizational performance began over 75 years ago. Noted social scientists such as Taylor (1911), Gulick (1937), Barnard (1938), Weber (1947), and Fayol (1949) placed heavy emphasis on determining the level of organizational efficiency as the primary measure of effectiveness. These early contributors to organizational effectiveness were primarily concerned, however, with the theoretical and conceptual aspects. One of the problems was measuring effectiveness.

The best method of describing organizational effectiveness was in terms of a construct or a theory (Campbell et al., 1974). Rather than an operational definition, a theory was absolutely essential with regard to whether one organization was more effective than another, or
whether certain variables contribute to effectiveness. Schools have
lacked effectiveness because of nonexistent technical theory (Argyris,
1974).

Theoretical Models

Two general, theoretical models existed—goal-centered and
natural systems. The goals model set parameters by which
organizations achieved stated goals. Examples were Management by
Objectives (Odiorne, 1965, 1969), Cost/Benefit Analysis (Rivlin,
The natural system assumed that a dynamic organization had such great
demands placed upon it that it was not possible to define even a small
number of meaningful goals. Rather, the organization was measured by
how well it maintained internal consistency, how it reacted to
emergencies and how fast it consumed its resources. Examples of the
systems model, using an a priori definition, were the Likert ISR
(1967), Organizational Development (Argyris, 1964), and Grid
Orientation Development (Blake & Mouton, 1968).

Hoy and Ferguson (1985) developed a most helpful theoretical
framework for viewing effectiveness. They reviewed the two basic
organizational effectiveness models. Problems associated with the
goals model included the fact that goals change, and organizational
goals may not be associated with personal goals. The natural system
model was personal rather than organizational, with inputs, processes,
and outputs.

Hoy and Ferguson, however, offered a synthesis of the
goal/system models. Based primarily on the theoretical construct of
Parsons (1960), an organization must continually solve four problems in order to have sustained momentum and improve:

Adaptation—the problem of changing with the organizational milieu.

Goal Attainment—the problem of establishing and achieving goals.

Integration—the problem of sustaining solidarity and group cohesiveness.

Latency—the problem of sustaining organizational norms, values, and motivation.

**The Parsonian Theory**

Sociologist Talcott Parsons (1953) believed that the science of action (effectiveness) was not tied to any particular macroscopic or microscopic level. The basic organization (Parsons, 1965) was derived from value systems within a normative orientation. Organizational effectiveness (Parsons, 1937) involved the process of time, was subjective, and was based on one's perceptions. He theorized that value patterns guide individual activities within the organization (1956).

Four assumptions (Parsons, 1953) were formed to explain systems maintenance: the principle of action and reaction, in which organizational force is equal in opposite directions; the principle of inertia, since an organization tends to move in the same direction unless momentum is interrupted; the principle of acceleration, inasmuch as rates of change are a result of forces operating on or in the organization; and the principle of systems integration, in which components must be compatible with each other for continued existence. This hypothesis suggested that each principle was associated with the
solution of system problems and, by their frequency, held the system together.

From an operational perspective Parson's (1960) theory can be translated into organizational functions. For example, successful adaptation, or innovation, involved a consideration for inflexible reality demands and a change to the situation outside the system. Those individuals within the system needed to be sensitive of others around them because of the element of human interrelationship.

Whitelaw (1984) found that staff ability to change might be a critical factor in school effectiveness. Organizational effectiveness researchers, such as Argyris (1978), found that the main problem was not identifying the performance of stable tasks. Rather, the focus was upon helping the organization identify purposes and tasks in the context of a changing environment. Thus, adaptiveness became synonymous with effectiveness.

Research Supporting the Parsonian Theory

In a survey Steers (1975) reviewed 17 effectiveness models and found adaptability to be the most frequently mentioned element. Mott (1972) and Bennis (1968) stated that adaptive behaviors were becoming increasingly important in American society. In their paper on organizational engineering, Lyert and March (1964) indicated that when goals were not achieved the organization must change and adapt to seek different solutions. Constant innovation, according to Peters and Austin (1985), was one of the sustaining elements of excellence. They agreed with Purkey and Smith (1983) that systems change was messy, unpredictable, and uncertain. Clark, Lotto, and Astuto (1984)
concurred with the selection of adaptation as a core element of effectiveness.

Goal gratification was oriented toward performance. It involved intrinsically gratifying activities and was frequently the culmination of activity. A goal was attained when a relationship existed between a social system and its parts, thus achieving a maximum of output. Output for one organization (e.g., high-school graduation) may be input for other organizations (community, business needs). Effectiveness, reported Joyce (1983), was defined as student academic achievement, as measured by standardized test results, within a social context. As well, Eisner (1979) believed that standardized test scores were used to indicate goal achievement because of precise quantification. Parents and taxpayers wanted unambiguous data, and no other suitable substitute has been found. A caveat was given, however, inasmuch as test scores were by themselves an incomplete picture; rather, a definition should include the wealth of the total school culture.

Successful organizational integration, or staff cohesion, involved relationships between people such that the organization retained its characteristic as a single entity. Affective behavior by members was especially important. Cohesion was further supported in a map of effectiveness which has been designed to measure that quality statistically (Rohrbaugh, 1983).

Latency, operationally defined as commitment, had no visible sign of success or activity, but was in operation throughout the life of the organization. Commitment maintained and renewed the motivational and recurring cultural values in the system. It included
the maintenance and expression of norms, which may disagree with system norms, but which must be present for the system to continue. Effective educators must possess high degrees of commitment regarding their basic purpose (Odden & Odden, 1984). Commitment focused on linking the identity of the individual to the organization, thus bringing the two factors into coincidence (Mowday et al., 1979). It was a state in which an individual identified with the organizational goals and maintained membership, thus contributing to organizational well-being. This component should remain stable over time.

In addition to the research which supported the identification of Parsonian (1960) organizational effectiveness components, more holistic research evidence was also available. Within the context of the systems environment, the elements of adaptation, goal attainment, cohesion, and commitment were considered to be essential for effectiveness to occur (Caplow, 1964; Parsons, 1956a, 1956b; Scott, 1959).

Campbell (1974) identified 26 independent variables which affected organizational effectiveness. Among them were productivity, adaptation, cohesion, and commitment. Likewise, Mott (1972) believed a school was effective if there was evidence of a high degree of productivity, flexibility, and adaptability.

Productivity, adaptability, and flexibility were indicators of effectiveness, posited Miskei (1979), who also believed that a strong argument could be made for the influence of perceived organizational effectiveness of school performance.

In further support of Parsons, Steers (1977) believed that organizational effectiveness was not linear but highly
multidimensional in nature and stressed both goal orientation and developing systems. In his analysis of 17 effectiveness studies he identified, among other elements, achievement, innovation, cohesion, and commitment.

Effectiveness Indicators

Early Efforts

Leonard Ayres, who in 1909 wrote *Laggards in Our Schools*, might have applauded the effort to recognize exemplary schools. Ayres made a comparison of the relationship between industrial and education efficiency—long before organizational effectiveness became fashionable.

An index of efficiency for public-school systems would enable educators to measure the percentage of children succeeding in their studies. This, Ayres argued, came closest to typifying the efficiency measurement which engineers used to design factory machinery (e.g., 60% of potential energy). Similarly, the backward or retarded pupil's performance could be improved by compulsory attendance, flexible grading policies, and special classes for immigrants and physically handicapped. In 1988 this index seems simplistic when compared with the cultural complexities which are now being researched (e.g., Purkey & Smith, 1982, 1983; Deal, 1985).

School Effectiveness Questioned

Public education improvement efforts still have critics, such as Levine (1985), who recommended that improvement was possible through association with corporate productivity and hands-on management. Sponsored entrepreneurship can be better learned from
such organizations at AT&T, Honeywell, and IBM. However, school improvement derived from business solutions must be cautiously analyzed, since schools were a different kind of organization than most businesses.

Research has not resulted in a consensus regarding the elements of educational effectiveness or total effectiveness (Kimberly et al., 1983). Researchers have become more aware that organizational effectiveness was multilinear and contradictory, and that outputs in some organizations (e.g., a car factory) lent themselves much more easily to measurement than did others (e.g., a school). The number of criteria against which output was measured was dependent upon how many constituencies were interested in how well the organization was performing. Public schools, because they served a large and divergent clientele, should be measured against similarly divergent measures of success. Performance estimates further resulted from the general image a school projected, and descriptions of differences resulted in observable indicators. However, observable indicators may not have been a suitable measure because of the highly complex, cultural experiences typical of schools. Technical and political problems also were barriers to the development of indicators (Smith, 1988).

From the very beginning of the founding of this nation there have been critics of the public-school system. These criticisms have been analyzed (Harris et al., 1986) and educators were cautioned that before criticisms were accepted, data must be confirmed with regard to valid assumptions and logic. Educators must learn to distinguish between justified and poorly founded critical research. Though public education has been recently examined more closely than ever before,
teachers and administrators did not want to be evaluated or to have their programs held up to public scrutiny (House, 1973). Having faith in their schools shaken, citizens sought proof and demonstration that the education children were receiving was excellent, or at least not bad. Schools could be successfully evaluated, but not as completely nor as decisively as hoped for because of the political context in which they exist (see Footnote, p. 122).

**School Effectiveness Is Measured**

As stated previously (pp. 4, 17), the competitive aspects of both private and public education were more pronounced as resources became scarce and demands for academic excellence increased. As the competitive aspect of education grew, the consumers—students, parents, and taxpayers—played a correspondingly important role in forming opinions with regard to the effectiveness of the product. Did students learn? Did parents have confidence in the schools? Did taxpayers believe they were receiving a quality program for their tax investment? The answers to these questions might be defined in terms of "feet and money" (E. F. Buck, Jr., personal communication, April 6, 1988). Education consumers, if not satisfied with the product, could simply walk away and take their business elsewhere. Parents could take their children out of one school or school system and enroll them in another in order to seek a better education. Or, private schools were available for a tuition fee. Consumers of educational services seemed to be more selective and demanding. In fact, how did students and taxpayers perceive their public educational system?

The Third Annual Opinion Survey of Michigan High-School Students (1987) was conducted as a part of Project Outreach sponsored
by the Michigan Department of Education. A total of 4,388 10th- and 12th-grade students were polled through the use of a written questionnaire. Student opinion was drawn from random public schools based upon community type and regions. There were no significant differences between the beliefs in the two different grade levels. The majority student opinion regarding the quality of education is that it had remained consistent over the past three years. Five percent of the pupils gave their school As, 37% Bs, 40% Cs, 12% Ds, and 3% did not know. All citizens, however, gave their school the following report card: As, 9%; Bs, 41%; Cs, 24%; Ds, 12%; and 11% did not know. Both groups gave schools Es at a 3% rate. When comparing all school employees, students gave those with whom they had most contact—teachers—the highest rating. Peer pressures, drug abuse, and parental pressure were ranked as the three most important teen-age problems. According to the pupils, their educations can best be improved by offering a better variety of courses and a better preparation for college.

School effectiveness has also been routinely assessed and questioned by the annual Gallup Poll of the Public’s Attitude Toward Public Education. The 18th Annual Poll (1986), for the first time in the history of the Poll, identified the use of drugs by pupils as the most important problem (28%). This concern was followed by a lack of discipline (24%). From these primary problem areas, which accounted for 52% of the total population, the perceived problems fell dramatically, with only 11% concerned about poor financial support, and 8% with poor curriculum and standards. Consequently, 82% of the population responded with three major areas of concern. The first was
a community, not school-based, problem. Compared with the 1974 results of the overall ratings by letter grade (A, B, C, D, F) the 1986 Annual Poll indicated fewer As (11% compared to 18%), more Cs (11% compared to 6%), and fewer Fs (15% compared to 20%). The low point in the 18-year public opinion ratings was 1983, when only 6% of the schools received As and 35% Cs.

Comparing the 1986 report with the 1983 report, it can be concluded that the public believed the schools were gradually getting better—the ultimate goal of the effectiveness movement. The public identified the following characteristics of successful schools: safe, orderly environment; reported and measured pupil progress; high staff expectations; agreement between parents and staff regarding school goals; and the principal helping teachers to teach. The public continued to support strongly more strict requirements for grade-level promotion and testing as the method to determine grade level promotion. Thus, the 1986 Gallup Poll identified quality indicators of effectiveness similar to those found by Austin (1981), Edmunds (1979), Sheldin (1986), and Stedman (1985). Supporting characteristics of effective schools fall into seven categories, reported Stedman (1985): personal attention to students, skillful utilization of teachers, parental educational and political involvement, ethnic and racial emphasis, student responsibility for school affairs, discipline, and preventive teaching. He then outlined a practical application matrix with citations for classroom implementation.
Indicators Are Identified

Austin (1981) and Edmunds (1979) indicated that a "6 Factor Formulation" was responsible for effective schooling and suggested the following clusters: leadership, high expectations from both principals and teachers, emphasis on basic skills, order and discipline, systematic evaluation of pupils, and increased time-on-task. They also emphasized the use of several instruments designed to measure effectiveness which appeared to be promising, especially Mott's Index of Perceived Organizational Effectiveness (Mott, 1972).

When one enters an elementary school as adults (Sheldon, 1986), certain "baggage and lenses" are carried (p. 139) which are a mixture of social, emotional and cognitive experiences. Between nursery school and sixth grade a child has spent 9,000 hours in an elementary school--more than twice the time spent in senior high school, and as much as senior high school and college combined. Good schools enjoyed favorable answers to the following questions: Does everyone seem happy? Are learning styles and interests differentiated? How do people treat one another? Is school ready for the child? Is pupil performance assessed in more than one way? Is there enthusiasm for educating the whole child?

Adding to their original list of 13 effectiveness characteristics, Purkey and Smith (1985) have listed some institutional barricades to the improvement process: implementation failure, union opposition and administrative resistance, unclear goals, lack of resources, and an absence of shared decision making. Purkey and Smith continued by recommending the school as the
appropriate unit of study. Moreover, time must be provided to implement new concepts in a decentralized and localized environment.

Drucker (1966) analyzed effectiveness from the standpoint of executive behavior. Effectiveness must be learned. Effectiveness was defined as performance and contributions, based on ability and knowledge, which increased the quantity and quality of organizational results. He continued, indicating that there was no effective personality and that executives differed widely in temperament, knowledge, and interests.

In his classic publication A Place Called School, Goodlad (1984) commented on the improvements which have occurred during the 1980s. Indicators of improvement were demonstrating improved test scores, recognition of the burden schools carry, a new spirit of optimism, and internally initiated changes. To provide data for his research Goodlad surveyed 38 schools, including 1,000 classrooms ranging across all socioeconomic and geographic considerations. It was apparently the largest single school-effectiveness study ever conducted.

Schooling was described through themes: school functions and relevance; how teachers teach in certain environments; the curriculum, resources, equity, and the hidden curriculum; satisfaction; and the need for data feedback. The identification of the school as the unit of study was also an important element of schooling.

In terms of goals, Goodlad reported that 50% of parents and staff believed the most important emphasis should be intellectual, with the balance scattered among social, personal, and vocational. To his credit Goodlad suggested that more curriculum will not improve
instruction; rather, teaching will improve with understanding and implementing correct pedagogy on a school-by-school basis. The single, biggest obstacle to effectiveness was the consistent problem which haunts effective-schools research—definition of suitable objectives and goals.

Why were some schools more satisfying to pupils and parents than others? Among the characteristics discovered were high degrees of structure, staff enthusiasm and caring attitudes, clear expectations, and parent accessibility to staff. Goodlad concluded by suggesting that key schools, experimental in nature, be created which would form state networks of programs devoted to developing and implementing promising practices. Laundry lists were to be avoided in favor of interconnecting principles.

The Michigan Educational Assessment Program

Since 1970, the Michigan Department of Education has provided recommendations regarding the improvement of the public-school educational programs through assessment of needs. The Michigan Educational Assessment Program (1986-87) was first used in 1973-74, and subsequently revised in 1980-81. It was intended to "identify which students have acquired basic skills and assess the strengths and weaknesses of their basic skills programs" (p. 1) in reading and mathematics and science. The assessment tests, administered every October to all 4th-, 7th-, and 10th-grade public-school pupils, were "criterion-referenced sets of items measuring selected essential performance objectives" (p. 1).

Each objective was measured by a set of three questions, and was untimed. Objectives were attained if pupils answered two of the
three questions correctly. Shown here was the summary of the test format for grade 4:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Cognitive Skills (Skill Areas I-V)</th>
<th>Positive Responses to Reading (Skill Area VI)</th>
<th>Related Reading Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of Objectives</td>
<td>Number of Test Items</td>
<td>Number of Objectives</td>
</tr>
<tr>
<td>4</td>
<td>25</td>
<td>75</td>
<td>4</td>
</tr>
</tbody>
</table>

The positive responses to reading included questions regarding whether pupils read on their own time, talked about what was read, or asked for more reading materials. Related activities involved value questions which indicated the amount of time watching television, reading for pleasure, and doing homework. Similarly, the mathematics questions for grade 4 followed this structure:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Core Test</th>
<th>Correlated Tests</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of Objectives</td>
<td>Number of Test Items</td>
</tr>
<tr>
<td>4</td>
<td>28</td>
<td>84</td>
</tr>
</tbody>
</table>

Even though the Michigan Educational Assessment Program was administered to grades 4, 7, and 10, only the 4th-grade results were used in this study. Some, if not many, elementary schools were organized to include kindergarten and grades through 4 or grades 1 through 5. However, only grade-4 scores were used.

Existing research regarding a relationship between effective schools and Michigan Educational Assessment Program test scores initially appeared to be negligible. However, Chizmar (1988) reported a study involving an elementary-school improvement program designed to
analyze Michigan Education Assessment Program pupil performance. Fourth-grade reading and mathematics test-score results were disaggregated during 1985 and 1986. Data for the 1985 disaggregated analysis indicated "little difference" when considering the variables of sex, race, income, and educational level of mothers. The 1986 disaggregated data did not show "any variances" between any quarter when using the same four variables. The only apparent difference was in the variable of sex, where girls performed better than boys.

The Michigan Department of Education (1986-87) has published a list of principles which were indicators of school effectiveness, and toward which educators should work in cooperation. They were maximized allocated instructional time, parental involvement, high expectations, supportive teachers who used positive feedback, high degree of classroom structure, and tutoring. This information corroborates that presented by Berliner (1985), Miller (1985), and Anderson (1985) in defining effectiveness characteristics. But, these characteristics were general in nature and did not appear to lend themselves to a specific definition of an exemplary school.

Summary

Chapter II was designed to identify and describe the politics, empirical research, theory, and indicators of effective schools studies. The task was difficult because of the vast quantities of research which had been published.

Politics was an undeniably strong influence on exemplary schools. Indeed, it has been said that commission reports created the current reform movement, only to be used for purposes of reelection of officials at all levels of government. The needs of poor children
were mentioned as a strong political element. Recently the national Governors' Association has aggressively taken the lead in effectiveness initiatives and has found the public platform to be very beneficial for high visibility to constituents. Various state-level plans to upgrade public education have used competition as an action lever to force school districts to improve or lose their clientele to rival districts through parent right-to-choose options.

The "new research," generated from the depressed educational community during the years following the Coleman Report, has given inspiration and hope to parents and professionals alike. The message was simple: schools do make a difference. The school has been identified as the critical unit of study. Research results confirmed schools as highly complex, multivariate, but unaccountable organizations which need a closer relationship with the school district to achieve unity of purpose and effort. The biggest single problem in effectiveness studies involved identifying what objectives and standards were appropriate, could be measured, or should be measured. Experts cautioned against the use of laundry lists to describe effective schools, and instead suggested an emphasis on process and culture. For over 75 years organizations have been described theoretically. Two basic models exist--goal and natural system. Various examples of each model were mentioned. A Parsonian synthesis of the two models was described and suggested as the sociological foundation upon which the study would be anchored. Empirical research was offered in support of four operational elements of effectiveness.
Finally, research efforts have not resulted in a consensus regarding the indicators of effectiveness. As early as 1909, educators had struggled with this problem and had found that the very divergence of public education had caused a similar divergence in how effectiveness is measured. School success can be measured, but not as accurately as in more objectively defined settings. Since 1983, the annual Gallup Poll indicated that public perception of public education was improving, and that the public-supported measures to continue high degrees of structure, pupil progress, and staff expectation. Goodlad's classic, A Place Called School (1984), reported a massive study which concluded by recommending the establishment of a network of key schools. The Michigan Educational Assessment Program was described as a basis of standardizing minimal pupil-achievement levels in reading and mathematics. Thus, it was demonstrated that increasing educational effectiveness has taken a multitude of forms and directions.
CHAPTER III

METHODOLOGY

Introduction

The identification of exemplary public elementary schools in Michigan was considered to be causal-comparative, or "ex post facto," in nature. Causal-comparative research investigated, according to Isaac (1978), "possible cause and effect relationships by observing some existing consequence and searching back through the data for plausible causal factors" (p. 22).

Description of Methodology

Causal-comparative methodology had several advantages when an experimental approach was not feasible, such as the control and manipulation of certain variables. It was also useful when the control of variables was unrealistic or when laboratory controls were impractical or too costly (Isaac, 1978). The main weakness in the causal-comparative design was the lack of control of variables. However, in effectiveness studies, this has been an on-going problem which has plagued researchers and will continue to plague them in the future since data is collected within the context of an open social system.

Research Design

Eight independent variables, which were suggested to be associated with the dependent variable of an exemplary school, were

47
identified. The Department of Education decision as to which schools are accepted as exemplary is based upon the decision of a panel of experts after a site visit to each school selected for further consideration among those which applied. The proposed paradigm included a sociological definition based on a combination of five variables.

A list of the variables follows:

<table>
<thead>
<tr>
<th>Dependent ($Y^1$)</th>
<th>Independent ($X$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exemplary School Status ($Y^1$)</td>
<td>Parson's Organizational Effectiveness Elements</td>
</tr>
<tr>
<td>(Michigan Department of Education applicant schools)</td>
<td>Goal Attainment (Academic Achievement) ($X_1$)</td>
</tr>
<tr>
<td></td>
<td>Latency (Commitment) ($X_2$)</td>
</tr>
<tr>
<td></td>
<td>Integration (Cohesiveness) ($X_3$)</td>
</tr>
<tr>
<td></td>
<td>Adaptation (Innovation) ($X_4$)</td>
</tr>
<tr>
<td></td>
<td>Overall Organizational Effectiveness ($X_5$)</td>
</tr>
</tbody>
</table>

Thus, $Y^1 = R^2{1,2,3,4,5}$. Because socioeconomic factors were important to a more comprehensive understanding of effectiveness, three elements were included in the study:

- Socioeconomic Elements (SES)
  - Household Income ($X_6$)
  - Per-Pupil Expenditure ($X_7$)
  - Household Education ($X_8$)

Thus, $Y^1 = R^2{6,7,8}$.

The list of eight independent variables, including the five effectiveness and three socioeconomic factors, therefore represented the total definition involving regression analysis. Thus,

$$Y^1 = R^2{1,2,3,4,5,6,7,8}.$$  

The 0.01 level of significance was used.
Selection of Subjects

The sample included in the study was dual in nature. It was proposed that each of the 79 public elementary schools which applied for recognition be included since it was from this list of schools that the 20 finalists were chosen by the panel of experts. As a reference point to compare the 79 applicant schools, the 80 highest-achieving public elementary schools were identified from all public-school districts according to top-quarter mean aggregated Michigan Educational Assessment Program test results.

Several phases occurred in the evolution of the subject population. The 79 applicant schools and 80 highest-achieving schools totaled 159 schools. Of the 159 schools, ten schools were found on both the list of applicants as well as the highest-achieving schools. Therefore, to avoid duplication, these ten schools were included on only the list of applicant schools. Four schools were closed during the course of the study while 83% of the surveys were returned. Therefore, the population for the study eventually contained 120 remaining schools.

The regression analyses were designed to test only the applicant schools in a relationship with the eight effectiveness characteristics. After screening the 79 applicant schools for missing data, 57 applicant schools remained for inclusion in the testing of regression—37 of which were "non-exemplary" and 19 "exemplary." During the analysis of variance of the 120 schools, 12 schools had data missing. Thus, the total number of schools used during the analysis of variance program numbered 108—39 "non-exemplary" schools, 18 "exemplary" schools, and 51 "achievement" schools. Therefore, the
regression total equaled 57 while the analysis of variance total equaled 108 schools.

The test data, or Parson's goal-attainment dimension of social-system survival, were rather easily obtained due to the accessibility of the Department of Education computer system. The other three dimensions which were derived from the Parsonian definition became more difficult to obtain since there were four component questionnaires (perceived staff commitment, perceived staff cohesiveness, perceived staff innovation, and perceived overall effectiveness) necessary in order to complete the total theoretical definition. This portion of data gathering included the building principal and three of his/her teachers. It was important, however, that the principals randomly select the responding teachers based upon numerical ranking (every other teacher, assuming there are at least six teachers assigned to that building).

**Instrumentation**

With regard to socioeconomic status, the Research Department at the Michigan Department of Education was contacted to furnish information regarding variables for per-pupil expenditure, family income, and family education (1980 Michigan Census data). One of the controversies in conducting effective-schools research was that of inherent educational resources, or lack thereof. How could one begin to compare a wealthy with a poor school district? It seemed prudent, therefore, to run two further separate analyses: one including only the Parsonian effectiveness characteristics, and one including only the socioeconomic elements of family income, family education, and per-pupil expenditure. Additionally, the Department of Education was
asked to furnish test scores from the 1984-85, 1985-86, and 1986-87 fourth-grade reading and mathematics sections of the Michigan Educational Assessment Program (MEAP).

The Parsonian theoretical framework used in this study included the dimensions of goal attainment, adaptation, integration, and latency. The Michigan Educational Assessment Program scores were thought to be one suitable, and standard, measure of the goal-attainment dimension. Therefore, with regard to the test scores, fourth-grade reading and mathematics scores were included in the proposed definition. The Michigan Department of Education exemplary-schools recognition program included test scores also. But, it was left to the discretion of the applying school to determine and report the test results. An analysis of Michigan Educational Assessment Program scores, once the data had been collected, was possible for all schools contained in the sample, thus providing yet another perspective from which to evaluate effectiveness.

The remaining independent variables in the instrumentation effort were taken from Parson's (1960) theoretical framework of survival for social systems. As noted previously, Parsons identified the organizational survival dimensions of goal attainment, adaptation, integration, and latency. Innovation indicates adaptation and was measured by the Troubleshooting Checklist (TSC), while integration indicated cohesiveness and was measured by the Organizational Climate Description Questionnaire (OCDQ). Latency indicated organizational commitment and was measured by the Organizational Commitment Questionnaire (OCQ). Finally, overall school effectiveness was
measured by the Index of Perceived Organizational Effectiveness (IPOE).

The Troubleshooting Checklist (TSC) was designed to measure the potential for change within the school setting. It centered upon the attitude toward innovation through staff responses to questions involving both past and present innovation plans. The questionnaire consisted of 16 items, each requiring a response to a Likert-type five-point scale ranging from very typical to very atypical. Sample questions included the following: "Analyses have been made concerning the effects of innovations on the entire school," and "Change agents have been invited to return more than once for information on educational change processes." Both validity and reliability of the Troubleshooting Checklist were acceptable. Convergent validity was determined by Manning (1979) using Campbell and Fiske's Multitrait-Multimethod Matrix; scores from this subtest \( (r = .77) \) correlated with results from a subjective rating form which asked subjects to indicate their assessment for adopting school innovations. Reliability coefficients have ranged from .84 to .92 (Hoy & Ferguson, 1985).

The element of cohesiveness was measured by the Organizational Climate Description Questionnaire (OCDQ) which reflects the esprit and morale of the staff. In other words, it was the level at which teachers were finding satisfaction in their job performance. Four response categories were involved in the questions; examples of which follow: "The teachers accomplish their work with great vim, vigor and pleasure," and "In faculty meetings there is a feeling of 'Let's get things done.'" Construct validity has been supported by a comprehensive study by Andrews (1962). As well, Halpin and Croft...
(1962) reported a split-half coefficient of reliability of .75 for esprit. Hoy and Ferguson (1985) reported an alpha coefficient of .80.

Commitment, as measured by the Organization Commitment Questionnaire (OCQ), required survey respondents to answer 15 items. It was designed to measure employee belief in and acceptance of organizational goals and values, employee willingness to exert effort on behalf of the organization, and strong desires to retain organizational membership. "I am willing to put in a great deal of effort beyond that normally expected in order to help this organization be successful," and "I find my values and the organization's values are very similar" were examples of Organizational Commitment Questionnaire questions. A seven-point scale, ranging from strongly agree to strongly disagree, measured respective responses. Mowday, Porter, and Steers (1979) indicated evidence of both convergent and discriminant validity with internal scale consistency ranging from .82 to .93. Hoy and Ferguson (1985) reported an alpha coefficient of reliability of .89.

Overall, perceived organizational effectiveness was measured by a relatively short, simple instrument. The Index of Perceived Organizational Effectiveness (IPOE) included eight questions which required users to respond to one of five scale points. Sample items included "Of the various things produced by the people you know in your school, how much are they producing?" Also, "Do the people in your school get maximum output from the available resources?" Mott (1972) established this index for use in hospitals for the National Aeronautics and Space Administration and has reported an alpha
coefficient reliability of .89, while Hoy and Ferguson (1985) reported the alpha coefficient of reliability at .87.

The Parsonian framework was considered especially important to this study since it expanded and provided for social and multivariate elements of effectiveness. To obtain this data, a survey was sent to each of the schools selected to participate in the study.

Data Collection and Recording

The Michigan Educational Assessment Program scores and socioeconomic status information were reported in computer format from the Research Office of the Michigan Department of Education. The reading and mathematics data were aggregated by top-quarter means and by individual school and school district. The survey information was tallied on a master form by frequency and value.

Statement of Null Hypotheses

Three null hypotheses were advanced:

$H(0)1$. The Parsonian effectiveness characteristics and socioeconomic elements are not significantly related to the acceptance or rejection of applicant schools as exemplary.

$H(0)2$. The socioeconomic elements are not significantly related to the acceptance or rejection of applicant schools as exemplary.

$H(0)3$. The Parsonian effectiveness characteristics are not significantly related to the acceptance or rejection of applicant schools as exemplary.
Statistical Analysis

This study was concerned with the explanation of variance, not only with regard to the variables but also with regard to the variance and relationship between and among variables. Because there was more than one independent variable and because there was a possibility that the variables were intercorrelated, multiple linear regression analysis was chosen as the primary statistical tool. According to Pedhazur (1982), it "is eminently suited for analyzing the collective and separate effects of two or more independent variables on a dependent variable" (p. 6). Specifically, Multiple Linear Regression Analysis was used. Calculations were conducted using the Biomedical Data Processing (BMDP) computer package (1985).

The Biomedical Data Processing Program 1R estimated the multiple linear regression equation using all variables. A least squares regression equation between the dependent variable and one or more independent variables was estimated. The multiple correlation coefficient, significance of coefficient, and P values were printed.

The model fitted by 1R was

\[ \hat{y} = a + b_1x_1 + b_2x_2 + \ldots + b_px_p + \varepsilon \]

where

\[ \hat{y} \] was the dependent variable

\[ x_1, \ldots, x_p \] were the independent variables

\[ b_1, \ldots, b_p \] were the regression coefficients

\[ a \] was the intercept

\[ p \] was the number of independent variables

\[ \varepsilon \] was the error with mean zero.
The predicted value $y$ for each case was

$$\hat{y} = a + b_1x_1 + b_2x_2 + \ldots + b_px_p$$

Another dimension of the regression analysis with the Biomedical Data Processing Program program was 2R, stepwise regression. Stepwise regression computes the estimates of the definitions of a multiple linear regression formula in a stepwise manner by entering or removing variables one at a time from a list of independent variables (Dixon, ed., 1985). Forward stepping, which begins with no independent variables, was used in this study to assist in identifying and confirming the relative strength of each predictor.

The regression model designed for this program was

$$\hat{y} = a + b_1x_1 + b_2x_2 + \ldots + b_px_p + \varepsilon$$

where

- $\hat{y}$ was the dependent variable
- $x_1, \ldots, x_p$ were independent variables
- $b_1, \ldots, b_p$ were regression coefficients
- $a$ was the intercept
- $p$ was the number of independent variables
- $\varepsilon$ was the error with mean zero.

The predicted value $y$ for each case was

$$\hat{y} = a + b_1x_1 + b_2x_2 + \ldots + b_px_p.$$  

Furthermore, since there was a probability that between variable comparisons involving the different school groupings (cells) would be useful, analysis of variance (ANOVA) was identified as an appropriate tool. The Biomedical Data Processing Program for Analysis of Variance was 2V. An analysis of variance tested one or more null hypotheses that the means of all groups sampled derive from
populations with equal means, and that the means differed only because of sampling error (Isaac, 1978). It answered the important question regarding whether the difference between at least two sample means was statistically significant. Consequently, it determined whether the variability between group means was large enough to prove statistically that a significant difference was present in the data.

The test of equality of raw means was the test that
\[ \bar{Y}_{ij} - \bar{Y}_{kj} = 0 \]
for all \( i, k \),

where \( \bar{Y}_{ij} \) = an observation of the group \((l,j)\).

The test of equality of column means was the test that
\[ \bar{Y}_{i.} - \bar{Y}_{i.} = 0 \]
for all \( j, l \).

The test of no interaction was the test that
\[ \bar{Y}_{ij} + \bar{Y}_{kl} = \bar{Y}_{il} + \bar{Y}_{kj} \]
for all \( i \neq k \) and \( j \neq l \).

The test labeled MEAN was the test that
\[ \bar{Y}_{ij} = 0. \]

Operationally, "P2V (Dixon, ed., 1985) obtains each sum of squares or the difference in the residual sums of squares of two regression models. For each grouping variable with \( P \) levels, the Biomedical Data Processing Program 2V generates \((P - 1)\) dummy variables. Interactions between grouping variables are represented by the products of their dummy variables. P2V fits the regression model containing all the dummy variables for the grouping variables and their interactions, and then the model containing all dummy variables except those of the main effect being tested. The sum of squares, therefore, is the difference between residual sums of squares of the two models" (p. 363).
CHAPTER IV

FINDINGS

Introduction

This portion of the study yielded hypothesized statistical findings, unhypothesized statistical findings, a description of sampled respondents, non-statistical observations, and a brief summary. Detailed statistical analysis pages supporting the respective findings are located in Appendix C.

Hypothesized Statistical Findings

Each null hypothesis was restated with its respective statistical test, alpha level, and findings.

Hypothesis Restatement $H(0)$. There was no statistically significant relationship between the eight organizational effectiveness elements and the schools which applied for Department of Education exemplary status.

The statistical test was multiple linear regression using the BMDP program 1R. The alpha level selected was the $P < .01$ level of significance. The Analysis of Variance was reported in Table 1.
TABLE 1

H(0)1 ANALYSIS OF VARIANCE

<table>
<thead>
<tr>
<th>Sum of Squares</th>
<th>DF</th>
<th>Mean Square</th>
<th>F Ratio</th>
<th>P(tail)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>8</td>
<td>0.0862</td>
<td>0.356</td>
<td>0.9384</td>
</tr>
<tr>
<td>Residual</td>
<td>48</td>
<td>0.2422</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Thus, H(0)1 is retained at the \( P = 0.9384 \) level of significance. The Multiple R-Square, reported in Table 2, indicated only a mild (6\%) explanation of the variance accounted for by all the variables in each model.

TABLE 2

H(0)1 MULTIPLE R-SQUARE

<table>
<thead>
<tr>
<th>Multiple R</th>
<th>Standard error of estimate 0.4922</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R-Square</td>
<td>0.0560</td>
</tr>
</tbody>
</table>

The multiple regression analysis used a total of 8 variables, read a total of 57 cases, and considered all data as a single group. The variable means, standard deviations, coefficients of variation, and minimum and maximum values were within an acceptable range.

Tests of each separate variable using regression analysis revealed no statistically significant relationships. Perceived staff innovation was the least interrelated variable, while community income was the most intercorrelated variable.
**TABLE 3**

\[ H(0)1 \] INDEPENDENT VARIABLE P

<table>
<thead>
<tr>
<th>Variable</th>
<th>T</th>
<th>P(2Tail)</th>
<th>Tolerance</th>
</tr>
</thead>
<tbody>
<tr>
<td>X(52) Household Income</td>
<td>-0.539</td>
<td>0.5926</td>
<td>0.34963</td>
</tr>
<tr>
<td>X(56) Total Per Pupil Expenditure</td>
<td>0.046</td>
<td>0.9632</td>
<td>0.48979</td>
</tr>
<tr>
<td>X(64) Household Education</td>
<td>-0.349</td>
<td>0.7290</td>
<td>0.65291</td>
</tr>
<tr>
<td>X(58) Pupil Achievement</td>
<td>-0.181</td>
<td>0.8572</td>
<td>0.59785</td>
</tr>
<tr>
<td>X(60) Staff Commitment</td>
<td>0.658</td>
<td>0.5135</td>
<td>0.73544</td>
</tr>
<tr>
<td>X(61) Organizational Climate</td>
<td>0.308</td>
<td>0.7594</td>
<td>0.72168</td>
</tr>
<tr>
<td>X(62) Staff Innovation</td>
<td>-0.136</td>
<td>0.8924</td>
<td>0.76089</td>
</tr>
<tr>
<td>X(63) Perceived Organizational Effectiveness</td>
<td>0.819</td>
<td>0.4169</td>
<td>0.73769</td>
</tr>
</tbody>
</table>

**Hypothesis Restatement** \[ H(0)2 \]. There was no statistically significant relationship between the three socioeconomic elements and the schools which applied for Department of Education exemplary status.

The statistical test was multiple linear regression using the BMDP program 1R. The alpha level selected was at the \( P < .01 \) level of significance. The Analysis of Variance was reported in Table 4.
TABLE 4

H(0)2 ANALYSIS OF VARIANCE

<table>
<thead>
<tr>
<th>Sum of Squares</th>
<th>DF</th>
<th>F Square</th>
<th>F Ratio</th>
<th>P(Tail)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>0.1781</td>
<td>3</td>
<td>0.0594</td>
<td>0.259</td>
</tr>
<tr>
<td>Residual</td>
<td>12.1377</td>
<td>53</td>
<td>0.2290</td>
<td></td>
</tr>
</tbody>
</table>

Thus, H(0)2 was retained at the P = .8545 level of significance. The Multiple R-Square, reported in Table 5, revealed virtually no variable variance explanation accounted for by the socioeconomic elements.

TABLE 5

H(0)2 MULTIPLE R-SQUARE

<table>
<thead>
<tr>
<th>Multiple R</th>
<th>Standard error of estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1202</td>
<td>0.4786</td>
</tr>
</tbody>
</table>

The multiple regression analysis used a total of 3 variables, read a total of 57 cases, and considered all data as a single group. The variable means, standard deviations, coefficients of variation, and minimum and maximum values were within an acceptable range.

Tests of each separate variable using regression analysis revealed no statistically significant relationships. Household education was the least interrelated variable, while household income was the most interrelated variable.
TABLE 6
H(0)2 INDEPENDENT VARIABLE P

<table>
<thead>
<tr>
<th>Variable</th>
<th>T</th>
<th>P(2Tail)</th>
<th>Tolerance</th>
</tr>
</thead>
<tbody>
<tr>
<td>X(52)(Household Income)</td>
<td>-0.776</td>
<td>0.4412</td>
<td>0.49108</td>
</tr>
<tr>
<td>X(56)(Total Per-Pupil Expenditure)</td>
<td>0.354</td>
<td>0.7244</td>
<td>0.57576</td>
</tr>
<tr>
<td>X(64)(Household Education)</td>
<td>0.025</td>
<td>0.9800</td>
<td>0.79966</td>
</tr>
</tbody>
</table>

Hypothesis Restatement H(0)3. There was no statistically significant relationship between the five Parsons' effectiveness elements and the schools which applied for Department of Education exemplary status.

The statistical test was multiple linear regression using the BMDP program 1R. The alpha level selected was at the P < .01 level of significance. The Analysis of Variance was reported in Table 7.

TABLE 7
H(0)3 ANALYSIS OF VARIANCE

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>DF</th>
<th>Mean Squares</th>
<th>F Ratio</th>
<th>P(Tail)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>0.5082</td>
<td>5</td>
<td>0.1016</td>
<td>0.439</td>
<td>0.8192</td>
</tr>
<tr>
<td>Residual</td>
<td>11.8076</td>
<td>51</td>
<td>0.2315</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Thus, H(0)3 is retained at the P = .8192 level of significance. The Multiple R-Square, reported in Table 8, indicated only a mild (4%)
explanation of the variance accounted for by all the variables in the organizational effectiveness elements.

TABLE 8

\[ H(0)|3 \] MULTIPLE R-SQUARE

<table>
<thead>
<tr>
<th>Variable</th>
<th>T</th>
<th>P(2Tail)</th>
<th>Tolerance</th>
</tr>
</thead>
<tbody>
<tr>
<td>X(58) Pupil Achievement</td>
<td>-0.714</td>
<td>0.4786</td>
<td>0.85311</td>
</tr>
<tr>
<td>X(60) Staff Commitment</td>
<td>0.500</td>
<td>0.6195</td>
<td>0.83075</td>
</tr>
<tr>
<td>X(61) Organizational Climate</td>
<td>0.101</td>
<td>0.9203</td>
<td>0.80398</td>
</tr>
<tr>
<td>X(62) Staff Innovation</td>
<td>0.079</td>
<td>0.9373</td>
<td>0.90966</td>
</tr>
<tr>
<td>X(63) Perceived Organizational Effectiveness</td>
<td>0.821</td>
<td>0.4154</td>
<td>0.78202</td>
</tr>
</tbody>
</table>

The multiple regression analysis used a total of 5 variables, read a total of 57 cases, and considered all data as a single group. The variable means, standard deviations, coefficients of variation, and minimum and maximum values were within an acceptable range.

Tests of each separate variable using regression analysis revealed no statistically significant relationships. Perceived staff innovation was the least intercorrelated variable, while perceived organizational effectiveness was the most intercorrelated variable.
The hypothesized statistical findings were specified as follows:

1. There was no statistically significant relationship between the public elementary schools which had applied for exemplary status and the eight organizational effectiveness elements.

2. There was no statistically significant relationship between the public elementary schools which had applied for exemplary status and the three socioeconomic elements.

3. There was no statistically significant relationship between the public elementary schools which had applied for exemplary status and the five Parsonian effectiveness elements.

Unhypothesized Statistical Findings

1. Data Description. The BMDP program 2D (Dixon, ed., 1985) was used to screen data with regard to the 120 schools surveyed by computing the frequency, percentage, and cumulative percentage for each distinct value. Most of these data were simply useful in terms of reporting variable values, value ranges, and identifying outliers. However, several categories were of interest to this study.

The statistical analysis furnished scores with regard to the three socioeconomic status variables contained in the study—community income, family education, and school district total per-pupil expenditure.

Variable X(52), community income, presented a wide diversity of financial resources which were present in the respective school districts. Table 10 illustrates the range of wealth.
TABLE 10

COMMUNITY INCOME INDEX

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>$23,747.</td>
</tr>
<tr>
<td>Median</td>
<td>$40,574.</td>
</tr>
<tr>
<td>Mode</td>
<td>$12,029.</td>
</tr>
<tr>
<td>Lowest</td>
<td>$53,103.</td>
</tr>
<tr>
<td>Highest</td>
<td>$10 $20 $30 $40 $50 $60</td>
</tr>
</tbody>
</table>

Community Income Level (in thousands)

It can be seen that the difference between the least wealthy and most wealthy school district which participated in the study was over four times the income level—seemingly a span of considerable consequence.

Family education levels which were obtained represented both high-school and college degree programs and were indicated by the variables X(53), X(54), and X(55) respectively.
The frequency distribution of community citizens who were formally educated continued to be widely dispersed, especially in the lowest and highest percentage of four-year college graduates.
Table 13 displays variable X(56), School District Total Per-Pupil Expenditures, for the elementary schools which were studied. Total per-pupil expenditures were calculated by computing the sum of local sources, state sources, federal sources, and other sources obtained from Michigan State Board of Education Bulletin 1014 (1984-85). Even with categorical aid received by school districts, the disparity between the lowest and highest categories of total per-pupil expenditures reached nearly threefold.

**TABLE 13**

SCHOOL DISTRICT TOTAL PER-PUPIL EXPENDITURE

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Median</th>
<th>Mean</th>
<th>Mode</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>$2,309</td>
<td>$3,297</td>
<td>$3,531</td>
<td>$5,664</td>
<td>$6,708</td>
</tr>
</tbody>
</table>

Dollar Amount

School district size, although not a socioeconomic variable, was included as an element for future research efforts as well as general information. Data indicated the average size of the school districts studied was 6,684 pupils. The smallest was 535 pupils while the largest was 33,398 pupils. The mode for all districts was 7,478 pupils.

The last variable, X(58) Pupil Achievement Test Scores, was the most closely frequency-grouped set of data and showed less variance. These data were taken from 1984-86 Michigan Educational Assessment Programs (MEAP), aggregated with both mathematics and reading tests at
the fourth-grade level. The Michigan Educational Assessment Program tests were minimal competency and criterion-referenced in design.

TABLE 14
PUPIL ACADEMIC ACHIEVEMENT

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Mean</th>
<th>Median</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>71.2</td>
<td>88.4</td>
<td>94.5</td>
<td>99.0</td>
</tr>
</tbody>
</table>

Top-Quarter Mean Scores (Mode not unique)

With regard to pupil achievement, Appendix A contains data sheets which identified the 79 elementary schools which applied for the Michigan Department of Education recognition program in 1986, as well as the 20 elementary schools selected as exemplary. Also, in Appendix C, the 80 public elementary schools which had the highest aggregated Michigan Educational Assessment Program pupil test scores are listed. The data show the following range of scores:

- Applicant schools 98.2 to 71.2
- Highest achieving schools 99.0 to 94.4

2. Correlation Matrix. BMDP 1R computer statistical analysis program produced a correlation matrix which positively and negatively correlated all variables from X(1) to and including X(64). The following description of the variable numbers and corresponding common titles was provided for the purpose of clarification.
<table>
<thead>
<tr>
<th>Variable Number</th>
<th>Item Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X(1)</td>
<td>School Code</td>
</tr>
<tr>
<td>X(2)</td>
<td>Questionnaire Response Time</td>
</tr>
<tr>
<td>X(3)-X(17)</td>
<td>Organizational Commitment Questionnaire (OCQ)</td>
</tr>
<tr>
<td>X(18)-X(27)</td>
<td>Organizational Climate Description Questionnaire (OCDQ)</td>
</tr>
<tr>
<td>X(28)-X(43)</td>
<td>Troubleshooting Checklist (TSC)</td>
</tr>
<tr>
<td>X(44)-X(51)</td>
<td>Index of Perceived Organizational Effectiveness (IPOE)</td>
</tr>
<tr>
<td>X(52)</td>
<td>Community Income</td>
</tr>
<tr>
<td>X(53)-X(55)</td>
<td>Household Education (separate scores for high-school graduation, 1 year college, 4-year college graduation)</td>
</tr>
<tr>
<td>X(56)</td>
<td>Total Per-Pupil Expenditures</td>
</tr>
<tr>
<td>X(57)</td>
<td>School District Size</td>
</tr>
<tr>
<td>X(58)</td>
<td>Pupil Achievement Test Scores</td>
</tr>
<tr>
<td>X(59)</td>
<td>Dependent Variable (1986 MDE Applicant Schools)</td>
</tr>
<tr>
<td>X(60)</td>
<td>Staff Commitment (OCQ)</td>
</tr>
<tr>
<td>X(61)</td>
<td>Organizational Climate (OCDQ)</td>
</tr>
<tr>
<td>X(62)</td>
<td>Staff Innovation (TSC)</td>
</tr>
<tr>
<td>X(63)</td>
<td>Perceived Organizational Effectiveness (IPOE)</td>
</tr>
<tr>
<td>X(64)</td>
<td>Household Education (consolidated scores for high-school graduation, 1 year college, and 4-year college graduation)</td>
</tr>
</tbody>
</table>

The size of the school district had small (non-significant) correlations with the following variables: pupil achievement (-.001), staff commitment (.259), organizational climate (.089), staff innovation (.182), and perceived organizational effectiveness (.121).
Pupil achievement had negative correlations with the dependent variable (.097), staff commitment (.093), staff innovation (.185), and perceived organizational effectiveness (.049). The strongest overall positive correlation with the Parsonian Organizational Effectiveness elements was the extent of college education. A small correlation (.182) was found between organizational climate and staff innovation.

3. Stepwise Regression Analysis. Stepwise Regression computed estimates of the measures of a multiple linear regression by entering and removing variables, one at a time, from a list of possible predictions (Dixon, ed., 1985). The purpose was to obtain the most significant variable in terms of $R^2$. The Biomedical Data Processing Program 2R accomplished this identification task and was used to predict the strongest of the eight Parsonian definition elements. The maximum acceptable $F$ to enter values were 4.000 and 4.000, whereas the minimum acceptable $F$ to remove were 3.900 and 3.900. Variables $X(52)$, $X(56)$, $X(58)$, $X(60)$, $X(61)$, $X(62)$, $X(63)$, and $X(64)$ were entered. The summary table results are indicated in Table 15.
TABLE 15

STEPWISE SUMMARY TABLE

<table>
<thead>
<tr>
<th>Step No.</th>
<th>Multiple R-Square</th>
<th>Change in R-Square</th>
<th>F to Enter</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. X(63) Perceived Organizational Effectiveness</td>
<td>0.0276</td>
<td>0.276</td>
<td>1.56</td>
</tr>
<tr>
<td>2. X(52) Household Income</td>
<td>0.0416</td>
<td>0.0140</td>
<td>0.79</td>
</tr>
<tr>
<td>3. X(60) Perceived Staff Commitment</td>
<td>0.0517</td>
<td>0.0101</td>
<td>0.57</td>
</tr>
</tbody>
</table>

Thus, together, perceived organizational effectiveness, household income, and staff commitment combine for a multiple R-square of only 0.0517. There is no significant relationship between perceived organizational effectiveness, household income, and perceived staff commitment, and the selection or rejection of exemplary schools.

Based on a need to further investigate possible statistical differences, an Analysis of Variance (ANOVA) was conducted using all the Parsonian effectiveness elements, the schools selected as exemplary, the schools which had applied for recognition but which had not been selected (non-exemplary), and the schools which had the highest pupil-achievement test scores. Therefore, it was found that pupil achievement X(58) was highly statistically significant at the P < .01. (See Table 16.)
## TABLE 16
ANOVA Comparing Achievement, Non-Exemplary, Exemplary Schools

<table>
<thead>
<tr>
<th></th>
<th>Achievement</th>
<th>Non-Exemplary</th>
<th>Exemplary</th>
<th>Marginal</th>
<th>Tail P</th>
</tr>
</thead>
<tbody>
<tr>
<td>X(52) Household Income</td>
<td>$24,521.</td>
<td>$25,943.</td>
<td>$23,939.</td>
<td>$24,937.</td>
<td>.5625</td>
</tr>
<tr>
<td>X(56) Total Per-Pupil Expenditure</td>
<td>$3,426.</td>
<td>$3,537.</td>
<td>$3,469.</td>
<td>$3,474.</td>
<td>.8423</td>
</tr>
<tr>
<td>X(64) Household Education</td>
<td>66.8</td>
<td>67.4</td>
<td>66.7</td>
<td>67.0</td>
<td>.8956</td>
</tr>
<tr>
<td>X(58) Pupil Achievement</td>
<td>96.2</td>
<td>88.7</td>
<td>87.5</td>
<td>92.0</td>
<td>.0000</td>
</tr>
<tr>
<td>X(60) Staff Commitment</td>
<td>91.6</td>
<td>87.8</td>
<td>90.7</td>
<td>90.1</td>
<td>.2141</td>
</tr>
<tr>
<td>X(61) Organizational Climate</td>
<td>33.6</td>
<td>33.0</td>
<td>33.3</td>
<td>33.4</td>
<td>.7895</td>
</tr>
<tr>
<td>X(62) Staff Innovation</td>
<td>73.9</td>
<td>73.4</td>
<td>74.1</td>
<td>73.8</td>
<td>.9490</td>
</tr>
<tr>
<td>X(63) Perceived Organizational Effectiveness</td>
<td>33.8</td>
<td>33.6</td>
<td>34.9</td>
<td>33.9</td>
<td>.4143</td>
</tr>
</tbody>
</table>
Table 16 indicates that there was a significant difference among the means of the three groups of schools only on variable X(58), pupil achievement. They were not significantly different with respect to household income, perceived staff commitment, and perceived organizational effectiveness.

The significant F ratio for variable X(58) was followed up by a Scheffe test to compare all pairs of means (Ferguson, 1981, pp. 307-309). Ferguson quotes Scheffe's (1959) recommendation that a higher alpha level be used for this test than was used for the analysis of variance significance test, due the stringency of the test. As $\alpha = .01$ was used for the hypothesis test, an $\alpha = .05$ was used for the Scheffe test.

For the comparison of means i and j, the Scheffe test used as critical value

$$\sqrt{F^1 \times MS_{\text{error}} \times \left(\frac{1}{n_i} + \frac{1}{n_j}\right)}$$

where $F^1 = (k - 1) \times F_{.95}(2, 105)$

Hence, $F^1 = 2 \times 3.09 = 6.18$; and, for contrast, $\bar{x}_i - \bar{x}_j$, the critical value was

$$\sqrt{6.18 \times 21.19636 \times \left(\frac{1}{n_i} + \frac{1}{n_j}\right)} = 11.4452 \sqrt{\frac{1}{n_i} + \frac{1}{n_j}}$$

Table 17 shows, for each contrast, the critical value and the critical difference.
TABLE 17

SCHEFFE TEST

<table>
<thead>
<tr>
<th>Comparison</th>
<th>$\sqrt{\frac{1}{n_i} + \frac{1}{n_j}}$</th>
<th>Critical Value</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1 - Group 2</td>
<td>.2127</td>
<td>2.4346</td>
<td>7.4525</td>
</tr>
<tr>
<td>Group 1 - Group 3</td>
<td>.2742</td>
<td>3.1378</td>
<td>8.7350 *</td>
</tr>
<tr>
<td>Group 2 - Group 3</td>
<td>.28495</td>
<td>3.2613</td>
<td>1.2825</td>
</tr>
</tbody>
</table>

It is clear from Table 17 that the mean for the high-achieving schools was significantly higher than the mean of either of the other two groups. There was no significant difference between the means of the exemplary and non-exemplary schools.

4. Sampled Population Description. At the time this study was initiated in 1986, there were 2,044 public elementary schools in the state of Michigan (Michigan State Board of Education, 1986). Of these 2,044 public elementary schools, 79 public elementary schools applied for recognition as exemplary schools. It was these 79 schools, along with the 80 elementary schools selected on the basis of highest academic achievement, which formed the population core of the study. A quick profile (Table 18) of the applicant and achievement schools was possible based upon mean data derived from tables located in this chapter.
TABLE 18
PROFILE OF SCHOOLS

Hou sehold Income $25,295.00
Household Education 37.9% high-school graduates
  9.8% four-year college graduates
Total School District Per-Pupil Expenditure $ 3,531.00
School District Size 6,605
Pupil Academic Achievement (top-quarter
  mean MEAP percentage) 92
Questionnaire Response Time 21.5 days

Of the 159 total schools, four were closed during the course of the
project; 10 were named in the list of both the schools which applied
for recognition and those schools cited for pupil achievement and,
therefore, were listed only as application schools; and, 83% of the
remaining 144 schools returned the surveys which they were sent.
Following elimination of schools for incomplete data, a total of 57
applicant schools were included in the regression analyses, and 108
applicant and academic achievement schools were included in the
analysis of variance test. Thus, a net total of up to 108 schools
actually were included in the Biomedical Data Processing Program data
analysis. The 83% survey return rate was a result of three waves of
survey initiatives and was a pleasant surprise compared to that which
was normally expected in a survey conducted through the mail.

The geographical locations of the elementary schools were
depicted on Michigan state maps (Figures 2, 3, and 4) showing only
county boundary lines. The maps, in order, represented the applicant
school locations, the exemplary school locations, and the achievement
school locations.

An analysis of Figure 2 reveals the locations of the 79 public
elementary schools which applied for exemplary status. Generally, the
locations of the applicant schools parallel the locations of the
population density in Michigan. For example, of the 79 applicant
elementary schools, 32 schools were located in the Wayne-Oakland-
Macomb counties area. Thus, the greater Detroit metropolitan area
accounted for 41% of applicant schools, or a rough equivalent to their
normally expected population proportion of 46%. The same holds true,
generally, for the other geographic areas of the state. The
metropolitan areas of Ann Arbor, Battle Creek, Bay City, Detroit,
Flint, Grand Rapids, Jackson, Kalamazoo, Lansing, Muskegon, Saginaw,
and the Michigan portion of Toledo, Ohio, account for approximately
80% of all population. Likewise, 76% of the schools which applied for
exemplary status were derived from these same population centers.
However, there were some exceptions. The Lansing area had no
applications, but the Kalamazoo area had eight. The Upper Peninsula
had no applicants whatsoever, and Bay and Saginaw Counties had three.
The 79 schools which applied included the 20 schools which were eventually selected as exemplary. Figure 3 illustrated those locations on a Michigan outline map.
As was the case with the applicant schools, the selected exemplary schools generally followed the same population density trends. Conversely, the similarities between Figure 3 and Table 19 ended at that point. The ratio of school sites selected to school sites which applied was quite skewed by certain geographical areas. As a result, the following data demonstrate the county-by-county ratio of application schools to schools selected as exemplary.
## TABLE 19
APPLICANT TO EXEMPLARY SCHOOLS RATIO

<table>
<thead>
<tr>
<th>County</th>
<th>Number of Applicant Schools</th>
<th>Number of Applicants Selected as Exemplary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bay</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Berrien</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Calhoun</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Clare</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Eaton</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Emmet</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Ingham</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Isabella</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Jackson</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Kalamazoo</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Kent</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Leelanau</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Lenawee</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Macomb</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Monroe</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Oakland</td>
<td>22</td>
<td>5</td>
</tr>
<tr>
<td>Otsego</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Roscommon</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Saginaw</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>St. Clair</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>St. Joseph</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Tuscola</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Upper Peninsula</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Van Buren</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Washtenaw</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Wayne</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Totals</td>
<td>79</td>
<td>20</td>
</tr>
</tbody>
</table>

Thus, about one in every four applicants were selected as exemplary. Moreover, the total number of 20 schools was not a simple arbitrary standard. Rather, it was based on the number of vacancies to which Michigan was entitled for nomination of elementary schools to the U. S. Department of Education exemplary schools recognition program. In turn, the 20 vacancies were based on the number of United

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States Congressional seats which were apportioned according to population density.

The last of the three comparative maps is that which described the 80 elementary schools selected on the basis of performance only.

There existed, in the researcher's opinion, some non-statistical relationship between Figure 4, which lists the achievement schools, and Figures 2 and 3, which list applicant and exemplary schools. There appears to be a numerical similarity between the applicant schools in the Wayne-Oakland-Macomb counties area and the achievement schools. The apparent similarities seem to diminish greatly after that sample. Three distinct pockets of performance appeared on the map in Figure 4: the Detroit metropolitan area comprised of Wayne, Oakland, and Macomb counties; Midland County; and the Muskegon-Ottawa-Kent counties area. For the size of the population, Kent County was clearly the leader in pupil achievement, claiming 13 schools. Oakland County had 17, but its size in population was nearly twice that of Kent County. Wayne County, having eight applicants but no exemplary schools, had five achievement schools. The Upper Peninsula had no applicants and, therefore, no exemplary schools, but reflected four achievement schools. In somewhat of a reversal, Kalamazoo County schools had eight applicants, but only two exemplary and two achievement schools.
In a comparison shown in Table 20, the number of applicant schools were compared with the number of achievement schools.
### TABLE 20
**APPLICANT TO ACHIEVEMENT SCHOOLS RATIOS**

<table>
<thead>
<tr>
<th>County</th>
<th>Number of Applicant Schools</th>
<th>Number of Achievement Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bay</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Berrien</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Calhoun</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Clare</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Eaton</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Emmet</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Ingham</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Isabella</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Jackson</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Kalamazoo</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Kent</td>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td>Leelanau</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Lenawee</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Macomb</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Monroe</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Oakland</td>
<td>22</td>
<td>18</td>
</tr>
<tr>
<td>Otsego</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Roscommon</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Saginaw</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>St. Clair</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>St. Joseph</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Tuscola</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Van Buren</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Washtenaw</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Wayne</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>79</strong></td>
<td><strong>60</strong></td>
</tr>
</tbody>
</table>

Those schools not applying, but selected based upon academic performance, are indicated, according to county locations in Table 21.
TABLE 21
NUMBER OF NON-APPLICANT ACHIEVEMENT SCHOOLS BY COUNTY

<table>
<thead>
<tr>
<th>County</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinton</td>
<td>1</td>
</tr>
<tr>
<td>Crawford</td>
<td>1</td>
</tr>
<tr>
<td>Delta</td>
<td>1</td>
</tr>
<tr>
<td>Genessee</td>
<td>2</td>
</tr>
<tr>
<td>Ionia</td>
<td>1</td>
</tr>
<tr>
<td>Keweenaw</td>
<td>1</td>
</tr>
<tr>
<td>Marquette</td>
<td>2</td>
</tr>
<tr>
<td>Midland</td>
<td>4</td>
</tr>
<tr>
<td>Muskegon</td>
<td>4</td>
</tr>
<tr>
<td>Ottawa</td>
<td>3</td>
</tr>
</tbody>
</table>

Total: 20

Oakland and Kent Counties accounted for 32 of the 80 achievement schools, or 40% of all such schools. The Detroit metropolitan area (Wayne, Oakland, and Macomb Counties) contained 33 schools, or 42.3% of the achievers. Clearly, for the size of the population, Kent County was Michigan's pupil achievement leader, as defined in this study.

5. Sampling Technique. This study focused on a small, relatively select group of Michigan public elementary schools totaling 108 schools, or 5.3% of all 2,044 public elementary schools. There was no random feature in the identification of schools, since all schools were selected on the basis of pupil achievement or recognition program applications. Components included household income, household education, school district per-pupil expenditures, 1986 Michigan Department of Education exemplary elementary school applicants, and 1984-1986 Michigan Department of Education elementary school achievement.
The non-hypothesized statistical findings were specified as follows:

1. Twenty-five percent of the academically top-achieving Michigan public elementary schools had not applied for exemplary status, and thus were not even involved in the program.

2. Forty-seven percent of the public elementary schools which had applied were not identified as the top-achieving public elementary schools.

3. Thirteen percent of the applicant schools were also identified as the top-achieving elementary schools.

4. The socioeconomic elements of household income, household education, and school district per-pupil expenditure showed no apparent statistical differences between achievement schools, exemplary schools, and non-selected (non-exemplary) schools.

5. A profile of all schools involved in the study revealed they were located in a school district of 6,605 pupils and had households in which parents earned $25,295.00. Nine and eight tenths percent of the households had parents who had earned college degrees. The amount of $3,531.00 was spent on per-pupil school district education.

6. Applicant-school geographic locations, as well as exemplary-school locations, with some exceptions, paralleled the state of Michigan demographic locations. The notable exception was Wayne County.

7. Oakland County had 23% of all schools identified as top academic-achievement schools, while Kent County had 18%. The combined
Detroit metropolitan area, comprised of Wayne, Oakland, and Macomb counties, had 42% of all the top-achieving schools.

8. On a per-capita basis, Kent County clearly had the greatest number of schools identified as top-achieving schools.

9. Perceived organizational effectiveness, household income, and staff commitment were statistically selected as the strongest independent variables.

10. The number of schools selected as exemplary was based on the number of congressional seats, and not solely on the basis of merit.

Non-Statistical Observations

During the several years this researcher has studied the effective-schools movement, he has been fortunate to have spoken to many persons, professional and lay alike, and had read extensively the literature related to effective schools. Several findings, based on personal observations, have been synthesized and summarized below.

1. Effective-Schools Research. The full spectrum of effective-schools research is only now beginning to emerge. Like an iceberg, its formation mainly occurred under the educational surface and was only partially visible. Begun in the 1960s, the effective-schools research literature had grown both in volume and in quality to the point where educators could now definitively discuss organizational effectiveness as it related to public education. It was of major importance to differentiate between the measurement of public-education effectiveness and the measurement of private business or industrial effectiveness. Public education could not regulate or control the raw
materials (which was the student body), nor could it require common standards for all schools. Nevertheless, educators of the 1980s have taken a definitive step forward, based upon 20 years of previous empirical research, in the identification of "what works" in effective schools. But, a cautious attitude was advised, since methodology might not work in all situations and operational implementation was still not clearly defined.

2. Recognition Program Perceptions. Every two years federal and state departments of education announce the selection of schools recognized as exemplary. Two basic reactions to this program have resulted.

First, at least some of the general public honestly believe that the recognized schools were, in fact, the best schools compared to all schools. Did not President Reagan speak before the principals of the exemplary schools? Were not the schools awarded certificates and "E" flags signifying excellence in education? Did not the media carry articles commending the exemplary schools for achieving high goals? The public thus concluded these elementary schools must truly represent the highest quality in our state and nation.

Second, professional educators, both teachers and administrators, view the procedure and selection process from a much more skeptical and critical perspective. A comment frequently heard in conjunction with the program relates the selection of exemplary schools with politics. Politics is defined (Morris, ed., 1970) as "partisan or factional intrigue within a given group" (p. 1015) or, more prosaically, who gets what. It is possible that some portion of this reaction constituted professional jealousy. However, noted authors, such as Gilbert Austin, (personal communication, March 7,
1987) of the University of Maryland, have indicated that the "present methods of identifying exemplary schools, particularly those used by the U. S. Department of Education and, apparently, those used by the Michigan State Department of Education, to be very suspect." Thus, even though, as a professional, one is desirous of recognition of excellence, one also has serious reservations regarding the credibility of the circumstances under which the awards are presented.

3. Exemplary School Defined. For the purpose of this study, a Michigan exemplary public elementary school is defined as a school which demonstrated the highest Michigan Educational Assessment Program pupil performance and was characterized by a strong degree of perceived staff innovation, perceived staff cohesiveness, and perceived staff commitment. It might serve as a model for others. The socioeconomic factors of household income, household education, and school-district per-pupil expenditure had no apparent significant relationship to this definition.

4. Recognition Program Selection Procedures. The public elementary-school recognition program essentially used two components during the process of selecting the exemplary schools.

First, the application itself contained a total of four major categories--school-district characteristics (size, percentage of low income), school characteristics (size, percentage of low income, percentage of immigrants, percentage of special education pupils, staff turnover, significant problems), eligibility criteria (pupil academic achievement), and quality indicators. The quality indicators section consisted of eight subheads--school organization, leadership,
curriculum, instruction, school climate, school-community relationships, effort to improve and maintain high quality, and student outcome.

From the description of school-district characteristics and school characteristics, it seems apparent that problems, such as high drop-out rates or lack of resources were important aspects in the evaluation of the total educational setting and environment. Moreover, of the eight quality indicators, only one—student outcomes—contained any objective data which were directly measurable. Even when considering the student-outcomes section (pupil academic achievement), no standards or instrumentation were required, thus allowing a nominating school to submit any test data it felt suitable.

Second, the rating process was conducted by a panel of experts. Reading teams, composed of Michigan Elementary and Middle School Principals Association (MEMSPA) members and selected Michigan Department of Education staff, evaluated each application separately and jointly, assigning points based on expert opinion. Subsequently, on-site visitation teams, comprised of two persons each, verified the application data. As a result, not only were application contents essentially subjective in nature but so were the expert ratings based upon how well the application was written. The last point, preparation and writing of the application, appeared to be a critical element in the reader's evaluation of the impact of the content.

Another aspect of the exemplary-school selection process was the informal, non-printed guidance and instructions which the Michigan Department of Education officials felt was important to achieve equality. Some Michigan Department of Education personnel
unofficially indicate that, for political reasons, it was necessary to ensure that the full spectrum of public elementary schools be represented. Thus, Department members were urged to select schools which portrayed a complete range of economic, social, and geographic characteristics.

Of particular interest to the Department, apparently, were those schools which had numerous problems or a lack of resources, and which had apparently overcome these barriers to achieve the goals which they had set. A review of geographic and socio-economic features of those schools selected as exemplary confirmed the fact that representative equality generally had been achieved.

The most interesting fact regarding this aspect of the recognition program was the submission of applications from each of the ten elementary schools in a particular school district. When the announcement was made regarding which schools had been selected, the superintendent of this school district became upset to learn that only one of the ten schools was recognized. Through negotiation, two schools were eventually recognized. (These ten schools, interestingly, comprised 13% of the total number of applicants.) The fact that only one school per school district was permitted recognition further underscored what was perceived to be an invalidating aspect of the entire program. Again, a summary impression emerged that a major component of the recognition of schools was the equality and equity issue and not necessarily the performance issue.

The non-statistical observations in this report were summarized as follows:
1. Effectiveness literature has been improved greatly from an operational standpoint during the past 20 years. Consequently, the profession had more ability to substantiate teaching and administrative practice.

2. The exemplary-school selection process was perceived by the general public as resulting in the selection of the "best" schools, while professional educators were more skeptical.

3. Political considerations dictated that exemplary schools reflect an equal and fair distribution based on geography and socio-economic factors, with the single exception that only one school per school district be allowed recognition as exemplary.

Summary

Chapter 4 represents an important aspect of this project. It was apparently the first time that an attempt had been made to coincide an objective measurement with an essentially subjective, expert-rated recognition program.

Each of the three null hypotheses, designed to determine a significant difference between exemplary and non-exemplary schools, were retained at $P < .01$. Consequently, from a statistical standpoint, no significant relationship was detected between the eight characteristics which were proposed to have been associated with exemplary school status and the acceptance or rejection of schools for exemplary status.

Further analysis revealed other important outcomes. Achievement schools were significantly higher in pupil achievement than both the non-exemplary and exemplary schools. There was no significant difference with regard to pupil achievement between exemplary and non-
exemplary schools. Household income, household education, and school-district per-pupil expenditures appeared to show no statistically significant difference, among the three groups of schools.

A profile of schools was constructed along with a detailed explanation of the sampled population. A list of all 159 public elementary schools which participated in the study is provided in Appendix A. A total of 83% of the participating schools returned the mailed surveys. A geographical study, using map outlines, was conducted to compare the three school groups. Kent County appeared to have the largest number of per capita academically achieving schools.

Educational organizational effectiveness had become greatly refined during the past 20 years, even though a lack of common standards made objective comparisons difficult. Opinions regarding the recognition program varied considerably. Lay observers felt that quality schools had been selected, based on what they read and observed through the media. Educators were not so agreeable, however. The definition of an exemplary elementary school was reviewed as well as observations regarding the selection process. Political and socioeconomic considerations were evident during the recognition selection process.
CHAPTER V

SUMMARY, CONCLUSIONS, DISCUSSION OF RESULTS, AND RECOMMENDATIONS

This chapter presents the summary, discussion of the results, and recommendations. Included are reviews of Chapters 1, 2, and 3. Further, analyses regarding hypothesized statistical findings, unhypothesized statistical findings, and non-statistical observations occur. The recommendations contain suggestions regarding programmatic improvement and future research.

Summary

Introduction

This study intended to improve the status of the exemplary public-elementary-school recognition program. The exemplary-school recognition program is a natural extension of the effective-schools research movement. It serves to give visible, tangible proof to the notion that excellence in public education indeed does exist. A major barrier to exemplary consensus, however, has proven to be a marked difference in community norms, values, and standards.

Historically, the public-school program has played a key role in the development of the unique American society. The "rugged individual" theme predominated until the emergence of a more refined and defined work force. Issues such as equity, equality, and equal opportunity began to emerge. Following closely behind the
differentiation of the work force was the recognition of individual differences and the resulting educational needs therein. Sputnik, the Coleman Report (Coleman, 1966), and the political environment combined for a powerful effect upon public education. Thus, at least to some extent, the change came from outside and not from inside the profession. Consequently, some researchers believe the effective-schools movement is the product of governmental commission reports and various political initiatives.

The exemplary-schools portion of the effectiveness movement has been adopted by both the state and the federal departments of education during the 1980s. These departments, fueled by external pressures for proof of professional competence, believe the public needs to know that excellence in education really does exist. Schools, in fact, do make a difference! The problem statement for this research is defined in terms of how exemplary schools are selected. Do schools selected as exemplary reflect the highest levels of quality?

The trend toward the recognition of effectiveness is expected to continue well into the 1990s. As this trend occurs, more direct competition between public-school systems is inevitable. Parental rights of choice, tax vouchers, prayer, and public funding for private schools are but a few issues which have received attention. The implications for certain school districts may be troublesome, given the non-competitive environment in which they have previously operated.

This study includes a sociological framework for organizational effectiveness and culminates with a design aimed at identifying
definitive elements of the exemplary school. Three null hypotheses were projected to determine a significant statistical relationship between the public elementary schools which applied for Department of Education exemplary status and the proposed design which included eight independent variables which were suggested to be associated with organizational effectiveness. The hypotheses are restated as follows:

Hypothesis 1. *The Parsonian effectiveness characteristics and socioeconomic elements are not significantly related to the acceptance of applicant schools as exemplary.*

Hypothesis 1 is retained at the $P = .01$ level of significance, since the analysis of variance indicates a $P$ of 0.9384. The 0.056 Multiple R-Square score indicates a 6% explanation of variance accounted for by all variables in each model.

Hypothesis 2. *The socioeconomic elements are not significantly related to the acceptance of applicant schools as exemplary.*

Hypothesis 2 is retained at the $P < .01$ level of significance, since the analysis of variance indicates a $P$ of 0.8545. The 0.0145 Multiple R-Square score indicates less than a 1% explanation of variables accounted for by socioeconomic elements in the Department of Education model.

Hypothesis 3. *The Parsonian effectiveness characteristics are not significantly related to the acceptance of applicant schools as exemplary.*
Hypothesis 3 is retained at the $P = .01$ level of significance, since the analysis of variance indicates a $P$ of 0.8192. The 0.0413 Multiple R-Square score indicates a 4% explanation of variables accounted for by the organizational effectiveness elements in the Department of Education model.

Limitations and delimitations are specified, as are the various terms used throughout the study. The dissertation is divided into the standard five-chapter organization.

Review of Literature

The political implications, "new research" conducted, theories, and the indicators of effective-schools research are described and identified in Chapter 2.

Political initiatives at the federal level have culminated in several commission reports and panel symposia designed to report on the current status of public education. Some political observers indicate that reelection is the motivation behind linking the aggressive behavior of public officials and their push for improving school performance. "Federal policy on schools is formed in quiet battles among forces and players far removed from classrooms and children" (Mann, 1984, p. 31). The most effective political reformers appear to be state governors. The opposition at grassroots levels, however, to attempts by state legislatures and governors to take control of local education has created an entanglement of interests and objectives. Thus, as a centralized versus decentralized school program is hotly contested, the question of who controls education emerges as a growing issue.
The new research regarding effectiveness has been empirically based. Consequently, educators have an operational base upon which to describe the elements of organizational growth and development—something relatively new to the profession. The root of the problem regarding school effectiveness is the definition of educational goals and objectives, with the biggest single barrier being the issue of local school control. A significant breakthrough in the literature are the findings that schools and educators do make a difference in the education of boys and girls. A more refined research trend indicates that sociological and cultural definitions of effectiveness are beginning to replace the laundry-list approach. A few researchers go so far as to suggest effective-schools research did not ever really exist and that there are no answers to effectiveness questions.

The conceptual aspects of organizational performance can probably be best described in terms of operational theory. Two major theoretical models exist—goal-centered and natural systems. A synthesis of the goal-centered and natural systems is suggested as the theoretical framework. Based primarily on the constructs of sociologist Talcott Parsons (1960), a rationale is presented to support the following organizational effectiveness components:

1. **adaptation** (innovation)—changing within the organizational milieu

2. **goal attainment** (academic achievement)—establishing and achieving goals

3. **integration** (cohesiveness)—sustaining solidarity and group cohesiveness
4. latency (commitment)—sustaining organizational norms, values, and motivation.

The philosophical premise upon which this study defines effectiveness is derived from theory which stresses organizational value systems. Effectiveness involves the process of time, is subjective, and is based upon one's perceptions.

Effectiveness indicators have been analyzed since at least 1909. Indicators have ranged from simplistic and relatively mechanical elements to complex cultural dimensions. Investigations have not reached a consensus regarding that which constitutes effectiveness. Researchers have become aware that an effective organization is multilinear and possibly contradictory, since personal and organizational goals may not always coincide. Outputs in some organizations lend themselves more easily to measurement than do others. Because of the diverse values and norms within each school system, excellence and effectiveness in schools is difficult to measure with any degree of reliability, validity, and consistency.

Methodology

The identification and description of exemplary Michigan public elementary schools is causal-comparative or ex post facto in design. An on-going problem in the study of exemplary schools is the lack of control of variables, since the data-collection effort occurs within the context of an open social system.

Eight independent variables are suggested to be associated with the dependent variable:
Dependent ($Y^1$) Independent ($X$)

Exemplary School Status ($Y^1$) Parson's Organizational Effectiveness Elements
(Michigan Department of Education applicant schools) Goal Attainment (Academic Achievement) ($X_1$)

Latency (Commitment) ($X_2$)
Integration (Cohesiveness) ($X_3$)
Adaptation (Innovation) ($X_4$)
Overall Organizational Effectiveness ($X_5$)

Socioeconomic Elements (SES)
Household Income ($X_6$)
Per-pupil Expenditure ($X_7$)
Household Education ($X_8$)

The sample population ($n = 159$) consists of the 79 public elementary schools which had applied in 1986 for recognition as a Michigan Department of Education exemplary school. Of these 79 schools, 20 were eventually selected as exemplary. As a comparative reference point, the 80 highest academic-achieving Michigan public elementary schools are also identified. Academic achievement in reading and mathematics is measured by aggregated Michigan Educational Assessment Program (MEAP) tests for grade 4 from 1984, 1985, and 1986.

The Parsonian theoretical framework adapted for use in this study includes the dimensions of pupil-goal attainment, perceived staff commitment, perceived staff cohesiveness, perceived staff innovation, and perceived overall organizational effectiveness, and is measured using the following instruments:

- Pupil Achievement
- Michigan Educational Assessment Program

- Perceived Staff Innovation
- Troubleshooting Checklist

- Perceived Staff Cohesiveness
- Organizational Climate Description Questionnaire

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Perceived Staff Commitment Organizational Commitment Questionnaire
Perceived Overall Organizational Effectiveness Index of Perceived Organizational Effectiveness.

The socioeconomic data, including household income and household education, are derived from the 1980 Michigan census. Per-pupil expenditure data are obtained from the Michigan Department of Education. The various tests of validity and reliability are reported in support of each of the instruments which were used to collect data.

The Michigan Educational Assessment Program pupil-achievement scores, per-pupil expenditures, and the socioeconomic data are collected through the state of Michigan data processing system. The organizational effectiveness-elements data are derived from mail surveys sent to each of the 144 participating schools. Three waves of mailings were used to obtain the perceptions of teachers and principals.

Of the 144 schools which were sent surveys, 83% responded. Excluding those schools with incomplete data, the net number of participating schools includes 108 schools. All incoming data were recorded manually on a master tally form, then transferred to the computer data entry program for analysis.

Because there was more than one independent variable and because there was a possibility that the variables were intercorrelated, multiple linear regression analysis was chosen as the primary tool. Also used to enhance the data analysis was stepwise regression and analysis of variance. The Biomedical Data Processing computer statistical packages used were multiple linear regression, stepwise regression, and analysis of variance.
The major findings of this study include the following statistical and non-statistical data.

1. Except for pupil academic achievement, there is apparently no statistically significant difference among the three categories of schools—the high-achieving schools, those schools accepted as exemplary, and the schools which applied for but were not selected as exemplary.

2. The percentage of variance, which is explained by the independent variables, yields only a minor statistical relationship.

3. Perceived organizational effectiveness, household income, and perceived staff commitment are statistically selected as the strongest independent variables.

4. The socioeconomic elements of household income, household education, and school district per-pupil expenditure show no apparent statistical difference between high achievement schools, exemplary schools, and non-exemplary schools. In fact, schools with the highest achievement provide the least funding per pupil.

5. Compared with the exemplary and non-exemplary schools included in the study, schools identified as having the top pupil achievement have significantly higher pupil achievement.

6. Three distinct geographic areas of highest pupil achievement are identified in the state of Michigan.

Conclusions

One significant statistical difference appears between public elementary schools involved in this study: Schools which applied for exemplary status have pupil-achievement test scores which are
significantly lower than schools which were identified based upon the highest pupil-academic achievement.

The Parsonian organizational effectiveness elements used in this study are not significantly related to the selection or rejection of the schools which applied for exemplary status. Unexpectedly, the socioeconomic elements of family income, family education, and school funding show no significant difference between exemplary, achievement, and non-exemplary schools. Perceived overall organizational effectiveness, household income, and perceived staff commitment statistically prove to be the strongest variables. Three geographic areas, demonstrating particularly strong pupil academic achievement, are identified within Michigan. The selection process appears more closely aligned with equal geographic and socioeconomic status than academic-achievement performance. While the public perceives the schools selected for recognition as the best schools, professional educators are more suspect.

Discussion of Results

This study was intended as an effort, initiated from within the education profession, to describe the methods and procedures by which Michigan exemplary public elementary schools are selected. The researcher supports the notion that educators do indeed make a difference in the education of boys and girls, and that exemplary schools do exist. The study is unique, inasmuch as a review of previously conducted research reveals nothing which has linked organizational-effectiveness studies with schools identified as exemplary. Furthermore, since the Michigan recognition program was but one of 50 state programs which comprises the U. S. Department of
Education recognition program, the results may be useful in the other states as well.

The research principle of serendipity was evident as the results and data in this study were analyzed. The study began with the identification of the 79 Michigan public elementary schools which had applied in 1986 for exemplary status. A comparison was then made with the 20 Michigan public elementary schools which were eventually selected from that same set of 79 schools.

A Parsonian sociological definition of effectiveness was applied to those schools which had nominated themselves for recognition as an exemplary school and had been selected. The definition was also used with those schools which had applied but had not been selected, and to those schools which demonstrated the highest pupil-achievement test scores. The objective was to determine what significant differences, if any, exist. Except for the effectiveness element of pupil academic achievement, no significant differences were found. The anticipated difference between the definition of exemplary schools and non-exemplary schools did not occur.

Instead, an unanticipated finding was obtained: Exemplary and non-exemplary schools have significantly lower achievement levels than the top achieving elementary schools. It should be reemphasized that, at the .0000 level, the difference in achievement between these groups is highly significant.

Even more unexpected was the fact that the socioeconomic elements have no apparent effect on any one of the three sets of schools. How much money a school district spends per pupil has little or no effect on selection of an exemplary school or on how well the
pupils achieve. Family income has little or no effect on selection of an exemplary school or how well pupils achieve. Family education has little or no effect on selection of an exemplary school or how well pupils achieve.

Clou ding the definition of an exemplary school is the continuing issue of lack of agreement on what constitutes a measurable degree of quality, effectiveness, and excellence. This researcher adopted a sociological definition since schools are social phenomena or social organizations and cannot be reduced to an engineering or mechanical formula. The results, excepting pupil academic achievement, do not clarify this issue nor reveal any trends which would lead the researcher to hypothesize a new definition of exemplary schools.

The statistical results indicate that the majority of the variance of results is due to something other than the eight independent variables which comprise the effectiveness definition. However, this conclusion leads to questions with regard to another logical explanation. If the sociological definition does not show a reason for variance between exemplary and non-exemplary schools, what combination of variables do? Is it possible that, because there is no significant difference between the two sets of schools, the exemplary schools are not really exemplary? Or, is it possible that, because there exists no significant difference, all schools are exemplary? Or, is it possible that the instruments do not detect differences which do exist? Clearly, more definitive research is needed.
The U. S. Department of Education and the Michigan Department of Education need to carefully review the process of determining schools to be recognized as excellent. For example, because of Department of Education equality policy, equal geographic representation is a necessary component of the selection process. In the best interest of a more accurate definition of quality in public education, perhaps more attention should be paid to identifying and including indicators of quality, such as pupil achievement, and less attention to whether or not schools are selected from a given geographic location.

The mail-survey response rate of 83% is an encouraging indicator with regard to the interest level in effective-schools research. Numerous personal notes of encouragement were received during the questionnaire-response portion of the study. Thus, practicing educators appear to remain very interested in understanding how to achieve quality at the individual building level. All four survey instruments appear valid.

The comparison between schools, using the maps which compare geographic areas, isolates data from a different, non-statistical point of reference. Based on pupil academic performance alone, elementary schools in Kent County have the most elementary schools indicating highest pupil academic achievement. Irrespective of socioeconomic issues, it would be logical to query the reasons for this unusually dense cluster of high-performance schools. Three geographic areas of highest pupil academic achievement exist, according to the achievement schools map locations: Wayne, Oakland, and Macomb counties; Midland County; and the Kent, Muskegon, and
Ottawa counties area. These data are considered important, since it is the most visible and accepted measure of accountability when addressing a public forum.

Finally, after considerable analysis of the data collected for this study of school recognition, one develops the impression that the schools which received recognition were chosen for the problems which have been overcome and the amount of progress made as the result of cooperation and effort. These are obviously important to the educational community and the growth and development of individual goals. But, this focus, as reflected in the application itself, does not appear to concern itself as much with the most widely accepted and easily measured indicator of performance—pupil achievement. It would almost seem that the current program does not consistently reward performance, but is generally an effort reward for schools which had worked very diligently to achieve mission goals. Of course, this is not altogether true, since 10 schools which applied for recognition are also included in the list of top-achieving schools. Nonetheless, the fact remains that only one Michigan public elementary school was identified as a top-achieving school and also a 1986 Michigan Department of Education exemplary school. Accordingly, an in-depth review of the recognition program, its purposes and procedures, needs to occur in order to more accurately portray the existence of educational excellence. Excellence in education exists. As professionals, educators simply need to become more precise in its description.
Recommendations

Based on the review of literature and on the findings of this study, the following recommendations are made for review, consideration, and possible adoption.

1. It is recommended that the Michigan Department of Education continue the recognition program and expand it by providing school districts which demonstrate high pupil achievement with recognition indicating academic performance (pp. 75, 77, 80, 82, 83, 84, 97, 98).

2. It is further recommended that the Michigan Department of Education continue the recognition program by providing school districts which show improvement with recognition indicating academic effort (pp. 3-4, 21, 87).

3. It is also recommended that the Parsonian sociological elements be integrated in other organizational effectiveness studies to refine its potential for future use (pp. 28, 45).

4. It is recommended that the Michigan Department of Education eliminate congressional geographic and socioeconomic criteria in judging exemplary status (p. 83). It is further recommended that they remove the prohibition against recognition of more than one school per school district.

5. It is also recommended that the use of expert panels of readers to evaluate applications be continued (p. 82). However, more emphasis needs to be placed upon pupil achievement using a common standard for comparative purposes.

6. It is also recommended that further analysis of the three geographic areas which reflect highest pupil academic performance
occur in an effort to determine why these pupil-achievement levels exist (pp. 74, 77-78, 85, 98).

7. The Michigan state aid act is based on the relative wealth of school districts. In view of the fact that per-pupil expenditures are not apparently statistically related to pupil achievement, it is recommended that the Michigan legislature carefully review the reasoning behind the state aid act rationale (pp. 66, 67, 77, 84, 93).

8. It is further recommended that the study be replicated, including the same sample population, but using ethnographic research techniques.

9. It is also recommended that the same study be replicated, but using schools identified as having pupil academic achievement which reflects the school mean scores rather than the school top-quarter scores.

10. It is recommended that the study be replicated at the high-school level.
MEMORANDUM

ST. JOSEPH PUBLIC SCHOOLS
E. P. CLARKE ELEMENTARY SCHOOL
DAVID L. RATAJK

TO: ____________________________
DATE: December 10, 1987

☐ For your information; do not return.

☐ Please note contents and return.

☐ Please give your opinion and return.

☐ Please read carefully, make necessary changes
   and return.

☐ Noted, with thanks.

☐ Would like to discuss with you.

☐ Provided per your request.

COMMENTS: Your response and those
of three randomly selected teachers
are needed!! The success of our
study identifying elementary
school effectiveness depends upon
your participation. Please... fill
out the questionnaires and return
them today. Thank you!

[Signature]
October 22, 1987

Dear

On October 2, 1987 your school was sent four questionnaires as part of a doctoral study which intends to more precisely define exemplary Michigan elementary schools. The Michigan Association of Elementary and Middle School Principals both supports and endorses this project.

We still need your assistance!! As the Principal of a school which demonstrates exceptionally high pupil academic achievement on the MEAP, your responses and those of your staff are critical to the success of this investigation.

Please......complete the Index of Organizational Effectiveness. Then, randomly select three teachers; one to complete the Organizational Commitment Questionnaire, one the Esprit Index, and one the Innovative Experience Subtest.

Return all questionnaires in the self-addressed, stamped envelope by Friday, October 30th. Your support of this study will result in Michigan Principals having more useful information regarding how to achieve elementary school effectiveness.

Sincerely,

David L. Ratajik, Principal
St. Joseph Public Schools and
Doctoral Candidate at Andrews University

Bernard M. Lali, Ph.D.
Professor of Educational Administration, Andrews University

M Code

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October 2, 1987

Dear ,

Literature related to exemplary schools reveals some major indicators of organizational effectiveness: pupil academic achievement, staff commitment, staff esprit, staff innovation and overall perceived effectiveness.

This doctoral study intends to more precisely define exemplary Michigan public elementary schools. Your school has been selected for participation since it had previously applied for Michigan Department of Education recognition as an exemplary school. Therefore, your experience with, and potential for, exemplary status makes your responses extremely valuable to the success of the study. A code number has been affixed for purposes of follow-up only.

Please, take a few minutes to complete the Index of Perceived Organizational Effectiveness. Also, please ask one teacher to complete the Organizational Commitment Questionnaire, one teacher the Esprit Index and one teacher the Innovative Experience Subtest. It is important that the teachers be selected randomly—perhaps by choosing every other teacher on your staff roster.

Return all questionnaires in the self-addressed, stamped envelope by October 19, 1987. Your support and assistance is very much appreciated.

Sincerely,

David L. Ratajik

A code
Dear Colleague:

We are composing this letter to let you know the Michigan Elementary and Middle School Principals Association's Board of Directors have endorsed this study by Mr. Dave Ratajik.

It is our hope that upon completion of his work Mr. Ratajik will have information which will prove very useful to our Michigan Department of Education and to the United States Department of Education in regards to the Exemplary Schools Program.

The leadership of MEMSPA appreciates your efforts in responding to any requests from Mr. Ratajik.

Sincerely,

William Mays, Jr.
Executive Director

WM:bg
August 24, 1987

David L. Ratajik
Principal
E.P. Clarke Elementary School
515 East Glenlord Road
St. Joseph, MI 49085

Dear David:

Dr. Hoffman has passed on to me your letter regarding the Trouble Shooting Checklist since I know the history of its development.

I recommend you go ahead and use the TSC as you proposed and simply put a note in your dissertation explaining that it was not possible to locate Brad or to secure permission in any way. I have no idea where Brad is located.

Sincerely,

William L. Rutherford
Associate Professor

WLR/bh
Mr. David L. Ratafia
115 East Glenlord Road
St. Joseph, MI 49085

Dear Mr. Ratafia:

Thank you for your letter regarding the Organizational Climate Perception Questionnaire.

If the questionnaire was developed under U.S. government contract, as you indicate in your letter, then no permission is necessary for you to use it. Of course, we would appreciate your giving credit to Dr. Halpin, Dr. Craft, and the U.S. Office of Education, Department of Health, Education, and Welfare.

Good luck with your research.

Sincerely,

[Signature]

[Name]

Research Assistant

To the National Institute
July 29, 1987

Mr. William Mays, Jr., Executive Director  
MEMSPA  
Room 9, Manly Miles Building  
1405 South Harrison Road  
East Lansing, Michigan 48823

Dear Bill,

Enclosed is a copy of an approved dissertation proposal and an application for research project assistance.

I am requesting that MEMSPA endorse the study (Level I, 1-5) and sponsor it by designating the state office for survey return as well as providing use of Association mailing lists (Level II, 2,6). In return, the researcher will allow MEMSPA access to any and all data collected, and to publish those portions of the study deemed appropriate. It is also understood that, if the required conditions are not met, all monies received from MEMSPA will be repaid.

It is my belief that, as Principals, we are providing leadership during a period of unusual professional growth and development. One segment of growth has been the initiative, at state and federal levels, to recognize exemplary elementary schools. MEMSPA has played a key role in this selection process by providing expert panel members. The attached proposal includes expert opinion, but also extends the identification process to include a common standard of academic achievement as well as elements of organizational survival. A statistical test is planned to confirm reliability and validity.

MEMSPA will benefit from this study since:
+ the selection process will be made more definitive.
+ effective schools research is on the "cutting edge" of current leadership topics.
+ recommendations for program improvement can be made to the Department of Education.
+ the membership will be provided with findings regarding organizational effectiveness sustainment.
+ this research, to the best of our knowledge, is unique, and can be applied throughout all states and NAESP.

I would be glad to meet with the Professional Development Commission on Thursday, August 13, 1987 to provide further explanation. Thank you for your support and consideration.

Sincerely,

David L. Ratajik
June 23, 1987

Dr. Lyman Porter
Departments of Administration/Psychology
University of California at Irvine
Irvine, California 92717

Dear Dr. Porter,

I am preparing to write my dissertation as a partial requirement for the Ed.D. Degree at Andrews University, located in Berrien Springs, Michigan.

My research design includes mail surveys which are intended to confirm certain perceived elements of organizational effectiveness. One of the instruments I would like to use is the Organizational Climate Questionnaire. Since this survey will be an important component in the data which is collected I would very much appreciate your permission to use this instrument.

Thank you very much for your consideration.

Sincerely,

David L. Ratajik
June 23, 1987

Dr. Cecil Miskel, Dean
Graduate School of Education
University of Utah
Salt Lake City, Utah 84112

Dear Dr. Miskel,

I am preparing to write my dissertation as a partial requirement for the Ed.D Degree at Andrews University, located in Berrien Springs, Michigan.

My research design includes mail surveys which are intended to confirm certain perceived elements of organizational effectiveness. One of the instruments I would like to use is the Index of Perceived Organizational Effectiveness. Since this survey will be an important component in the data which is collected I would very much appreciate your permission to use this instrument.

Thank you very much for your consideration.

Sincerely,

David L. Ratajik

Permission granted.

Cecil Miskel
July 2, 1987
Mr. David L. Ratajik, Principal  
E. P. Clarke Elementary School  
St. Joseph Public Schools  
515 East Glenlord Road  
St. Joseph, Michigan  49085  

Dear Mr. Ratajik:

Enclosed find data you requested. The printout lists the school districts, by descending value, according to their performance on 4th grade mathematics, 7th grade mathematics, 4th grade reading, and 7th grade reading, for each of the 1984-85 and 1985-86 school years respectively. MEAP data for the 1983-84 school year were not accessible through the information system.

At the end of the printout, starting at page 22 (upper right corner) is a listing of districts, sorted by median family income. For each district, the percentage no more than high school, the percentage completing between one and three years of college, and the percentage completing four years of college are also listed. The state summary of these variables is listed on page 35.

For expenditure I have included copies of Bulletins 1011 and 1014 for the most recent year available.

Sorry for the delayed response. I hope these data will be helpful. If you have any questions, please contact me.

Sincerely,

Jacob Silver  
Research Consultant
April 6, 1987

Mr. David L. Ratajik, Principal
E.P. Clarke Elementary School
515 E. Glenlord
St. Joseph, MI 49085

Dear David:

I have your letter of March 24, 1987 in which you indicate that sometime in May your dissertation proposal should be completed.

For your information the Professional Development Commission will next meet on May 7 and August 13th. So when you send the material to us will determine when the commission will be able to respond.

Cordially,

William Mays, Jr.
Executive Director

WM/ae
January 5, 1987

Jacob Silver, Educational Consultant
ORIS
Michigan Department of Education
P.O. Box 3008
Lansing, MI 48909

Dear Jacob,

This letter confirms our recent discussion regarding my request for certain data to be used during my doctoral studies. Specifically, I'm asking for the following information during the years 1984, 1985, and 1986:

1. MEAP scores for grades 4 and 7 from the:
   a. Top 10% of all Michigan schools *
   b. 86 applicants for the 1986 Michigan Elementary School Recognition Program.

2. Total per pupil general fund expenditures including local, state, federal, and other sources from the:
   a. Top 10% of all Michigan school districts *
   b. School districts which include the 86 applicants for the 1986 Michigan Elementary School Recognition Program.

3. The percentage of children provided free and reduced hot lunches for the school districts identified above. (NOTE: This is a change from our original discussion; however, this variable may be more valuable than the previous one involving pupil-teacher ratio).

4. Household income and if possible education levels using the 1980 census data for the school districts identified above.

I wish to thank you for your advice and assistance, and please call if you have further questions.

Sincerely,

David L. Ratajik
E.P. Clarke Elementary School

cc Dr. Richardson

Excluding those school districts having under 100 pupils

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In my capacity as a building Principal, I have experienced an interesting phenomenon with regard to the issue of demonstrated educational competency. During the past several years my school has been visited by a growing number of families who were eager to investigate the possibility of enrolling their children prior to the purchase or construction of a home. Curricula, discipline policies, ancillary services, physical condition of the plant, and staff qualification were items routinely discussed during a tour of the facility. Consequently, parents were making a decision on the school their children would attend before they considered housing. Shopping for schools was becoming more commonplace, at least in my school district.
MDE ELEMENTARY SCHOOL
RECOGNITION PROGRAM APPLICATION
ELEMENTARY SCHOOL RECOGNITION PROGRAM

COVER SHEET

School Name ____________________________ District ____________________________

Principal's Name (Mrs. Miss Ms. Mr. Dr.) __________________________________________

Address __________________________________ County _____________________________

______________________________________________ Congressional District __________

Telephone Number ( ) ____________________ Congressional District __________

I have reviewed the information contained in this form and, to the best of my knowledge, it is accurate.

________________ Date ____________________ (Principal’s Signature)

****************************************************************************************************
Superintendent's Name (Mrs. Miss Ms. Mr. Dr.) __________________________________________

School District Name: __________________________

Address __________________________________________

______________________________________________

Telephone Number ( ) ____________________

I have reviewed the information contained in this form and, to the best of my knowledge, it is accurate.

________________ Date ____________________ (Superintendent’s Signature)

****************************************************************************************************
School Board President's Name (Mrs. Miss Ms. Mr. Dr.) ____________________________

Address __________________________________________

______________________________________________

Telephone Number ( ) ____________________

I have reviewed the information contained in this form and, to the best of my knowledge, it is accurate.

________________ Date ____________________ (School Board President’s Signature)
**COVER SHEET**

*Names of the people who assisted in preparing this form*

<table>
<thead>
<tr>
<th>Name</th>
<th>Position/Title</th>
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</tbody>
</table>
I. SCHOOL DISTRICT CHARACTERISTICS

1. Number of students enrolled in the district: __________

2. Number of residents in the district: __________

3. Number of schools in the district: ___Elementary Schools
   ___Junior High/Middle Schools ___High Schools ___Total

4. District Classification: (Select one only)
   __Large City (population more than 500,000)
   __Medium City (population 150,000-500,000)
   __Small Town (population less than 150,000)
   __Suburban
   ___Rural (population less than 2,500 or less than 1,000 people per square mile)

5. Percentage of students in the district from low income families: ____% Please indicate how this number was determined.

6. Please describe any significant changes that have occurred in the last 3-5 years in the characteristics described in items 1-5.

II. SCHOOL CHARACTERISTICS

1. Total school enrollment: _________ Grade Span: __________

2. Number of students enrolled at each grade level:
   K ___ 1 ___ 2 ___ 3 ___ 4 ___ 5 ___ 6 ___ 7 ___ 8 ___

3. Racial/ethnic composition of the students in your school:
   ___ American Indian or Native Alaskan
   ___ Asian or Pacific Islander
   ___ Hispanic
   ___ Black, not Hispanic Origin
   ___ White, not Hispanic Origin

4. Does your school have a sizable group of recent immigrants or refugees? ____ If yes, please describe.

5. Percentage of students in your school from low income families: ____%. Please indicate how you determined this number.
6. Percentage of students who require special education services: __________% 
Please indicate the type(s) of services required and the number(s) who require and receive them.

7. Please describe any significant changes that have occurred in the last 3-5 years in the characteristics described in items 1-6. (e.g. significant changes in student enrollment)

8. Please indicate the number of staff in each of the following positions:

<table>
<thead>
<tr>
<th>Position</th>
<th>Full-Time</th>
<th>Part-Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrators</td>
<td></td>
<td></td>
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<tr>
<td>Classroom Teachers</td>
<td></td>
<td></td>
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<tr>
<td>Teacher Aides</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Counselors</td>
<td></td>
<td></td>
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<tr>
<td>Subject Area Specialists (e.g. reading specialists)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Library and Other Media Professionals</td>
<td></td>
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<tr>
<td>Social Workers</td>
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<tr>
<td>Security Officers</td>
<td></td>
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<tr>
<td>Food Service Personnel</td>
<td></td>
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<tr>
<td>Clerical Staff</td>
<td></td>
<td></td>
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<tr>
<td>Custodians</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9. Describe your teacher turn-over rate. How many first year teachers did you hire in each of the last three years?

10. How long has the principal been in his/her position? __________
11. What are the primary educational needs of children served by your school? How were they determined?

12. Please describe any other school characteristics of which the reviewers should be aware.
III. ELIGIBILITY CRITERIA

IF YOUR SCHOOL IS SELECTED FOR A SITE VISIT, THE INFORMATION SUMMARIZED IN THIS SECTION MUST BE AVAILABLE FOR INSPECTION BY THE SITE VISITOR.

1. How is student achievement at grade level defined in your district? Please list all tests and other evaluation instruments used in the definition, and indicate specific standards (e.g., 50th percentile, placement in classroom textbooks, etc.) used to determine whether a student is achieving at grade level. Indicate if the instruments or methods used differ from one grade to the next.

2. Use this space to indicate the percentage of students performing at or above grade level in each of the last three years for all elementary grade levels included in your school. (Do not include data for pre-K, or K, or any category of special education students for whom the evaluation instruments are not appropriate to measure their achievement.)

<table>
<thead>
<tr>
<th></th>
<th>1982-83 % at or above grade level</th>
<th>1983-84 % at or above grade level</th>
<th>1984-85 % at or above grade level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics</td>
<td>_______ %</td>
<td>_______ %</td>
<td>_______ %</td>
</tr>
<tr>
<td>Reading</td>
<td>_______ %</td>
<td>_______ %</td>
<td>_______ %</td>
</tr>
</tbody>
</table>

3. Provide any additional information that may be useful in determining your school's eligibility. If your school has compelling evidence of unusual success but does not meet all the eligibility criteria, present evidence and discuss.
IV. QUALITY INDICATORS

The items in this section are intended to gather information about the ways the eight indicators of quality are reflected in the programs, policies, and practices of your school.

As appropriate, you should highlight the ways that various programs, policies, and practices have been designed and implemented to meet the needs of the students served in your school. Whenever possible responses should include specific examples and the number of participants or children served.

1. QUALITY OF SCHOOL ORGANIZATION

   a. Please describe your school's mission statement or educational philosophy. How was it developed and how is it communicated to students? Parents? Teachers? Other members of the community?

   b. Describe how your school is organized (including placement, class size, and grouping practices) to reflect student needs and school philosophy. (Please include information about preventive or remedial programs, bilingual education, special education, and programs for the gifted and talented.)
2. **QUALITY OF BUILDING LEADERSHIP**

   a. Describe ways in which the principal or other building leaders inspire teachers, parents, and students to accomplish the school’s mission and demonstrate skills that enable the school to reach its goals.

   b. Describe how the building leaders convey high expectations for teachers and students.

   c. Describe how building leaders involve teachers in decision making regarding the organization and operation of the school?
3. QUALITY OF INSTRUCTIONAL PROGRAM AND CURRICULUM INCLUDING CHARACTER DEVELOPMENT

a. What are the essential school-wide instructional goals in English (literature, reading, writing, oral language development), mathematics, science, history, geography, the arts, economics, and other subjects that the State and school system deem appropriate? How were these goals identified?

b. How does the instructional program ensure that children are developing the basic skills and the higher order cognitive skills necessary to function effectively in our society?
c. How does the instructional program provide for a firm foundation of knowledge about our nation's culture (e.g. a familiarity with leading figures - past and present, folklore, ideas, traditions, principles, values, and central institutions of American society)?

d. How do school programs, practices, and policies foster the development of sound character, democratic values, ethical judgement, and the ability to work in a self-disciplined and purposeful manner?
4. **QUALITY OF INSTRUCTION**

a. Describe prevalent instructional techniques, strategies, and approaches used in your school. Describe how they relate to curricular objectives and research-based principles of learning.

b. What procedures exist to evaluate and improve the quality of instruction provided by teachers? How often are teachers observed and evaluated? What feedback mechanism exists to provide for instructional improvement? How does your school recognize and reward teacher efforts?

c. Describe programs and other opportunities for staff development. To whom are these made available? Describe how staff needs are determined, when programs take place, and how they are evaluated. How much time and other resources are allocated to staff development?
d. Describe procedures for measuring and monitoring student progress. How are students and parents informed of progress and what practices facilitate appropriate adjustments in classroom instruction?

e. Describe the school policy on homework. What procedures exist to ensure that the policy is carried out?

f. What strategies are used on a school-wide and classroom basis to maximize efficient use of time available for instruction?
5. QUALITY OF SCHOOL CLIMATE

a. Describe the climate of your school. What has been done to create and sustain this climate?

b. Summarize your school's overall approach to discipline. Describe any special procedures or programs used to maintain order and discipline throughout your school. What factors contribute most to order in your school?

c. Describe school practices or activities designed to foster school pride and high morale among students, staff, and community. In which aspects of school life do students, staff and community take the greatest pride?
6. **QUALITY OF SCHOOL COMMUNITY RELATIONS**

   a. Describe strategies used to ensure that parents and other members of the community understand what the school expects of them and to ensure that school staff understand what parents and community members expect in return.

   b. Describe opportunities for parents to be involved in the instructional program of their children.
c. Describe the volunteer program in your school. In what other ways does the community provide support for your school?

d. What opportunities exist for parents to participate in and affect important decisions about their children's education?

e. What efforts are made to involve students in community service activities?
7. **EFFORTS TO MAINTAIN HIGH QUALITY PROGRAMS AND/OR TO MAKE IMPROVEMENTS**

   a. What procedures exist to evaluate the overall success of the school?

   b. What strengths and weaknesses were identified in the most recent evaluation? What changes were made to improve your school as a result of the evaluation?

   c. How were the results communicated to parents and community members?
d. Describe any obstacles to educational excellence confronted by your school in the past 3-5 years. How have they been overcome? If they have not been completely overcome, how are they being addressed?

e. As you look back over the last 3-5 years, what conditions and changes have contributed most to the overall success of your school?

f. What improvements would you most like your school to make in the next 3-5 years and how will you bring them about?
8. **Student Outcomes**

a. Provide evidence of student achievement in basic and higher order cognitive skills, knowledge, and character formation in each of the last three years. This information should be presented in a way best suited to your school. However, as a minimum, you should indicate what instruments were used to measure outcomes, the number of students who were evaluated and their grade levels.

b. Provide evidence of achievement by special education students not included in the previous item.
c. Indicate your school's performance last year in the following areas:

   Daily Student Attendance %
   Daily Teacher Attendance %

Have these rates changed significantly (i.e. by more than 10%) in the past 3-5 years?

d. List any recent awards received by your school and individuals in your school for outstanding programs, teacher performance, and student achievement.

e. Provide evidence of improvement in school discipline (e.g. detention figures, suspensions, other classroom and school exclusions).
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<thead>
<tr>
<th>SDE Code</th>
<th>School District</th>
<th>Elementary School</th>
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<tbody>
<tr>
<td>001.</td>
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<td>002.</td>
<td>Reese</td>
<td>Reese</td>
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<tr>
<td>003. *</td>
<td>Lowell</td>
<td>Alto</td>
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<tr>
<td>004. ***</td>
<td>Blissfield Com.</td>
<td>Blissfield</td>
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<tr>
<td>005.</td>
<td>Suttons Bay</td>
<td>Suttons Bay</td>
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<tr>
<td>006. *</td>
<td>Barrien Springs</td>
<td>Sylvester</td>
</tr>
<tr>
<td>007.</td>
<td>Clintondale</td>
<td>Charles McGlinnen</td>
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<tr>
<td>008.</td>
<td>Essexville-Hampton</td>
<td>Viola Vereleen</td>
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<tr>
<td>009.</td>
<td>Covert</td>
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<td>86.</td>
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</table>

* selected as exemplary
** withdrawn— not an elementary school
*** closed
APPENDIX B
ORGANIZATIONAL COMMITMENT QUESTIONNAIRE
ORGANIZATIONAL COMMITMENT QUESTIONNAIRE

Instructions: Check the response that best describes your personal opinions about each of the following statements.

Note: "Organization" refers to the school building in which you work.

Responses: Strongly Disagree, Moderately Disagree, Slightly Disagree, Neither Disagree or Agree, Slightly Agree, Moderately Agree, Strongly Agree.

1. I am willing to put in a great deal of effort beyond that normally expected in order to help this organization be successful.

   _____ Strongly Disagree
   _____ Moderately Disagree
   _____ Slightly Disagree
   _____ Neither Disagree or Agree
   _____ Slightly Agree
   _____ Moderately Agree
   _____ Strongly Agree

2. I talk up this organization to my friends as a great organization to work for.

   _____ Strongly Disagree
   _____ Moderately Disagree
   _____ Slightly Disagree
   _____ Neither Disagree or Agree
   _____ Slightly Agree
   _____ Moderately Agree
   _____ Strongly Agree

3. I feel very little loyalty to this organization.

   _____ Strongly Disagree
   _____ Moderately Disagree
   _____ Slightly Disagree
   _____ Neither Disagree or Agree
   _____ Slightly Agree
   _____ Moderately Agree
   _____ Strongly Agree
4. I would accept almost any type of job assignment in order to keep working for this organization.

   ____ Strongly Disagree
   ____ Moderately Disagree
   ____ Slightly Disagree
   ____ Neither Disagree or Agree
   ____ Slightly Agree
   ____ Moderately Agree
   ____ Strongly Agree

5. I find that my values and the organization's values are very similar.

   ____ Strongly Disagree
   ____ Moderately Disagree
   ____ Slightly Disagree
   ____ Neither Disagree or Agree
   ____ Slightly Agree
   ____ Moderately Agree
   ____ Strongly Agree

6. I am proud to tell others that I am part of this organization.

   ____ Strongly Disagree
   ____ Moderately Disagree
   ____ Slightly Disagree
   ____ Neither Disagree or Agree
   ____ Slightly Agree
   ____ Moderately Agree
   ____ Strongly Agree

7. I could just as well be working for a different organization as long as the type of work was similar.

   ____ Strongly Disagree
   ____ Moderately Disagree
   ____ Slightly Disagree
   ____ Neither Disagree or Agree
   ____ Slightly Agree
   ____ Moderately Agree
   ____ Strongly Agree

8. This organization really inspires the very best in me in the way of job performance.

   ____ Strongly Disagree
   ____ Moderately Disagree
   ____ Slightly Disagree
   ____ Neither Disagree or Agree
   ____ Slightly Agree
   ____ Moderately Agree
   ____ Strongly Agree
9. It would take very little change in my present circumstances to cause me to leave this organization.

___ Strongly Disagree
___ Moderately Disagree
___ Slightly Disagree
___ Neither Disagree or Agree
___ Slightly Agree
___ Moderately Agree
___ Strongly Agree

10. I am extremely glad that I chose this organization to work for over others I was considering at the time I joined.

___ Strongly Disagree
___ Moderately Disagree
___ Slightly Disagree
___ Neither Disagree or Agree
___ Slightly Agree
___ Moderately Agree
___ Strongly Agree

11. There is not too much to be gained by sticking with this organization indefinitely.

___ Strongly Disagree
___ Moderately Disagree
___ Slightly Disagree
___ Neither Disagree or Agree
___ Slightly Agree
___ Moderately Agree
___ Strongly Agree

12. Often, I find it difficult to agree with this organization's policies on important matters relating to its employees.

___ Strongly Disagree
___ Moderately Disagree
___ Slightly Disagree
___ Neither Disagree or Agree
___ Slightly Agree
___ Moderately Agree
___ Strongly Agree

13. I really care about the fate of this organization.

___ Strongly Disagree
___ Moderately Disagree
___ Slightly Disagree
___ Neither Disagree or Agree
___ Slightly Agree
___ Moderately Agree
___ Strongly Agree
14. For me this is the best of all possible organizations for which to work.

_____ Strongly Disagree  
_____ Moderately Disagree  
_____ Slightly Disagree  
_____ Neither Disagree or Agree  
_____ Slightly Agree  
_____ Moderately Agree  
_____ Strongly Agree

15. Deciding to work for this organization was a definite mistake on my part.

_____ Strongly Disagree  
_____ Moderately Disagree  
_____ Slightly Disagree  
_____ Neither Disagree or Agree  
_____ Slightly Agree  
_____ Moderately Agree  
_____ Strongly Agree

ESPRIT INDEX
(ORGANIZATIONAL CLIMATE DESCRIPTION QUESTIONNAIRE)
ESPRIT INDEX

Instructions: Check the response that best describes the frequency with which the stated conditions occur in your school.

Responses: Rarely, Sometimes, Frequently, Very Often

1. The morale of the teachers is high.
   ____ Rarely
   ____ Sometimes
   ____ Frequently
   ____ Very Often

2. The teachers accomplish their work with great vim, vigor, and pleasure.
   ____ Rarely
   ____ Sometimes
   ____ Frequently
   ____ Very Often

3. Teachers at this school show much school spirit.
   ____ Rarely
   ____ Sometimes
   ____ Frequently
   ____ Very Often

4. Custodial service is available when needed.
   ____ Rarely
   ____ Sometimes
   ____ Frequently
   ____ Very Often

5. Most of the teachers here accept the faults of their colleagues.
   ____ Rarely
   ____ Sometimes
   ____ Frequently
   ____ Very Often
6. School supplies are readily available for use in classwork.

   _____ Rarely
   _____ Sometimes
   _____ Frequently
   _____ Very Often

7. There is considerable laughter when teachers gather informally.

   _____ Rarely
   _____ Sometimes
   _____ Frequently
   _____ Very Often

8. In faculty meetings, there is a feeling of "let's get things done."

   _____ Rarely
   _____ Sometimes
   _____ Frequently
   _____ Very Often

9. Extra books are available for classroom use.

   _____ Rarely
   _____ Sometimes
   _____ Frequently
   _____ Very Often

10. Teachers spend time after school with students who have individual problems.

    _____ Rarely
    _____ Sometimes
    _____ Frequently
    _____ Very Often

INNOVATIVE EXPERIENCE SUBTEST
(TROUBLESHOOTING CHECKLIST FOR SCHOOLS)
INNOVATIVE EXPERIENCE SUBTEST

Instructions: Check the response that most accurately reflects how you view conditions in your school.

Note: Change agent refers to both external and internal individuals whose purpose is to facilitate change.

Responses: Very Typical, Somewhat Typical, Neither Typical nor Atypical, Somewhat Atypical, Very Atypical, Not Applicable.

1. This school Is considering innovations that contain easily alterable material which can meet the demands of varied teaching situations.

___ Very Typical
___ Somewhat Typical
___ Neither Typical nor Atypical
___ Somewhat Atypical
___ Very Atypical
___ Not Applicable

2. Analyses have been made concerning the effects of innovations on the entire school.

___ Very Typical
___ Somewhat Typical
___ Neither Typical nor Atypical
___ Somewhat Atypical
___ Very Atypical
___ Not Applicable

3. Change agents have been invited to return more than once for information on educational change processes.

___ Very Typical
___ Somewhat Typical
___ Neither Typical nor Atypical
___ Somewhat Atypical
___ Very Atypical
___ Not Applicable
4. The teachers at this school know very little about new educational practices.

   ___ Very Typical
   ___ Somewhat Typical
   ___ Neither Typical nor Atypical
   ___ Somewhat Atypical
   ___ Very Atypical
   ___ Not Applicable

5. School personnel are pressured to change by the central school district office.

   ___ Very Typical
   ___ Somewhat Typical
   ___ Neither Typical nor Atypical
   ___ Somewhat Atypical
   ___ Very Atypical
   ___ Not Applicable

6. Innovation attempts up to this time have not been carried out successfully on a day-to-day basis.

   ___ Very Typical
   ___ Somewhat Typical
   ___ Neither Typical nor Atypical
   ___ Somewhat Atypical
   ___ Very Atypical
   ___ Not Applicable

7. Teachers are pressured from the central offices to implement innovations quickly.

   ___ Very Typical
   ___ Somewhat Typical
   ___ Neither Typical nor Atypical
   ___ Somewhat Atypical
   ___ Very Atypical
   ___ Not Applicable

8. Innovations have been imposed externally in this school system without regard to specific local needs.

   ___ Very Typical
   ___ Somewhat Typical
   ___ Neither Typical nor Atypical
   ___ Somewhat Atypical
   ___ Very Atypical
   ___ Not Applicable

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9. Members of this school have requested the opportunity to see, in operation, an innovation which is under consideration.

____ Very Typical
____ Somewhat Typical
____ Neither Typical nor Atypical
____ Somewhat Atypical
____ Very Atypical
____ Not Applicable

10. The school plans for implementation of innovations include systematic procedures for staff education.

____ Very Typical
____ Somewhat Typical
____ Neither Typical nor Atypical
____ Somewhat Atypical
____ Very Atypical
____ Not Applicable

11. This school would only be interested in making changes to avoid criticism from the school district central office.

____ Very Typical
____ Somewhat Typical
____ Neither Typical nor Atypical
____ Somewhat Atypical
____ Very Atypical
____ Not Applicable

12. The superintendent involves the teaching staff, especially during the decision-making phases of the curriculum change process.

____ Very Typical
____ Somewhat Typical
____ Neither Typical nor Atypical
____ Somewhat Atypical
____ Very Atypical
____ Not Applicable

13. The person introducing the innovation has recognized authority in the school.

____ Very Typical
____ Somewhat Typical
____ Neither Typical nor Atypical
____ Somewhat Atypical
____ Very Atypical
____ Not Applicable
14. Many types of instructional materials have been examined by members of this school system in order to determine what innovation would be best suited to their needs.

- Very Typical
- Somewhat Typical
- Neither Typical nor Atypical
- Somewhat Atypical
- Very Atypical
- Not Applicable

15. Specific problems and needs have been identified by staff members of this school system.

- Very Typical
- Somewhat Typical
- Neither Typical nor Atypical
- Somewhat Atypical
- Very Atypical
- Not Applicable

16. Although the teachers have already been working with an innovation for some time now, they do not fully understand what the innovation is all about.

- Very Typical
- Somewhat Typical
- Neither Typical nor Atypical
- Somewhat Atypical
- Very Atypical
- Not Applicable

Source: Manning, 1979
THE INDEX OF PERCEIVED ORGANIZATIONAL EFFECTIVENESS
THE INDEX OF PERCEIVED ORGANIZATIONAL EFFECTIVENESS

Instructions: Every educator produces something during his/her working hours. It may be a "product" or a "service." The following list of products and services are just a few of the things that result from schools: lesson plans, community projects, new curricula, student learning, instruction, teacher-parent meetings, athletic achievements, art and music programs.

Indicate your response to each question by checking the appropriate line for each item.

1. Of the various things produced by the people you know in your school, how much are they producing?

   ____ Low Production
   ____ Fairly Low Production
   ____ Moderate Production
   ____ High Production
   ____ Very High Production

2. How good is the quality of the products or services produced by the people you know in your school?

   ____ Poor Quality
   ____ Low Quality
   ____ Fair Quality
   ____ Good Quality
   ____ Excellent Quality

3. Do the people in your school get maximum output from the available resources (money, people, equipment, etc.)?

   ____ Not Efficiently
   ____ Fairly Efficiently
   ____ Not Too Efficiently
   ____ Very Efficiently
   ____ Extremely Efficiently
4. How good a job is done by the people in your school in anticipating problems and preventing them from occurring or minimizing their effects?

   _____ A Poor Job
   _____ A Fair Job
   _____ An Adequate Job
   _____ A Very Good Job
   _____ An Excellent Job

5. How informed are the people in your school about innovations that could affect the way they do their work?

   _____ Uninformed
   _____ Moderately Informed
   _____ Somewhat Informed
   _____ Informed
   _____ Very Informed

6. When changes are made in the methods, routines, or equipment, how quickly do the people in your school accept and adjust to the changes?

   _____ Very Slowly
   _____ Fairly Rapidly
   _____ Immediately
   _____ Rather Slowly
   _____ Rapidly

7. How many of the people in your school readily accept and adjust to the changes?

   _____ Many Less Than Half
   _____ Less Than Half
   _____ Half
   _____ More Than Half
   _____ Nearly Everyone

8. How good a job do the people in your school do in coping with emergencies and disruptions?

   _____ A Poor Job
   _____ A Fair Job
   _____ An Adequate Job
   _____ A Good Job
   _____ An Excellent Job

MULTIPLE LINEAR REGRESSION ANALYSIS COMPUTATIONS
H(0)1 STATISTICAL FINDINGS

**ANALYSIS OF VARIANCE**

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<th>SUM OF SQUARES</th>
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**H(0)2 STATISTICAL COMPUTATIONS**

**DEPENDENT VARIABLE**............................... 59 X(59)
**TOLERANCE**............................................. 0.0100

**ALL DATA CONSIDERED AS A SINGLE GROUP**

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**H(0)3 STATISTICAL COMPUTATIONS**

**DEPENDENT VARIABLE**
- 50 X(59)

**TOLERANCE**
- 0.0100

**ALL DATA CONSIDERED AS A SINGLE GROUP**

**MULTIPLE R**
- 0.2031

**MULTIPLE R-SQUARE**
- 0.0413

**ANALYSIS OF VARIANCE**

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### Stepwise Regression Analysis Computations, All Variables

**Summary Table**

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<th>Variable</th>
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ANALYSIS OF VARIANCE
COMPARING ALL SCHOOLS WITH ALL VARIABLES

GROUP STRUCTURE

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X(59) & COUNT \\
ACHIEVEMENT & 51 \\
NON-EXEMPLARY & 39 \\
EXEMPLARY & 18 \\
\end{array}
\]

CELL MEANS FOR 1ST DEPENDENT VARIABLE (HOUSEHOLD INCOME)

\[
\begin{array}{c|cccc}
Q & ACHIEVEMENT & NON-EXEMPLARY & EXEMPLARY & MARGINAL \\
X(52) (HOUSEHOLD INCOME) & 24520.50000 & 25843.10256 & 23930.77770 & 24037.20052 \\
COUNT & 51 & 30 & 10 & 100 \\
\end{array}
\]

STANDARD DEVIATIONS FOR 1ST DEPENDENT VARIABLE

\[
\begin{array}{c|cccc}
Q & ACHIEVEMENT & NON-EXEMPLARY & EXEMPLARY \\
X(52) (HOUSEHOLD INCOME) & 254.47470 & 31772 & 402.50070 \\
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ANALYSIS OF VARIANCE FOR 1ST DEPENDENT VARIABLE

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CELL MEANS FOR 2ND DEPENDENT VARIABLE (PER-PUPIL EXPENDITURE)

\[
\begin{array}{cccc}
Q & \text{ACHIEVEMENT} & \text{NON-EXEMPLARY} & \text{EXEMPLARY} & \text{MARGINAL} \\
\hline
X(56)(\text{PER-PUPIL EXPENDITURE}) & 3420.43137 & 3537.46154 & 3469.44444 & 3473.69444 \\
\hline
\text{COUNT} & 51 & 38 & 18 & 108 \\
\end{array}
\]

STANDARD DEVIATIONS FOR 2ND DEPENDENT VARIABLE

\[
\begin{array}{cccc}
Q & \text{ACHIEVEMENT} & \text{NON-EXEMPLARY} & \text{EXEMPLARY} \\
\hline
X(56)(\text{PER-PUPIL EXPENDITURE}) & 645.25158 & 1087.38725 & 1018.00244 \\
\end{array}
\]

ANALYSIS OF VARIANCE FOR 2ND DEPENDENT VARIABLE

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>DEGREES OF FREEDOM</th>
<th>SUM OF SQUARES</th>
<th>MEAN SQUARE</th>
<th>F</th>
<th>PROB.</th>
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<tbody>
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CELL MEANS FOR 3RD DEPENDENT VARIABLE (PUPIL TEST SCORES)

\[
\begin{array}{cccc}
Q & \text{ACHIEVEMENT} & \text{NON-EXEMPLARY} & \text{EXEMPLARY} & \text{MARGINAL} \\
\hline
X(56)(\text{PUPIL TEST SCORES}) & 96.18606 & 68.74359 & 87.46111 & 92.04907 \\
\hline
\text{COUNT} & 51 & 38 & 18 & 108 \\
\end{array}
\]

STANDARD DEVIATIONS FOR 3RD DEPENDENT VARIABLE

\[
\begin{array}{cccc}
Q & \text{ACHIEVEMENT} & \text{NON-EXEMPLARY} & \text{EXEMPLARY} \\
\hline
X(56)(\text{PUPIL TEST SCORES}) & 1.33086 & 5.82583 & 6.07178 \\
\end{array}
\]

ANALYSIS OF VARIANCE FOR 3RD DEPENDENT VARIABLE

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<th>PROB.</th>
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CELL MEANS FOR 4TH DEPENDENT VARIABLE (STAFF COMMITMENT)

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<tr>
<td>X(80)(STAFF COMMITMENT)</td>
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COUNT 51 38 18 108

STANDARD DEVIATIONS FOR 4TH DEPENDENT VARIABLE

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<tr>
<td>X(80)(STAFF COMMITMENT)</td>
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ANALYSIS OF VARIANCE FOR 4TH DEPENDENT VARIABLE

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CELL MEANS FOR 5TH DEPENDENT VARIABLE (ORGANIZATIONAL CLIMATE)

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COUNT 51 38 18 108

STANDARD DEVIATIONS FOR 5TH DEPENDENT VARIABLE

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ANALYSIS OF VARIANCE FOR 5TH DEPENDENT VARIABLE

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### Cell Means for 6th Dependent Variable (Staff Innovation)

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<th>Non-Exemplary</th>
<th>Exemplary</th>
<th>Marginal</th>
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</thead>
<tbody>
<tr>
<td>X(62) (Staff Innovation)</td>
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<td>73.41026</td>
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### Standard Deviations for 6th Dependent Variable

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<th>Exemplary</th>
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<tbody>
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<td>X(62) (Staff Innovation)</td>
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### Analysis of Variance for 6th Dependent Variable

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<th>Mean Square</th>
<th>Tail Prob.</th>
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<tbody>
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<td>73.25778</td>
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### Cell Means for 7th Dependent Variable (Organizational Effectiveness)

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<tr>
<td>X(63) (Organizational Effect.)</td>
<td>33.84214</td>
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### Standard Deviations for 7th Dependent Variable

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<tbody>
<tr>
<td>X(63) (Organizational Effect.)</td>
<td>3.21479</td>
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### Analysis of Variance for 7th Dependent Variable

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<td>11.34759</td>
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### CELL MEANS FOR 8TH DEPENDENT VARIABLE (HOUSEHOLD EDUCATION)

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<th>EXEMPLARY</th>
<th>MARGINAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>X(H4)(HOUSEHOLD EDUCATION)</td>
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### STANDARD DEVIATIONS FOR 8TH DEPENDENT VARIABLE

<table>
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<th>ACHIEVEMENT</th>
<th>NON-EXEMPLARY</th>
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<td>X(H4)(HOUSEHOLD EDUCATION)</td>
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### ANALYSIS OF VARIANCE FOR 8TH DEPENDENT VARIABLE

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>DEGREES OF FREEDOM</th>
<th>SUM OF SQUARES</th>
<th>MEAN SQUARE</th>
<th>F</th>
<th>TAIL PROB.</th>
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</thead>
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### TOP ACHIEVING ELEMENTARY SCHOOLS

#### MEAP TEST SCORE RESULTS, 1984-86

26 AUG 87  MICHIGAN EDUCATION ASSESSMENT PROGRAM DATA
15:13:14  STATE DEPARTMENT OF EDUCATION HIS DPS/47 GCOS-8

FILE: AGGREGATED FILE

<table>
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<th>SCHOOL NAME</th>
<th>SCORE</th>
<th>SCHOOL</th>
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**NUMBER OF CASES READ = 72**  
**NUMBER OF CASES LISTED = 72**  
*6 CASES NOT AVAILABLE*
LIST OF REFERENCES


Bennett urges Catholic schools to teach America's "tough kids"! (1988, April). The Herald-Palladium, p. 28.


Michigan State Department of Education. A program to honor 20 Michigan schools, 1985-86.


NAME: David Lee Ratajik
PLACE OF BIRTH: La Porte, Indiana
DATA OF BIRTH: May 22, 1941

EDUCATION:

1963 Bachelor of Arts—Elementary Education
Murray State University
Murray, Kentucky

1964 Master of Arts—Education Administration
George Peabody College of Vanderbilt University
Nashville, Tennessee

1988 Doctor of Education—Education Administration
Andrews University
Berrien Springs, Michigan

PROFESSIONAL EXPERIENCE:

1964 Commissioned officer
on active duty with the United States Army and the
Michigan Army National Guard. Currently holds the
rank of Lieutenant Colonel. Commanded armor and
infantry units from platoon through battalion
level. Staff experiences include personnel,
intelligence, operations, and logistics
assignments.

1966-71 Classroom Teacher
Grand Haven Public Schools
Grand Haven, Michigan

1971-73 Executive Director
Ottawa County
Michigan Education Association

1973- Elementary School Principal
St. Joseph Public Schools
St. Joseph, Michigan

PUBLICATION: "The School Administrator and the Grievance
PROFESSIONAL MEMBERSHIPS:

National Association of Elementary Principals

Michigan Elementary and Middle School Principals Association

Andrews University Chapter, Phi Delta Kappa

Michigan National Guard Association

National Guard Association of the United States