

THE PRINCIPAL AND ACCOUNTABILITY:
A STUDY OF THE RELATIONSHIPS AMONG
ELEMENTARY PRINCIPALS' RATINGS, PRINCIPAL
AUTONOMY, AND STUDENT ACHIEVEMENT

Dissertation for the Degree of Ph. D.

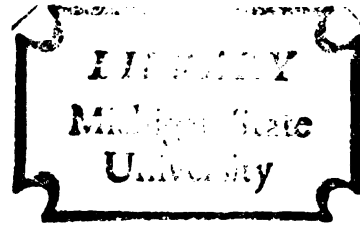
MICHIGAN STATE UNIVERSITY

SHIRLEY JEAN HANSEN

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ABSTRACT

THE PRINCIPAL AND ACCOUNTABILITY: A STUDY OF THE RELATIONSHIPS AMONG ELEMENTARY PRINCIPALS' RATINGS, PRINCIPAL AUTONOMY, AND STUDENT ACHIEVEMENT

By

Shirley Jean Hansen

Purpose of the Study

With the growing demand for educational accountability has come a concomitant need to determine the degree to which student learning, or the lack of it, could be attributed to educators. The major purpose of this study was to respond to that need by investigating the relationship between the perceived effectiveness of principals and their associated students' achievement.

With the vesting of responsibility inherent in accountability has come a counter demand for autonomy; therefore, the study also sought to provide descriptive data regarding the relative autonomy a principal is perceived to have. The extent to which this autonomy was related to principals' effectiveness ratings and to student achievement was also investigated.

The degree to which the principals' tenure in position affected the relationship between effectiveness and achievement was an additional purpose of the study.

Procedures

The population of Michigan K-12 school districts with at least two elementary schools was stratified by Community Types; i.e., Metropolitan Core, City, Town, Urban Fringe, and Rural. Community Type had been previously defined by the Michigan Department of Education and the districts listed accordingly.¹ Since Community Types were indirectly related to socioeconomic conditions, the stratification was used in an effort to control this variable.

Disproportionate sampling of the strata was done to assure a sufficient number of cases in each stratum. The total population was used in two strata and simple random sampling was used in the other three strata for a total sample of 159 elements. To assure that each school selected in the study was free from matters of mutual influence common to schools from the same district, multi-stage cluster sampling was used with the district in the first stage and elementary schools with at least grades 1 through 4 in the second stage. 132 responses were received for a response rate of 83%.

The Administrator Profile Survey was used to obtain information from the respondents. The instrument included the Administrator Image Questionnaire developed at Western Michigan University to measure principal effectiveness and an adaptation of McCleary and Hencley's inventory² to assess principal autonomy.

The study received the endorsement and assistance of the Michigan Association of Elementary School Principals.

The principals' immediate superiors were selected to judge the principals' effectiveness and autonomy. First, because the accountability pressures associated with the position in day-to-day operations and consideration of promotions or demotions rested with the superiors. Secondly, the superiors through policies and expectations were in a position to prescribe the principals' roles as well as describe the principals' effectiveness.

Appropriate individual student reading achievement scores were secured from the Michigan Department of Education. School composite mean percentages were hand-calculated for all elements in the study.

Simple correlations of effectiveness with achievement, autonomy with achievement, and autonomy with effectiveness were tested using the Pearson product-moment correlation coefficients. Tests holding SES constant in one instance and tenure in position for another used partial correlations. The combined effect of autonomy and effectiveness on achievement was tested with multiple correlations and a regression equation was also set up to test their predictability on achievement. An .05 alpha level of significance was accepted for all statistical measures.

Major Findings

1. No significant correlation could be found in the data between principal effectiveness and achievement by Community Types. Effectiveness plotted against achievement showed that a curvilinear relationship did not exist between the variables. When held constant, the principals' tenure in position did not affect the

effectiveness/achievement correlation significantly. Partialling out the SES variable did not result in a significant correlation between effectiveness and achievement for the entire sample.

2. Principals' autonomy varied by function. Principals had the most autonomy in human relations and process aspects of their jobs. They had almost complete autonomy in school organization and relatively high autonomy in instructional development and in school--community/parent relations. Principals had the least autonomy in determining school plant needs. Decision-making authority for resources in general was relatively low.

3. Principals in Metropolitan Core Community Type were perceived to be least effective and to have the least autonomy while principals in City Community Type were considered most effective and had the most autonomy. Only principals in the City Community Type had a significant correlation between effectiveness and autonomy.

4. The relationship between autonomy and achievement by Community Type did not show a significant correlation.

5. When autonomy by indicators and effectiveness were multiple correlated with achievement the coefficients were significant for all Community Types tested. Using a linear regression model, variation in principal effectiveness and autonomy predicted variations in achievement.

6. Superiors perceived elementary principals across all types of communities most effective in attitudinal areas; e.g.,

attitude toward their jobs, supportiveness, and appearance, and least effective in the skill areas; e.g., ability to delegate responsibility, to evaluate, and to communicate expectations.

¹Michigan Department of Education, "Local District and School Report: Explanatory Materials," Michigan Educational Assessment Program, Third Report, 1972-73, Lansing, Michigan.

²Lloyd E. McCleary and Stephen P. Hencley, Secondary School Administration (New York: Dodd, Mead, and Co., 1965).

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By

Shirley Jean Hansen

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To Jim

Whose understanding, support,
and love made it possible
and gave it meaning

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To Virginia Wiseman, master guide through the doctoral labyrinth, and Bob Carr, kind interpreter of statistical data and computer language, I am especially indebted.

The endorsement and assistance afforded this study by the Michigan Association of Elementary School Principals is greatly appreciated. I further wish to thank Dr. E. P. Keller, Executive Secretary; Beryl Gavitt, Administrative Assistant; and other members of that office for their courtesy and enthusiastic cooperation.

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Chapter I

INTRODUCTION

Statement of the Problem

A prior logic suggests that schools exist and educators profess on the premise that the educational institution as presently constituted effects some measure of student learning. The extent of this relationship is at the heart of accountability concerns. Within this rapidly expanding movement, considerable attention is being given to the degree to which student learning can be attributed to the students' school and that school's personnel.

Ornstein comments,

In our efforts to introduce the concept of accountability, we are aiming at improving the general educational process. Any examination of student performance should begin with an examination of the effectiveness of professional educators, especially the teachers and school administrators.¹

If Ornstein's concern is directed toward the building administrator, the problem becomes one of examining the relationship between the degree to which a principal is perceived to be functioning effectively with regard to identifiable tasks and the achievement level of the students associated with that principal. It is to this problem that this study is directed.

¹Allan C. Ornstein, Accountability for Teachers and School Administrators (Belmont, California: Fearon Publishers, 1973), p. 15.

Background of the Problem

Accountability as a term in education is relatively new, the concept is not. Socrates was held accountable for his teachings to the extent that in 339 B.C., he drank hemlock rather than denounce his teachings. The Bible clearly sets forth the degree to which Jesus Christ was held accountable for what He taught. In Victorian England, the New Castle Report of 1858 laid the foundation for a procedure later to be known as "pay for results." The Report stated, ". . . the examination will exercise a powerful influence over the efficiency of the schools."²

In America, formal accountability in education can be traced back to the "Old Deluder Satan Law." In 1647, the Great and General Court of the Massachusetts Bay Colony insisted every child in the Colony be taught to read and write. "It held the town accountable for providing this instruction out of its own funds. And it backed up its mandate with an annual fine of five pounds to be levied on any town that failed to comply."³

In the Nineteenth Century, the famous Scopes Monkey Trial glaringly brought the concerns of teacher accountability to the American public's attention.

²Lindley J. Stiles, "Policy and Perspective," The Journal of Educational Research, LXIV (May-June, 1971), Inside Cover.

³Henry S. Dyer, "The Role of Evaluation in Accountability," Conferences on Educational Accountability (Princeton, New Jersey: Educational Testing Service, 1971), p. F-2.

As Sidney Marland, former Assistant Secretary for Education for the Department of Health, Education, and Welfare, put it in 1972, ". . . accountability has always been with us. Until now it did not have a name."⁴

What is new in the educational accountability concept is the shift in emphasis from responsibility for what and how subjects are taught to responsibility for those teachings being absorbed by the learner. The growing concept that the educator should be responsible for what the student learns is concomitant with the evolution of the accountability movement. At the core of this movement is the assessment of the degree to which a student has progressed toward specified goals and objectives.

Implicit in the term accountability is the act of determining the locus of this responsibility. Ornstein and Talmadge have stated,

Surely, most people agree that everyone, including teachers and school administrators, should be held accountable for their work. But what many educators object to, even fear, is the over-simplified concept that defines accountability as the sole responsibility of the teacher or principal.⁵

This fear has been realized in Michigan where administrative positions and ratings have been and are predicated on assessment scores. Read reported in 1973,

⁴Sidney P. Marland, "Accountability in Education," Teachers College Record, LXXIII, No. 3 (February, 1972), 345.

⁵Allan C. Ornstein and Harriet Talmadge, "The Rhetoric and Realities of Accountability," Washington, D.C.: National Education Association Reprint. Adapted from Reforming Metropolitan Schools by Ornstein, Daniel R. Levine, and Doxey A. Wilkerson, Goodyear, 1974.

Already the Michigan Assessment Program has affected adversely many competent educators. Recently two highly respected, experienced and well-qualified black principals were placed on probation because the state test norms for their schools were in the lower percentiles. Originally, the local board of education proposed to dismiss these principals but public pressure forced reconsideration.⁶

House, Rivers, and Stufflebeam in their evaluation of the Michigan Accountability Model reported, "Some principals have been told to raise the scores of their schools or lose their jobs."⁷

Martin⁸ reports that one regional board in Detroit went so far as to recommend all principals be rated unsatisfactory because student achievement was below the norms. When queried about the inclusion of Detroit in this study, Rankin⁹ said application could be made to do so, but he would not recommend nor would he support such a study at this time since relating principals' ratings to student achievement was such a sensitive area.

The Michigan Department of Education in their Staff Response to the Report: An Assessment of the Michigan Accountability System to House et al. state,

⁶Lawrence Read, "An Assessment of the Michigan Assessment," in School Evaluation: The Politics and Process, ed. by Ernest R. House (Berkeley: McCutchan Publishing Corp., 1973), p. 67.

⁷Ernest R. House, Wendell Rivers, and Daniel Stufflebeam, "An Assessment of the Michigan Accountability System," Phi Delta Kappan, LV, No. 10 (June, 1974), 667.

⁸Thomas Martin, Director of Personnel, Detroit Public Schools. In conversation, October, 1974.

⁹Stuart C. Rankin, Asst. Superintendent for Research and Development, Detroit Public Schools. In conversation, October, 1974.

Evidently, the panel believes that achievement test data have no place in teacher evaluations under any circumstances. The Department agrees that such data should not be the sole criterion for releasing a teacher or administrator, but it would be unwise to say that it could not become a component of such a system.¹⁰

As a result of their study, Chabotar, Sederburg, and Lad flatly state, "The Michigan educational accountability model holds administrators and teachers responsible for results."¹¹

Thus, there appears to be a growing assumption that a relationship exists between the effectiveness of a elementary principal and the students' achievement, more specifically Michigan principals and the students' achievement scores on the Michigan Educational Assessment Program tests.

As previously noted, accountability implicitly seeks a locus of responsibility. Any consideration of the principal's role in an accountability mode needs also to consider the latitude the principal has to execute the functions for which she is held responsible. As Johns has said in reviewing the financial implications in accountability,

¹⁰Michigan Department of Education, A Staff Response to the Report: An Assessment of the Michigan Accountability System (Lansing, Michigan: Michigan Department of Education, 1974), p. 18.

¹¹Kent J. Chabotar, William A. Sederburg, and Lawrence J. Lad, "Implementing Education Accountability: The Michigan Experience," Report No. 31 (East Lansing, Michigan: Michigan State University, Center for Rural Manpower and Public Affairs, 1973), p. 19.

Accountability, a comparatively new and sometimes disturbing word in education, is in order today. For every dollar put into education comparable value should come out. . . . Professional educators should carefully evaluate the effectiveness of their activities and should have the necessary freedom to make changes and adaptations whenever necessary to increase productivity and quality.¹²

Unlike so many short-lived slogans in the rhetoric of education, the concept of accountability is rapidly becoming cemented in legislative action. Government responsibility once assumed is seldom relinquished. As Mr. Chief Justice Burger observed in delivering the majority opinion in Lemon v. Kurtzman, "We have already noted that modern governmental programs have self-perpetuating and self-expanding propensities."¹³

In the fall of 1972, 23 states had reportedly passed legislative acts featuring some aspect of accountability.¹⁴ By August, 1973, the count was at 27 states.¹⁵ The editors of Phi Delta Kappan in June, 1974, tallied 33 states that had some form of

¹²Roe L. Johns and Kern Alexander, "Future Directions for School Financing," National Educational Finance Project. Gainesville, Florida, 1971, p. 4.

¹³Mr. Chief Justice Burger, Lemon v. Kurtzman (Glen Echo, Maryland: The Horace Mann League of the United States of America, Inc.), p. B-3311.

¹⁴Phi Delta Kappan Editor's Page, "Holding the Accountability Movement Accountable," Phi Delta Kappan, LV, No. 10 (June, 1974), 657.

¹⁵State Educational Accountability Repository, "Legislation by States: Accountability and Assessment in Education," (Madison, Wisconsin: Wisconsin Department of Public Instruction, 1973), p. vii.

accountability legislation and reported, ". . . another dozen states are currently considering action of some kind."¹⁶

Accountability gained a firm foothold in Michigan with the enactment of Section 14, Public Act No. 307 in August of 1969. The act was initiated by the Michigan State Department of Education and authorized the Department to conduct a statewide educational assessment program. In 1970, the governor supported an act, Public Act No. 38, which mandated a more comprehensive assessment program.

Act 38 requires the Michigan State Department of Education to develop a program which shall:

- (a) Establish meaningful achievement goals in the basic skills for students, and identify those students with the greatest educational need in these skills.
- (b) Provide the state with the information needed to allocate state funds and professional services in a manner best calculated to equalize educational opportunities for students to achieve competence in such basic skills.

This section of the Act clearly demonstrates the legislature's intent to direct the Michigan State Department of Education to establish achievement goals (objectives), assess needs and to allocate state funds in an effort to equalize educational opportunity. Accountability in Michigan is designed for public accounting and to provide data for compensatory allocation of funds.

Considering the magnitude of the accountability movement in education--its political significance, its instructional impact, and sheer dollar expenditure--remarkably little supportive research

¹⁶Phi Delta Kappan, loc. cit., Editor's Page.

has been done. As Neidermeyer and Klein commented in 1972, ". . . virtually no research on accountability has been conducted,"¹⁷ and as the editors of the Phi Delta Kappan observed in their June, 1974, issue, "For all of the interest and the variety of accountability plans being developed, we know very little as yet of their success."¹⁸

Lack of research in accountability extends to the more narrow concern of this study, the relationship of the principal's effectiveness to student achievement scores. Four studies by Levine (1966),¹⁹ Lutz and Evans (1968),²⁰ Weber (1971),²¹ and Clark (1972)²² focused primarily on other educational concerns and often limited their studies in scope, but all did find that school administrators played a significant role in school achievement. A more recent study directly related to state assessment scores, limited to reading results and to only two schools, was

¹⁷Fred Neidermeyer and Stephen Klein, "An Empirical Evaluation of a District Teachers' Accountability Program," Phi Delta Kappan, LIV, No. 2 (October, 1972), 100.

¹⁸Phi Delta Kappan's, loc. cit., Editor's Page.

¹⁹Daniel U. Levine, Raising Standards in the Inner City Schools, Council for Basic Education, Occasional Papers #11 (December, 1966).

²⁰Frank Lutz and Seymour Evans, The Union Contract and Principal Leadership in New York City Schools (New York: The Center for Urban Education, December, 1968).

²¹George Weber, Inner-City Children Can be Taught to Read: Four Successful Schools, Council for Basic Education, Occasional Papers #18 (October, 1971).

²²Kenneth B. Clark, The Educationally Deprived (New York: Metropolitan Applied Research Center, 1972).

conducted by the State of New York Office of Education Performance Review. This in-depth study of two New York City inner-city schools with markedly different state assessment reading scores did provide some controls of the out-of-school variables by matching the two schools to minimize the impact of social and cultural factors. The findings of the New York study was consistent with the work of Levine, Lutz and Evans, Weber, and Clark; and found "Quality and attitude of the administration seemed to be the only real difference between the two schools."²³

These studies, then, support the assumption that there is a relationship between administrative capabilities and student achievement. However, a search of the research literature did not reveal any study which specifically set out to explore this relationship. Therefore, there is a need to determine if a relationship on a broad scale does exist between the principal's perceived effectiveness and student achievement and to see if this relationship is modified by the principal's perceived autonomy.

Statement of the Purpose

The purpose of this study is to contribute empirical evidence to the field of educational administration and to the accountability movement as to the relationship between principal effectiveness and student achievement. The primary focus of the

²³State of New York Office of Education Performance Review, "School Factors Influencing Reading Achievement: A case Study of Two Inner City Schools" (Albany, New York: New York State Education Department, March, 1974).

study is to substantiate or negate the hypothesis of a significant positive correlation between ratings of principals' effectiveness and student achievement, more particularly Michigan elementary principals and student achievement as measured by the Michigan Educational Assessment Program reading test, Grade 4.

The study also seeks to provide descriptive data regarding the relative autonomy of the building principal as perceived by the principal's superior with reference to seven specific functions of the principalship. It further explores the extent to which this perceived autonomy is related to the principal's ratings and to student achievement.

The work of Coleman et. al.,²⁴ Mosteller and Moynihan,²⁵ and Jencks²⁶ suggest a strong relationship exists between student achievement and the student's socioeconomic background. Since student achievement is a major component of the hypotheses being examined, a further purpose of the study is to investigate the degree to which the correlations vary by socioeconomic status of the schools under study.

²⁴James Coleman et al., Equality of Educational Opportunity Survey (Washington, D.C.: United States Department of Health, Education and Welfare, U.S. Government Printing Office, 1966).

²⁵Frederick Mosteller and Daniel P. Moynihan, eds., On Equality of Educational Opportunity (New York: Random House, 1972).

²⁶Christopher Jencks, Inequality (New York: Harper and Row, 1972).

Research Hypotheses

Hypothesis 1

A positive correlation exists between the effectiveness of an elementary principal as rated by the principal's superior and the associated school's student achievement as measured by the Grade 4 Michigan Educational Assessment Program, 1973-74, test in reading within each of the Michigan Department of Education Community Types; Metropolitan Core, City, Town, Urban Fringe, and Rural.

Hypothesis 2

Correlations between the effectiveness of a principal as rated by the principals' superiors and student achievement as measured by the Grade 4 Michigan Educational Assessment Program, 1973-74, test in reading will be significantly different in the two Michigan Department of Education school district Community Types, Metropolitan Core and Urban Fringe.

Hypothesis 3

A positive correlation exists between the effectiveness of an elementary principal as rated by the principals' superiors and the degree of autonomy the superiors believe the principals have within each Community Type.

Hypothesis 4

A positive correlation exists between the degree of autonomy superiors believe principals have and the associated schools'

student achievement as measured by the reading test Grade 4 of the Michigan Educational Assessment Program, 1973-74, within each Community Type.

Hypothesis 5

A proportion of the variance of student achievement as measured by the reading test, Grade 4, Michigan Educational Assessment Program, 1973-74, can be explained by the multiple correlation of principal effectiveness and autonomy as perceived by the principals' superiors within each Community Type.

Hypothesis 6

The degree of correlation between the effectiveness of principals as rated by the principals' superiors and student achievement as measured by the Grade 4 Michigan Educational Assessment Program, 1973-74, test in reading will be modified by the principal's tenure in position within each Community Type.

Definition of Terms

Accountability: The process-responsibility concept used in Michigan and defined by Porter, ". . . a quality or state of education whereby educational institutions take responsibility for ensuring that their students reach agreed-upon and clearly-defined educational objectives."²⁷

²⁷John Porter, "The Future of Accountability," Conference on Educational Accountability (Princeton, New Jersey: Educational Testing Service, 1971), p. J-12.

Assessment: The process of ascertaining achievement levels of students, confined in this study to mean paper and pencil tests standardized in content, format and administration. Assessment and state assessment are also used to refer to the Michigan Educational Assessment Program tests.

Autonomy: The quality or condition of self-governance, auto-regulation, and self-modification.²⁸

Community types: The five categories established by the Michigan Department of Education in 1971 with respect to community size, proximity to metropolitan core and indirectly to socioeconomic status of the community; e.g., Metropolitan Core, City, Town, Urban Fringe, and Rural.²⁹

Criterion-referenced test: A measured learner performance compared to some specified behavioral criterion of proficiency.³⁰ Used synonymously with criterion-referenced measurement.

Effective(ness): For the purposes of this study, effectiveness will mean the perceived degree of achieving specified job competencies.

²⁸Arthur L. Costa, "Who's Accountable to Whom?" Educational Leadership, XXVIII, No. 1 (October, 1970), 15-19.

²⁹The five Community Types was employed in the 1970 U.S. Census data. For definition by type see Michigan Department of Education, 1972-73 Third Report, Michigan Educational Assessment Program, "Local District and School Report: Explanatory Materials," pp. 31-32.

³⁰William A. Mehrens and Irvin J. Lehmann, Measurement and Evaluation in Education and Psychology (New York: Holt, Rinehart and Winston, Inc., 1973), p. 63.

Michigan Accountability Model: A cyclical process involving six steps: (1) Goals, (2) Performance Objectives, (3) Needs Assessment, (4) Delivery Systems, (5) Evaluation, and (6) Recommendations.³¹

Michigan Association of Elementary School Principals (MAESP): A voluntary organization of elementary principals in the State of Michigan.

Michigan Educational Assessment Program (MEAP): The assessment program initiated by the Michigan Department of Education in 1969.³² Concern in this study is directed only to the Grade 4 test in reading administered in 1973-74.³³

Michigan School District: For purposes of this study, a K-12 school district in Michigan with at least two elementary schools, each school encompassing at least grades 1-4, or their equivalent.

Objective: A description of the behavior expected of a learner after instruction.³⁴ ". . . identifies certain indicators directly related to a specific goal area and for which accurate data

³¹Michigan Department of Education, "A Position Statement on Educational Accountability," (Lansing, Michigan: Michigan Department of Education, 1972), pp. 2-3.

³²Michigan Department of Education with Educational Testing Service, "Technical Report of Selected Aspects of the 1969-70 MEAP," (Lansing, Michigan: Michigan Department of Education, 1971).

³³Michigan Department of Education, 1973-74 First, Second, and Third Reports, Michigan Educational Assessment Program (Lansing, Michigan: Michigan Department of Education).

³⁴Robert H. Davis, Lawrence T. Alexander, and Stephen L. Yelon, Learning System Design (New York: McGraw-Hill Book Company, 1974), p. 29.

related to a specific goal area and for which accurate data may be collected."³⁵ The following terms are used in the study synonymously with objective and with each other: performance objective, behavioral objective, educational objective, and instructional objective.³⁶

Objective-Referenced Test (ORT): A specific form of the MEAP initiated in 1973-74 to assess performance of Michigan students on selected performance objectives in reading and mathematics. The test also included a Word Relationships section used by the Michigan Department of Education as an indicant of verbal aptitude for their research purposes, but will not be used in this study.³⁷

Principal: The administrator of a school, confined in this study to an elementary school with a minimum of grades 1-4, and who occupied that principalship in the 1972-73 and 1973-74 school years.

Socioeconomic status (SES): Home and community social and economic status using the Bureau of Census accepted indicators of

³⁵Michigan Department of Education, "Objectives and Procedures, 1973-74 MEAP, First Report," (Lansing, Michigan: Department of Education), p. 2.

³⁶The reading objectives tested in the MEAP-ORT, 1973-74, as presented in Appendix A provide examples.

³⁷Michigan Department of Education, 1973-74 MEAP, First Second and Third Reports (Lansing, Michigan: Department of Education).

head of household's occupation, level of educational attainment of the father and the mother, and the total family income.³⁸

Superior: For purposes of this study, the superordinate to whom the principal is directly responsible and who ordinarily rates the principal's performance; used in this study interchangeably with supervisor.

Instrumentation

The questionnaire to be used in the study, Administrator Profile Survey, will seek data in three major areas; autonomy, effectiveness, and socioeconomic status. The first two will pertain to the principal of the selected school and the latter refers to the school's clientele.

The autonomy portion of the survey will be comprised of seven administrative functions adapted from the inventory used by Henoley and McCleary.³⁹ These functions are personnel, organization, building budget, curriculum development, instructional development, school-community/parent relations, and school plant.

The principal's effectiveness will be assessed by using the Administrator Image Questionnaire developed at the Educator Feedback Center at Western Michigan University.⁴⁰ In order to

³⁸U.S. Bureau of the Census, Methodology and Scores of Socioeconomic-Status, Working Paper No. 15 (Washington, D.C.: U.S. Bureau of the Census, 1963).

³⁹Lloyd E. McCleary and Stephen P. Henoley, Secondary School Administration (New York: Dodd, Mead, and Company, 1965), pp. 73-102.

⁴⁰Educator Feedback Center, Western Michigan University, Kalamazoo, Michigan.

maintain the integrity of the instrument and rely on data from its previous usage, the instrument is modified slightly by necessary changes in instructions only.

The third major component of the instrument is the portion that requests data on the heads of the household occupations, the parents' educational attainment, and the family income to derive a socioeconomic status score for the school attendance area. This section of the instrument is based on the U.S. Bureau of Census Working Paper 15.⁴¹

The demographic data requested in the instrument is the length of the principal's tenure in position and the names of the other schools the principal may administer. The tenure in position is treated as a variable in the study. The school names serve to identify the other schools for which assessment data will be needed.

A detailed description of the development of the entire instrument and the supporting rationale is presented in Chapter III. A copy of the Administrator Profile Survey can be found in Appendix B.

Assumptions of the Study

The following assumptions are made by the researcher in the implementation of this study:

1. The respondents' answers to the survey questions represent honest appraisals, and the ratings reflect their considered

⁴¹U.S. Bureau of the Census, op. cit.

opinion of the principal with regard to each item in the instrument.

2. Confidentiality to the respondents was sufficiently assured that the lack of anonymity will not bias their response.

3. By using the entire population in two strata and random sampling in the remaining strata, statistical inference can be used to generalize the findings to the sampled population.

4. The 1973-74 MEAP-ORT reading test is sufficiently reliable and valid to provide a measure of reading achievement. Further, the faults attributed to it⁴² are relatively equal in their application to all students taking the test and do not detract from the use of this test for the purposes of this study.

5. The Michigan Department of Education Community Types provide generally homogeneous groupings of school districts with respect to community characteristics.

6. The students' socioeconomic status is a viable consideration in exploring the relationship between principal effectiveness and student achievement.

Delimitations of the Study

This study addresses itself to the relationship between the principal's effectiveness as measured by "Administrator Image Questionnaire," principal's autonomy, and student achievement as measured by the 1973-74 MEAP-ORT reading test.

⁴²See Chapter III, "Measurement" for discussion of the MEAP-ORT reliability, validity, and general critique.

The observable units of the study are principals of Michigan public schools who were in the principalship of the selected school in the 1972-73 and 1973-74 school years and who administer a school with at least grades 1-4, or their equivalent. Sex, age, teaching responsibilities, and educational attainment of the population of principals are not considered variables. Neither are the administering of more than one school nor the school(s)' enrollment size considered factors in the study.

The study examines the effectiveness of the principals as perceived by their superiors in terms of the characteristics identified in the Western Michigan University administrative rating form, "Administrator Image Questionnaire." While district policies and relative emphasis in principalship functions are not universally the same and this instrument, or any instrument, does not necessarily reflect the unique characteristics of any given district, no other criteria of administrative effectiveness are considered in this study. While real world situations often evoke disparity in the relative emphasis of the criteria, for the purposes of this study all items on the instrument are equally weighted.

The principal's autonomy is determined entirely by her superior's perceptions with regard to the seven functions listed in the instrument. No other criteria or judgment is used to assess the principal's relative autonomy. All functions are given equal weighting.

The rating a principal receives rests upon the perceptions of the principal's superior and is confounded by the expectations

the superior has, the skill the superior has in observation, and in the time and understanding the superior has to get the job done. All these variances recognize that the superiors are not likely to be equally qualified as raters. However, the total inclusion of the population of districts in two cases and the random selection of districts in the other cases should reduce the effect of this factor. It should also be noted that it is real world conditions that the study proposes to measure. No one else in the district has responsibility for the elementary principals and no one coming in from outside would have the same mental set resulting from on the job associations. It is the superior's imposed policies, constraints, expectations and perceptions that the principal must live with each day on the job and upon which the functions of a specific principalship are predicated.

For purposes of this study, student achievement results of the 1973-74 Grade 4 Michigan Educational Assessment Program-Objective-Referenced Test in reading are the sole student achievement measure utilized. In the selected schools, scores of all students meeting the Department criteria for the administration of the tests are used. If the principal is associated with more than one school, assessment scores from all schools within her administration are considered but not pooled.

The multiplicity of accountability programs prompted Chabotar et. al. to state, "What accountability is, therefore, depends on the kind of accountability program that is constructed

and implemented."⁴³ Since this study is limited to the Michigan elementary principal and the Michigan Accountability Model, this study uses Chabotar's resolution of the dilemma. The terminology and theory of accountability used in the research is confined to those used by the Michigan Superintendent of Public Instruction, adopted by the Michigan State Board of Education, and/or stated by the Michigan Department of Education.

Statements made by the state bodies cited above are taken at face value and are used in the study without equivocating their merit--with the exception that the strengths and weaknesses in the MEAP identified by scholars and pertinent to this study are set forth.

This study will not attempt to evaluate the Michigan Accountability Model, or the MEAP-ORT as a component of it.

Inferences from the data extend only to the sampled populations. Correlation statistics employed in the analysis of the data used in this study do not necessarily mean causation.

In Chapter 2, the literature pertinent to the study is reviewed. This review includes:

1. Studies on accountability with emphasis on the Michigan Accountability Model,
2. Function of measurement in accountability, and more specifically the history and analysis of the Michigan Educational Assessment Program,

⁴³Chabotar et. al., op. cit., p. 1.

3. Characteristics of the elementary principalship as related to principal autonomy,
4. Findings of studies examining the relationship between the elementary principal and student achievement.

The research design is detailed in Chapter 3. The testable hypotheses are stated. The explicit steps for drawing the sample, securing the data, and analyzing that data are specified.

In Chapter 4, an analysis of results with reference to the hypotheses and interpretation of the data are presented.

Summary and conclusions derived from an interpretation of data gathered in the study and from information found in the review of the literature are set forth in Chapter 5. In addition, implications for future research are also stated.

Chapter II

SELECTED REVIEW OF THE LITERATURE

The related literature review has been presented in four categories: (1) accountability and the Michigan Accountability Model; (2) measurement in accountability and the Michigan Educational Assessment Program; (3) the elementary principalship as it relates to autonomy; and (4) research relating principals' effectiveness to student achievement. These categories have not been presented with the intention of providing a detailed description of these areas, but rather are offered as an encapsulated form to provide a better understanding of the conditions in which the investigation of the study was undertaken.

Accountability

As the term accountability has been applied to education, it has developed as a broad concept varied in its interpretation and implementation. Lessinger, who is credited with having popularized the term accountability in education, has defined it, ". . . the process designed to ensure that any individual can determine for himself if the schools are producing the results promised."¹

¹Leon M. Lessinger, "Accountability in Public Education," Today's Education, LIX, No. 5 (May, 1970), 52.

Allen has noted, "Accountability is more often than not considered in the narrow sense of assessment and measurement rather than in its broader and more definitive meaning of being responsible and liable."²

Estes reacting from a superintendent's perspective gave accountability more of a legal-political tone, "Accountability is, in essence, a statement of policy. It states that educators will accept responsibility for their performance--or lack of it. It implies that there is a contract between school personnel and the public"³

The over-riding political tone of accountability has been noted by Kearney and Huyser, "One of the major limitations in any state-wide assessment arises from inherent political considerations. 'Accountability' is essentially a political word; assessment programs are essentially political programs."⁴

Part of the answer to what accountability is seems to rest in its origins. In 1971, at the Chicago Conference on Educational Accountability, Allen raised the question, "Why accountability

²James E. Allen, Jr., "Public Expectations," Conferences on Educational Accountability (Princeton, New Jersey: Educational Testing Service), June, 1971, p. E-2.

³Nolan Estes, "Issues in Implementation," Conferences on Educational Accountability (Princeton, New Jersey: Educational Testing Service), June, 1971, p. E-2.

⁴C. Philip Kearney and Robert J. Huyser, "The Politics of Reporting Results," in School Evaluation: The Politics and Process, ed. by Ernest R. House (Berkeley: McCutchan Publishing Corp., 1973), p. 49.

now?" He explored further, asking, "Is its popularity a response to outside criticism and lagging support, or is it a response to an inner sense of failure?"⁵

In answer to Allen's questions, several writers⁶ have seen accountability primarily dating from the passage of the Elementary Secondary Education Act (ESEA) in 1965. While Section 205 of ESEA did not hold the school systems accountable, it did call for an accounting, an evaluation of progress. The students of accountability who trace its recent upsurge to this Act pointed to the millions of dollars the Act provided to buy more sophisticated technology, more materials, greater diversity of materials, higher salaries, and more professional services--all things educators had long thought would enhance learning. Educators had long lamented their lack of resources and felt greater expenditures would show demonstrable results. ESEA provided much of that money, but the measurable results in achievement scores have been discouraging. As Estes, Dallas Superintendent, remarked in 1971, after five years and five million dollars they had little to show for it.⁷

Stake has emphasized dollars in the birth of accountability, but, noting other problems as well, stated "Increasing educational

⁵Allen, op. cit., p. E-1.

⁶See Chabotar et al., op. cit., pp. 6-7; Dyer, op. cit., p. F-5; and Mark R. Shedd, "Issues in Implementation," Conference on Educational Accountability (Princeton, New Jersey: Educational Testing Service, 1971), Part C.

⁷Estes, op. cit., p. D-4.

mounting frustration with social and political problems have brought higher demands for answers to an important question: what are we getting for our education dollar?"⁸

Accountability also seems to be a product of changing expectations for the schools. According to Lessinger, part of the impetus for educational accountability has come from this change. Instead of ". . . the old screening, sorting and reject system that put students somewhere on the bell-shaped curve stretching from A to F . . .," he has seen education developing in response to the public shift to a "zero reject system" where certification assures a student can perform specific tasks.⁹

This shift has also been reflected in the increased use of criterion-referenced tests as opposed to norm-referenced tests. While the latter served as a comparative sorter on the curve, the former is used in response to the demand to know if certain objectives have been met.

Failure in schools has long been assumed to rest with the student, not the school. This condition has prompted Davies to remark, ". . . education is probably the only area of our free-

⁸Robert E. Stake, "Measuring What Learners Learn," in School Evaluation: The Politics and Process (Berkeley: McCutchan Publishing Corp., 1973), p. 193.

⁹Leon M. Lessinger, "Accountability for Results: A Basic Challenge for America's Schools," in Accountability in Education, Lessinger and Ralph W. Tyler, eds. (Orthington, Ohio: Charles A Jones Publishing Company, 1971), pp. 8-9.

enterprise system in which the consumer rather than the producer is held responsible for the quality of the product."¹⁰

Educational accountability proponents have sought to turn this around, to determine how well the consumer is served, and to place the onus of failure on the "producer."

Allen summed up the socioeconomic climate that spawned accountability,

The push for accountability is inevitable. The circumstances of our times--loss of public confidence, taxpayer revolt, student unrest, neglect of the disadvantaged, and demands for social justice--have forced accountability to the very top of priorities.¹¹

It is apparent that the desire or demand for accountability in education has come from many directions--mushrooming as few educational concepts have. Lessinger recently told an Atlanta audience that in the last four years over 4000 books and articles have been written about accountability.¹² So many have rushed into the breach opened by the pressures for accountability and in

¹⁰Don Davies, "Toward a New Consumerism," in Accountability for Teachers and School Administrators, ed. by Ornstein (Belmont, California: Fearon Publishers, 1973), p. 129.

¹¹James E. Allen, Jr., and Donald B. Woodington, "Accountability from the Viewpoint of a State Commissioner of Education," Phi Delta Kappan, LIV, No. 2 (October, 1972), 91.

¹²A copy of the proceedings is available from Dr. B. Frank Brown, Director, Information and Services Programs, /I/D/E/A/, P. O. Box 446, Melbourne, Florida.

such a short time that no clear concise concept of accountability or its instrumentation has emerged. As Turnbull has lamented, "So great is the interest--and so meager the clarification of the issues and problems involved . . ."¹³

Concern for the semantical and operational problems imbedded in the movement has prompted Dyer to comment,

The term accountability has lately become attached to so many different schemes for the conduct of instruction and the management of schools that it is in danger of losing any usefulness as a means of rational communication. It figures prominently in discussion related to community control for the schools. It is invoked as one of the goals to be achieved through such devices as performance contracting, education vouchers, merit pay, and differentiated staffing. . . . It is a theme that runs through much of the theorizing that seeks to apply to school administration the techniques packaged under labels like 'planning-programming-budgeting,' 'cost-effectiveness,' and 'management by objectives.' This diversity of usage underlines an important fact: accountability is not a simple concept.¹⁴

The vast array of programs seeking their way into education under the umbrella of accountability has caused the "Father of Accountability," Lessinger, to comment, "I refuse to be held accountable for accountability and all the things that are done in

¹³William W. Turnbull, "Preface," Conference on Educational Accountability (Princeton, New Jersey: Educational Testing Service, 1971), A-1.

¹⁴Henry S. Dyer, "How to Achieve Accountability in the Public Schools," Phi Delta Kappa Fastback (Bloomington, Indiana: Phi Delta Kappa Educational Foundation, 1973), p. 7.

its name. Like all movements, it had to spread and shift until it fits everybody's predilection."¹⁵

Accountability Implementation

Much of the literature on accountability has been couched in vague general terms. Early advocate Lessinger asserted, ". . . [the] public expects greater relevance in what we teach."¹⁶ However, Bowers has pointed out that Lessinger treated the public as a "unitary entity that shares a common set of values and expectations."¹⁷

When attempts have been made to lift accountability from its rhetoric and operationalize it in a pluralistic community, it has become obvious that the phrases surrounding accountability are not as concise nor as workable as may be superficially surmised. After reporting some resolutions and procedures of various interest/pressure groups, Sciara and Jantz observed,

It becomes apparent that forms of applied accountability rise and fall according to the support or opposition they encounter from various concerned groups, and because of the effectiveness inherent in that particular form of accountability application.¹⁸

¹⁵Leon Lessinger, "Lessinger: 'Not Accountable for Accountability'," cited in Education U.S.A., XVI, No. 21 (January 21, 1974), 111.

¹⁶Leon Lessinger, "Evaluation and Accountability in Educational Management," Academy of Educational Engineers, published by the Society of Education Engineers, 1970.

¹⁷C.A. Bowers, "Accountability from a Humanist Point of View," The Educational Forum, XXXV (May, 1971), p. 480.

¹⁸Frank J. Sciara and Richard K. Jantz, Accountability in American Education (Boston: Allyn and Bacon, Inc., 1972), p. 232.

Popham gave weight to these pragmatic concerns, "Talk is cheap. While everyone's talking about the merits of educational accountability, few mention the fact that practical procedures for making accountability work have not been devised."¹⁹

Whether the emphasis in educational accountability has been on the process, the products, or on both, most students of accountability agree with Lessinger, "How to engineer accountability for results in public education is the central problem for the education profession."²⁰

The focus on results has caused a gradual reappraisal of program evaluation from one based on inputs to one based on inputs and outputs. The reliance on input data caused Peterson, Governor of Delaware, to remark in 1970 that educators traditionally think in terms of inputs--new programs, more dollars for materials, higher teacher salaries and the like, and he asserted, "We have files, and wastebaskets, full of [input] statistics about education."²¹

¹⁹W. James Popham, "Found: A Practical Procedure to Appraise Teacher Achievement in the Classroom," originally appeared in Nations' Schools (May, 1972), reprinted in Accountability for Teachers and Schools, ed. by Ornstein (Belmont, California: Fearon Publishers, 1973), p. 25.

²⁰Lessinger, "Accountability for Results: A Basic Challenge for America's Schools," in Accountability in Education, Lessinger and Ralph W. Tyler, eds. (Worthington, Ohio: Charles A. Jones Publishing Company, 1971), p. 28.

²¹Russel W. Peterson, "Accountability as a State Function," Compact, IV (October, 1970), 19-20.

In noting the dilemma for educators in assessing outputs, Cunningham²² has summed up the status of the "art" noting that educators have done quite well in providing evidence relative to input into educational processes. The stewardship function has been relatively well served; however, at the heart of accountability difficulties has been the problem of producing reasonable measures of educational outputs, both product and performance. In trying to come to grips with the output dimension, Cunningham has succinctly summed up the concerns of many, "This is our chief accountability bind."²³

Paul Mort and his following led educators and laymen alike to equate expenditures and educational quality. While some relationship undoubtedly exists, it has been simplistically presented and often overstated.²⁴

The public and political pressures for demonstrable educational results have been noted by Sciara and Jantz as they view the growing dissatisfaction of the majority of taxpayers who will no longer settle for the "old triad" of qualified teachers, the latest

²²Luvern L. Cunningham, "Our Accountability Problems," Theory into Practice, VIII (October, 1969), p. 286.

²³Ibid.

²⁴Stephen K. Bailey, et al., Schoolmen and Politics: A Study of State Aid to Education in the Northeast (Syracus: University Press, 1962), pp. 24-25.

equipment and methods and modern school plants as indicators of effective schools.²⁵

And the politicians, ever mindful of changing public sentiment, joined the call for clearer output measures. Jesse Unruh back in 1967, commented,

In my judgement, well-informed legislators, governors, and administrators will no longer be content to know, in mere dollar terms, what constitutes the abstract needs of the schools. . . . The politician of today is unimpressed with continuing requests for more input without some concurrent idea of the schools' output.²⁶

Out of the public and political pressures for educational accounting has come the rhetoric, the models, and the plans to react to shifting demands placed on education. While there has been divergence in their labelings, structure, and implementation, there has also been a commonality.

Components of Accountability

Accountability plans under any banner, model, or acronym consistently have at least three operational components; (1) stating goals/objectives, (2) measuring their achievement, and (3) communicating the results.

Goals and objectives.--Lopez has observed that the clearer the idea educators have of what they wish to accomplish, the greater

²⁵Sciara et al., op. cit., p. 3.

²⁶Jesse Unruh as quoted by Elaine Exton, American School Board Journal, MLIV, No. 2 (February, 1967), 15.

will be their chance for accomplishing it. He summarily stated it was impossible for him to conceive of an effective accountability program that did not operate within the umbrella of the goal-setting process.²⁷

Lessinger stated, ". . . educational accountability can be implemented successfully only if educational objectives are clearly stated before instruction starts."²⁸

All proponents of accountability have asserted that some stated purpose, goal, objective, and/or predetermined level of performance by students is a necessary component of any program to be accountable. Divergent thinking has come with the substantive nature of the goals and objectives. McKinney and Mannebach²⁹ have posed the problem of the behavior specified in the objective being valid and realistic. Sciara and Jantz³⁰ have raised a parallel question of who should determine the skills, values, attitudes, and creative abilities to be taught. Concurrence has been reached on only the most basic skills, and the recognition that in a

²⁷Felix M. Lopez, "Accountability in Education," originally appeared in Phi Delta Kappan (December, 1970), reprinted in Accountability for Teachers and School Administrators ed. by Ornstein, (Belmont California: Fearon Publishers, 1973), p. 68.

²⁸Lessinger, "Accountability in Public Education," Today's Education, LIX, No. 5 (May, 1970), p. 52.

²⁹Floyd L. McKinney and Alfred J. Mannebach, "Performance Objectives: Foundations for Evaluation," Agricultural Education Magazine, XLII (June, 1970), p. 301.

³⁰Sciara et al., op. cit., p. 23.

pluralistic society any professional action will be approved by some individuals and groups in the community and concurrently disapproved by others. The framing of objectives as Barro has observed is, ". . . an intrinsically subjective, value laden, and often highly political process."³¹

Measuring achievement.--Some manner of measurement has proven to be an indispensable component of any accountability program. Since measuring achievement within an accountability model is a major focus of this study, it is treated in detail later in this chapter.

Communication.--The third component of any schema of accountability is communication. Lopez has placed considerable emphasis on this facet,

To be successful, therefore, the accountability program must meet the following requirements:
1. It must be an important communication medium in a responsive environment . . .³²

Problems of communicating to the lay public professional considerations has been compounded by in-house semantical difficulty. As Mecklenburger and Wilson see it, "People who talk of management, cost-effectiveness, needs assessment, and product emphasis rouse

³¹Stephen M. Barro, "An Approach to Developing Accountability Measures for the Public Schools," in Accountability for Teachers and School Administrators, ed. by Ornstein (Belmont, California: Fearon Publishers, 1973), p. 51.

³²Lopez, op. cit., p. 67.

hostility in people who talk of the whole child, individual differences, my classroom, or the learning process."³³

Regardless of the problems that have plagued the development of the accountability components, the concept of accountability cannot be denied. Grobman³⁴ has pointed out that rejecting the idea of accountability would be tantamount to saying that schools and educators are not and should not be responsible.

It has been in this realm of responsibility that much of the dialogue has taken place and where the all important aspect of communication has been obfuscated. At the heart of this confusion has been the question of exactly who should be accountable. And once identified the subsequent questions have been accountable for what and to what degree. The lack of definitive answers to these questions has precipitated much resistance to the movement.

Parameters of Accountability

The broad field of organizational theory rests on the postulates that an organization to be effective and efficient must have clearly defined purposes or goals, spheres of responsibilities, and some means of monitoring progress toward those goals. In a

³³James A. Mecklenburger and John A. Wilson, "Learning C.O.D.: Can the Schools Buy Success?" in Accountability for Teachers and School Administrators, ed. by Ornstein (Belmont, California: Fearon Publishers, 1973), p. 80.

³⁴Hulda Grobman, "Accountability for What?" in Accountability for Teachers and School Administrators, ed. by Ornstein (Belmont, California: Fearon Publishers, 1973), p. 28.

vague and general way, this theory has been applied to the educational institution. Basic to the concept of accountability in education has been an attempt to more concisely state the goals, more explicitly delineate responsibilities, and more precisely measure performance. However, the proponents of accountability who would apply an industrial model to education have found the situations are not cleanly analogous. The generalities and vagueness have grown out of the public educator's need to be responsive to many publics; the inability to control the "raw material" or the "material" in process. Further difficulties have come from the social scientists inability to determine the degree of progress toward the goals, or the lack of it, that can be attributed to the schooling process. The human dimensions of this situation have been noted by Dyer,

Education does not deal with inert raw materials, but with living minds that are instinctively concerned first with preserving their own integrity and second with reaching a meaningful accommodation with the world around them. The output of the educational process is never a 'finished product' whose characteristics can be rigorously specified in advance . . .³⁵

It has been in this setting that the ambiguities in educational accountability have flourished.

³⁵Henry S. Dyer, "Toward Objective Criteria of Professional Accountability in the Schools," Phi Delta Kappan, LII, No. 4 (December, 1970), p. 211.

The what in accountability.--The discussion of goals and objectives in the preceding section has already alluded to the difficulty in defining precisely what the goals of the schools should be. Society expects the schools to perpetuate the culture, yet the American society is a pluralistic one composed of special interest groups who have varied expectations for the schools. The 1974 ASCD Yearbook, Education for an Open Society, devotes Part 3 to these conflicting demands. In the introduction to this part, the authors have stated,

A large segment of the violence and disruption during the past decade, in schools and society, has been caused by those who wanted a piece of the action--a larger share of the power and decision-making activity.³⁶

So from the what the dialogue quickly shifts to the who. Who will participate in deciding what shall be taught and who will be responsible for seeing the identified tasks are accomplished.

The who in accountability.--The U.S. Supreme Court in handing down its opinion in Rodriguez³⁷ noted that the U.S. Constitution neither implicitly nor explicitly concerns itself with education. Yet the Federal government in its actions has become increasingly involved in what shall be taught by the very nature of the acts and conditional appropriations it has passed.

³⁶Association for Supervision and Curriculum Development, Education for an Open Society (Washington, D.C.: ASCD, 1974), p. 97.

³⁷"Rodriguez: The Decision," Compact (May/June, 1973), p. 5.

The Tenth Amendment of the U.S. Constitution has left the responsibility of education with the state and its people. Every state constitutionally assumed this responsibility. State statutes, laws, and guidelines have continued to promulgate and delineate this right.

Local school districts have existed at the discretion of the state and school board members are state officers. The school boards in turn have delegated some of the state given responsibilities it has to its chief school officer, the superintendent.

The superintendent through his office has delegated certain responsibilities to his subordinate administrators and to the teachers. Within this legalistic framework the local educator has ultimate responsibility to the state and to its people.

In a legal sense the state has the authority to decree what shall be taught. In a practical and politically expedient sense, much of the determination of what shall be taught has been placed with local school districts, their professional personnel, and the local citizenry. The local board as a policy-making body has represented the community's interests and has involved special groups of citizens in participatory decision-making. To the degree that the board has been elected locally and the district has depended on locally levied funds for school support, the educational community has also been responsible politically and economically to the local populace.

It has been within these legal, political, economical and social constraints that the professional educator has been obliged

to operate. Only to the degree that the principal has been permitted to do so has the determination of what shall be taught been made by her.

These constraints placed on the local educator have given rise to considerable concern over who shall be responsible for results and to what degree. For these reasons, shared accountability has become a popular term in the accountability literature. As Lovett has commented, "But education is a multi-faceted construct and all the social elements that articulate with it must also agree to examination and accounting."³⁸

However, "sharing" blurs responsibility and tends to engender circular finger pointing.

To achieve any of the conciseness the accountabilitarians have pursued requires some resolution of this circularity. The task has not proven easy. As Mecklenburger and Wilson have put it, "Someone other than children must bear the responsibility for whether children learn successfully. Who bears that responsibility, and to what measure are questions loaded with dynamite."³⁹

That the educational accountability literature has repeatedly suggested the teacher should be accountable has been made clearly evident in the position statements that have come from various

³⁸Robert Lovett, "Professional Accountability in the Schools," Kappa Delta Pi Record, VII (October, 1970), p. 6.

³⁹Mecklenburger et al., op. cit. p. 88.

teachers' groups. Bain, NEA president in 1970, took an early defensive stance,

To make the easy assumption that teachers are primarily responsible for the quality of education today is absurdly naive. . . .The classroom teacher has either too little control or no control over the factors which might render accountability either feasible or fair.⁴⁰

Many writers have sheared away from teacher accountability and have dropped the load on the administrator--and more particularly the principal.

Briner has observed, "Teachers, parents, and others apparently don't want to be fully accountable for improving education. On the other hand, administrators must be directly accountable. It is their essential reason for being."⁴¹ He has supported this statement with the rationale, "It is not possible to hold teachers accountable for the quality of learning. They are too little involved in educational management, including the allocation of resources . . . for administrators, it is a different story. Their principle responsibility is educational accountability."⁴²

Wildavsky has supported Briner,

I recommend focusing accountability on the principal of the school because he is the one with the essential power in the system. . . .

⁴⁰Helen Bain, "Self-Governance Must Come First, Then Accountability," Phi Delta Kappan, LI (April, 1970), 413.

⁴¹Conrad Briner, "Administrators and Accountability," Theory Into Practice, VIII (October, 1969), p. 205.

⁴²Briner, *ibid.*, p. 140.

The principal, therefore, is the one who is capable of limiting and usually does limit the teacher's discretion . . . and the principal is assumed to have a longer-term commitment to the school system.⁴³

In the battle of "who's on first," some writers have urged caution. McConnell has admonished against rashly attributing accountability,

The most enthusiastic proponents of the accountability movement believe that it is possible to assess objectively the effectiveness and also the efficiency of whole school systems, particular schools, individual administrators, and, finally, specific teachers. I am not very sanguine about parceling out the contributions to measured pupil performance, and particularly to the subtle outcomes of education, made by teachers, administrators, and school systems.⁴⁴

Havinghurst has reminded the accountability proponents that there are many variable in the learning process which cannot be fully isolated or controlled. He noted that accountability becomes pernicious when it places the "whole weight of responsibility on only one of several agents who cause pupil success or failure."⁴⁵ After listing six major causal agents other than professional educators--learning ability, family, peer group, community, school

⁴³Aaron Wildavsky, "A Program of Accountability for Elementary Schools," Phi Delta Kappan, LII (December, 1970), p. 214.

⁴⁴T. R. McConnell, "Accountability and Autonomy," Journal of Higher Education, XLII (June, 1971), p. 463.

⁴⁵Robert J. Havinghurst, "Joint Accountability: A Constructive Response to Consumer Demands," Nation's Schools, LXXXIX, No. 5 (May, 1972), p. 46.

board (facilities and policies), and pupil's self-concept, aspirations, ambition and interest, he noted, "In view of the complexity of these causal agents, any simple system of accountability is likely to be a bad one."⁴⁶

The variables mentioned by Havinghurst bring into focus one of the greatest impediments to research in the social sciences. The researcher has been unable to control the human dimension. Consequently, any procedure that seeks to attribute the qualities of an end product in this arena to a given process or processor has been plagued by the limitations inherent in the situation. These considerations have made the assignment of levels of accountability to certain educators or procedures highly nebulous.

To what degree?--The question of degree has two major facets--the expected standard of attainment for the product, the student; and the level of proficiency for the processor, the educator. The complexities of accountability have been compounded further by the interrelationship of product/processor dimensions.⁴⁷

The literature has made clear that much work needs to be done in establishing criteria for both dimensions with consideration for this interaction. Porter, Supt. for Public Instruction in Michigan, has suggested,

Future improvements in education as a result of innovative techniques will be based in part upon the development of two specific types of information by local school districts.

⁴⁷Barro, op. cit., p. 50.

- 1) Improved and more comprehensive student performance measures in the cognitive as well as affective domain, and
 - 2) Improved and more specific performance objectives related to the functions and contributions of teachers, principals, administrators, and school boards and the parents of students.
- At present, such information does not to a great extent exist in school systems.⁴⁸

The intricacies of accountability implementation can be illuminated by looking closer at a consideration of a criterion as an interpretation of one aspect of an objective. cursory appraisal generally yields the conception of a criterion as a monotonic weighting of each performance objective that can be summarized to determine progress toward some goal. However, Levine has noted that a criterion is more than a simple combination rule that might be used in assigning effectiveness, but instead has the characteristic of usually being variable in addition,

Under the so-called 'law of diminishing returns,' as a desideratum becomes more available, each additional increment in its availability becomes less desirable. . . . the criterion is an expression of the objectives that: (1) recognizes the relative importance of different performance measures in contributing to the overall effectiveness of a program, and how that weighting changes as a function of the magnitude assumed by each performance measure; and (2) utilizes this knowledge in transforming the performance of a system into a final valuation of effectiveness.⁴⁹

⁴⁸ John Porter, "Accountability in Education," in Accountability in Education, ed. by Lessinger and Tyler (Worthington, Ohio: Charles A. Jones Publishing Company, 1971), p. 45.

⁴⁹ Donald M. Levine, "Improving Educational Evaluation: Analysis of New Directions," Research Bulletin, XIV, No. 4 (June, 1974), 1,2,5. Institute of Administrative Research, Teachers College, Columbia University.

The multidimensionality of the interrelationships involved in the criterion aspect of accountability alone is illustrative of the reasons that the rhetoric of accountability has sounded so good to some and its implementation has been fraught with problems for so many. Problems in application can be exemplified by examining the assumptions underlying the concept of holding a principal accountable for student achievement.

Assumptions Underlying Principal Accountability

As indicated in the statement of the problem, there are those who have assumed that a Michigan elementary principal can and should be held accountable for the achievement of the students in her building as measured by the Grade 4 MEAP tests; and further, that this achievement should be reflected in the principal's rating.

To endorse such an assumption these proponents have further implied (a) the mean of students' achievement scores can be attributed to the respective school program; (b) that a linkage exists wherein the principal's behavior affects teacher behavior which in turn affects student behavior and meaningful changes in student behavior can be measured by an achievement test; and (c) this achievement can explicitly be measured by the Grade 4 MEAP-ORT reading test.

That student achievement scores can be attributed in any large measure to school variables has been placed in doubt by the findings of Coleman et al.,⁵⁰ Mosteller and Moynihan,⁵¹ and Jencks.⁵²

⁵⁰Coleman et al., op. cit.

⁵¹Mosteller and Moynihan, op. cit.

⁵²Jencks, op. cit.

Jencks observed, "The amount of schooling an individual gets has some effect on his test performance, but the quality of his schooling makes extraordinarily little difference."⁵³ He explained, "It simply means that variations in what children learn in school depend largely on variations in what they bring to school, not on variations in what schools offer them."⁵⁴

However, later in his analysis Jencks, concluded, "Elementary schooling is helpful for middle-class children and crucial for lower-class children," but he stressed that the conclusion was based on "problematic inferences of uncertain validity."⁵⁵

There have been critics who suggested that the work of Jencks, Coleman, and others in this vein have all been based on "problematic inferences of uncertain validity." Their methodology, analysis, interpretation, and conclusions have all come under attack. The argument that schools do make a difference has been joined on the other side by Bowles et al.,⁵⁶ Dyer,⁵⁷ Guthrie et al.,⁵⁸ and others.

⁵³Ibid., p. 53.

⁵⁴Ibid.

⁵⁵Ibid., p. 89.

⁵⁶S. Bowles, "Toward Equality of Educational Opportunity?" Harvard Education Review, XXXVIII, No. 2 (Winter, 1968), 89-99.

⁵⁷H. S. Dyer, "School Factors and Equal Educational Opportunity," Harvard Education Review, XXXVIII, No. 2 (Winter, 1968), 38-56.

⁵⁸J. Guthrie, G. B. Kleindorfer, H. H. Levin and R. T. Stout, Schools and Inequality (Urban Coalition, 1969).

The New York study of two schools with markedly different state assessment scores in reading suggested that when socioeconomic factors were controlled the school did make a difference.⁵⁹

Huyser, Supervisor of the Research, Evaluation and Assessment Services of MDE, reported that an analysis of the 1973-74 ORT data showed every objective measure had a positive correlation to the Word Relations section (aptitude measure). The Department's past experience has shown a relationship between Word Relations and Community Types, the five categories which were established by MDE with respect to community size, proximity to metropolitan core and indirectly to socioeconomic status (SES). Huyser concluded that he would expect ORT achievement results "to tie into Community Types and SES."⁶⁰

While not entirely in agreement, researchers in the field seemed to suggest that elementary schools make some difference in students' achievement, but that achievement per se can more accurately be appraised if some effort to control the SES variable is made.

The second underlying assumption requires that a linkage exists from the principal through the teacher and ultimately to student achievement. Each step of this behavioral chain must support the weight of the assumption. A search of literature in the field must yield scholarly opinion and/or research evidence

⁵⁹State of New York Office of Education Performance Review, op. cit.

⁶⁰Robert Huyser, in conversation, August, 1974.

that the principal does affect teacher behavior, that teacher affects student behavior, and that these changes in student behavior can be measured on achievement tests.

"As the principal, so the school," was the maxim offered by Gross and Herriott and they supported their statement with findings.⁶¹

Goldhammer commenting on the elementary schools he saw on his "Starch crusade" indicated he found "beacons of brilliance" to "potholes of pestilence" and he attributed the variance to the role of the principal in the respective building. He characterized the "potholes" as "dirty, poorly staffed buildings which lacked leadership, where 'each room was a cell unto itself with little interaction'."⁶²

Berman has stated,

Leadership is an infinitely delicate sensitive process exercised by one who facilitates the productivity of others. Within the milieu of the school, there exists an enormous capacity for leadership. It is naturally expected that this leadership will come from those in such titled positions as supervisor, curriculum director and principal.⁶³

⁶¹ Neal Gross and Robert E. Herriott, Staff Leadership in Public Schools (New York: John Wiley and Sons, Inc., 1965), p. 161.

⁶² Keith Goldhammer in an address to the National Association of Elementary School Principals, April, 1973. Reported in the NAESP Convention Reporter (Washington, D.C.: National School Public Relations Association, 1973), p. 31; also see Goldhammer and associates, Elementary School Principals and Their Schools.

⁶³ Louise M. Berman, Supervision, Staff Development and Leadership (Merrill's International Series in Education, 1971), p. iii.

Halpin concurred commenting, "School principals are administrators and ipso facto, leaders."⁶⁴

Shartle's definition of a leader included, "An individual who exercises positive influence acts upon others . . . in a given office or position of apparently high influence."⁶⁵

Weber's work regarding bureaucracy laid the ground work for studies in legal-rational, traditional, and charismatic authority.⁶⁶ Guba has added a social scientist's perspective, "For power has two aspects . . . the nomothetic formal dimension the administrator has status and exerts authority; while in terms of the idiographic or personal dimension the administrator has prestige and exerts influence." He added, "Although status and authority accrue to the administrator by virtue of the office he holds, prestige and influence must be achieved individually."⁶⁷

Studies in the field, then, have given strong support to the effect the principalship has on the teachers; however, the extent of the influence beyond the authority of the office seems

⁶⁴Andrew W. Halpin, Theory and Research in Administration (New York: The MacMillan Company, 1966), p. 27.

⁶⁵Carroll L. Shartle, "Studies in Naval Leadership: Part I," in Groups, Leadership and Men, ed. by Guetzkow, pp. 121-2.

⁶⁶Max Weber, "Legitimate Authority and Bureaucracy," Organization Theory, ed. by D. S. Pugh (Baltimore, Maryland: Penguin Education, 1971), pp. 15-29.

⁶⁷Egon G. Guba, "Research in Internal Administration--What Do We Know?" Administrative Theory as a Guide to Action, ed. by Roald F. Campbell and James M. Lippman (Danville, Illinois: The Interstate Printers and Publishers, Inc., 1960), p. 123.

to have rested with the "personality of the leader in relation to the personality of the followers and then to relate these variables to the characteristics of the situation."⁶⁸

Lewin, Lippitt, and White's study⁶⁹ launched a series of studies establishing that leadership behavior with children affects the children's behavior. Getzels commented on this study and others,

Perhaps the prototype of thinking in this field is the classic and influential study of democratic authoritarian, and laissez-faire leadership demonstrating the effect of group climate on task performance. Other studies of different order show that when teachers' social values and pupils' social values are similar the pupils' achievement tends to be high; when teacher-pupil values are dissimilar, pupil achievement tends to be low.⁷⁰

Getzels' summary of findings in this area suggested that not only does teacher behavior affect the children's behavior but this effect is measurable in the students' achievement. Halpin has endorsed this approach and stated the expectations

⁶⁸Don E. Hamachek, "Leadership Styles--Decision-Making and the Principal," Selected Readings on General Supervision ed. by James E. Heald, Louis G. Romano, and Nicholas P. Georgiady (New York: The Macmillan Co., 1970), p. 133.

⁶⁹Kurt Lewin, Ronald Lippitt, and Ralph K. White, "Patterns of Aggressive Behavior in Experimentally Created 'Social Climates'," The Journal of Social Psychology, S.P.S.S.I. Bulletin, 1939, No. 10, 271-299.

⁷⁰Jacob W. Getzels, "Theory and Practice in Educational Administration: An Old Question Revisited," in Campbell and Lippham, eds., Administrative Theory as a Guide to Action (Danville, Illinois: The Interstate Printers and Publishers, Inc., 1960), p. 52.

upon which the schools have been organized, "As a result of the year which they spend with her [the teacher], the children . . . are expected to show changes in behavior, especially in respect to school achievement. . . ." ⁷¹

More recent studies have added to the growing body of research indicating a student's self-image is related to his academic achievement. Studies in student self-perception and self-concept as related to student achievement by Lumpkin, ⁷² Seay, ⁷³ and Hamachek ⁷⁴ have indicated a significant positive correlation does exist between student behavior and achievement.

However, it should be recognized that these and other studies in this area have relied on measuring factors in the affective domain where instrumentation is still relative gross. Dyer has observed, "The armamentarium of educational and psychological measurement contains a good many instruments of various types for

⁷¹ Halpin, op. cit., p. 81.

⁷² D. Lumpkin, "Relationship of Self-Concept to Achievement in Reading," unpublished doctoral dissertation, University of Southern California, 1959.

⁷³ L. C. Seay, "A Study to Determine Some Relations Between Changes in Reading Skills and Self-Concepts Accompanying a Remedial Program for Boys with Low Reading Ability and Reasonably Normal Intelligence," unpublished doctoral dissertation, North Texas State College, 1960.

⁷⁴ D. E. Hamachek, "A Study of the Relationship Between Certain Measures of Growth and Self-Images of Elementary School Children" unpublished doctoral dissertation, University of Michigan, 1960.

evaluating students' attitudes toward learning, toward themselves, and toward one another. Admittedly, these instruments are still pretty crude."⁷⁵

It would appear from the literature that there has been evidence presented which offers variable support for each step of the linkage that the second assumption demands. Therefore, it seems that each link of the chain has some support from the theorists, but in practice each link has appeared to be situation specific. The strength of the linkage will vary in impact at each step and only the very limited New York study suggested that all links were transcended to form a solid accountable chain from principal to student achievement.

The final assumption in the theoretical foundations of this research has been that the Grade 4 reading Michigan Educational Assessment Program (MEAP) Objective Referenced Test (ORT) can provide the data to measure the students' achievement.

Before giving specific consideration to the MEAP test, the fallibility of any test should be recognized. Stake has expressed this concern, "Just as the population census and the bathroom scales have their errors, educational test have theirs. The technology and theory of testing are highly sophisticated;

⁷⁵Dyer, Conference on Educational Accountability (Princeton, New Jersey: Educational Testing Service, 1971), p. I-5.

the sources of error are well known." He continues, ". . . no one can eliminate test errors. Unfortunately, some errors in testing are large enough to cause wrong decisions about individual children or about school-district policy."⁷⁶

Earlier MEAP tests were norm-referenced tests to be used for comparative purposes. However, the 1973-74 MEAP test was designed as a criterion-referenced test with the expressed purpose of determining how well Michigan children were doing in relation to specified objectives. This new test, the MEAP-ORT has received qualified support from such psychometricians as Ebel and Mehrens.⁷⁷ Ebel has characterized it as, ". . . a pioneering and generally sound program of statewide assessment."⁷⁸ However, it has also come under rather heavy attack by House et al.,⁷⁹ Womer,⁸⁰ and Rudman.⁸¹

⁷⁶Stake, op. cit., p. 195.

⁷⁷William Mehrens, Class comments, Education 464, Michigan State University, May, 1974.

⁷⁸Robert Ebel, "Limitations and Problems in Measurement in Mandated Assessment Programs," unpublished paper presented to Large School Systems Invitation Conference on Measurement in Education. Cincinnati, Ohio, May 6, 1974, p. 2.

⁷⁹House et al., op. cit., pp. 666-8.

⁸⁰Frank B. Womer, "Interpretation of Michigan Educational Assessment Results," (Ann Arbor, Michigan: University of Michigan, Bureau of School Services), January, 1974.

⁸¹Herbert C. Rudman, "Between Us," Michigan Elementary Principal, L, Issues 1, 2, 3 (February, April and June, 1974).

The critics seemed relatively satisfied with the reliability of the test.⁸² However, serious questions have arisen regarding the validity of the ORT. The test items were designed to measure the minimal objectives in reading and mathematics as adopted by the Michigan State Board of Education. There was general consensus that the test items were representative of the objectives, but state wide results of the 1973-74 ORT cast doubts as to exactly how minimal the objectives truly were.⁸³

While this aspect in the problem with validity could cause some distortion in results depending on the relative emphasis a specific school places on reading and mathematics and on the narrow range the tests actually measured these two areas are universally taught and are considered the backbone of elementary education. The Michigan Department of Education has observed,

The Department recognizes that the present testing domain is restricted, but it seemed only reasonable to test reading and mathematics first because they are basic learning areas. The Department did not by its actions intend to suggest that schools should only emphasize reading and mathematics; however, the Department feels that student success in these two areas is basic, absolutely necessary, and easily measurable.⁸⁴

⁸²Rudman, April, 1974, op. cit., p. 11; and House et al., op. cit., p. 666.

⁸³See House et al., op. cit., p. 666; Womer, op. cit., and Rudman, op. cit., p. 12.

⁸⁴Michigan Department of Education, A Staff Response to the Report: An Assessment of the Michigan Accountability System, 1974.

Therefore, it seems reasonable to assume that faults in this aspect of validity were relatively equally dispersed and not sufficient to nullify the basis for the final underlying assumption under consideration.

The needs, concerns, and difficulties of the national accountability movement and the complex considerations of attributing educational accountability to the principal underscore the problems inherent in its implementation. These problems have been reflected in the State of Michigan's efforts to develop and implement an accountability model.

Accountability in Michigan

In Michigan, as in other states, elementary and secondary public education has been proclaimed a state responsibility by state constitutional provision. The state legislature operated fully within its prerogatives by mandating a state assessment with Public Act 307 in 1969 and Public Act 38 in 1970.

Historical perspective.--The Michigan Department of Education (MDE) initiated and supported Act 307 which directed the Department to conduct state-wide assessment. The governor's office initiated P.A. 38 which passed the legislature the following year. These two acts laid a base for the development of the Michigan Accountability Model. The acts directed MDE to take action in the three universal components of accountability; develop objectives, assess progress, and communicate results. The body of the two acts have been presented in Appendix C.

Chronologically, the assessment component of the model, Step 3, and the statement of goals, Step 1, preceeded the model's adoption. With the enactment of P.A. 307, the MDE contracted with Educational Testing Service to develop a norm-referenced test to be used for state-wide assessment of reading, mathematics and English. It was first administered in January, 1970 in grades 4 and 7. In early 1970, the Michigan State Board of Education appointed an advisory task force and charged its members to identify and delineate what they believed to be the "common goals of an educational system capable of meeting the growing and changing needs of contemporary society."⁸⁵ Of interest to this study, no building principal, elementary or secondary, were among the 21 lay and professional members of the task force. After acceptance of the tentative goals by the State Board, twenty-five meetings were held throughout the state to elicit opinions and concerns of local educators and lay citizens. The State Board reviewed the hearing preceedings, made some revisions and published The Common Goals of Michigan Education in September, 1971.

The goals have been grouped into three principal areas: (1) citizenship and morality; (2) democracy and equal opportunity; and (3) student learning. These three goal areas have been sub-headed with more explicit goals--22 in all. The goals were designed

⁸⁵ John W. Porter, "Forward," The Common Goals of Michigan Education (Lansing, Michigan: MDE, 1971).

in broad and generally non-controversial language and have been likened to the Seven Cardinal Principles of Education.⁸⁶

House et al.⁸⁷ in the assessment of the Michigan Accountability Model noted the goals were unclear and lamented that no on-going review or provision for updating them existed. Since the goals have been considered the functional basis for both the objectives and the revised assessment program, the panel recommended more clarity and definite plans for periodic review and updating. The MDE in their response to the House et al. evaluation commented,

The Department agrees that such reviews are necessary in the long term, and such a review of the twenty-two goals of Michigan education will be established. Indeed, the Superintendent of Public Instruction will request the Council on Elementary and Secondary Education to annually review the educational goals in light of new information.⁸⁸

In the November, 1971 issue of Michigan Education, the MDE outlined its six point model. In March, 1972, a more detailed description of the model adopted by the State Board was published in A Position Statement on Educational Accountability. In this

⁸⁶ Dalton Coe, Superintendent, Bullock Creek School District, in conversation, January, 1972.

⁸⁷ House et al., op. cit., p. 664. It should be noted that MDE's "A Staff Response to the Report: An Assessment of the Michigan Accountability System," noted in Footnote 88 felt the House et al. evaluation of the model was biased. The evaluation was commissioned by the Michigan and National Education Associations. Mehrens, in conversation, May, 1974, concurred with MDE.

⁸⁸ Michigan Department of Education, "A Staff Response to the Report: An Assessment of the Michigan Accountability System," Lansing, Michigan: Michigan Department of Education, 1974, p. 5.

document, the six steps of the Michigan Accountability Model were described by the Department,

1. Identification, discussion and dissemination of common goals for Michigan Education.
2. Approaches to educational challenges based on performance objectives consistent with the goals.
3. Assessment of educational needs not being met, and which must be met to achieve performance objectives and goals.
4. Analysis of the existing (or planned) educational delivery systems in light of what assessment tells us.
5. Evaluation and testing within the new or existing delivery system to make sure it serves the assessed needs.
6. Recommendations for improvement based upon the above.⁸⁹ (underlines supplied)

To operationalize the model, Porter, Michigan's Superintendent of Public Instruction, envisioned self-renewing potentialities,

This model is a process, not a curriculum imposition. Along with being continuous and circular, the model is envisioned as enhancing the role of the teacher in the educational process of preparing our children . . .⁹⁰

Prior to the adoption of the model by the State Board, the drafting of the objectives, Step 2, was well under way. MDE's subject matter specialists in cooperation with subject matter

⁸⁹ Michigan Department of Education, "A Position Statement on Educational Accountability," March, 1972.

⁹⁰ Ibid., p. 1.

referent groups drew up tentative objectives. The Commissions on Objectives were called together in November, 1971, and charged to "serve as panels of judges, or juries, to review, react to, make modifications where appropriate, and develop recommendations regarding: . . ." the objectives.⁹¹ Of the 168 who were originally appointed to serve on the commissions only 17 commission members attended the last meeting on May 30, 1973.⁹² Many members felt they were not having sufficient input to make the effort to stay involved.⁹³ This reaction was also reported in House et al.⁹⁴

It was the intent of the MDE that the objectives be minimal. By involving, at least superficially, a wide representation of educators and lay people, the Department also hoped to achieve consensus as to the substantive nature of the objectives. A Department spokesman has stated,

The performance objectives in reading and mathematics and in the other areas should be viewed as a consensus among educators at all levels of the educational system and in all regions of the state as to the minimum behaviors that students should be able to demonstrate at selected levels of the educational continuum.⁹⁵

⁹¹Michigan Department of Education, unpublished communication to Commission members, November, 29, 1971.

⁹²Researcher's personal experience.

⁹³Commission members comments to the researcher, 1972-1973.

⁹⁴House et al., op. cit., p. 666.

⁹⁵As cited in House et al., op. cit., p. 664.

After reviewing the objectives, the procedures for selecting the objectives for testing, and the test results, House et al. commented, "Clearly, the objectives so far developed do not represent a consensus of educators and the objectives are not minimal."⁹⁶

In its A Staff Response . . . to House et al., the Department noted their intent had always been to deal with "minimum student expectations," and promised to conduct a survey to ascertain if the published objectives represented a state-wide consensus.

The survey conducted by Market Opinion Research (MOR) in the spring of 1974, did not establish a consensus on objectives, and, in fact, showed some confusion on the definition of educational accountability.⁹⁷ Porter had attempted to lay the groundwork, but the survey showed his message was not pervasive in the classroom. Nor was it reaching the kitchen.

While the model was developing, Porter had offered his definition of accountability,

. . . the guarantee that all students without respect to race, income, or social class will acquire the minimum school skills necessary to take full advantage of the choices that accrue upon successful completion of public schooling, or we in education will describe the reasons why.⁹⁸

⁹⁶House et al., op. cit., p. 664.

⁹⁷Michigan Department of Education, "The Public's Understanding and Attitudes Toward Educational Accountability," (Lansing, Michigan: MDE, August, 1974).

⁹⁸John W. Porter, "The Future of Accountability," Conference on Educational Accountability (Princeton, New Jersey: Educational Testing Service, 1971), J-1.

In the future application of accountability, Porter foresaw greater emphasis on educator responsibility,

I have defined accountability of the future as a quality or state of education whereby educational institutions take responsibility for ensuring that their students reach agreed-upon and clearly-defined educational objectives.⁹⁹

Neither of these definitions nor the attendant publicity in Michigan through the years of development penetrated into the public or professional conscience. The MOR survey requested by Governor Milliken and commissioned by MDE reported, "'Educational accountability' is not a term with a single meaning in Michigan today."¹⁰⁰ Of the 1165 Michigan adults and 200 teachers surveyed, MOR reported, "Thirty-eight percent of Michigan residents (and even 12% of the teachers) can verbalize no meanings for it at all."¹⁰¹ The report also stated the meanings offered were diverse and noted the greatest congruence of thinking (15%) gave a kind-and-quality of education response that was clearly not relevant to educational accountability.¹⁰²

After receiving this report and the results of thirteen accountability hearings held in Michigan in 1974, Porter offered some observations and conclusions. His first observation was,

⁹⁹Ibid., p. J-12.

¹⁰⁰Michigan Department of Education, "The Public's Understanding and Attitudes Toward Educational Accountability," 1974, p. 15.

¹⁰¹Ibid.

¹⁰²Ibid.

There is a need for a concise, clearly-understood definition of the term 'educational accountability'-- for agreement or consensus upon a definition, and for a major effort to communicate such a definition to Michigan's citizens.¹⁰³

Porter's Conclusion No. 1, part 1, in the same report was,

1. That the State Board of Education definition of educational accountability -- namely:

EDUCATIONAL ACCOUNTABILITY IS DETERMINING HOW THE EDUCATIONAL COMMUNITY, IN COOPERATION WITH MICHIGAN CITIZENS, CAN IMPROVE STUDENT LEARNING AND PERFORMANCE --

be given wide circulation among Michigan's citizens-- parents, teachers, administrators, board members, and others.¹⁰⁴

Obviously, the indispensable component in accountability of communication has continually haunted the MDE. As noted earlier, Lopez stated an accountability program requires, ". . . communication medium in a responsive environment." Michigan's Accountability Model has suffered from ineffective communication and found itself in a setting that was far from being a "responsive environment." In the MOR survey, the respondents most frequently mentioned communication as a means of making schools more accountable.¹⁰⁵ Porter's Observation No. 5 that he drew after reading the report was,

There is an urgent need to establish effective communication channels to overcome the opposition, animosity, lack of understanding, and confusions surrounding the State Board's Six-Step Accountability Process.¹⁰⁶

¹⁰³Ibid., p. 113.

¹⁰⁴Ibid., p. 113.

¹⁰⁵Ibid., p. 41.

¹⁰⁶Ibid., p. 120.

The "urgent need" was prompted by the May, 1974, MOR survey results showing only 4% of the general public questioned was aware of the accountability program and little more than half of the teachers (54%) expressed familiarity with the plan.¹⁰⁷

Not only has the accountability program met with public apathy, but Porter indicated at a Chicago conference in May, 1974, that those who knew about it hardly constituted a "responsive setting." He stated that professional educators are too powerful and that teacher opposition eventually will scrap the plan. He expressed fear that the whole accountability process in Michigan would come to a "screeching halt," and remarked, "I don't see our ever pulling it off politically."¹⁰⁸

In January 1975, some of Porter's pessimism came home to roost when the Michigan State Board of Education with only one member remaining from the original Board that had adopted the accountability model, adopted a resolution to halt any expansion of the assessment program. The resolution as reported in the MAESP Newsletter read,

1. The State Board of Education continue pilot testing of assessment items for two years.
(Editor's Note--Discussion demonstrated that the intent of this recommendation is to postpone further expansion of every-pupil testing until greater analysis of the value of the assessment program had been completed).

¹⁰⁷ National School Public Relations Association, "Reading: Issues and Actions," Education U.S.A. Special Report (Arlington, Virginia, 1974), p. 18.

¹⁰⁸ Ibid.

2. Resources originally planned for every-pupil testing at the first grade level should be shifted to further research and development. Specifically, we need to (1) show the value of the assessment program to policy-making at the state level, and (2) determine the relationship between educational programs and student learning.

3. The State Board of Education directs staff or hire an outside consultant to prepare a state plan for improving student learning for State Board of Education review.

4. The State Board of Education make a commitment to expend efforts in developing the "affective domain" and in providing "humanistic" education for Michigan children.¹⁰⁹

Implementation of the Michigan Accountability Model has virtually come to the "screeching halt" Porter predicted, for assessment has proven to be its most visible and an integral part of its implementation. Students of accountability have concurred that the movement is broader than its assessment component, but without the measurement aspect for analysis of product and process there are no quantifiable data to assess the effectiveness of those who could be held accountable.

Measurement

A review of accountability programs underline its uneven trial-and-error progress and its inadequacies. At the same time,

¹⁰⁹ Michigan Association of Elementary School Principals, "State Board of Education News, Accountability Program Action," MAESP Newsletter, I, No. 1 (January, 1975) East Lansing, Michigan, p. 4.

it has brought an awareness of psychometric theory to more professional educators and helped precipitate increased efforts to improve measurement technology. Lessinger has pointed this up, "Today the questions focus on results obtained for resources used. The questions are pointed, insistent, and abrasive."¹¹⁰

In so far as accountability rests on measurement, the concept transposed from industry has been maladaptive. In the industrial realm measurement of inputs/outputs has been concerned with reducing the human variability in the process. By contrast, in measuring cognitive and psychosocial functions of students, it has been precisely the human factors which psychometricians seek to measure and evaluate.¹¹¹ The industrial analogy has the quality control elements that have not been feasible in education where neither the "raw material" nor "material in process" have been controllable. Havinghurst¹¹² has noted that we do not generally consider a child's academic ability as an input measure. Lindman has put it strongly, ". . . without the power to select its raw material and reject defective products, the school cannot guarantee its product."¹¹³ He has envisioned pre-established levels of skills

¹¹⁰Leon Lessinger, "Engineering Accountability for Results in Public Education," in Accountability in Education (Worthington, Ohio: Charles A. Jones Publishing Company, 1971), p. 28.

¹¹¹Henry S. Dyer, op. cit., I-5.

¹¹²Robert J. Havinghurst, "Joint Accountability: A Constructive Response to Consumer Demands," Nation's Schools, LXXXIX, No. 5.

¹¹³B. Lindman, Conference on Educational Accountability (Princeton, New Jersey: Educational Testing Services, 1971), B.4-5.

as measured by appropriate tests as the inevitable consequence of the factory analogy imposed on the educational setting, and has concluded, "The great diversity of human talent and varying contributions of the home and peer groups makes this degree of uniformity impossible."¹¹⁴

Expectations for measurement as suggested by McConnell¹¹⁵ have tended to outrun the technology and caused some to turn from its existing capabilities. As Peterson has reminded those who would shun it, "Even those educators who cry 'It can't be measured' must admit that we teach with the notion that there is something to be learned."¹¹⁶

The basic premise of psychometric theory has evolved from the notion that "there is something to be learned" and the desire to find if indeed it has been learned.

Psychometric Theory

Everything that has existed has done so in some quantity; therefore, it has the potential to be measured. That the quantities, or characteristics, have varied among individuals has proven to be the essence of life and of measurement. Cronbach long ago

¹¹⁴Ibid, p. B-5.

¹¹⁵T. R. McConnell, "Accountability and Autonomy," Journal of Higher Education, XLII (June, 1971), 211.

¹¹⁶Russell W. Peterson, "Accountability as a State Function," Compact, IV (October, 1970), p. 20.

noted, "Almost any task or action some men can and will do more skillfully than others. . . . The purpose of every psychological test is to detect differences between individuals."¹¹⁷

Measurement error.--At the heart of psychometric theory has been the desire to describe differences in achievement, aptitudes, interests and attitudes. Running parallel to this desire has been the recognition that a certain error of measurement exists in any such description. The probability of specific types of errors in measurement has been made predictable through statistical procedures. Variances in scores have resulted from the subjects health, motivation, or luck in guessing; from test conditions or administrator error; or from sampling error. Sources of error can also be attributed to selecting an inappropriate test, scoring errors, and errors in interpreting the test data.

Estimates of reliability¹¹⁸ have been derived by test-retest for stability, by equivalent forms at a point in time or over time for equivalency and equivalency-stability, and by split-half, Kuder-Richardson formulas, or Hoyt's ANOVA for internal

¹¹⁷L. Cronbach, Essentials of Psychological Testing (New York: Harper and Brothers, 1949), p. 37.

¹¹⁸Reliability has been used as the consistency with which the variance of the observed score can be attributed to the true score variance. The reliability indicates the measure of confidence that can be placed in a given score being within a certain range of scores over repeated testings. Or, the reliability coefficient shows the extent to which errors of measurement influence scores on the test. For elaboration see Mehrens et al., op. cit., pp. 102-123.

consistency. Mehrens and Lehman¹¹⁹ have stated that these measures of reliability are not completely appropriate for criterion-referenced tests, and they have presented Livingston's formula for establishing the reliability of criterion-referenced measures.

A test may be most reliable and consistently measure the wrong thing. Therefore, while reliability has proven a necessary condition for validity, it has been unable to stand alone. Validity has exceeded it in importance. Criterion-related validity has enabled test interpreters to predict with reasonable accuracy some future performance from the test data or to substitute the test results for needed information that has been difficult to attain. Should the purpose of the test be to describe the subjects command of a particular field of knowledge then content validity has been the focus.

In addition to statistical errors, certain procedural errors have been shown to produce misleading scores. Selecting a test that has not validly measured the content of interest has led to erroneous assumptions. Scoring a test has introduced errors if the scoring is manual or subjective. Since accountability measurements have usually involved a large number of subjects, they have generally been machine scored. Therefore, barring student/teacher/school errors in entry, this has not been considered a major source of error in assessment.

¹¹⁹Mehrens et al., Ibid., p. 121.

Due to the pressures and the publicity attendant in accountability, test administration and interpretation have been discussed at length in the accountability-measurement literature. The term standardized test means the test has a standard format, content, and administration. To violate the guidelines for administering the test has the effect of distorting the results. The technical data which were established on the assumption that the standardization will be followed cease to have meaning and cannot legitimately be used as a frame of reference for interpretation.

Despite these losses, the lack of adherence to the directions for administering tests have been all too common. Dyer has commented that tests are ". . . too often invalidated right at the source because of maladministration."¹²⁰

In addition to the more traditional problems inherent in casual, careless or untrained administration of tests, another problem associated with accountability has received considerable attention. When teachers and administrators have been held publicly accountable for results on tests they administer and when those results have the power to hold or lose a job, the pressures associated with results have raised the spectre of deliberate maladministration. To assure impartial results, Ebel has recommended,

¹²⁰Dyer, Conference on Educational Accountability (Princeton, New Jersey: Educational Testing Service, 1971), p. I-10.

The test should be administered and scored, and the results interpreted, by persons who have no responsibility for developing the performance which is being assessed.¹²¹

Of great concern to psychometricians has been the misuse and abuse of test data. The veneration some have attached to a score has been frightening in the light of Cronbach's reminder, "Any score, and any average, percentile, or correlation, is an estimate."¹²²

Those who use and report test data have to be mindful of the variety of statistical and procedural errors that may be present in any score. Dyer has commented that most consumers of achievement test results seem to be amazingly unaware of the limitations of such data and added, ". . . failure to recognize the inherentounciness of test scores can and does lead to all sorts of mistaken conclusions . . ."¹²³

Perhaps, the terminology, the implied precision, and the sanctimonious aura that surrounds test results belong at the feet of the educators. The dependence the general public has placed on test data which has in turn helped to sell the concept of accountability can be traced directly to the professionals. Mecklenburger and Wilson have supported this view, "The assumption is that tests

¹²¹Ebel, op. cit., p. 13.

¹²²Cronbach, op. cit., p. 39.

¹²³Dyer, op. cit., p. I-10.

provide precise yardsticks of student progress, and educators have allowed parents and school boards to believe in these scores. But these tests are not precise."¹²⁴

Gaines¹²⁵ concurred noting that the professionals have taught the high regard for test scores with their use in grouping, tracking, college bound--indeed as a basis for life chances. It is incumbent on the educator who uses test data to recognize the sources of error and to ascribe to the data no more than the psychometrician deems it warrants. The educator must be aware of what a test was constructed to measure and precisely what conclusions can be drawn from the test results. For some time, there have been tests designed to differentiate among individuals in a comparative, or normative, sense. Recent interest has focused on tests to differentiate among individuals who have or have not met the standards of a specific objective.

Norm- and criterion-referenced measurement.--The change in expectations the public has for education has been seen in an increased use of criterion-referenced tests. Keppel¹²⁶ has reminded those who see criterion referenced tests as a panacea that there

¹²⁴Mecklenburger et al., op. cit., p. 82.

¹²⁵Edythe J. Gaines, "A Way Out of the Tangled Web," Conference on Educational Accountability (Princeton, New Jersey: Educational Testing Service, 1971), p. G-1.

¹²⁶Francis Keppel, "Issues in Implementation II," Conference on Educational Accountability (Princeton, New Jersey: Educational Testing Service, 1971), p. D-6.

is no guarantee that a criterion-referenced test is any less subject to skill sampling errors than norm-referenced tests, and he has furthered warned its proponents that eventually the standard of satisfactory performance on a criterion-referenced test depends on someone's judgment of what is acceptable or desirable.

The norm-referenced test provided the comparative data for sorting on the curve and the criterion-referenced test measured the individual against a specified standard. The distinction between norm- and criterion-referenced measures has been made primarily on the basis of interpreting the test and the purposes for which it is given.

The norm-referenced tests' purpose has been to differentiate and discriminate among the students. Items that everyone or no one has attained tend to be deleted. On the other hand, with a criterion-referenced test to measure a well taught course based on reasonable objectives; the students may well attain many of the objectives. While a criterion-referenced test has inevitably discriminated between the achieving and non-achieving student to some degree, it has not been the primary purpose in the normative sense.

There has been some disagreement in the literature as to whether criterion-referenced tests in their current stage of refinement differ from norm-referenced ones in techniques of construction. Mehrens and Lehmann have indicated there is a difference in construction, and stated, ". . . item analysis, reliability, and some types

of validity are different in a criterion-referenced measure."¹²⁷
 Popham and Husek¹²⁸ have noted that the criteria for the test itself that are important in a norm-referenced test are not important for criterion-referenced test. Ebel concurred, "The constructor of the criterion referenced test should be expected to discount evidence of discriminatory power and choose the item which seems more relevant to the goals of instruction."¹²⁹

Rudman has come down hard on the other side,

What needs to be laid to rest at this point in the notion that the construction of objective-referenced [criterion-referenced] tests is really different from¹³⁰ the construction of norm-referenced tests; it is not.

House et al.,¹³¹ would seem to support Rudman for in analyzing the reliability of Michigan's new criterion-referenced test, the ORT, they used KR-20 for internal consistency--a norm-referenced procedure rather than one designed for criterion-referenced tests. While the technical report for the 1973-74 ORT has not yet been published, Huyser¹³² has indicated the MDE also has checked its reliability with KR-20.

¹²⁷Mehrens et al., op. cit., p. 70.

¹²⁸W. James Popham and T. R. Husek, "Implications of Criterion-Referenced Measurement," Journal of Educational Measurement, VI (Spring, 1969), 1-10.

¹²⁹Robert Ebel, op. cit., p. 9.

¹³⁰Rudman, op. cit., p. 11.

¹³¹House et al., op. cit., p. 666.

¹³²For discussion, see Mehrens et al., op. cit., p. 121.

Mehrens and Lehmann¹³³ have agreed with Rudman to the extent that they have stated there are more similarities than differences between the two tests. Ebel¹³⁴ has also observed that without the labeling it would be hard to distinguish between the two on the basis of format.

Tyler¹³⁵ has become a strong proponent of criterion-referenced testing for accountability measurement. He has discussed discrimination in norm-referenced test construction and observed that they have not been designed to measure growth for low achievers from disadvantaged environments or for the advantaged student. He has noted so few questions have been included for the slow student or advantaged student that it has not provided a dependable measure on either of them. Tyler has emphatically stated, "Accountability for pupil learning is more dependably assessed by criterion referenced tests . . ." ¹³⁷ and later described criterion-referenced tests as ". . . designed to sample specified knowledge, skills, and

¹³³Robert Huyser, Supervisor REAS of MDE, in conversation, February, 1975.

¹³⁴Mehrens et al., op. cit., p. 70.

¹³⁵Ebel, op. cit., p. 10.

¹³⁶Ralph W. Tyler, "Testing for Accountability," Nation's Schools, LXXXVI, No. 6 (December, 1970), 37-39.

¹³⁷Ralph W. Tyler, "Accountability in Perspective," in Accountability in Education (Worthington, Ohio: Charles A. Jones Publishing Company, 1971), p. 4.

abilities and to report what the child knows and can do of these specified matters."¹³⁸

Ebel has noted the fallacy in this argument,

The trouble with this notion is that different objectives are not separate, discrete entities, independent of each other. They are all interdependent part of a complex whole. They tend to resist clear definition as distinct components, for they overlap and interact.¹³⁹

While the use of criterion-referenced measures has reportedly been increasing, most psychometricians have not regarded it as more precise or more valid than norm-referenced measures, but simply a different way to seek and interpret information about a subject. Ways of gathering and reporting data have garnered considerable attention in the accountability literature; however, fear of measurement's impact on the curriculum has merited many more lines of type.

Curricular and Instructional Distortion

Those who have decried the ill-effects of accountability assessment on the curriculum generally fall in three categories: (1) those who voice concern about "teaching to the test," (2) those who are concerned with disproportionate emphasis on the tested areas and the neglect of other curricular areas, and (3) those who

¹³⁸Tyler, "Testing for Accountability," Nation's Schools, LXXXVI, No. 6 (December, 1970), 38.

¹³⁹Ebel, op. cit., p. 10.

are concerned with the discrepant attention given the child who will produce on the test and conversely the neglect of those who won't shine so brightly.

When instructional time has been devoted to teaching to the exact questions on a test, the test has no value as a measurement device and such a teacher has been labeled unprofessional and unethical. However, there is a fine but important line between this practice and teaching to assure that the students have command of the areas to be tested. If the test is a representative sample of instruction, then teaching to the topics on the test has not only been permissible but desirable. Poor content validity on a test that must be given and whose results will be publicly reported has presented the danger of placing disproportional emphasis on those aspects of the curriculum that will be tested and to slight the other areas.¹⁴⁰ Chabotar has considered both sides of the coin, "Does this mean that educators will not be held responsible for student development in the analytical and affective which cannot be measured by current testing technique? Furthermore, will teachers then alter their lesson plans to cover only what is to be tested . . .?"¹⁴¹

¹⁴⁰Tyler, "Accountability in Education," op. cit., p. 3.

¹⁴¹Chabotar, et al., op. cit., p. 46.

Stake,¹⁴² Wildavsky,¹⁴³ and Sciara et al.¹⁴⁴ have all called attention to the educational detriment that may occur to the child who is less test productive. When school mean scores are used to determine a school's effectiveness and when a norm-referenced test designed to discriminate is used, the slow and the advantaged child have fewer questions to demonstrate their academic progress; therefore, the average child will pay off better in school means. Preferential treatment to the average child may yield spuriously high test results. The graver consequence would be the academic neglect of the other children.

Limitations in Measurement

In discussing measurement errors and the potential dangers in the assessment aspect of accountability, the limitations of measurement have been alluded to. So far in this study measurement and test have been used interchangeably. However, measurement has generally been considered a broader term than tests,¹⁴⁵ and the concept of test certainly has exceeded the paper and pencil examination. Within the accountability movement, paper and pencil tests have become the most prevalent form of assessment because of the demands of measuring large numbers of students as well as scoring and reporting these results. Because of the nature of

¹⁴²Robert E. Stake, "Testing Hazards in Performance Contracting," Phi Delta Kappan, LII, No. 10 (June, 1971), 583-588.

¹⁴³Wildavsky, op. cit., p. 174.

¹⁴⁴Sciara et al., op. cit., p. 6.

¹⁴⁵Mehrens et al., p. 6.

administration, group standardized tests have invariably been paper and pencil examinations. The constraints in such evaluative procedures are obvious. Numerous human behaviors have been identified that cannot be measured in such a fashion.¹⁴⁶

No one would argue that much has been taught and much has been learned that has not been measured in the assessment programs. The movement to hold educators accountable, however, has been devoted to those areas which can be easily measured--generally with group paper and pencil tests.¹⁴⁷

Pondering the relationship between teaching and testing, Stake noted that while Anderson, Goldberg, and Hiddle as well as Wittrock and Hill have been working on the problem, "neither the test nor anyone else has developed scales or grounds for describing the similarity between teaching and testing. . . . This is the most grievous failing. There is not good way to indicate how closely the tests match instruction."¹⁴⁸

The literature has not suggested that measurement within accountability has been weak, but rather those using it should recognize what Barro referred to as ". . . severe limitations to the state of the art of educational measurement."¹⁴⁹

¹⁴⁶Lessinger in Accountability for Teachers and School Administrators, op. cit. elaborates on this point.

¹⁴⁷Davies, op. cit., p. 131.

¹⁴⁸Stake, op. cit., p. 209.

¹⁴⁹Barro, op. cit., p. 51.

In fact, most writers would support Lessinger and Allen in arguing for education to use what it does have. They commented, ". . . the fact that the many results of education are subjective and not subject to audit should not deter us from dealing precisely with those aspects of education that lend themselves to precise definitions and assessment."¹⁵⁰

And if the problems in measurement were not great enough within the definable limits of the school, there has also been much discussion of out-of-school variables.

Out-of-school Variables

While it has not received the play in the press that Coleman and his progeny have, David et al.¹⁵¹ in their work in Michigan preceeded Coleman in a search for determinants of educational achievement and attainment. David found the most powerful predictor of a child's education was the education of the father, with disposable income second and the father's occupation third.

¹⁵⁰Leon Lessinger and Dwight H. Allen, "Performance Proposals for Educational Funding: A New Approach to Federal Resource Allocation," in Accountability in American Education (Boston: Allyn and Bacon, Inc., 1972), p. 49.

¹⁵¹Martin David, Harvey Brazer, James Morgan, and Wilbur Cohen, Educational Achievement--Its Causes and Effects, Monograph #23 (Ann Arbor, Michigan: University of Michigan Survey Research Center, October, 1961).

The educational literature has been loaded with concern for the impact of out-of-school variables on learning and the effect the school can have since Coleman's report¹⁵² was issued in 1966. This report, others that followed, and critiques of their methodology and findings have already been mentioned in Chapter I. It has relevance to this review in so far as the studies and discussion Coleman precipitated have repeatedly noted that a large portion of the child's educational determinants were out-of-school variables or were unexplained. The more a child's achievement has been determined by out-of-school variables, there is proportionately less that can be attributed to in-school variables, such as specific personnel and programs. To the degree that these studies can be supported, a test measures more than a given school has contributed.

Sciara et al. have summed up the size of the task,

Gathering information so that student learning progress can be measured objectively and attributed honestly to the efforts of any particular teacher, one particular program, or one particular school, presents problems of great magnitude. Variables such as student's health, his home environment, socioeconomic circumstances, previous education, already learned skills, self-concept, and motivational index will have to be considered.¹⁵³

The problem becomes more complex if consideration is given to the fact that environmental variables probably do not act singly, but in combination as McConnell¹⁵⁴ has suggested.

¹⁵²Coleman, op. cit.

¹⁵³Sciara et al., op. cit., p. 230.

¹⁵⁴McConnell, op. cit., p. 212.

These complexities have led Nyquist to state, "Let us not put the whole burden on the schools. Responsibility for poor housing, poverty, unemployment, adult prejudices, and urban decay lies elsewhere. Accountability is interlocking among many partners."¹⁵⁵

Closely aligned with the general problem of identifying out-of-school variables and their impact on learning and learning measures has been the highly visible concern of cultural bias in testing. However, since this has not been a consideration in the study, it has not been treated here.

Should the millenium arrive and measurement overcome all its limitations, measuring educational objectives could be accomplished completely and precisely, the dilemma would still exist as to how to attribute the attainment, or the lack of it, to any specific person or program. Since the variables just discussed have not appeared to be unidimensional or to operate in isolation, their contribution even through factor analysis has proven difficult to assess. As Bell observed, "To be trite, learning is difficult to quantify and measure. It is an even more perplexing task to identify what influences learning and what causes fruition. Conversely, it is difficult to identify causes for learning failure."¹⁵⁶

¹⁵⁵Ewald B. Nyquist, "Measuring Purposes and Effectiveness," in Accountability in Education (Worthington, Ohio: Charles A. Jones Publishing Company, 1971), pp. 25-6.

¹⁵⁶Bell, op. cit., p. C-4.

Though the school would appear to have a more definable entity, attributing academic progress within the school walls has also given rise to consternation in the accountability literature.

Attributing Results

The essence of accountability is measuring results and attributing those results to someone or something. Barro has laid out the problem well,

. . . if the overall effectiveness of educators and schools is to be assessed, measurement will have to be extended to many more dimensions of pupil performance than are covered by instruments in common use . . . But no program of performance measure alone, no matter how comprehensive or sophisticated, is sufficient to establish accountability. To do that, we must also be able to attribute results (performance gains) to sources.¹⁵⁷

McConnell, Stake and Wildavsky have all voiced caution in attributing results.¹⁵⁸ But lest professionals seek an escape from responsibility, Wildavsky hastens to add,

It is true that such a test does not by any means measure all that a teacher does or attest to all his impact. No such test can be devised. Nor is it necessary to do so. To say that what a teacher does is so exotic that it cannot be measured is simply to say that he ought to do what he pleases, and that is not tenable.¹⁵⁹

¹⁵⁷Barro, op. cit., p. 50.

¹⁵⁸McConnel, op. cit., pp. 212-213; Stake, op. cit., p. 219; and Wildavsky, op. cit., p. 17.

¹⁵⁹Wildavsky, op. cit., p. 17.

Cunningham¹⁶⁰ has seen the repeatedly professed limitations on testing as a rationalization to avoid evaluation. While Ebel has projected that professional evaluation by an outside source is inescapable, "Teachers and school administrators need to face the fact that external evaluation of their effectiveness is inevitable. They cannot escape accountability to students, parents, and taxpayers."¹⁶¹

Educators cannot have it both ways. Gaines has held that standardized test scores cannot appropriately be used to judge the effectiveness of individual teachers nor school units. However, Gaines has rhetorically queried why such confidence has been placed in the value of standardized test scores as measurements of success and effectiveness. He concluded,

No, it is we educators, not the laity, who are dealing in non sequiturs and logical inconsistencies when we say (through our behavior if not our words) that these test scores can make clear determinations about the performance of pupils but not about educators and schools.

Again, we cannot have it both ways, parents undoubtedly will give up the idea of rating educators in terms of test results when educators give up rating children by these measures.¹⁶²

Turned around the question that Gaines prompts has to be-- if educators refuse to use test scores for their accountability, why do they adhere to them for the student? And a further dimension --if educators are to be accountable, what measurement would they have to judge their effectiveness?

¹⁶⁰Cunningham, op. cit., p. 85. ¹⁶¹Ebel, op. cit., p. 12.

¹⁶²Gaines, op. cit., p. G-5.

It has been in a climate of uncertainty precipitated by questions of this kind that the Michigan Educational Assessment Program tests were first administered in 1970.

Michigan Education Assessment Program

The Michigan Educational Assessment Program (MEAP) was initiated by the Michigan State Board of Education and funded by the legislature initially through the enactment of P.A. 307 of 1969, and subsequently under Act 38 of the Public Acts of 1970. The first assessment test was conducted by the Michigan Department of Education (MDE) in the 1969-70 school year and was used to assess "the levels and distribution of educational performance for Michigan's districts, schools, and pupils."¹⁶³ The program was designed and administered by the Research, Evaluation and Assessment Services, MDE, with the assistance of the Educational Testing Service (ETS).¹⁶⁴

The assessment battery was administered to fourth and seventh grade pupils in January of 1970.

The format of the norm-referenced test was 4 choice items. Scores were converted for each test and scaled with a mean of 50 and a standard deviation of 10. The scaled scores were used in all reporting.

¹⁶³John W. Porter, "Forward," Technical Report of Selected Aspects of the 1969-70 Michigan Educational Assessment Program, 1971, p. i.

¹⁶⁴Ibid.

The Michigan Association of Professors of Educational Administration formed a Task Force to review the first MEAP test. In their position paper reported out in April, 1972, they took exception to the need for a Michigan test rather than using an already established standardized test and noted the Michigan population was not that unique. They further observed,

The Michigan Assessment of Basic Skills is characterized by patch-work construction, poor item analysis information, the use of untried items in the published editions of the test, shoddy cosmetic changes in words or letters or names of people and representing these as 'new' items.¹⁶⁵

They questioned the lack of support for the MDE's claim of content validity, and pointed to the lack of evidence to support criterion-related validity. Other concerns such as the manner and method of reporting results also were criticized.¹⁶⁶

However, it was primarily in response to the charges of poor content validity by the state's educators that the Department

¹⁶⁵Task Force on Educational Assessment and Accountability, Herbert C. Rudman, Chairman. "The Michigan Educational Assessment Program: An Abstract," Michigan Association of Professors of Educational Administration, 1972, p. 5.

¹⁶⁶The test was criticized for having reported percentile rankings of 15 and 62 for separate districts with 3 1/2 raw score points difference. The problem was compounded by the fact that additional funding was provided one district and not the other on this basis. (See Task Force report for elaboration). These misleading results found their way into the press after MDE had assured the school districts that the scores would not be publicly released added more fuel to the fire. That the legislature instigated the release of the test results did not salve many wounds. See Kearney et al., op. cit., for the political by-play.

began to frame the objectives already mentioned as a basis for future assessment. The department continued to use the normative tests with on-going modifications through the 1972-73 school year. A new test based on the performance objectives was first administered in the fall of 1973.

Objective-Reference Test

The new MEAP test--called Objective-Referenced Test (ORT) was administered in the same grades, 4 and 7, and confined to reading and mathematics. The Word Relations section of the old test remained as a norm-referenced aptitude measure and provided continuity in measuring succeeding populations.

The tests were developed to measure some of the objectives in reading and mathematics. In reading 23 objectives at the fourth grade and at the seventh grade were measured, and 35 and 45 objectives in mathematics were selected for the two grades, respectively. Five items were developed to test each of these objectives. The format of the test retained the 4 choice item used in the previous MEAP test. Rather than the normative nature of the preceding four assessment tests, MDE claimed the new ORT was designed to "reveal specific skills that students have or have not attained."¹⁶⁷ The objectives selected for testing were assumed to be "minimal skill objectives" and were defined by the Department as "ones for which it is desirable to have all students attain."¹⁶⁸

¹⁶⁷ Michigan Department of Education, MEAP First Report, 1973-74 (Lansing, Michigan: MDE), p. 3.

¹⁶⁸ Ibid., p. 4.

The test items were reportedly written by teachers in four school districts with an assist from MDE. The items were then edited by MDE and the technical support contractor, California Test Bureau. The Department reported that the instrument was "successfully piloted during the 1972-73 school year in five Michigan school districts,"¹⁶⁹ but did not clarify what constituted "success."

The Department has acknowledged that after the items were tried out they were revised on the basis of comments from teachers and subject matter specialists, and stated, ". . . an extensive validation procedure was used to eliminate poor items and inappropriate objects, . . ." However, no validity documentation or other information could be found in the Department literature on test construction. A technical report on the ORT has yet to be published.

The involvement of educators in the development of objectives and test items has lent support to the Department's claim for content validity. However, House et al., report, ". . . even those teachers who participated felt their involvement was rather cursory and too much a matter of form. . . . Strong opposition and resentment expressed by many teachers and some teacher groups indicates a feeling on their part that they were not significantly involved."¹⁷⁰

Critique of ORT

As part of the contract with MDE, the CTB attempted to validate the MEAP for 1973 as a criterion referenced test using a

¹⁶⁹Ibid., p. 3.

¹⁷⁰House, et al., op. cit., p. 14.

sensitivity index, pre-posttest gain corrected for guessing. Rudman¹⁷¹ has computed and reported this index and found the highest correlation was in the fourth grade reading and was only .22. Rice¹⁷² reports that the MDE would not accept this kind of validation and requested norm construct validity, and that the CTB refused to comply. MDE then went to another testing service for certification of validity.

Rudman addressed the purported difference in the new ORT over the old MEAP test,

The characteristics of test items selected for the 1973-74 test used by the Department of Education are the same ones employed by many authors of norm-referenced standardized achievement tests. These include (1) teacher comments based on item-analysis try-outs, (2) test item difficulty, (3) KR-20 reliability coefficients, (4) point bi-serial correlation coefficients to test item discrimination, (5) growth in item difficulty from grade to grade, and (6) comparing highest fourth or fifth of a group of scores to the lowest fourth or fifth.¹⁷³

Both Rudman and House et al. agreed that the KR-20s and point bi-serial correlations were acceptable for most items. House et al. have commented that the tests have admirable reliability.¹⁷⁴

¹⁷¹H. C. Rudman, "Between Us . . ." Michigan Elementary Principal, L, No. 1 (February, 1974) 12.

¹⁷²Arthur Rice, Accountability Specialist, Michigan Education Association, in conversation, MEA Office, February, 1974.

¹⁷³Rudman, op. cit., p. 12.

¹⁷⁴House et al., op. cit., p. 666.

The 1973-74 ORT results have caused the critics to assert that despite Department claims to the contrary, the objectives were not minimal. Womer commented in 1974, ". . . if one accepts at face value the information now available in assessment publication and from public statements about Michigan assessment . . . one may conclude . . . not a single school district in this state is meeting minimal objectives in reading and mathematics."¹⁷⁵

Rudman has concurred, "If we follow the reasoning of the Department of Education, then this year's test results indicate that all of the districts in Michigan have failed to attain mastery of minimal objectives at grades 4 and 7!"¹⁷⁶

Calculations of the results showed that in reading 95% of the fourth graders and 88% of the seventh graders did not attain the objectives. These data clearly demonstrated that if the test items were valid for the objectives, then the objectives were not valid for the population it measured.

ORT Changes for 1974-75.--Since modification in the MEAP-ORT suggests areas of weakness in the first instrument, a review of the changes was undertaken. It was found that a number of objectives had been dropped and that the definition for minimal skill objective had been changed from "desirable to have all students attain" to "desirable to have most students attain . . ."

¹⁷⁵Frank B. Womer, "Interpretation of Michigan Educational Assessment Results," University of Michigan, Bureau of School Services, 1974.

¹⁷⁶Rudman, op. cit., p. 12.

(underline supplied).¹⁷⁷ MDE explained, "Unfortunately, the nature of minimum objectives was frequently misunderstood during the last school year. The Department of Education did not expect--based on empirical data--that the objectives would be attained by 90 to 100 percent of the state's students in the 1973-74 assessment."¹⁷⁸

The Department dropped three objectives in reading and five objectives in mathematics at both the fourth and seventh grades and made word changes in a few others. The Department did not discuss the deletion of individual objectives, but defended the whole procedure,

Based on the results of the 1973-74 assessment and with the advice of professional organizations and curriculum specialists, some objectives and test items were deleted. Other items were clarified by word changes or improvements in accompanying art work.¹⁷⁹

The Word Relationship section which had previously been mandatory was made available at district option. Other changes were additive in nature and did not reflect on the policies or procedures of the 1973-74 test.

Purposes and Plans for MEAP

In the first presentation of the Michigan Accountability Model, the purpose of the "Needs Assessment" component stated,

¹⁷⁷Michigan Department of Education, MEAP First Report, 1973-74, op. cit., p. 3.

¹⁷⁸Ibid.

¹⁷⁹Ibid., p. 16.

Having identified the goals for children, and having articulated the performance objectives for schools, it is necessary to assess the existing relationship between them. This analytical chore must utilize all the knowledge at hand: research, testing, resource distribution and personnel availability and a host of others. The objective is to give local school officials some notion of the variance between desirability of performance objectives and what the child or children can do . . .¹⁸⁰

In the Michigan Department of Education's working draft, "Draft Long Range Plan" for the MEAP, they further articulated the purpose of assessment,

Purpose: The purpose of state educational assessment in Michigan is to secure information about the mastery of minimum levels of basic skills and other common learnings by Michigan children and youth to provide for improved educational decision making.¹⁸¹

The increased emphasis on communication can be seen in the purposes and objectives of assessment which have been set forth in the First Reports of MEAP for 1973-74 and 1974-75. In identical language, they state,

The first objective of the MEAP is to provide the State Board of Education, the Executive Office, the Legislature, and citizens with data describing the levels of basic skills attainment and other relevant descriptive data about each of Michigan's schools and school districts. . . .

The second objective of the MEAP is to provide local educators with specific information about the levels of basic skills educational attainment of students and of other relevant descriptive data for their own schools and school districts. . . .

¹⁸⁰Michigan Department of Education, "A Position Statement on Educational Accountability," March, 1972, p. 7.

¹⁸¹Michigan Department of Education, "Draft Long Range Plan (Parts I-VI) MEAP," mimeographed working draft, p. 5.

The third objective of the MEAP is to provide information regarding the progress of the Michigan educational system as a whole and the progress of its school districts and schools over a period of years to the State Board of Education, the Executive Office, and the Legislature, and citizens.¹⁸²

According to Donovan,¹⁸³ the Department's stated plans call for continued testing in fourth and seventh grades but with fewer objectives for every pupil in reading and mathematics, and for matrix sampling for additional reading and mathematics objectives as well as other content areas. The MDE piloted the testing of 48 first grade entry level objectives in the 1974-75 school year. Each teacher administered only one test covering no more than two objects. The Department has stated that its intended procedure is to follow a similar procedure with an additional 35 first grade objectives in 1975-76 and to eventually go to state wide sampling at this level.

In January, 1974, MDE published their plans in "Grades to be Assessed," giving the following tentative timetable for implementation as presented in Figure 2.1.

Some modifications in these plans took place in 1974, but the most dramatic change took place as a result of the State Board of Education's adoption of a resolution regarding assessment on January 8, 1975, as previously mentioned.

¹⁸²Michigan Department of Education, MEAP First Report 1974-75, pp. 7-10.

¹⁸³David L. Donovan, Director of Research, Evaluation, and Assessment Service, MDE. In a presentation Extern Program, Michigan State University, January, 1975.

Grade	School Year				
	1973-74	1974-75	1975-76	1976-77	1977-78
1		X	X	X	X
4	X	X	X	X	X
7	X	X	X	X	X
10			X	X	X
12				X	X

Figure 2.1--Timetable, MEAP grades to be assessed, January, 1974.

Donovan, speaking within a week following the Board meeting suggested the timetable would probably be altered as depicted in Figure 2.2.

Grade	School Year				
	1973-74	1974-75	1975-76	1976-77	1977-78
1		Pilot	Pilot	X	X
4	X	X	X	X	X
7	X	X	X	X	X
10			Pilot	X?	X?
12				Develop?	Pilot?

Figure 2.2--Revised timetable, MEAP, January, 1975.

Donovan noted development of the 12th grade instrument to measure "exit competencies" may not be developed in 1976-77, because the objectives may not have been adopted in time--not because of the Board's resolution.¹⁸⁴

¹⁸⁴Ibid.

A review of the evolution of MDE's broken front efforts to make assessment a viable component of the Michigan Accountability Model has revealed the great complexity of the task before them. To date, the assessment program has attempted to measure only part of one of the 22 sub-goals identified in the "Common Goals of Michigan." The functions of the MDE to date have been limited to gathering data, allocating money and disseminating the data. They have yet to venture into the true realm of accountability where differences revealed by assessment data would be attributed to resources, people or dollars.

There have been data in the literature to support the concept that schools do make a difference, but identifying the myriad of factors that contribute to that difference requires sophisticated technology and extensive resources. Michigan has found itself in the vortex of whirling questions that neither educators nor social scientists have yet resolved. For example, what particular facets of the elementary principalship, what type of administrative performance might be reflected in student achievement? In what areas should the principal have the autonomy needed for responsible decision-making? How much autonomy is desirable? The answers have remained unclear, partially because the functions expected of the elementary principalship have remained varied and unclear.

Autonomy in the Elementary Principalship

In considering the functional autonomy of the elementary principal both the evolving role of that principalship and the

aspects of autonomy deriving from the theory of organization structure must be addressed.

A review of the literature regarding the role of the elementary principal would suggest that the role has divergence in practice, but much commonality in its historical evolution and in identifiable tasks associated with that role.

The Elementary Principalship

The historical evolution of the elementary principalship has much to do with the current practices associated with it. The position grew out of a synthesis of educational practices in Europe that were brought to the American shores and the societal needs unique to America that were placed upon education.

Historically, the principal predates the superintendency and both the name and the concept evolved from the "principal-teacher." The first educational administrative tasks at the building level were assumed by teachers. While the principal-teacher of early schools performed many functions of an administrative nature, such acts were considered secondary, or even incidental, to the primary duty of instruction. Many administrative activities were carried out by lay committeemen or elected officials. These conditions established two principles early in American school traditions; first, that elementary school administrators were teachers first and administrators second, and secondly, policy

decisions concerning elementary schools should be made by lay workers.¹⁸⁵

One of the early treatises on educational administration was Cubberley's work. Writing in 1922, he argued for more emphasis and responsibility to be placed in the office of the principalship,

We are not likely to overestimate the importance of the office of school principal. As the superintendent gives tone and character to the whole school system, so the school principal gives tone and character to the school under his control. . . . The knowledge, insight, skill, and qualities for helpful leadership of the principal of the school practically determines the ideals and standard of achievements of both teachers and pupils within the school.¹⁸⁶

The position of elementary school principal did not become common in the United States until the early part of the twentieth century. A small group of elementary school administrators formed the Department of Elementary School Principals (DESP) of the NEA in 1920. A major concern of the DESP in its early years was the teaching duties many principals continued to have. In listing the five stages of development of elementary school administration in the DESP Fifth Yearbook, Crouch¹⁸⁷ observed that of all the steps

¹⁸⁵Fred A. Snyder and R. Duane Peterson, Dynamics of Elementary School Administration (Boston: Houghton Mifflin Co., 1970), p. 7.

¹⁸⁶Elwood P. Cubberly, Public School Administration (Boston: Houghton Mifflin Company, 1922), p. 190.

¹⁸⁷Roy A. Crouch lists five stages in the development of elementary school administration in Chapter Two of the DESP Fifth Yearbook; (1) One-Teacher, (2) Head-Teacher, (3) Teaching Principal, (4) Building Principal, and (5) Superivsing Principal.

none had been more significant than the releasing of the administrator from teaching duties.

Associated with the teaching-principal has been the more clerical administrative duties. Tracing the antecedents of this role, McCarty stated, "The modern school administrator is the unfortunate descendent of the teaching principal, an office historically restricted to second-rate clerical duties."¹⁸⁸

The modern day principal has been unable to throw off these historical shackles for her managerial responsibilities appear to have increased. As Hencley et al. have reported,

From the time of the first 'principal teacher,' the image of the elementary school principal has developed in many communities as a person who is competent in managing facilities, equipment and supplies: Allocating teaching functions; promoting, guiding, and disciplining students; scheduling buses, classes, and PTA meetings. All of these tasks focus primarily on technical management and have tended to project a low-level image of elementary administration.¹⁸⁹

In addition to clerical-managerial tasks, the elementary school administrator's heritage has identified two other distinct spheres usually associated with the principal--discipline and

¹⁸⁸Donald J. McCarty, "Organizational Influences on Teacher Behavior," Selected Readings on General Supervision, James E. Heald, Louis G. Romano, and Nicholas P. Georgiady, eds. (New York: Macmillan Company, 1970), p. 127.

¹⁸⁹Stephen Hencley, Lloyd McCleary, and J. McGrath, The Elementary School Principalship (New York: Dodd Mead and Co., 1970), p. 100.

supervision. Early school masters willed to the principal the image of disciplinarian complete with verbal lashing, rulers or switches, and even dunce caps. While more humane treatment of children and some laws that restrict physical punishment have reduced this aspect of the principal's role, "being sent to the principal's office" still connotes trouble--and discipline.

The sphere of supervision has had a parallel movement away from strictness to helpfulness. From the "checking up" inspection of the 1910s and 1920s, the supervisory functions evolved by the 1950s to "assistance in the development of better teaching-learning situations."¹⁹⁰

Expectations of elementary administrator's behavior has changed considerably in each of these areas since the advent of the position. During the evolution of the principalship, other duties have been ascribed to the principal.

Functions of the elementary principalship.--Heald and Moore described the building principal's role as one of a decision-maker and also as the subordinate who executes decisions made by the superintendent. The decisions she makes whether unilaterally or by consensus, were identified by the authors and can be grouped into personnel/pupil assignments, scheduling, utilization of space, and development of personnel.¹⁹¹

¹⁹⁰Kimball Wiles, Supervision for Better Schools (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1955), pp. 5-8.

¹⁹¹James E. Heald and Samuel A. Moore, II, The Teacher and Administrative Relationships in School Systems (New York: The Macmillan Company, 1968), pp. 130-1.

After reviewing the work of Jarvis et al., Ullhorn, Billings, Carlson, Andlurer, Ainsworth, and Frey as well as work or statements from Ohio, Maine, Illinois, Oklahoma, Sioux Falls, Washington, D.C., and Milwaukee, Keller¹⁹² selected ten of the most commonly repeated functions. They were: (1) Teacher evaluation; (2) Maintaining accurate, up-to-date records; (3) Organization of the school for effective learning; (4) Providing resources for education in the building; (5) Developing and implementing in-service training program for teaching personnel; (6) Assignment of pupils to grades, programs, teachers; (7) Selection and assignment of teachers; (8) Planning curriculum in terms of student needs; (9) Participation in the development of system-wide policies; and (10) Interpreting the school to the public.

In 1968, the California Elementary School Administrators Association published a monograph, "Evaluation of an Elementary Principal's Effectiveness," and enumerated five function to evaluate: (1) educational leadership, (2) personnel operations, (3) support management, (4) school-public communication, and (5) professional leadership.

The Michigan Association of Elementary School Principals defined the role of the elementary principal under six headings:

¹⁹²Edward P. Keller, "The Territory of the Michigan Elementary School Principal," unpublished dissertation, Michigan State University, 1972, pp. 26-36.

Working with Central Staff, Building Personnel, Pupil Personnel, the Profession, School Related Agencies, and the Community.¹⁹³

Goldhammer¹⁹⁴ characterized the principal as a master teacher, educational philosopher, curriculum builder, and a catalyst and identified the capabilities needed to fulfill the role as communication skills, skill in group procedures, and sensitivity. In addition, he felt the principal should have knowledge of organizational change process, the legal basis of school operations, sociological and political forces existing within the community, employee-management relations, organizational and management theory, and social psychology.

In elaborating on the multiplicity of the principal's roles, Levenson¹⁹⁵ proceeded to cite many of the labels the principal has acquired using Gibb's "an innovator, a creator, and a quiet revolutionary," McGowan's "a principal source of public information," Goodlad's "aid in construction of teacher-proof packages," Lewin's "skillful in dealing with the teachers' union," and Meredith's "curriculum organizers and directors, building managers, public relations experts, counselors, sounding boards, financial consultants, superiors, personnel developers, and scholars." He

¹⁹³Michigan Association of Elementary School Principals, "The Role of the Elementary School Principal" (East Lansing, Michigan: MAESP, 1972), p. 3.

¹⁹⁴Keith Goldhammer and Paul L. Houts, "A Conversation with Keith Goldhammer," The National Elementary Principal, LIII, No. 3 (March/April, 1974), 27-34.

¹⁹⁵William B. Levenson, "School Principal: On the Crossfire Line?" The Clearing House, XLV (December, 1970), 216.

added to the list by stating, "Complicating the principal's task is the mounting pressure for accountability."

Reflecting on the multitude of demands, it is not surprising that Goldhammer commented, ". . . we've expected the administrator, particularly the elementary school administrator, to be all things. . . The good Lord himself couldn't perform all the roles that have been expected of elementary school principals."¹⁹⁶

Diversity in the principalship.--The broad spectrum of expectations has been further compounded by the diversity of situations in which the roles have been enacted. Cunningham remarked, ". . . there is enormous variation from school to school. The configuration of programs, activities, and problems in different schools are not the same."¹⁹⁷

Wagstaff and Spillman have supported this view, "The principalship is the most loosely defined important position in the educational hierarchy. It's difficult, if not impossible, to speak definitely about it from school district to school district within a state, let alone on a national scale."¹⁹⁸

¹⁹⁶Goldhammer, op. cit., p. 28.

¹⁹⁷Luvern Cunningham, "The Principal in the Learning Community," The National Elementary Principal, LIII, No. 5 (July/August, 1974), 42.

¹⁹⁸Lonnie H. Wagstaff and Russell Spillman, "Who Should Be Principal?" The National Elementary Principal, LIII, No. 5 (July/August, 1974), 37.

Hemphill et al. have summed up the problem,

At present there is no useful system for the classification of different school characteristics which would make it possible to hold situational factors constant in a study of administrative behavior. With the bankruptcy of the search for administrative qualifications on the one hand and with the variety of communities and schools on the other, most attempts to determine criteria of success for school administrators have been singularly unsuccessful.¹⁹⁹

As might have been expected within this milieu a call has been heard to define the principals' domain of professional responsibility and competencies.²⁰⁰ With reference to the elementary principal, Goldhammer has also called for some criteria, stating, "We need to be able to define some performance criteria that are professionally relevant to the practice within the field, . . ."²⁰¹

Despite the multiplicity of expectations and the inconsistencies surrounding the elementary principalship the degree of autonomy a principal has or should have has primarily been treated in the literature as a unidimensional factor. Treatment of the topic would suggest that a principal either has autonomy or does not to the same degree in all functions.

¹⁹⁹John Hemphill, Daniel Griffiths, Norman Grederiksen, Glen Stice, Laurence Iannaccone, William Coffield, and Sydel Carlton, Dimensions of Administrative Performance (Teachers College: Columbia University and Educational Testing Service, 1961), I-4.

²⁰⁰Cogan, op. cit., p. 22.

²⁰¹Goldhammer, op. cit., p. 34.

Autonomy

I would make the position of school principal one place of fixed and definite responsibility, and I would magnify and dignify that position and office. I would have him feel the responsibility of the place he occupies.²⁰²

So wrote Blodgett in 1903.

Cubberly echoed these words twenty years later, commenting "Whatever can be done to add strength and dignity and responsibility to the office should be done, . . ."²⁰³

Despite these early calls for responsibility in the principalship, treatment of the topic with reference to the elementary principal has not been particularly evident in the educational literature. Discussion of the skills of decision-making; authority and power in the bureaucratic sense; and school decentralization to regions, not individuals, seem to have nibbled at the edges of the problem without sinking their collective teeth into it.

Meaning of autonomy.--Expanding on Costa's definition of autonomy as self-governance, auto-regulation; and self-modification that has been accepted for this study, he has also stated that it is not immunity, exemption, or lack of restriction, concluding, "Autonomy and freedom are not synonymous."²⁰⁴

²⁰²A. B. Blodgett, Proceedings of National Education Association, 1903, as cited in Cubberly, op. cit., p. 190.

²⁰³Cubberly, op. cit., pp. 190-191.

²⁰⁴Costa, op. cit., p. 116.

Clearly Costa has encompassed a sense of responsibility into his concept of autonomy. His thinking has been close to that of Trist and Bamforth's "responsible autonomy."²⁰⁵ Fayol has said, "Responsibility is a corollary of authority."²⁰⁶ Thus, it follows that autonomy ultimately rests on authority.

A great deal of the work in complex organization, both theoretical and empirical, has addressed itself to problems of classifying and analyzing types of organizational authority. Max Weber's seminal ideas on the subject have been the basis for most of these efforts.²⁰⁷ Central to Weber's concept of bureaucratic type of authority was the principle that "the person in command typically is the 'superior' within a functionally defined 'competency' or 'jurisdiction'."²⁰⁸

While the concept of bureaucracy was the spawning ground for the authority upon which autonomy rests, it has also embraced

²⁰⁵E. A. Trist and K. W. Bamforth, "Some Social and Psychological Consequences of the Longwall Method of Coal-Getting," in Organization Theory, ed. by D. S. Pugh (Baltimore: Penguin Education, 1971), pp. 345-6.

²⁰⁶H. Fayol, "General Principles of Management," in Organization Theory, ed. by D. S. Pugh (Baltimore: Penguin Education, 1971), p. 103.

²⁰⁷Hans Gerth and C. W. Mills, From Max Weber: Essays in Sociology (New York: Oxford University Press, 1958), pp. 196-244; and Max Weber, The Theory of Social and Economic Organization, trans. Talcott Parsons and A. M. Henderson (New York: Oxford University Press, 1947), pp. 324-341.

²⁰⁸Max Weber, "The Three Types of Legitimate Rule," trans., Hans Gerth, in Complex Organizations, ed. by A. Etzioni (New York: Holt, Rinehart and Winston, 1961), p. 5.

the rules, span of control, and rigidity which purports to constrain autonomy. Rossel referred to autonomy as a negative orientation to bureaucracy.²⁰⁹ However, Engel's²¹⁰ work did not support the contention that bureaucracy is necessarily detrimental to professional autonomy. She found that doctors perceived themselves having more autonomy in a mildly bureaucratic setting than those in a nonbureaucratic or highly bureaucratic situation.

Williams²¹¹ suggested that the question of legitimation or ethical sanctification of authority had been so thoroughly discussed in the thirty years prior to his writing that it had reached the point of diminishing returns. Williams treated the topic summarily by reproducing Peabody's table which has been regarded as succinct and comprehensive. The table has been presented on the following page with the same intent.

Building on Barnard's principle of acceptance, his "zone of indifference," Simon reversed it into the "zone of acceptance." Etzioni's compliance theory, an obverse view of authority, extends these principles.²¹² This work has applicability to the principalship in two directions. First, for the principal as a subordinate

²⁰⁹Robert D. Rossel, "Autonomy in Bureaucracies," Administrative Science Quarterly, XVI, No. 3 (September, 1971), 308-314.

²¹⁰Gloria V. Engel, "Professional Autonomy and Bureaucratic Organization," Administrative Science Quarterly, XV, No. 1 (March, 1970), 12-21.

²¹¹J. G. Williams, "The Concept of Authority," The Journal of Educational Administration, VI, No. 2 (October, 1968), 152-161.

²¹²See David L. Westby, "A Typology of Authority in Complex Organization," Social Forces, XLIV, No. 4 (June, 1966), 484-97 for detailed discussion.

TABLE 1 (PEABODY)*
THE BASES OF AUTHORITY

	Formal Authority Legitimacy	Authority Position	Functional Authority Competence	Authority Person
Weber	Legal Legal order	Hierarchical Office	Rational authority Technical knowledge, experience	Traditional authority Charismatic authority
Urwick		Formal conferred by the organiza- tion	Technical, implicit in special knowledge or skill	Personal, conferred by seniority or popularity
Simon	Authority of legitimacy, social approval	Authority of sanctions	Authority of confidence (technical competence)	Techniques of persuasion (as distinct from author- ity)
Bennis		Role incum- bency	Knowledge of performance criteria	Knowledge of the human aspect of administra- tion
Presthus	Generalized deference toward authority	Formal role or position	Technical expertise	Rapport with subordinates ability to mediate individual needs

*As cited by Williams, op. cit., p. 155.

Figure 2.3.--Peabody's bases of authority, Table I.

the zone of acceptance has established constraints or perceived constraints and has provided an identifiable area within which no autonomy exists and the principal would not attempt to make a decision. Secondly, as a superordinate to her teachers the principal finds the teachers' zone of acceptance an area within which compliance would be understood.

These considerations belong to the role and/or perceptions of the role. The actor who occupies the role invests it with personal power thus extending the area of authority or obviating it through weak administrative performance.

In implementation of these premises it should also be noted that these defined areas have seldom been all or nothing but have been obfuscated by participatory decision-making and the administrative team approach.

It has been suggested that the administrative team concept was born out of the polarization of administrators in response to teacher collective bargaining.²¹³ The protestations and models accompanying the movement have been summarized by Wynn.²¹⁴ He has seen the principals' willingness to join the team as an effort on their part to regain some lost decision-making authority. The relationship has proven fuzzy at best and Salmon has urged a "magna

²¹³Willard Fox and Neil Phlmann, "An Explicit Definition Boardteam," The Boardman (October, 1974), 1-3.

²¹⁴Richard Wynn, "Theory and Practice of the Administrative Team," (Arlington, Va.: National Association of Elementary School Principals, 1973).

carta" or "management manifesto" that will delineate the administrative team responsibilities, authority, accountability, composition, right, working relations, and agenda-building processes.²¹⁵

The advent of educational accountability and the application of cost-benefit analysis systems have promoted a renaissance of interest in scientific management in educational administration. The original "architect" of scientific management, Taylor, regarded administration as a technological system. This approach has found specified administrative functions, tall hierarchical organizations, and a high degree of central control compatible with it. However, it has led Wynn to surmise, "This concept of administration holds little place for the administrative team,"²¹⁶ and later he raised the question, "Are our concepts of individual accountability compatible with our concepts of group participation in decision-making?"²¹⁷

Those who view accountability in scientific management terms have difficulty reconciling autonomy and accountability. Some writers have seen them as conflicting concepts while others have viewed them as part and parcel of the same movement.

Autonomy and accountability.--The California School Administrators urged the principal, as a middle manager, to "move toward

²¹⁵Paul B. Salmon, "Are the Administrative Team and Collective Bargaining Compatible?" Compact, VI (June, 1972), 3-5.

²¹⁶Wynn, op. cit., p. 15.

²¹⁷Ibid., p. 29.

more autonomy and more accountability about all decisions affecting instruction."²¹⁸

Wynn has seen them as inseparable no matter which aspect is considered first, "The superintendent cannot expect to broaden the accountability of subordinate administrators without a commensurate broadening of their authority over those variables that impinge on the success of their jurisdiction."²¹⁹

McConnell on the other hand, has regarded autonomy and accountability as a possible dichotomy stating, "An individual loses autonomy to the extent to which he is answerable to an external agent,"²²⁰ or at least in conflict as he later commented, "There will be inevitable tension between the demands and requirements of accountability and the desire for autonomy."²²¹

Lopez has considered the relationship in another way, he suggested, "Accountability is to be distinguished from responsibility by the fact that the latter is an essential component of authority which cannot be delegated."²²²

²¹⁸California Elementary School Administrators Association, "Evaluation of an Elementary Principal's Effectiveness" (Burlingame, California: CESAA, 1968).

²¹⁹Wynn, op. cit., p. 40.

²²⁰T. R. McConnell, "Accountability and Autonomy," in Accountability in American Education (Boston: Allyn and Bacon, Inc., 1972), 201.

²²¹Ibid., p. 213.

²²²Lopez, op. cit., p. 65.

Elementary school administration and autonomy.--The English influence²²³ of building autonomy prevailed in the early organization of schools in America. Reflecting that Reich in his history of the elementary principal called the years from 1880 to 1920 the "golden age of the elementary school principalship," Cogan noted, "the principal was almost autonomous and often had nearly complete control of teacher selection, placement, promotion, and salaries. He enjoyed almost total control of supervision . . ."²²⁴

However, with the rapidly expanding population came the more complex school system and the realization expressed by Morphet et al., "No school group is completely autonomous in authority. All school groups, both formal and informal, are subgroups of the total organization."²²⁵

The "golden age" has turned dime store geen with the continued encroachment on what was once the principal's domain.

As Lutz et al. commented:

Whereas it was once the accepted practice for the building principals to select their staffs, schedule personnel and programs, select materials, and develop

²²³For a comparison of the autonomy in English, French, and American school systems see Snyder and Peterson, Dynamics of Elementary School Administration (Boston: Houghton Mifflin Company, 1970), p. 4-8.

²²⁴Morris L. Cogan, "The Principal and Supervision," The National Elementary Principal, LIII, No. 4 (May/June, 1974), 21.

²²⁵Edgar L. Morphet, Roe L. Johns and Theodore Reller, Educational Organization and Administration: Concepts, Practices and Issues (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1967), p. 127.

program, today we find many of these functions restricted, and some totally removed from the principal's jurisdiction.²²⁶

The literature abounds with notations on impingement on the principal's territory. Cogan has offered one list,

. . . today's principal must work within an unparalleled array of imperative demands; militant and often irreconcilable parent groups, rioting students, merciless budget cuts, unionized teachers . . .²²⁷

From another perspective, Keller has added to the constraints by listing tradition, the history of her school; legal limitations; rights and privileges of parents and children; requirements of teamwork, realities of community expectations; . . .²²⁸

The most "votes" for lost ground have gone to teachers' negotiations. Wynn has proven representative of much of the thinking in this area as he commented,

Principals are understandably frustrated when they find their former prerogatives traded off at the bargaining table. The agreement, which is often negotiated without their consultation strips them of some of their authority while increasing the constraints upon their behavior.²²⁹

A close second in the literature is the often repeated concern with the tedium of tiny tasks. Costa has summed up this dilemma,

²²⁶Frank Lutz, Lou Kleinman, Sy Evans, Grievances and Their Resolution (Danville, Ill.:" Interstate Printers and Publishers, 1967), p. 79.

²²⁷Cogan, op. cit., p. 21.

²²⁸A. J. Keller, op. cit., p. 24.

²²⁹Wynn, op. cit., p. 7.

A common practice is for district administrators to consider the building principal as the 'instructional leaders' of the schools. Yet at the same time the principals are given burdensome tasks, meaningless audits, superfluous inventories, and other 'adminis-trivia'.²³⁰

Goldhammer has illustrated the principal's problem more graphically,

. . . you don't need a master's degree to devise a playground schedule or to order the toilet paper
 . . . burden him with chores that somebody with a good high school education could do. It's about time we reserve that professional capability for strictly professional responsibilities.²³¹

Other constraints on the principal's autonomy that have been mentioned in the literature are the endless meetings, central office personnel, technical advances, urban problems, integration, and the educational bureaucracy, or the organizations tolerance for variation.

Ironically, accountability has been born out of the public disenchantment with public education--a climate and a movement that in itself provides constraints.

The number of chunks carved out of the principal's territory as suggested in the literature has raised the question if she has any room left to stand her ground. Happily, there are those who have some optimistic thoughts. Snyder and Peterson have placed much of the determination of autonomous boundaries with the principal

²³⁰Costa, op. cit., p. 120.

²³¹Goldhammer, "A Conversation with Keith Goldhammer," The National Elementary Principal, LIII, No. 3 (March/April, 1974) 32.

herself suggesting that she will function according to what she perceives as important to herself and to the organization.²³²

Wrenn has driven the point home, "Lack of autonomy is often held up as a constraint on principals, but I believe that most of us have more autonomy than we assume," and she added, "Autonomy is in large measure a state of mind, one that requires courage, conviction, and willingness to be held accountable."²³³

Redfern has suggested that principals can make better application of human resources in the negotiations arena without loss and maybe some gains,

Perceptive principals can adjust to the new order without loss of effectiveness. It is largely a matter of reassessing administrative prerogatives, finding more meaningful ways to make cooperative decisions and to utilize teachers and other staff personnel as human resources capable of contributing far more than they may be doing at present to advance the total program of the school.²³⁴

While growth of state and federal participation in the educational enterprise has expanded with almost every session of these legislative bodies and courts have added to the volume of case law, Johns has offered hope to the legally beleaguered

²³²Snyder, et al., op. cit., p. 80.

²³³Elizabeth H. Wrenn, no title, The National Elementary Principal, LIII, No. 3 (March/April, 1974), 37.

²³⁴George B. Redfern, "Negotiation Changes Principal-Teacher Relationships," The National Elementary Principal, XLVII (April, 1968), 25.

principal asserting that the power over education is not a fixed quantity and increased participation at one level does not necessarily lessen the power at another level of government. He has viewed the continuum as a partnership where federal, state and local each assume responsibility for those processes that can be dealt with most effectively at each level.²³⁵

Though the restive public has increased its demands through accountability, the flip side has been a concomitant call for more responsible autonomy. The Michigan Association of Elementary School Principals' only official position on accountability has been offered in conjunction with other professional organizations and lay groups in the state. This coalition, The Michigan Forum of Educational Organizations, reached consensus on seven minimum criteria for developing an educational accountability plan. Criteria 3 and 5 have particular relevance to the dimensions of autonomy in accountability,

3. An accountability plan should make clear that all persons involved in the education process have important responsibilities and that these persons are accountable, not for or to each other, but for the effort to reach agreed-upon goals. . . .

5. The local school district should have the primary responsibility for the development and implementation of an accountability plan, and basic

²³⁵R. L. Johns, "State Organization and Responsibility for Education," Implications for Education of Prospective Changes in Society, No. 2 of Designing Education for the Future, Edgar L. Morphet and Charles O. Ryan, eds. (New York: Citation Press, 1967), p. 263.

planning should be centered in the individual school buildings. . . .²³⁶

Goldhammer has urged superintendents to give principals ". . . all the opportunity, praise, and reward necessary to pick up the ball and run with it. It's time for us to eliminate the chain-of-command concept."²³⁷

A report has come from one school district, Lansing, Michigan, where the ball has been tossed,

My school district has implemented a model providing for building-level autonomy. While this form of organization places more responsibility in the hands of the principal, it certainly allows the school administrator the opportunity to make more expeditious decisions. . . . Under our philosophy of 'responsible autonomy' (the superintendent's term), each building must be accountable for its own operation.²³⁸

The writer did not indicate if the sense of accountability extended to achievement scores or the organizational patterns effect on them. Indeed, there has been very little evidence to date as to organizational or principal characteristics that are related to student achievement.

²³⁶Michigan Forum of Educational Organization, "Criteria for Developing an Educational Accountability Plan," as published in The Michigan Elementary Principal, L, No. 2 (April, 1974), 23.

²³⁷Goldhammer, "A Conversation with Keith Goldhammer," The National Elementary Principal, LIII, No. 3 (March/April, 1974), 32.

²³⁸Shirli Vioni, "On Autonomy and Diversity," The National Elementary Principal, LIII, No. 4 (May/June, 1974), 27.

Related Research Studies

Research literature relating administrative characteristics to student achievement has not been extensive. Heim²³⁹ found in his search of the field only four studies that related the ratio of administrators to students. None of these studies found a correlation between the quantity of administrators and student achievement.

Those researchers who have studied the quality of administration found a relationship between the effectiveness of an administrator and student achievement. However, in considering the results of these studies the reader is reminded that the terms "quality" and "effectiveness" were not defined consistently.

Weber's study first identified four schools that were notable exceptions to the pattern of low reading achievement in inner-city schools. After testing the students to confirm achievement levels and rather intensive observation of the school setting, Weber found eight factors common to all schools; strong leadership, high expectations, good atmosphere, strong emphasis on reading, additional reading personnel, use of phonics, individualization, and careful evaluation of pupil progress.²⁴⁰ Commenting on the key variable "strong leadership," Weber observed, "Strong leadership

²³⁹John Heim, Variables Related to Student Performance and Resource Allocation Decisions at the School District Level (Albany: New York State Education Department, 1972).

²⁴⁰George Weber, Inner-City Children Can Be Taught to Read: Four Successful Schools, Council for Basic Education, Occasional Papers #18 (October, 1971).

is not surprising. But it was striking that all four schools have clearly identifiable individuals who would be regarded as outstanding leaders by most people who are knowledgeable about our public schools."²⁴¹

After exploring means to raise standards for children in the inner-city schools, Levine concluded that an adequate level of education in a low-income school is not likely to be attained "unless its administration is vigorous and highly skilled in working to overcome the forces responsible for the abominable situations which presently exist in the large majority of inner-city schools." He stressed the need for administrators who could offer an unusually high level of professional leadership.²⁴²

Concentrating on one facet of the principalship, Lutz and Evans studied union contract implications in New York City and explored how successful principals manipulate the contract in working with teachers.²⁴³

Kenneth B. Clark concluded from his study that the effective principal acts as an educational leader in relation to the teachers. He listed the following characteristics:

²⁴¹Weber, op. cit., p. 26.

²⁴²Daniel U. Levine, Raising Standards in the Inner City Schools, Council for Basic Education, Occasional Papers #11 (December, 1966).

²⁴³Frank Lutz and Seymour Evans, The Union Contract and Principal Leadership in New York City Schools (New York: The Center for Urban Education, December, 1968).

- sets and implements established curriculum and performance goals;
- has high expectations of his teachers and insists on regular diagnostic assessment of student performance;
- helps his staff to reinforce their strengths and correct their weaknesses through workshops, staff development, direct supervision;
- keeps in direct touch with classroom performance;
- involves teachers in program planning;
- defines roles and responsibilities clearly;
- focuses on student performance rather than classroom control as primary.²⁴⁴

The New York Office of Performance Review undertook an in-depth study of two elementary schools who had significantly different achievement on the state reading scores and were matched to minimize the impact of social and cultural factors on the following characteristics: median family income, percentage of families on welfare, pupil ethnicity, percentage of pupil with second language difficulties, percentage of pupil eligible for free lunches, and pupil mobility.²⁴⁵ After extensive testing, interviews, and observations by teams from the Office, they concluded, "The findings of this study suggest that the differences in pupils' reading achievement in these two schools were primarily attributable to administrative policies, behavior, procedures and practices."²⁴⁶

²⁴⁴Kenneth B. Clark, A Possible Reality as cited in School Factors Influencing Reading Achievement (Albany: Office of Education Performance Review, 1974), p. 5.

²⁴⁵State of New York Office of Education Performance Review, School Factors Influencing Reading Achievement; A Case Study of Two Inner City School, 1974.

²⁴⁶*Ibid.*, p. 20.

It should be noted that all of the studies reviewed here as pertinent to the topic of this research were conducted in low SES schools and in most cases were limited to an in-depth case study approach of relatively few schools. In all cases, they concentrated on achievement or negotiations and the "fall-out" was the effective principal.

Summary

If we could first know where we are and whither we are tending, we could better judge what to do and how to do it.

Abraham Lincoln

The selected review of the literature has provided an overview of "where we are" with reference to the elementary principal, her functions and autonomy, and "whither we are tending" within the accountability movement.

The accountability movement has evidenced rapidly expanding support from politicians and those who felt its effectiveness in the industrial realm. The difficulties of applying the accountability mode to the education institution have been considered with particular attention to the Michigan Accountability Model.

The indispensable components of accountability; goals/objectives, measurement, and communication were presented. Special attention was given to measurement's contribution to accountability along with the positive and negative ramifications of its use in the accountability movement.

The development of the current role of the elementary principalship and its functions were reviewed. The merits of autonomy for the elementary principal with reference to accountability were considered.

Finally, studies pertinent to the area of consideration in this study were presented.

This selected review has presented the conditions under which the need for the study evolved and were pursued to "better judge what to do and how to do it."

Chapter III

DESIGN OF THE STUDY

The purpose of this chapter is to describe the research design. The characteristics of the population, the sampling procedures, the instrumentation, the procedures for securing the data, and a delineation of the data methodology are presented.

Population

The elements of the population under consideration in this study were Michigan elementary schools housing at least grades 1-4, or their equivalent. They were part of K-12 school districts which had at least two elementary schools. Further, in order to satisfy the conditions of the study, the principal of the selected school had to have occupied that position during the 1972-73 and 1973-74 school years. By design, every type of Michigan community; rural, urban, suburban, town, and city was represented in the study.

Sampling Design

District policies and matters of mutual influence prevent the researcher being assured independence exists between schools within a given district. While statistical independence was not needed for correlational treatment, it was desirable to be sure each element represented a discrete entity. In order to preserve

independence, multi-stage cluster sampling was used. The elements of the first stage of the sampling frame were the K-12 school districts in Michigan; and elements of the second stage were the elementary schools. The school principal's rating, perceived degree of autonomy, and the students' achievement scores for each of the schools selected in the second stage provided the observable data.

To be assured a representative sample of all the K-12 school district community types were represented, The Community Types as defined and listed by the MDE¹ were stratified and either to total population or a random sample was drawn from each stratum. The school districts and schools that comprised the entire sample are listed in Appendix E.

The stratification of the first stage sampling frame was also done in an effort to increase precision. As noted previously, there is a growing body of evidence to substantiate a significant positive correlation between SES and achievement test results. To the extent that the strata are more homogeneous with respect to SES which is related to the dependent variable, student achievement scores, the sampling error should be reduced.²

¹Michigan Department of Education, 1972-73 MEAP Third Report, "Local District and School Report: Explanatory Materials," (Lansing, Michigan: MDE), pp. 33-39.

²Earl R. Babbie, Survey Research Methods (Belmont, California: Wadsworth Publishing Company, Inc., 1973), p. 98.

The sub-population by Community Type, the strata, were sampled disproportionately to insure sufficient number of cases of each type for analysis. The total population of districts designated as Metropolitan Core was included in the study with the exception of Kalamazoo and Detroit districts. In Kalamazoo, elementary schools have been organized in a manner that does not satisfy the conditions of this study; e.g., grades 1-4, or equivalent in a given school. As noted earlier, Detroit's assistant superintendent of research and development has indicated he would not recommend nor support research in this sensitive field at this time. Where less than the total-sub-population was used, the needed sample size of 40 was determined by use of the Biometrika Tables for Statisticians Confidence Coefficient 0.95.³ Table 3.1 lists the Community Types, the number of districts in Michigan eligible by definition for inclusion in the study, the sample sizes, and the percentage of the population represented by the sample.

Samples were drawn by simple random sampling using a table of random numbers. Sampling frames for each school district selected were then constructed. One school from each district was chosen by simple random selection.

³E. S. Pearson and H. O. Hartley, eds., Biometrika Tables for Statisticians, 2nd ed., as cited in Statistical Methods in Education and Psychology, by Gene V. Glass and Julian C. Stanley (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1970), p. 537.

TABLE 3.1.--Population and sample size by Community Type.

Community Type	Population (Eligible Districts)	Sample Size	Per cent of Population
Metropolitan Core	13	13	100
City	26	26	100
Town	76	40	52
Urban Fringe	111	40	36
Rural	<u>84</u>	<u>40</u>	<u>48</u>
TOTALS	310	159	51

Since schools eligible for inclusion in the study must have had a principal who occupied that position in the 1972-73 and 1973-74 school years, determination of the tenure in position during both school years was confirmed by referring to the Michigan Education Directory and Buyers Guide,⁴ 1972-73 and 1973-74 editions. This was further verified in the survey by the tenure in position question in the instrument which also served as a filter question.

In cases where the principal of the selected school had not served in those years, the school was deleted from the study and the school next to it in the sampling frame was selected. In

⁴Michigan Education Directory, Michigan Education Directory and Buyer's Guide, 1972-73 ed. and 1973-74 ed. (Lansing, Michigan: Michigan Education Directory).

instances where no principal/school within the district met the conditions of the study, the district was deleted and an additional district within the stratum was randomly selected.

Instrumentation

In order to gather the information needed to test the hypotheses and conditions of the study, it was necessary to prepare a questionnaire that would yield some measure of the principal's autonomy, effectiveness, tenure in position, and other buildings administered. It was also deemed advisable to request an approximation of the socioeconomic status of the respective school's clientele. In accordance with these needs the Administrator Profile Survey was prepared with the subsections Autonomy, Tenure in Position, Administrative Image Questionnaire, and Socioeconomic Status.

Autonomy

No evidence could be found in the research literature that the level of principal autonomy had been surveyed either in a global nature or by task. In order to acquire this information, McCleary and Hencley's⁵ inventory was adapted to those potential decision-making functions within the elementary principalship. As this portion of the instrument was primarily designed to provide descriptive data, the instrument was judged for appropriateness,

⁵Lloyd E. McCleary and Stephen P. Hencley, Secondary School Administration (New York: Dodd, Mead and Company, 1965), pp. 75-94.

comprehensiveness, and clarity. The judges were selected by purposive sampling⁶ and included: (1) seven practicing supervisors, (2) nine practicing principals, (3) the Executive Secretary of MAESP, and (4) five former superintendents including the Executive Secretary of the Michigan Association of School Administrators.

The following indicators were submitted for consideration to the judges:

1. Personnel
2. Organization
3. Building Budget
4. Curriculum Development
5. Instructional Development
6. School--Community/Parent Relations
7. School Plant

Illustrative questions were supplied with each item to help clarify the nature of that function. All judges endorsed the indicators as specified. A few word changes in the illustrative remarks were suggested, modifications were made accordingly, and the Autonomy sub-section was submitted to the other judges.

The questionnaire asked the respondents to indicate the degree of autonomy they perceived the principal had or could delegate with regard to each function. A scale of 1 to 5 was used with the descriptors: 1. Rarely; 2. Seldom; 3. About Half;

⁶Babbie, op. cit., p. 106.

4. Usually; and 5. Almost Always. These terms were defined in relation to a span of twenty percentile points each; i.e., "2. Seldom: 20-40% of the time."

The complete Administrator Profile Survey has been included in Appendix B.

Effectiveness

The "Administrator Image Questionnaire" (AIQ) developed by Western Michigan University's Educator Feedback Center was used to assess the principal's effectiveness. Permission to use the instrument was granted by Dr. Roth and a copy of his letter has been presented in Appendix D.

Except for minor changes in instructions the original AIQ format was preserved to maintain the integrity of the instrument. Twenty-three indicators with illustrative comments were presented with a descriptor scale of Poor, Fair, Average, Good, and Excellent. Following the Center's procedures, these terms were later quantified on a 1-5 scale.

In evaluating their instrument the Center reported, "The reliability coefficients from the different scaled questionnaire items range from .82 to .93."⁷ In the 1968-1970 school years, 7004 nonprobabilistic sample of individual ratings of administrators were compiled. Means and standard deviations for each item and

⁷ Educator Feedback Center, Western Michigan University, "Interpreting and Utilizing Your Administrator Image Profile" (Kalamazoo, Michigan: Western Michigan University, N.D.), p. 3.

the total questionnaire were computed. On a 1 to 5 scale for each item, the mean of the means for the questionnaire was 3.854 and the standard deviation was 0.512.⁸

Tenure in Position

Within certain ranges the principal's tenure in the position under consideration (excluding the 1974-75 school year) was requested. The ranges used were (1) 2-5 years, (2) 6-10 years, and (3) over 10 years. Principals with less than two years did not meet the conditions of the study. The responses where it was indicated that the principal had spent less than two years in the position were excluded from the study. In this manner, the question not only provided demographic data but acted as a filter question.

Multi-building Administration

A place was provided on the questionnaire for the respondent to list any other school the given principal might administer in addition to the selected school. This information was used to gather achievement scores for all schools administered by the principal under study.

Socioeconomic Status

Brookover⁹ in his work found some SES variability within Community Types and some changes in SES over time. An attempt was

⁸Ibid., pp. 4-5.

⁹Wilbur B. Brookover, in conversation, October, 1974.

made to strengthen this aspect of the study by securing information on current SES with regard to each school in the study. In this way, it could be determined if the schools selected within each Community Type were relatively homogeneous with respect to SES; and, if not, would provide the data to control the SES variable in examining the correlations.

The respondents were, therefore, requested to provide data that would confirm the MDE 1971-72 information. Using the United States Bureau of Census to derive a composite socioeconomic index,¹⁰ the respondent was asked to approximate, (1) the percentage of heads of households in certain occupational categories, (2) the percentage of parents having specific levels of educational attainment, and (3) the percentage of families whose income would fall in a given range.

Finally, the respondent was asked to indicate if he would want to receive the results of the study.

Data Collection Procedures

Endorsement

The researcher requested the endorsement of her study by the Michigan Association of Elementary School Principals. On November 14, 1974, the Executive Committee of that body voted to

¹⁰Bureau of the Census, Methodology and Scores of Socioeconomic Status, Working Paper NO. 15 (Washington, D.C.: U.S. Department of Commerce, 1963).

endorse the study, and provided the services of their office to conduct the survey.

The cover letter for the questionnaire was sent out on MAESP letterhead and co-signed by Dr. E. P. Keller, Executive Secretary of that organization. Printed envelopes were also provided so that the respondents might return their questionnaires directly to the MAESP office.

Survey Procedures

In addition to informing the respondents of the nature of the study, the letter described the degree of confidentiality that would be maintained. They were informed that the school identification coded on the questionnaire would be known only to the researcher and would be destroyed as soon as the data was compiled. They were further assured that no one would ever be able to identify the school or the district in the reporting or publication of the data.

State assessment in Michigan has been characterized as an anathema to the superintendents of the state.¹¹ Despite the fact that it was predicted that the mention of "assessment" would depress the response rate¹² and could bias the response, keeping faith with the superintendents for this study and subsequent studies

¹¹Donald Curry, Executive Secretary, Michigan Association of School Administrators, in conversation, November, 1974.

¹²Ibid.

was an over-riding consideration. For this reason, the respondents were informed that assessment would be one component of the study.

Essentially the same information in an abbreviated form was presented in the follow-up cover letter for the second mailing. Both letters have been included in Appendix B.

The letter and questionnaire were sent to the superintendent of the district selected in the first stage of the cluster sampling. He was informed that a school in his district had been selected for inclusion in the study and the name of that school was written on a "clip-off" corner of the questionnaire for his convenience. He was further informed that the questionnaire was coded so that the responses could be correlated with other criteria.

The superintendent was asked that he, or his designee, to whomever the principal was directly responsible, respond to the questionnaire regarding the principal of the school selected.

The first mailing was sent December 24, 1974. The second mailing was made January 17, 1975. The data from those responses that had been received by February 5, 1975 were used in the analyses of the data. Table 3.2 indicates that an overall response rate of 83 per cent was obtained with the return rate by Community Type ranging from 77 to 88.5 per cent.

Of the 132 responses, 11 were not usable. Table 3.3 indicates the number and reasons for not using the responses.

TABLE 3.2.--Number and percentage of response by Community Type.

Community Type	Sample Size	Number of Responses	Percentage of Responses
Metropolitan Core	13	10	77
City	26	23	88.5
Town	40	32	80
Urban Fringe	40	33	82.5
Rural	<u>40</u>	<u>35</u>	<u>87.5</u>
TOTALS	159	132	83

TABLE 3.3.--Number and reason for unusable responses.

Number of Unusable Responses	Reason Unusable
2	refusal--employee privacy
3	district realignment e.g., new superintendent
3	principals had left district
3	new principal used in response
—	
11 TOTAL	

Table 3.4 presents the distribution and percentage of usable cases for data analysis for each Community Type. The percentage of usable responses for the entire sample was 76% and they ranged by strata from 75% to 77.5%.

TABLE 3.4.--Unusable responses, remaining number and percentage of responses by Community Type.

Community Type	Sample Size	Responses	Unusable Responses	Usable Responses No.	Responses %
Metropolitan Core	13	10	0	10	77
City	26	23	3	20	77
Town	40	32	1	31	77.5
Urban Fringe	40	32	2	30	75
Rural	<u>40</u>	<u>35</u>	<u>5</u>	<u>30</u>	<u>75</u>
TOTALS	159	132	11	121	76

Assessment Data

The assessment results of the MEAP-ORT, 1973-74, were made available by the Research Evaluation Assessment Services (REAS) division of MDE. A letter of permission for access to the data from Mr. Robert Huyser of that division has been included in Appendix D.

Since the ORT was designed as a criterion-reference test, no school composite scores were available. The school summary

data of the ORT 1973-74 provided the number of students who responded to each objective and the percentage of students who attained 80% or better. In consultation with Fisher¹³ of REAS it was decided a school composite could be derived by using the MDE's criterion of 80% and ascertaining the mean percentage of students having met that criterion. This was derived by using the formula

$$\frac{\sum_{i=1}^p (p_i)(n_i)}{p \sum_{i=1}^p n_i}$$

Where

n_i = number of students responding to each objective

p = number of objectives

P = percentage of students attaining 80%

When the number of students per objective (n_i) was constant across all objectives for a given school, the formula was reduced to

$$\frac{\sum_{i=1}^p P}{p}$$

In fact, if the number of students responding to the objectives did not vary more than two from a mean number of responses, the formula was still used without a loss of needed

¹³Thomas Fisher, REAS of MDE, in conversation, April, 1974.

accuracy. For example, in an instance where the number of students responding varied by six from objective to objective, or approximately three each way from the mean number of students, the two formulas differed by only .0009.

The composite achievement score was derived for every school in the study so that the data could be inspected to see if a difference existed in achievement between the responding and nonresponding elements. Achievement scores were also calculated for additional schools administered by the principal of a selected school in order to compare the achievement scores of various schools under one administration.

Treatment of the Data

Socioeconomic Status

To identify the relative socioeconomic status (SES) level of the schools selected, the U. S. Bureau of Census general methodology was adopted--using occupation, education attainment, and family income as components. The many categories under each component used by the Bureau were adapted into broader headings to simplify the list for the respondents.

Each respondent was asked to approximate the percentage of (1) heads of household within five occupational categories and unemployed; (2) the levels of educational attainment for the father and for the mother in the broader groupings of finished elementary/some high school, finished high school, some college, and college degree; and (3) the total family income that fell in

the specified ranges below \$5000, above \$25,000 and gradations of \$5000 in between.

These levels were given quantifiable scores by referring to Appendices II, III, and IV of Methodology and Scores of Socioeconomic Status¹⁴ which provided tables of scores for the levels of the three components, respectively. Where levels or categories were grouped, the score for the highest category represented was used.

Methodology and Scores . . . had been based on a 1960 dollar. In consultation with Carter,¹⁵ it was decided that the 1960 dollars be adjusted by the 1960 to 1974 Consumer Price Index ratio of .666; i.e., 1960 dollars ÷ .666 would yield 1974 dollars. The resulting figures were used to adjust the quantifying scores.

The provided or adjusted scores were then multiplied by the percentage given by the respondent. These products were summed for each component. For educational attainment the father's and mother's summative scores were averaged. Following the Bureau's procedures¹⁶ a simple average of the three component scores was then calculated. Thus, a SES Composite Index for each school was obtained.

¹⁴Methodology and Scores . . ., op. cit., p. 13.

¹⁵John Carter, Family and Individual Income, Statistics Branch, United States Bureau of Census, in conversation, November, 1974.

¹⁶Methodology and Scores . . ., op. cit., p. 3.

It should be noted that while the above description outlined the efforts made to treat the data concisely, the calculations rested on the respondent's approximations and the final composite index should be regarded only as an estimate of the school's SES.

A few respondents either felt this formation was too sensitive to submit or did not have it available. Of the usable responses in the study, Table 3.5 shows the number of respondents by Community Type that provided usable SES data and the number that offered incomplete data, uninterpretable data, or no data at all with reference to SES.

TABLE 3.5.--Number of respondents providing usable and unusable SES data by Community Type.

Community Type	Metropolitan Core	City	Town	Urban Fringe	Rural	Totals
Usable SES Data	10	19	26	24	25	104
Unusable SES Data	0	1	5	6	5	17
TOTALS	10	20	31	30	30	121

To quantify those schools where SES data was not clearly provided, the MDE's 1971-72 data and the researcher's personal inquiry were used. The percentiles of the 1971-72 data were adjusted only when those contacted who were familiar with the school area assured the researcher the socioeconomic conditions were no longer represented by the 1971-72 figures.

To establish a basis of quantification, a frequency distribution in deciles of the SES Composite Indexes was made from the supplied data. The percentiles reported or adjusted from the 1971-72 data were located on the distribution and the numerical value of the decile mid-point was assigned as the school's socioeconomic level.

Processing the Data

Upon completion of the survey and the ensuing calculations, the data were coded and punched on data control cards for statistical treatment by the Michigan State University's CDC 6500 computer.

Statement of Testable Hypotheses

Hypothesis I

Null Hypothesis I: No correlation exists between the effectiveness of an elementary principal as rated by the principals' superiors and the associated schools' student achievement as measured by the Grade 4, MEAP, 1973-74, test in reading within each of the Michigan Department of Education Community Types; Metropolitan Core, City, Town, Urban Fringe, and Rural.

Symbolically: $H_0: \rho_{xy_1} = 0$
 $\rho_{xy_2} = 0$
 $\rho_{xy_3} = 0$
 $\rho_{xy_4} = 0$
 $\rho_{xy_5} = 0$

Where,
 x = principal effectiveness
 y = achievement
 1 = Metropolitan Core

2 = City

3 = Town

4 = Urban Fringe

5 = Rural

Alternate Hypothesis I: A positive correlation exists between the effectiveness of an elementary principal as rated by the principals' superiors and the associated schools' student achievement as measured by the Grade 4 MEAP, 1973-74, test in reading within each of the Michigan Department of Education Community Types; Metropolitan Core, City, Town, Urban Fringe, and Rural.

Symbolically: $H_1: \rho_{xy_1} \neq 0$
 $\rho_{xy_2} \neq 0$
 $\rho_{xy_3} \neq 0$
 $\rho_{xy_4} \neq 0$
 $\rho_{xy_5} \neq 0$

Where legend is the same as the null form.

Hypothesis II

Null Hypothesis II: No difference will be found in the correlations between the effectiveness of a principal as rated by the principals' superiors and student achievement as measured by the Grade 4 MEAP, 1973-74 test in reading in the Community Type Metropolitan Core and in the Community Type Urban Fringe.

Symbolically: $H_0: \rho_{xy_1} = \rho_{xy_4}$

Where the legend is the same as the null form Hypothesis I.

Alternate Hypothesis II: Correlations between the effectiveness of a principal as rated by the principals' superiors and student achievement as measured by the Grade 4 MEAP, 1973-74, test in reading will be different in the two Michigan Department of Education school district Community Types, Metropolitan Core and Urban Fringe.

Symbolically: $H_1: \rho_{xy_1} \neq \rho_{xy_4}$

Where the legend is the same as the null form Hypothesis I.

Hypothesis III

Null Hypothesis III: No correlation exists between the effectiveness of an elementary principal as rated by the principals' superiors and the degree of autonomy the superiors believe the principals have by Community Type.

Symbolically: $H_0: \rho_{xz_1} = 0$
 $\rho_{xz_2} = 0$
 $\rho_{xz_3} = 0$
 $\rho_{xz_4} = 0$
 $\rho_{xz_5} = 0$

Where, x = principal effectiveness
 z = principal autonomy

Alternate Hypothesis III: A positive correlation exists between the effectiveness of an elementary principal as rated by the principals' superiors and the degree of autonomy the superiors believe the principals have.

Symbolically: $H_1: \rho_{xz_1} \neq 0$
 $\rho_{xz_2} \neq 0$
 $\rho_{xz_3} \neq 0$
 $\rho_{xz_4} \neq 0$
 $\rho_{xz_5} \neq 0$

Where the legend is the same as the null form Hypothesis III.

Hypothesis IV

Null Hypothesis IV: No correlation exists between the degree of autonomy superiors believe principals have and the associated schools' student achievement as measured by the reading test Grade 4, MEAP, 1973-74, by Community Type.

Symbolically: $H_0: \rho_{yz_1} = 0$
 $\rho_{yz_2} = 0$
 $\rho_{yz_3} = 0$
 $\rho_{yz_4} = 0$
 $\rho_{yz_5} = 0$

Where, y = achievement
 z = autonomy

Alternate Hypothesis IV: A positive correlation exists between the degree of autonomy superiors believe principals have and the associated schools' student achievement as measured by the reading test Grade 4, MEAP, 1973-74, by Community Type.

Symbolically: $H_1: \rho_{yz_1} \neq 0$
 $\rho_{yz_2} \neq 0$
 $\rho_{yz_3} \neq 0$
 $\rho_{yz_4} \neq 0$
 $\rho_{yz_5} \neq 0$

Where the legend is the same as the null form Hypothesis IV.

Hypothesis V

Null Hypothesis V: None of the variation in student achievement as measured by the Grade 4, MEAP, 1973-74, reading test, can be explained by the multiple correlation of principal effectiveness and autonomy as perceived by the principals' superiors.

Symbolically: $H_0: \rho_{y.xz_1} = 0$
 $\rho_{y.xz_2} = 0$
 $\rho_{y.xz_3} = 0$
 $\rho_{y.xz_4} = 0$
 $\rho_{y.xz_5} = 0$

Where, y = achievement
 x = effectiveness
 z = autonomy

Alternate Hypothesis V: A proportion of the variance of student achievement as measured by the reading test, Grade 4, MEAP, 1973-74, can be explained by the multiple correlation of principal effectiveness and autonomy as perceived by the principals' superiors by Community Type.

Symbolically: $H_1: \rho_{y.xz_1} \neq 0$
 $\vdots$
 $\rho_{y.xz_5} \neq 0$

Where the legend is the same as the null form Hypothesis V.

Hypothesis VI

Null Hypothesis VI: The principals' tenure in position does not affect the correlation between the effectiveness of a principal as rated by the principals' superiors and student achievement as measured by the Grade 4, MEAP, 1973-74, test in reading by Community Type.

Symbolically: $H_0: \rho_{xy.t_1} = 0$
 $\rho_{xy.t_2} = 0$
 $\rho_{xy.t_3} = 0$
 $\rho_{xy.t_4} = 0$
 $\rho_{xy.t_5} = 0$

Where,

x = effectiveness

y = achievement

t = tenure in position

Alternate Hypothesis VI: The degree of correlation between the effectiveness of principals as rated by the principals' superiors and student achievement as measured by the Grade 4, MEAP, 1973-74, test in reading will be modified by the principal's tenure in position by Community Type.

Symbolically: $H_1: \rho_{xy.t_1} \neq 0$

.

.

$\rho_{xy.t_5} \neq 0$

Where the legend is the same as the null form Hypothesis VI.

Analysis of the Data

A zero order correlation test, the Pearson product-moment formula¹⁷ was used as a means of calculating the correlation coefficient for each pair of variables in Hypotheses I, III, and IV.

Huyser¹⁸ mentioned that the proportion of students attaining the reading objectives when plotted formed a U shaped curve. Since student reading achievement constituted the dependent variable in the study and such a distribution might produce a non-linear relationship, principal effectiveness was plotted against achievement for each Community Type and for the entire sample to see if a non-linear relationship existed.

¹⁷Glass, et al., op. cit., p. 114.

¹⁸Huyser, op. cit., in conversation, February, 1974.

Multiple correlation was used to test the combined effect of autonomy and effectiveness on achievement as stated in Hypothesis V. To identify the extent that autonomy and effectiveness could serve as predictors of achievement the following formula is used:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2$$

Where $\beta_1 X_1$ = effectiveness
 $\beta_2 X_2$ = autonomy

Partial correlation was used to test the effect of tenure in position on the correlation between effectiveness and achievement. The formula used was:

$$r_{xy.t} = \frac{r_{xy} - r_{xt} r_{yt}}{1 - r_{xt}^2 - r_{yt}^2}$$

Fishers Z transformation of r provided a means of testing Hypothesis II to determine if a significant difference between the correlations for Metropolitan Core and for Urban Fringe existed. The test statistic was

$$Z = \frac{Z_{r_1} - Z_{r_2}}{\frac{1}{n_1 - 3} + \frac{1}{n_2 - 3}}$$

The strata were collapsed and assigned weights inversely to their probability of selection.¹⁹ The pooled weighted data

¹⁹Babbie, op. cit., p. 102.

were examined for the correlation between effectiveness and achievement controlled by SES using the partial correlation formula:

$$r_{xy.s} = \frac{r_{xy} - r_{xs}r_{ys}}{1 - r_{xs}^2 - r_{ys}^2}$$

The unidimensionality of the autonomy survey was examined by simple correlations of every item to the other and to the mean. The same process was used for the AIQ.

The .05 level of confidence was selected as the significance level for not accepting the null hypotheses.

Summary

The purpose of this chapter has been to describe the procedures and instrumentation used to fulfill the objectives and conditions of the study. The population was described and means of selecting the sample was outlined. Steps in the preparation of the instrument were set forth as well as the data collection procedures. Treatment of the data in preparation for analysis was described. The testable hypotheses, both null form and alternate form, were stated and also presented symbolically. Finally, the procedures and formulas used to test the hypotheses were given and an alpha level of .05 was accepted.

Chapter IV

ANALYSES OF THE DATA

This study had two rather discrete intents. One aspect of the research focused on the degree of relationship between certain variables while the other aspect was of a more descriptive nature. Therefore, this chapter is divided into two major sections. In the first part, data are presented in relation to the hypotheses of the study. The second section focuses on a description of the dimensions of autonomy revealed in the study as well as discussion of the item responses with respect to principal effectiveness.

Tests of the Hypotheses

To examine the magnitude of the correlation between principal effectiveness and student achievement, and the impact of the variables of autonomy, tenure in position, and socioeconomic status on this relationship, six major research hypotheses were developed. They were presented in null form in Chapter III. In order to test these hypotheses, various correlational measures were used and have been reported in relation to the specific hypothesis tested. For each of the statistical analyses, the .05 alpha level of significance was established.

Prior to consideration of the specific hypotheses, the reader should recall that the data were gathered and analyzed by stratum to test the hypotheses; and in stratum 1, Metropolitan Core, and stratum 2, City, the entire population was included. Under these conditions, in the strictest sense no inferential statistics can be employed. However, if it is generalized that the populations in these two strata represent infinitely large populations of similar schools, then the data can be treated inferentially. Therefore, what has been termed meaningful significance in interpreting and reporting the data has been drawn from what would constitute statistical significance and can be treated by the reader in the same fashion. The other three strata; Town, Urban Fringe, and Rural, were sampled and the data were treated with statistical inference.

Within this context, the hypotheses, the techniques employed for testing those hypotheses, the findings and the analysis are presented.

Principal Effectiveness and Achievement

The purpose of Hypotheses I and II were to determine if a relationship existed between principals' effectiveness and the student reading achievement by community type and among community types.¹ Expressed in null form, the first hypothesis reads as follows:

¹Table 4.12 presented on page 173 has depicted correlations of effectiveness item means with achievement by Community Type.

Null Hypothesis I: No correlation exists between the effectiveness of an elementary principal as rated by the principals' superiors and the associated schools' student achievement as measured by the Grade 4 Michigan Educational Assessment Program, 1973-74, test in reading within each of the Michigan Department of Education Community Types; Metropolitan Core, City, Town, Urban Fringe, and Rural.

Symbolically: $H_0: \rho_{xy_1} = 0$

$$\rho_{xy_2} = 0$$

$$\rho_{xy_3} = 0$$

$$\rho_{xy_4} = 0$$

$$\rho_{xy_5} = 0$$

Where,

x= principal effectiveness
y= student achievement
1...5= community types, and
 $E(r_{xy})$ =is biased estimator of ρ_{xy}

If both variables are continuous, the Pearson product-moment correlation coefficient provides the most stable correlation; i.e., the smallest standard error.² As the needed conditions could be satisfied, the Pearson product-moment was used to test Hypothesis I. Table 4.1 indicates the r_{xy} values for each Community Type. Clearly, whether referring to meaningful or statistical significance, the findings support the null hypothesis and it cannot be rejected.

As mentioned previously, one reason for stratifying by Community Types was an attempt to control SES as the correlations

²Walter R. Borg and Meredith D. Gall, Educational Research (New York: David McKay Company, Inc., 1963), p. 326.

were explored. However, an examination of the SES data³ suggested the schools in the study were not particularly homogeneous with respect to SES by community type. The data were therefore, collapsed as described in the research design. Partial correlation was used to hold the SES variable constant based on the assumption that "the factor held constant has a causal influence on the other two variables."⁴

TABLE 4.1.--Correlation between principal effectiveness (Administrative Image Questionnaire) and student achievement by Community Type.

Community Type	n	Correlation Between Effectiveness and Achievement
Metropolitan Core	10	$r_{xy_1} = .073^a$
City	20	$r_{xy_2} = .108^a$
Town	31	$r_{xy_3} = .044^b$
Urban Fringe	30	$r_{xy_4} = .027^b$
Rural	30	$r_{xy_5} = .061^b$

^aNot meaningfully significant.

^bNot statistically significant.

³The SES data giving ranges by Community Type have been presented in Table F-1 in Appendix F.

⁴Ibid., p. 339.

For the entire sample using weighted pooled data, the correlation between effectiveness and achievement, r_{xy} , was $-.005$. This correlation hardly warranted further statistical analysis; however, to satisfy the concern for the effect of SES on the relationship of effectiveness with achievement, the statistical procedures were undertaken. The partial correlation of effectiveness and achievement with SES partialled out was $.021$. This reaffirmed the findings by community type for Hypothesis I as cited above and offered further support for the null hypotheses.

As mentioned previously the state-wide distribution of reading scores on the MEAP-ORT, 1973-74, followed a U-shaped pattern. While this distribution was for individual reading scores, it raised speculation as to the distribution of the school composite reading scores. In order to learn more about the properties of the dependent variable, a histogram of all the school scores in the study was developed. This distribution has been presented in Figure 4.1.

It can be observed by referring to Figure 4.1 that the distribution of the school composite scores for the sample was not U-shaped, but rather showed a negatively skewed distribution approaching a normal distribution.

At the same time the histogram was being developed, a computer program to plot the bivariate relationship between effectiveness and achievement by community types and by the entire sample was undertaken to see if a non-linear relationship existed.

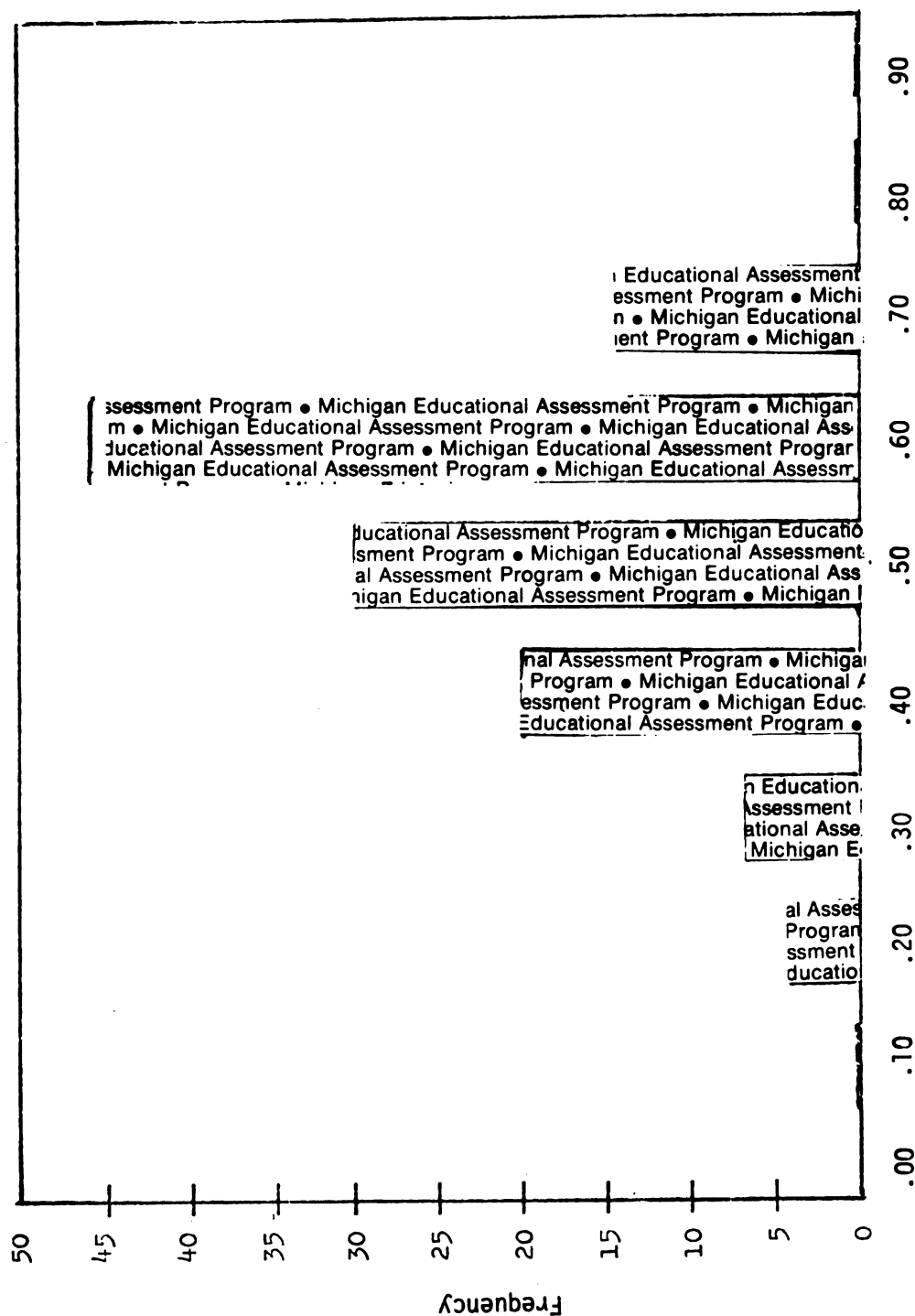


Figure 4.1.--Frequency distribution of school composite reading scores by mean percentile; MEAP-ORT, 1973-74.

The scatter plots, Figures G.1, G.2, G.3, G.4, G.5, have been included in Appendix G. The diffuse pattern evident in these plots clearly shows that neither a linear nor curvilinear relationship of any significance existed. While not significant, the tendency of the City schools toward a negative relationship in Figure G.2 may be of interest to the reader.

Null Hypothesis II: No difference will be found in the correlations between the effectiveness of a principal as rated by the principals' superior and student achievement as measured by the Grade 4 MEAP, 1973-74, test in reading in the Community Type Metropolitan Core and the Community Type Urban Fringe.

Symbolically: $H_0: \rho_{xy_1} = \rho_{xy_4}$

Where the legend is the same as Hypothesis I.

Since neither r_{xy_1} for Metropolitan Core nor r_{xy_4} for Urban Fringe were significant, there was no purpose in testing this hypothesis.

Autonomy

The third hypothesis refers to the relationship between the principals' autonomy and the principals' effectiveness. The fourth hypothesis explores the relationship between the principals' autonomy and the associated students' achievement in reading.

Before considering the findings of Hypotheses III and IV, it should be recognized that the primary purpose of the autonomy dimension of this study was to gather descriptive data. The data

were gathered with an instrument which had been adapted from an instrument developed and used by McCleary and Hencley.⁵ The adapted form was carefully judged, but it was not tested prior to usage for the explicit purpose or the particular population for which it was used in this study. The measures yielded by the Autonomy subsection of the Administrative Profile Survey should be viewed with this in mind and the results weighted accordingly.

Null Hypothesis III: No correlation exists between the effectiveness of an elementary principal as rated by the principals' superiors and the degree of autonomy the superior believes the principal has by Community Type.

Symbolically: $H_0: \rho_{xz_1} = 0$
 $\rho_{xz_2} = 0$
 $\rho_{xz_3} = 0$
 $\rho_{xz_4} = 0$
 $\rho_{xz_5} = 0$

Where, x = effectiveness
 z = autonomy, and
 $E(r_{xz})$ is a biased estimator of ρ_{xz}

Table 4.2 has presented the correlation coefficients resulting from the use of the Pearson product-moment treatment of the data for each Community Type.

⁵Lloyd E. McCleary and Stephen P. Hencley, Secondary School Administration (New York: Dodd, Mead and Company, 1965), pp. 75-94.

TABLE 4.2.--Correlations between principal effectiveness (AIQ) and principal autonomy.

Community Type	n	Correlations between Effectiveness and Autonomy
Metropolitan Core	10	$r_{xz_1} = -.063^a$
City	20	$r_{xz_2} = .534^b$
Town	31	$r_{xz_3} = .325^c$
Urban Fringe	30	$r_{xz_4} = .321^c$
Rural	30	$r_{xz_5} = .021^c$

^aNot meaningfully significant.

^bMeaningfully significant.

^cNot statistically significant at .05.

An inspection of Table 4.2 reveals that only the population of the City community type has a correlation of significance. The relationship of effectiveness and autonomy for principals in this type of community showed a moderately⁶ meaningful significance. Therefore, the following null hypotheses are not rejected:

$$\begin{aligned}
 H_0: \rho_{xz_1} &= 0 \\
 \rho_{xz_2} &= 0 \\
 \rho_{xz_3} &= 0 \\
 \rho_{xz_4} &= 0 \\
 \rho_{xz_5} &= 0
 \end{aligned}$$

⁶Moderate is used in the sense Glass et al., op. cit., p. 117, use it as "About +.50."

The null hypothesis:

$H_0: \rho_{xz_2} = 0$ is rejected in favor of the alternate

$H_1: \rho_{xz_2} \neq 0$.

Since the rater judged both variables, effectiveness and autonomy, the possibility of spuriously high correlations existed. While four of the five correlations were not significant, this possibility should not be totally disregarded in attributing significance to the relationship revealed in City communities.

Null Hypothesis IV: No correlation exists between the degree of autonomy superiors believe principals have and the associated schools' student achievement as measured by the reading test Grade 4, MEAP, 1973-74, by Community Type.

Symbolically: $H_0: \rho_{yz_1} = 0$

$\rho_{yz_2} = 0$

$\rho_{yz_3} = 0$

$\rho_{yz_4} = 0$

$\rho_{yz_5} = 0$

Where,

y = achievement

z = autonomy, and

$E(r_{yz})$ is a biased estimator of ρ_{yz} .

The correlation was tested with the Pearson r and the results have been presented in Table 4.3.

The findings reported in Table 4.3 supported the null hypothesis and it cannot be rejected.

TABLE 4.3.--Correlations of principal autonomy and reading achievement by Community Type.

Community Type	n	Correlation between Autonomy and Achievement
Metropolitan Core	10	$r_{yz_1} = .243^a$
City	20	$r_{yz_2} = .157^a$
Town	31	$r_{yz_3} = -.170^b$
Urban Fringe	30	$r_{yz_4} = -.043^b$
Rural	30	$r_{yz_5} = .207^b$

^aNot meaningfully significant.

^bNot statistically significant at .05.

Achievement and Effectiveness, Autonomy

The fifth hypothesis sought to examine the multiple affects of the principals' effectiveness and autonomy on student reading achievement and in null form reads as follows:

Null Hypothesis V: None of the variation in student achievement as measured by the Grade 4, MEAP, 1973-74, reading test, can be explained by the multiple correlation of principal effectiveness and autonomy as perceived by the principals' superiors by Community Type.

Symbolically: $H_0: \rho_{y.xz_1} = 0$
 $\rho_{y.xz_2} = 0$
 $\rho_{y.xz_3} = 0$
 $\rho_{y.xz_4} = 0$
 $\rho_{y.xz_5} = 0$

Where, y = achievement
 x = effectiveness
 z = autonomy

This relationship was studied using a general linear model

$$\hat{Y} = \beta_0 + \beta_1 X_1 + \dots + \beta_j X_j$$

The CDC 6500 LSTEP computer program was used in testing the model.

The multiple correlation coefficients, R, which gives the correlation of the predicted achievement, $\hat{Y}$, with the actual achievement, Y, are reported by Community Type in Table 4.4. The squared multiple R, R^2 , which gives the proportion of variance accounted for is also reported in the Table.

TABLE 4.4.--Multiple correlation coefficients and squared multiple R of principal effectiveness and autonomy for achievement by Community Type.

Community Type	n	Multiple Correlation Coefficients Squared Multiple R	
Metropolitan Core	8		
City	20	$R_2 = .6450^b$	$R_2^2 = .4160$
Town	30	$R_3 = .4199^c$	$R_3^2 = .1763$
Urban Fringe	30	$R_4 = .5628^c$	$R_4^2 = .3168$
Rural	28	$R_5 = .3791^c$	$R_5^2 = .1437$

^aAs the number of variables in the regression equation equalled the number of cases in the Metropolitan Core, singularity existed and there was no value in testing this relationship.

^bMeaningfully significant.

^cStatistically significant at .05.

The correlation of indicator means with the over-all autonomy mean have been explored in the second section of this chapter. Suffice it to state here that these correlations were so varied within a community type; e.g., Metropolitan Core ranged from .075 to .802, that the representational value of using the autonomy mean was cast in doubt. Therefore, the multiple regression equation was extended to effectiveness and each indicator of autonomy as variables. The formula was

$$\hat{Y} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8$$

Where, $\beta_1 X_1$ = effectiveness

$\beta_2 X_2$ = autonomy, personnel

$\beta_3 X_3$ = autonomy, organization

$\beta_4 X_4$ = autonomy, building budget

$\beta_5 X_5$ = autonomy, curriculum development

$\beta_6 X_6$ = autonomy, instructional development

$\beta_7 X_7$ = autonomy, school--community/parent relations

$\beta_8 X_8$ = autonomy, school plant

The independent variables, effectiveness and the autonomy indicators, in combination were found significant in predicting achievement in all community types tested. The R values were all significant and the null hypotheses that were tested; i.e.,

$$H_0: \begin{array}{l} \rho_{y.xz_2} = 0 \\ \rho_{y.xz_3} = 0 \\ \rho_{y.xz_4} = 0 \\ \rho_{y.xz_5} = 0 \end{array} \quad \text{were rejected.}$$

The squared multiple R showed that a portion of the variation in reading achievement could be accounted for by variations in the principals' effectiveness and the individual indicators for autonomy.

A relatively high ratio of variables to the sample size, n , tends to increase the probability of a linear "fit." Since the ratio was relatively high in this test, the multiple correlation coefficients and the squared multiple R reported in Table 4.4 should be interpreted cautiously with this factor in mind.

Tenure in Position

The sixth hypothesis was developed to explore the impact of the length of tenure in position on the correlation of effectiveness with achievement.

Data were gathered regarding tenure in position in three ranges; (1) 2-5 years, (2) 6-10 years, and (3) over 10 years. The frequency and means of tenure in position by ranges, not years, for each community type has been reported in Table 4.5.

Reference to the table discloses that principals in Metropolitan Core and City communities tended toward greater longevity in position while principals in Towns, Urban Fringe, and Rural communities were more apt to fall in the first range of 2-5 years. These figures, of course, were for principals who had been in that principalship at least two years prior to the study.

TABLE 4.5.--Frequency and means of tenure in position by ranges for each Community Type.

Community Type	n	Tenure in Position			Mean Range
		1 (2-5)	2 (6-10)	3 (Over 10)	
Metropolitan Core	10	2	4	4	2.20
City	20	8	3	9	2.05
Town	31	15	6	10	1.84
Urban Fringe	30	15	7	8	1.77
Rural	<u>30</u>	<u>14</u>	<u>8</u>	<u>8</u>	<u>1.80</u>
TOTALS	121	54	28	39	1.88

A partial correlation test was used to hold the effect of tenure in position constant while exploring the correlation between effectiveness and achievement. In Table 4.6, the results of this test have been reported along with the simple correlation, r_{xy} , for comparison purposes.

As can be seen from Table 4.6, no significance was found and the null hypothesis was not rejected. However, of passing interest to the hypothesis under study, the population of Metropolitan Core with the highest mean range of tenure in position in this study provided the greatest change from the simple correlation to the correlation with tenure partialled out.

TABLE 4.6.--Correlation of effectiveness and achievement with tenure in position controlled for each Community Type.

Community Type	n	Correlation Effectiveness and Achievement	
		Simple	Tenure in Position Controlled
Metropolitan Core	10	$r_{xy_1} = .073$	$r_{xy.t_1} = .25^a$
City	20	$r_{xy_2} = -.108$	$r_{xy.t_2} = -.096^a$
Town	31	$r_{xy_3} = .044$	$r_{xy.t_3} = .067^b$
Urban Fringe	30	$r_{xy_4} = -.027$	$r_{xy.t_4} = .013^b$
Rural	30	$r_{xy_5} = -.061$	$r_{xy.t_5} = .076^b$

^aNot meaningfully significant.

^bNot statistically significant at .05.

Of the six hypotheses set forth in this study, only Null Hypothesis V was rejected in favor of the research hypothesis across all community types. The findings were not consistent with the findings of other studies in the area of concern. Possible reasons for the lack of concurrence could be the differences in methodology or in their respective purposes.

Relationship to Previous Studies

The findings in this study do not support the work of the previously cited studies of Weber,⁷ Levine,⁸ Lutz and Evans,⁹ Clark,¹⁰ and the New York Study.¹¹ Only when both effectiveness and autonomy were multiply correlated with achievement was there support for the previously conducted studies, and reports of the other research do not suggest they considered the principal's autonomy as a variable in their studies.

Of these studies, all but Clark's work were intensive in-depth studies of 2 to 4 low SES schools by teams of judges. In contrast, this study attempted a broader state-wide survey. It also relied on the principals' superiors' judgement, for one of the major intents of this research was to study the on-the-

⁷George Weber, Inner-City Children Can be Taught to Read; Four Successful Schools (Council for Basic Education) Occasional Papers #18, October, 1971.

⁸Daniel U. Levine, Raising Standards in the Inner City Schools (Council for Basic Education), Occasional Papers #11, December, 1966.

⁹Frank Lutz and Seymour Evans, The Union Contract and Principal Leadership in New York City Schools (New York: The Center of Urban Educationa, December, 1968).

¹⁰Kenneth B. Clark, A Possible Reality as cited in School Factors Influencing Reading Achievement (Albany: New York Office of Education Performance Review, 1974), p. 5.

¹¹New York Office of Education Performance Review, School Factors Influencing Reading Achievement; A Case Study of Two Inner City Schools, 1974.

job situation. As Borg and Gall have said, ". . . the behavior of the individual as seen through the eyes of his supervisor, although different perhaps from the objective behavior of the individual, still has an important meaning in educational research."¹²

The use of the superiors' judgment, however, introduced the variability in raters which could have affected the results.

The criteria of measurement used in the instruments could also have led to discrepant results. The studies cited did not clearly set forth their criteria of effectiveness and what was stated was not consistent across studies; therefore, it is feasible that some of the discrepancy could be attributed to variations in criteria of effectiveness.

The differences between the measurement of the dependent variable, achievement, in the other studies and this one could be a contributing factor. This study relied on the Michigan Educational Assessment Program Objective-Referenced Test, a criterion-referenced test--a measurement approach which is relatively new and a given test which has not been subjected to all the rigors of standardized test development. While the weaknesses of the MEAP-ORT as pointed out by the experts did not seem sufficient to rule it out as a measuring device in this study, it may bear some responsibility for the differences in results between this study and others.

¹²Borg, op. cit., pp. 248-9.

In the New York study and in the work of Weber and Levine all of them started knowing the achievement scores; and, in fact, school selection was purposively based on the achievement results. Knowing the achievement, these studies sought to attribute the results to specific factors. The schools in these studies, then, were not randomly selected and no inferences can be drawn from them. Further, knowing part of the data in advance may have produced a mental set in the members of the observation teams and inadvertently caused a bias in the findings.

All of the schools involved in the studies cited with the possible exception of Lutz and Evans work had low SES clientele. The study reported here crossed socioeconomic lines and was representative of all social and economic conditions. While an attempt was made to control SES in this study, part of the conflicting results between the studies cited and this study could be due to the differences in the respective target populations.

Descriptive Aspects of the Study

To avoid redundancy throughout the following discussion, it should be prefaced by a few remarks. First, with respect to both autonomy and to effectiveness, the reported data were based on the perceptions of the principals' superiors. Secondly, the descriptive data referred only to the population of interest in this study; Michigan K-12 school districts with at least two elementary schools. Finally, the reader is reminded that the data pertained to the total population of Metropolitan Core and City

community schools and were generalized to similar situations while the data descriptive of Town, Urban Fringe and Rural community schools were treated through statistical inference.

Autonomy

Prior to an inspection of the data yielded by the autonomy instrument, the characteristics of the instrument itself should be considered.

The instrument.--Of importance to the interpretation of the data was the unidimensionality of the instrument for the population of interest in the study. Table 4.7 has depicted each indicator's correlation to the mean autonomy by community type. It should be noted prior to studying these results that the mean included the indicator under consideration.

By referring to Table 4.7, it can be observed that in the Town and Rural communities the indicators had moderate to strong correlations with the mean but were not consistent in their relationship. Metropolitan Core and Urban Fringe principals had relatively erratic correlations and City principals had a relatively weak picture across all indicators. The results of this study suggest that autonomy may not be uniform across tasks in some communities or across communities for some tasks. It would appear that the unidimensionality of the instrument and the construct upon which it was based is in doubt. To develop an instrument that could more fully assess autonomy may require

adherence to a construct that recognizes autonomy as situation and/or task specific.

TABLE 4.7.--Correlation of mean indicators with mean autonomy by Community Type.

Community Type	Autonomy Indicators						
	1	2	3	4	5	6	7
Metropolitan Core	.430	.637	.784	.802	.119	.075	.776
City	.336	.480	.434	.635	.112	.561	.414
Town	.753	.778	.828	.558	.748	.750	.622
Urban Fringe	.391	.659	.760	.601	.524	.233	.565
Rural	.601	.734	.671	.830	.772	.853	.626

Levels of autonomy by function.--The nature of this variability can be observed by inspecting Table 4.8. In this table, the mean score of each indicator by community type has been presented in the cells. An investigation of the means in each cell shows a range of 2.67 to 4.85 on a potential range of 1 to 5. The autonomy means by community type, column means, and the indicator means across community type, row means, have also been presented.

The least autonomy for a given function showed some commonality across community types. Even though Metropolitan Core principals had the least autonomy in personnel matters and

the Urban Fringe principals in curriculum development, City, Town, and Rural principals had the least autonomy in determining general facility needs, maintenance and renovation. Metropolitan Core and Urban Fringe principals also were perceived to have relatively low autonomy in this function. The low level of decision-making responsibility for this task across all community types was reflected in the indicator mean of means as "School Plant" had the lowest mean.

TABLE 4.8.--Autonomy indicator means by community type.

Autonomy Indicators	Community Types					Mean of Means
	Metro. Core	City	Town	Urban Fringe	Rural	
1. Personnel	2.67	4.45	4.03	4.17	4.31	3.93
2. Organization	4.80	4.70	4.48	4.80	4.70	4.70
3. Bldg. Budgets	3.60	4.35	3.64	4.23	3.83	3.93
4. Curr. Dev.	3.40	3.85	3.80	3.70	4.06	3.72
5. Instr. Dev.	4.78	4.85	4.45	4.63	4.56	4.65
6. Sch.-Comm.	4.20	4.65	4.41	4.73	4.33	4.46
7. Sch. Plant	3.40	3.65	3.25	3.73	3.23	3.45
MEAN OF MEANS	3.85	4.36	4.01	4.28	4.13	

There was even more commonality for the function that offered the most building level authority for the principal. For all but the City principals, the most autonomy could be found in

the principals' responsibility to organize the school in placement of teachers and students. City principals had the high level of autonomy with respect to this function also. The high indicator mean across all community types of 4.70 out of a possible 5.0 reflected this uniformity. Clearly the superiors perceive this function as a principals' responsibility.

To the extent that autonomy means by community type were representative of the total principals' autonomy, Metropolitan Core principals had the least autonomy and City principals had the most autonomy. A comparison of the cell means with the indicator means would support this position as City principals' autonomy was above the indicator mean for every function while Metropolitan Core principals were below the mean in five of the seven functions.

Summarily, it would appear that, in general, the principals in the population of interest have less autonomy regarding resources: personnel, budget, facilities, and curriculum development (which involved the selection of curricular materials). More autonomy seems to reside with the principals in the process and human relations aspects of the job; school organization, instructional development, and school--community/parent relations.

The discussion to this point has been in relative terms and should be expanded to the definitional terms. On the scale of 1 to 5 each quantitative numeral was provided a descriptor which was defined as follows:

1. Rarely: less than 20% of the time
2. Seldom: 20-40% of the time
3. About half: 40-60% of the time
4. Usually: 60-80% of the time
5. Almost always: More than 80% of the time.

According to these definitions, it would appear that in most instances the principal has more to say about her building's operations than anyone else. At least her boss thinks she has! Of the 35 cell means reported, only 13 were below 4 (60-80%) and only 1 was below 3 (40-60%). The notable exceptions were school plant where three means fall below 3.5 (or 50%) and personnel matters for Metropolitan Core principals.

Autonomy and achievement.--Of interest in the study was the impact a principal's perceived autonomy had on her associated students' achievement. The correlations of the means of autonomy indicators with achievement have been presented in Table 4.9.

TABLE 4.9.--Autonomy indicator means correlated with student achievement by community type.

Autonomy Indicators	Community Types				
	Metro. Core	City	Town	Urban Fringe	Rural
1. Personnel	.47	.26	-.13	.34	-.08
2. Organization	.19	-.13	-.28	.07	.26
3. Bldg. Budgets	.17	.57 ^a	-.25	-.17	.01
4. Curr. Dev.	.09	-.26	-.05	.07	.19
5. Instr. Dev.	-.001	.09	-.08	-.19	.29
6. Sch.-Comm.	-.03	.12	.06	-.16	.34
7. Sch. Plant	.16	-.10	-.08	-.15	-.02

^aMeaningfully significant.

Even a cursory glance of Table 4.9 reveals that the autonomy level of any indicator does not have a consistently significant relationship across all community types. In fact, only the principals' autonomy regarding building budgets in City schools showed a significant relationship to achievement. The lack of significant correlation by specific indicators supports the previous acceptance of Hypothesis IV in the null form.

Autonomy and effectiveness.--Also of interest was the relationship that autonomy had to the principals' rating for effectiveness. The correlations of the mean of each autonomy indicator with the mean effectiveness has been depicted in Table 4.10.

TABLE 4.10.--Correlations of autonomy indicator means with the effectiveness (AIQ) mean by community type.

Autonomy Indicators	Community Type				
	Metro. Core (n=10)	City (n=20)	Town (n=31)	Urban Fringe (n=30)	Rural (n=30)
1. Personnel	.50 ^a	.17	.21	.20	.17
2. Sch. Org.	.07	.35	.36 ^b	.21	-.06
3. Budgets	-.43 ^a	.19	.06	.36 ^b	-.03
4. Curr.	-.30	.47 ^a	.48 ^c	-.06	.08
5. Instr.	-.39	-.01	.25	.21	-.09
6. Sch.-Comm.	-.18	.22	.25	.12	-.11
7. Plant	.20	.12	.13	.18	.17

^aMeaningfully significant.

^bStatistically but not meaningfully significant.

^cStatistically and meaningfully significant.

While statistical and meaningful significance was found in a few isolated situations, the level of autonomy for any one indicator did not consistently correlate with the principals' effectiveness across community types. Nor did any community type show a consistent correlation across the indicators.

Before too much import is attached to these correlations, or any of the above autonomy findings, or any of the results presented in the following discussion of effectiveness, a word of caution seems warranted. Statistical procedures would indicate that with an alpha level of .05 in one hundred cases, five cases could be significant merely by chance. With the great many correlations reported in this descriptive section, it is well within statistical probabilities that those identified as significant could be attributed to chance. The lack of any consistent pattern lends support to this possibility. Since statistical procedures cannot guarantee significance or the lack of it, all significant findings are treated as such, but any interpretations of these findings should be done with this precaution in mind.

Effectiveness

The unidimensionality of the Administrative Image Questionnaire (AIQ) was examined by correlating each of the twenty-three items with the AIQ mean. The results showed a generally moderate to strong relationship for all items across all community types. The correlations are presented in Table H.1 in Appendix H.

While the items correlated relatively well with the AIQ mean, an analysis by item mean and community type provided an interesting picture of perceived effectiveness by function in a given community setting. This information has been presented in Table 4.11 in the cell means. The row means depicting the mean of means for items across community types and the column means showing the mean of means for community type across items have also been provided.

The AIQ used in scale of 1 to 5 using descriptors Poor, Fair, Average, Good, and Excellent. Of the 115 cell means, no item for any community had a mean below 3.0. Indeed, only four means were at or below 3.5 and all four of these were in Metropolitan community setting. Sixty-nine means were above 4.0 in the "Good" range. Four means were above 4.5 and all had reference to Item 3, "Attitude Toward Job."

Not unexpectedly, then, the item with the highest mean was "Attitude Toward Job." The principals were perceived to be least effective in #8 "Performance Under Stress," and #11 "Ability to Delegate Responsibility." A ranking of the behaviors of principals across the state perceived as most effective and least effective have been presented in Table 4.12.

Relating Table 4.12 to Table 4.11 showed the items of most effectiveness and least effectiveness were relatively consistent across all community types.

TABLE 4.11.--AIQ item means by Community Type and for entire sample.

AIQ Items	Community Type					Mean of Means
	Metro Core	City	Town	Urban Fringe	Rural	
1.	3.80	4.28	3.97	3.79	3.87	3.91
2.	4.40	4.37	4.23	4.07	4.13	4.20
3.	4.40	4.74	4.74	4.30	4.53	4.55
4.	3.70	4.26	4.16	3.97	4.10	4.07
5.	3.80	4.32	4.16	3.83	4.10	4.06
6.	4.20	4.47	4.39	4.47	4.47	4.42
7.	3.70	3.79	3.94	3.70	3.90	3.82
8.	3.50	3.84	3.77	3.73	3.77	3.75
9.	3.40	4.05	3.81	4.00	3.97	3.90
10.	3.60	4.16	4.16	4.03	4.17	4.08
11.	3.70	3.89	3.77	3.70	3.70	3.75
12.	3.70	4.42	4.13	3.80	3.87	3.99
13.	3.50	4.26	3.84	3.60	3.87	3.82
14.	4.10	4.32	4.19	4.17	4.27	4.22
15.	3.80	4.00	4.00	3.83	3.93	3.92
16.	4.00	4.16	3.97	4.13	4.10	4.07
17.	3.80	4.32	4.03	4.00	4.07	4.06
18.	3.30	3.95	3.90	3.60	3.87	3.77
19.	3.70	4.37	4.03	3.63	3.93	3.93
20.	3.70	4.26	4.03	3.93	3.83	3.97
21.	3.80	4.16	4.10	3.97	3.93	4.01
22.	3.70	4.00	3.94	3.79	3.93	3.89
23.	4.20	4.47	4.39	4.20	4.30	4.32
MEAN OF MEANS	3.804	4.25	4.09	3.93	4.03	

TABLE 4.12.--Effectiveness mean ratings across Community Types--
top five and bottom five levels.

Ranking	Mean	AIQ Item #	Description of Item
1.	4.55	3	Attitude toward job
2.	4.42	6	Supportiveness
3.	4.32	23	Appearance
4.	4.22	14	Fairness
5.	4.20	2	Consideration of others
.	.	.	.
.	.	.	.
.	.	.	.
19.	3.90	9	Openness
20.	3.89	22	Leadership skill
21.	3.82	7	Flexibility
	3.82	13	Success in communicating expectations
22.	3.77	18	Evaluating Ability
23.	3.75	11	Performance under stress
	3.75	8	Ability to delegate responsibility

If the mean of means for community types across items was used to gauge the perceived over-all effectiveness, then the Metropolitan Core principals would be ranked lowest and the City principals highest. The reader is cautioned that variation in rater expectations and situational conditions could be contributing to these differences.

Effectiveness and achievement.--Within the scope of the study has been an interest in how much achievement scores reflect the principals' effectiveness with respect to certain aspects of

the job. Therefore, correlations were developed for each AIQ item with achievement by community type. Table 4.13 has reported these correlations.

The over-all pattern shows little relationship between principals' perceived effectiveness and achievement. Between Metropolitan Core principals' appearance and achievement was a strong correlation and between their ability to delegate responsibility and achievement was a moderate correlation. Urban Fringe principals' consideration, City principals' attitude toward their jobs, and Metropolitan Core principals' flexibility were all found to have a moderate inverse relationship to achievement. Again, these significant findings could be ascribed to the number of correlations under consideration. Lack of consistency across community types suggests an unstable nature in replication unless all of these effectiveness items were situation specific.

Ancillary Data

Information was obtained and compiled in two areas contributing to the study but not central to it.

The mean percentage achievement scores of the non-respondents were derived to see if a nonresponse bias was evident in the dependent variable. Table 4.14 has reported the mean achievement by community type of the respondents and nonrespondents.

TABLE 4.13.--Correlations of AIQ item means with achievement by Community Type.

AIQ Items	Community Type				
	Metro Core (n=9)	City (n=20)	Town (n=30)	Urban Fringe (n=29)	Rural (n=29)
1.	.07	.31	.23	-.13	.03
2.	.25	-.09	.32	-.47 ^b	-.11
3.	.01	-.45 ^a	.01	.20	.01
4.	.26	-.14	.15	.02	.18
5.	.09	.01	-.19	.26	.11
6.	.18	-.11	.09	.03	-.20
7.	-.53 ^a	-.16	.07	-.22	.01
8.	-.46	-.08	-.19	-.04	-.13
9.	-.32	.05	-.10	-.29	-.01
10.	.35	-.29	.05	.01	-.27
11.	.55 ^a	.22	.23	.03	-.12
12.	-.41	.01	-.08	-.10	.09
13.	-.14	-.01	-.16	.22	-.07
14.	.35	-.23	-.01	.05	-.03
15.	.40	-.29	.23	.12	-.23
16.	.02	-.26	-.03	-.19	-.15
17.	.04	.22	-.09	.01	.08
18.	-.01	-.04	.01	.03	.30
19.	.01	-.03	.17	.06	.12
20.	.02	-.03	.05	-.15	-.11
21.	.03	-.29	-.07	-.10	-.13
22.	.18	-.28	-.01	.17	.02
23.	.84 ^a	.22	-.01	.10	-.14

^aMeaningfully significant.^bStatistically significant at .05.

TABLE 4.14.--Mean percentage achievement scores by community type and sample for respondents and nonrespondents.

Community Type	Metro. Core	City	Town	Urban Fringe	Rural	Mean of Means
Mean percentage achievement for respondents	46	58.7	60.4	59	55	53
Mean percentage achievement for nonrespondents	42.2	61.2	57	60.1	49.7	55.6

The mean percentage achievement scores for nonrespondents as shown in Table 4.14 fluctuated above and below the respondents' scores. No set pattern in reference to the dependent variable, achievement, that might be construed as a response bias was evident.

In those situations where the principal of the selected school also administered other schools, the mean percentage achievement for all schools was derived. If the hypothesis was supported that principal effectiveness impacted on student achievement, then some commonality in achievement of the schools under one administrator should be observable. The derived mean percentage for respondent schools has been reported in Table 4.15.

Visual comparison of the data seemed sufficient to establish that schools under one building administrator do not necessarily have comparable achievement. The results support the acceptance of Null Hypothesis I.

TABLE 4.15.--Mean percentage achievement score for multi-administered schools; selected school and schools also administered.

Community Type	Selected School	School(s) also Administered
City	a .653 b .589 c .438 d .775	a .520 b .674 c .519 d .740
Town	a .608 b .548 c .694 d .613	a .446 b .815 c .753 c .686 d .547
Urban Fringe	a .691 b .632	a .666 b .636
Rural	a .490 b .650 c .524 d .518	a .527 b .469 c .705 c .619 d .568 d .526
Mean of Means	.602	.613

While not central to the study, it is germane to the consideration of the principals' role and student achievement to note that the mean percentage achievement scores for the multi-administered schools were higher than for the sample as a whole.

To recognize the respondents' contribution to the study a copy of the results was offered on request. As a measure of the interest in accountability and the dimensions of this study, 71% of the respondents expressly asked to see the results.

Summary

To summarize the findings regarding the hypotheses of the study, Table 4.16 has been constructed.

TABLE 4.16.--Summary of hypotheses, tests and decision.

#	Hypotheses Description	Test	Reject/Do no Reject Null at .05
I	Effectiveness/Achievement by Community Type	r	Do not Reject
II	Effectiveness/Achievement; difference Metropolitan Core and Urban Fringe	Not tested	
III	Effectiveness/Autonomy by Community Type	r	Rejected null for City only
IV	Achievement/Autonomy by Community Type	r	Do not Reject
V	Achievement/Effectiveness, Autonomy by Community Type	Did not test Metropolitan Core Multiple Correlation Multiple Prediction	Reject Null
VI	Effectiveness/Achievement by Tenure in Position for each Community Type	Partial Correlation	Do not Reject

Inspection of Table 4.16 reveals that while a correlation was not significant between principal effectiveness and achievement or principal autonomy and achievement, effectiveness in combination with the seven autonomy indicators could significantly predict achievement. Therefore, Null Hypothesis V was rejected in favor of the Alternate Hypothesis V. As noted in Table 4.16, all other null hypotheses were not rejected except for City principals in Hypothesis III.

As analysis of the data suggested that autonomy was not a unidimensional function and appeared to be task and/or situation specific. City principals appeared to have the most autonomy and Metropolitan Core principals the least. Across all community types, principals had a great deal of autonomy in school organization and relatively little in determining school plant needs. In general, the principals had more autonomy in process and human relations functions and less decision-making authority regarding resources. More detailed analysis of correlations of autonomy indicators with achievement and with principal effectiveness by community types found only sporadic isolated correlations of significance.

Inspection of each of the twenty-three items in the effectiveness measure, the Administrative Image Questionnaire, disclosed the relative effectiveness of principals in relation to certain behaviors. Principals rated highest in attitude toward job and supportiveness of staff. They rated lowest in ability to delegate responsibility and in performance under stress. Correlations of the AIQ items to achievement was sketchy and inconsistent

with the strongest correlation, .84, between Metropolitan Core principals' appearance and achievement.

In Chapter V, a summary of the study, the findings, and conclusions generated by these findings are set forth along with their implications for administrative practice, administrative training, and further research.

Chapter V

SUMMARY, CONCLUSIONS AND IMPLICATIONS

In this final chapter a summary of the purposes, literature, and the research design are presented first. Conclusions generated by the analysis of the data are set forth followed by implications for administrative practices, administrative training, and further research.

Summary

Purpose of the Study

With the growing demand for educational accountability has come a concomitant need to determine the degree to which student learning, or the lack of it, could be attributed to educators. The major purpose of this study was to respond to that need by investigating the relationship between the perceived effectiveness of principals and their associated students' achievement.

A search for the loci of responsibility has been implicit in the educational accountability movement. With the vesting of that responsibility has come a counter demand for decision-making autonomy in areas where educators are to be held accountable. Therefore, the study also sought to provide descriptive data regarding the relative autonomy a principal is perceived to have.

The extent to which this autonomy was related to principals' effectiveness ratings and to student achievement was also investigated.

For two major reasons, the level of effectiveness and autonomy of the principals was judged by the person to whom the principals were responsible. First, within the accountability movement much of the pressures associated with the job in the way of promotions, demotions, and day-to-day operations has rested with the principals' immediate superior. Secondly, the super-ordinate through policies and expectations was in a position to prescribe as well as describe a given principal's effectiveness.

Review of the Literature

Four major areas related to the purposes of this study were selectively reviewed. Those areas and the dominant findings were as follows:

1. A review of educational accountability with emphasis on the Michigan Accountability Model.--The emerging accountability movement in education has been deeply rooted in political action and has been fraught with controversy. Definitions, purposes, and implementation were inconsistent in the literature and were generally situation specific. Born in industry, many aspects of accountability have been maladaptive to the educational setting. Accountability plans under any acronym or banner appear to consistently have at least three operational components; stating goals/objectives, measuring their achievement, and communicating their results.

The statement of goals and of objectives have constituted the first two steps in the six step Michigan Accountability Model. The third step of the model was labeled "Needs Assessment" as the measurement component. The other three steps were "Delivery System," "Evaluation," and "Recommendations." While part of the legislative mandate, the communication component was not explicitly stated in the model. The lack of a consistent communication program appeared to be a very basic problem in the implementation of the Michigan Model.

2. The function and impact of measurement in accountability--and more specifically, the history and analysis of the Michigan Educational Assessment Program.--The accountability movement has focused increased attention on measurement technology. There has been a gradual shift toward criterion-referenced measurement particularly by accountability proponents; however, most psychometricians have not regarded it as more precise or more valid than norm-referenced measures, but simply a different way to seek and interpret information. Pressures associated with measurement in accountability have raised the specter of teaching to the test as well as placing disproportionate emphasis on the content and the students that will "pay off."

The Michigan Educational Assessment Program (MEAP) tests were norm-referenced at their inception in 1970. The tests preceded the development of the Model and were authorized by the Michigan legislature. In 1973-74, the Michigan Department of

Education shifted to a criterion-referenced test, the Objective-Referenced Test (ORT), which was based on the objectives previously developed by Michigan educators and adopted by the Michigan State Board of Education. Lauded by some for their efforts, The Michigan Department of Education also appears to have had its difficulties--primarily, in the correct grade level placement of the objectives and/or the appropriate criterion plus problems in communicating test results.

3. Characteristics of the elementary principalship as related to principal autonomy.--The historical evolution of the principalship has ascribed three nearly universal duties to the principal; discipline, supervision, and clerical tasks. Beyond these areas, the multiplicity of the expectations surrounding the position has been compounded by the diversity of situations in which the principal functioned.

References to autonomy in the educational literature were sketchy. Autonomy appears to rest on authority so that bureaucratic organizations both foster and constrain autonomy. The literature was increasingly devoted to the subordinates' role in legitimizing authority which has relevance to the principal both as a subordinate and a superordinate.

Many internal and external forces work to impinge upon the principals' operational autonomy. These constraints were most frequently attributed to teacher negotiated contracts, admin-istrivia, and increased central office staff.

4. Related studies examining the relationship between the elementary principal and student achievement.--Research as reported in the literature relating administrative characteristics to student achievement has not been extensive. The work of Weber, Levine, Lutz and Evans, Clark, and the State of New York Office of Performance Review were presented. All the studies concentrated on known achievement scores in low SES schools and sought to attribute the learning achieved to in-school factors. In most cases, the research was an in-depth study in only a few schools. All the studies cited found achievement attributable to administrative policies, behavior, procedures, and practices.

Design of the Study

In order to test the hypotheses of the study, it was necessary to obtain some measure of principal effectiveness and of principal autonomy. The Administrative Image Questionnaire developed at Western Michigan University was used to rate principal effectiveness; however, it was necessary to develop an instrument to assess principal autonomy. McCleary and Henoley's inventory was adapted for this purpose.

The population of Michigan K-12 school districts with at least two elementary schools was stratified by Community Type. Disproportionate sampling of the strata was done to assure a sufficient number of cases in each stratum. The total population was used in Metropolitan Core and City and simple random sampling was used in the three Community Types; Town, Urban Fringe, and

Rural for a total sample of 159 elements. To assure that each school selected in the study was free from matters of mutual influence common to schools from the same district, multi-stage cluster sampling was used with the district in the first stage and elementary schools with at least grades 1 through 4 in the second stage.

Of the 159 elements, 132 responses were received for a response rate of 83%. As 11 responses were not usable, data were analyzed for 121 cases.

Individual student reading achievement scores were secured from the Michigan Department of Education's Research Evaluation and Assessment Services department, and school composite mean percentages were hand-calculated for all elements in the study.

A growing body of evidence suggesting that a strong relationship existed between SES and student achievement prompted the use of survey techniques and statistical procedures to control for SES in the study.

The hypotheses that involved simple correlations of effectiveness and achievement, autonomy and achievement, and autonomy with effectiveness were tested using the Pearson product-moment correlation coefficient. Tests holding SES constant in one instance and tenure in position for another used partial correlations. The combined effect of autonomy and effectiveness on achievement was tested with multiple correlations and a regression equation was also set up to test their predictability

on achievement. An .05 level of significance was accepted for all statistical measures.

Findings of the Study

Results of the statistical analyses performed on the data regarding the relationships of concern in the study have been summarized below.

1. No significant correlation could be found in the data between principal effectiveness and achievement by Community Types. Effectiveness plotted against achievement showed that a curvilinear relationship did not exist between the variables. When held constant, the principals' tenure in position did not affect the effectiveness/achievement correlation significantly. Partialling out the SES variable did not result in a significant correlation between effectiveness and achievement for the entire sample.

2. The relationship between autonomy and achievement by Community Type did not show a significant correlation.

3. Only City principals had a significant correlation between effectiveness and autonomy.

4. When autonomy by indicators and effectiveness were multiply correlated with achievement, the coefficients were significant for all Community Types tested. Using a linear regression model, it was found that some of the variation in achievement could be accounted for by the variations in effectiveness and autonomy.

5. When the twenty-three criteria for effectiveness were correlated with achievement several isolated correlations were significant, but none were consistent across types of communities. Metropolitan Core principals' appearance was found to have the strongest correlation with achievement, .84, and they had a moderate correlation between achievement and the ability to delegate responsibility. Other significant correlations: consideration, attitude toward job, and flexibility, had a moderate inverse relationship to achievement, but each was found only in one community type.

6. The highest means of effectiveness by item were the principals' attitude toward their jobs, supportiveness, and appearance. These results were consistent across all types of communities. Principals were least effective in their ability to delegate responsibility, perform under stress, evaluate, and communicate expectations.

7. City principals were the most effective and Metropolitan Core principals were least effective according to superordinates' perception.

8. Principals had the most autonomy in human relations and process aspects of their jobs. They had almost complete autonomy in school organization and relatively high autonomy in instructional development and school--community/parent relations.

9. Principals had the least autonomy in determining school plant needs. Decision-making authority for resources in general such as personnel, budget, and materials selection was relatively low.

10. Metropolitan Core principals were perceived to have the least autonomy while City principals had the most.

Conclusions

Based on the findings of this study and in reference to the population of interest, the following conclusions are offered:

1. The level of effectiveness a principal was perceived to have by her superior was not related to student reading achievement.
2. The amount of autonomy possessed by a principal did not affect student reading achievement or the principals' perceived effectiveness. The possible exception to the later was for principals working in City communities.
3. The length of time beyond two years that a principal had been in a given position did not make a difference in the relationship between effectiveness and achievement.
4. Some variation in student achievement can be accounted for by variations in principal effectiveness and autonomy. If the values found for the squared multiple R are looked at in the light of the conditions in which the relationships existed, they gain additional import. Out-of-school variables reportedly account for much of the variation in achievement. All in-school variables could only be related to that portion of achievement variation not affected by the out-of-school variables. Within these narrower confines, the R^2 values of .14 and .18 for the predictor variables in Rural and Town communities respectively take on considerable

interest. The $R_4^2 = .32$ (Urban Fringe) and $R_2^2 = .42$ (City) indicated a large portion of achievement variability not accounted for by out-of-school variables rested with variations in the predictor variables, principal effectiveness and autonomy. These values also suggest that the import of the predictor variables on achievement varied considerably by community type.

5. The perceived level of the principals' effectiveness varied by community type.

6. While autonomy and effectiveness were not significantly correlated, ranking community types by the mean effectiveness and mean autonomy of the principals showed Metropolitan Core principals had the least autonomy and were perceived to be least effective while City principals had the most autonomy and were perceived to be most effective.

7. Principals' autonomy varied by the task and by the type of community.

8. Principals seemed to have less autonomy in reference to resource allocation than they did in process and human relations functions.

9. When individual criteria of effectiveness were considered, no single criterion of effectiveness was significantly related to student reading achievement across all community types.

10. When specific behaviors of the principals were appraised for effectiveness, highest mean ratings went to attitudinal aspects of the job; e.g., attitude toward job, supportiveness, appearance,

fairness, and consideration. Those behaviors receiving the lowest ratings showed a high incidence of skill oriented activities; e.g., ability to delegate responsibility, evaluating ability, success in communicating expectation and leadership skill.

Implications for Administrative Practice and Training

If reading achievement prevails as a commonly accepted goal in elementary education and if accountability toward achieving that goal persists publicly and politically, then the results of this study have significance in both administrative practice and training.

While in-depth studies which were narrow in scope have observed that principals do make a difference in reading achievement results, on a broader scale even with SES controlled the data supplied by the superordinates in this study did not support this contention.

Administrative Practices

The wide-ranging implications of the principals' superiors perspective deserves careful consideration. In schools where reading achievement is high why were some principals not perceived as highly effective? Conversely, in schools where achievement was low what contributing qualities would cause a superior to perceive a principal as effective? Placed in the framework of organizational theory where administrative tasks are viewed as directing resources toward organizational goals the questions rephrased are:

If the principal was attaining a major organizational goals, why wasn't she considered effective? Or, if the principal was not attaining this goal, how could she possibly have been considered effective?

Implications of effectiveness and achievement findings.--

Situations vary and a number of answers to the above questions are possible. First of all, reading may not be the organizational goal it's espoused to be. Or, the superiors may not be skilled in perceiving those administrative qualities that lead to high reading achievement. With the growing emphasis on achievement results within the educational accountability movement from other quarters, if either of these conditions exist, it would behoove the elementary principal to educate the person to whom she is responsible, for "the boss" has a great influence on the elementary principal's day-to-day functions, on retaining her present position, and her access to promotions. It is critical to the elementary principal's role in an accountability climate that the expectations and criteria be relatively consistent among her major publics.

This leads to a consideration of the criteria themselves used to measure effectiveness. The possibility exists that the criteria were not relevant to the organization goal of improved reading skills. The findings that leadership skills, staff morale, managerial skill, and decision-making ability are not related to student reading achievement runs counter to many of the precepts imbedded in theories of educational administration.

The lack of a relationship between certain accepted administrative behaviors and the organizational goal of reading opens up for re-examination the pragmatic functions of the elementary principalship and the theoretical constructs upon which it has been based. A closer look at just one dimension of educational administration often mentioned in the literature, leadership, provides an inkling of the possible ramifications precipitated by a lack of relationship between leadership and reading achievement.

If it is assumed for the moment that the principal's leadership capabilities were honestly and forthrightly appraised, a number of potential considerations for explaining the absence of a significant relationship between these two variables are raised. If reading is an espoused goal, not a real goal, or is not a major goal, leadership may not have been evaluated with this goal in mind. The perceived leadership skills may have been directed toward other goals which really have primacy in the superior's mind. For example, a principal may really have been judged for how well she insulated the central office from vociferous parents regardless of reading achievement in that school. It is also possible that the principal may have appeared to be effective in leadership skills toward reading goals when, in fact, she was ineffective in directing resources to that end. A further possibility is that the territory within which leadership could have been exercised was constrained to actions that did not have an impact on the reading goals. Within the reading processes augmented in

the school the dynamics of the situation may limit the most effective of leaders from realizing that effectiveness in improved reading scores. For example, the principal may not have been "calling the shots" regarding reading. This eventuality gains support when it is recalled that the principals autonomy in curriculum development, including the selection of instructional objectives and materials, was relatively low. It may have been that the primary responsibility for the reading program belonged to the reading coordinator, for instance. Other factors within the school situation such as teaching personnel, plant conditions, or available resources may have had such intervening effects as to reduce the potential impact the principal could exert. Closely aligned to this possibility is the lack of control a leader has in a school setting to regulate external forces. While an attempt was made in the study to control for SES in exploring the relationship of effectiveness and achievement, there undoubtedly existed many confounding variables beyond the SES factors considered and beyond the principals' control which affect reading achievement. The in-school and out-of-school variables in combination could be so extensive as to leave little latitude for the principal's leadership skills to be reflected in achievement. The above cited conditions or others operating in a school setting are contingencies which suggest that the construct of a relationship between leadership skills and the realization of organizational goals in a school situation may need further definition.

The above illustration of possible explanations for the lack of correlation between leadership skills and achievement might be similarly drawn for other effectiveness variables. Such an examination of conditions would help the practicing administrator become more cognizant of the real goals and expectations of the organization and the criteria upon which she is to be judged as well as understanding the limits of effectiveness within which she works. These understandings are becoming increasingly important for survival as an administrator in the current accountability climate.

Implications of effectiveness and autonomy findings.--A

priori logic would suggest that the more effective a subordinate is perceived to be the more decision-making authority the subordinate would have. Elementary principals' superiors sampled in this study either did not subscribe to this line of reasoning or the constraints from other sources kept this from happening. Only to a moderate degree was a relationship between these variables found for principals in City communities. The discrepancy and the forces at work across the sample to precipitate these findings could have been teacher negotiated agreements, community conditions, bureaucratic traditions, or other designated to fulfill given functions. The elementary principal would profit from knowing precisely why she does not have autonomy consistent with perceived effectiveness and the source of the constraints.

An analysis of the findings of this study indicated principals' autonomy varied considerably by task in some communities

and by communities in some tasks. This has relevance to the practitioner who needs to know the parameters of her responsibilities. The principals' superiors stated how much autonomy they perceived the respective principal had. In many respects, the principal's autonomy is as great as the superordinate perceives it to be. The principals, therefore, should know the extent of that perceived autonomy and fully exercise responsibility within it, for the superior's delineation of autonomy tends to be prescriptive of what he expects the principal to take responsibility for and for which she will be held accountable. If the two areas, autonomy and accountability, are not congruent, it is incumbent on the administrator to reconcile them in practice or apprise her superior of the inconsistency.

The fact that principals have less autonomy with regard to resources than in process/human relations functions is germane to the principals operating in an accountability arena. Principals should be very conscious of the responsibility for what goes into a process when they are to be held accountable for what comes out.

Predictive value of effectiveness and autonomy.--Neither mean autonomy nor mean effectiveness of the principals were significantly correlated with the associated reading achievement. However, when these variables were placed in a regression equation, it was found that some of the variation in reading achievement could be accounted for by the variations in effectiveness and autonomy. In practice this predictive value is important, for it suggests

that if a principal is perceived to be effective and also has a relatively high level of autonomy on the indicators, the level of achievement can be predicted to a significant degree. The principal and her superior should know that this predictive value seems to be related to the type of community in which a principal is operating and the relevance to their respective situation. It is just as important to note, however, that high effectiveness ratings and relatively high autonomy do not necessarily cause high achievement.

Effects of mobility and multi-administration.--Wide-spread implications for the elementary principalship are suggested in the findings that neither tenure in position beyond the two year baseline nor multi-administration of buildings affected reading achievement. Principal mobility among buildings in a district or the administration of more than one building appeared not to benefit or adversely effect reading achievement. However, this intimates that reading achievement is the sole concern. Other expectations for the elementary principalship could very well preclude the advisability of applying these findings in practice.

Expectations and accountability.--The implications of this study repeatedly suggest a need to specify the expectations held for the elementary principalship concisely and consistently for the many publics it serves, to delineate the criteria for meeting those expectations, and to reconcile the discrepancies between specifications and practice. The call has been made before but

the public clamor for accountability makes the need imperative and immediate.

The findings and conclusions of this study should not be construed to suggest that the principal should not be held accountable. It does suggest that the principal cannot be all things to all people and there should exist some consensus for those functions for which a principal could and should be held accountable.

The results of this study do respond to the legitimacy of the assumption set forth in the statement of the problem, "a relationship exists between the effectiveness of an elementary principal and the student's achievement." A significant relationship did not appear to exist and based on the findings in this study the assumption is erroneous. Only when effectiveness and autonomy were considered in a regression analysis was any correlation established, but the results of the simple correlations indicated principals' jobs should not be held in jeopardy with assessment scores as the determinants. Conversely, the results of this study also suggest a principal cannot "take credit" for high reading achievement in her school. Of course, these comments are predicated on the integrity of the devices used to measure the variables. Again, a lack of consensus as to what criteria should be used to assess the effectiveness of an elementary principalship clouds the issue.

There is a great need for elementary principals, individually and collectively, through their working relationships with

other professionals in the field, through their Associations, and in consultation with educational administration experts at the university level to arrive at a concise description of the elementary principalship and communicate to the various referent groups a caveat of reasonable expectations. Until such time as this is done elementary principals may well be held accountable for "all the roles the good Lord himself couldn't perform."¹

Much of the previously stated implications for the practicing administrator has import for those who offer administrative pre-training and in-service training.

Administrative Training

If the superiors' ratings of principals were indicators of how successful the administrative preparation was, university personnel were quite helpful in over-all preparation. The variations in the means of certain behaviors indicated there were areas where their clients could profit from more help.

The superordinates who held the reins for the elementary principals daily operation and professional future saw them as quite effective in attitudinal matters, but ranked behaviors that lend themselves to skill training lower.

Careful analysis of the relative proficiency of principals with respect to the indicators might suggest areas where

¹Paraphrased from quote previously cited p. 99 by Keith Goldhammer and Paul L. Houts, "A Conversation with Keith Goldhammer," The National Elementary Principal, LIII, No. 3 (March/April, 1974), 27-34.

graduate instruction needs greater emphasis or different teaching strategies. The results also point to the areas where in-service for practicing administrators would be beneficial. These statements, however, have been based on the assumption that "Ability to Delegate Responsibility," "Evaluating Ability," "Leadership Skill," and other indicators that received relatively low scores are valued behaviors in the school setting. If they are, then the principals in the population should look to these areas to increase their perceived effectiveness and university personnel should seek ways to meet these needs.

The relative weakness of elementary principals to "Perform under Stress" may have significance in the training of prospective administrations, but it may have more profound implications for the criteria for the selection of candidates for administrative training.

There is also a role for those involved in training educational administrators at the university level to assist in redefining the elementary principalship. Once defined such a statement is no more than a paper document unless the practicing and prospective elementary principals receive training consistent with those expectations. Only when administrators in the field cease to accept responsibility for being all things to all people will the boundaries of accountability become manageable. The university personnel cannot only help establish realistic parameters but can assist principals in methods of educating other professionals and the lay public as to what are legitimate expectations.

The underlying theme through much of the discussion of practical implications has been the need for further research. As research is wont to do, this study seems to have raised more questions than it has answered.

Implications for Further Research

The review of the literature, the findings, conclusions, and practical implications generated by this study have prompted suggestions for further research. Some of the areas that appear to warrant further consideration are offered below.

1. Replication of this study as set forth or with some modifications seems warranted. There is a dearth of research in the area this study sought to explore. Since this appears to be the first study comparing principal effectiveness and student achievement on a state-wide basis and since it is in conflict² with the few narrower, in-depth studies that were cited previously, replication would add support to the findings reported here or could add credence to other studies.

Replication using other instruments to assess the variables would be of value. As the Michigan Educational Assessment Program Objective-Referenced Test is a pioneering effort and the technical literature has yet to be published, there remains some doubt as

²Only when both effectiveness and autonomy were multiply correlated with achievement was there support for the previously conducted studies, and reports of the other research did not suggest that the principals' autonomy was incorporated in these studies.

to the contribution this test made to measuring the dependent variable. A norm-referenced standardized test in reading or achievement measures in other areas such as mathematics would contribute to understanding the relationship of interest. Interpretation of data related to human behavior is complex. Obtaining that data is often more difficult. Other measures to rate the principals' effectiveness could provide additional insight.

A modified replication using other referent groups instead of, or in addition to, the superordinate would be of value. Of particular interest would be the perspective of the subordinates, the teachers, in a similar study. Any variation in perceptions could add considerable insight into the context within which the principal operates.

2. A study of the bases upon which superiors judge elementary principals' effectiveness would be of value. Such a study of one or several criteria for effectiveness considered in this study would add information to the scant body of data regarding the real expectations under which principals work.

3. A longitudinal study of the same relationships but with the prior knowledge of the parties involved should be undertaken. This procedure would offer several benefits that a cross-sectional study cannot provide. With respect to the dependent variable, data could be gathered from successive groups of children thus reducing the variability resulting from using one class or grade level. More importantly, the value of specified expectations and advance planning might be tested if the principal had prior

knowledge of those aspects of her job upon which she would be measured and held accountable.

4. A study focused on the predictor variables, effectiveness and autonomy, and the criterion, achievement, could yield fruitful results. This study might explore in greater depth the effects of community type on this relationship; and if differences by the type of community persist, seek to ascertain the conditions that prompt those differences.

5. A more comprehensive, detailed instrument to measure autonomy in relation to certain tasks should be developed. Such an endeavor could provide a valuable instrument and could also yield data regarding the degree of specificity by task and/or situation autonomy has.

6. The congruence of perceived autonomy and exercised autonomy should be investigated. Such a study could assess the amount of autonomy the principals' superior perceives her to have as well as address such questions as the degree of available autonomy the principal is perceived to actually use, the amount of autonomy the principal herself believes she has; and what, if any, discrepancy exists in these perceptions.

A companion pursuit might study the implications of Etzioni's Compliance Theory in relation to autonomy by surveying the elementary principals' subordinates, teachers and non-certified personnel, in this regard.

Autonomy in relation to the elementary principalship proved to be a most fascinating aspect of the study--a facet of educational administration that has been virtually unexplored. In the age of accountability, the dimensions of autonomy certainly need further study.

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APPENDICES

APPENDIX A

READING OBJECTIVES TESTED IN MEAP-ORT
1973-74

READING OBJECTIVES

Grade 4

Objective
Number

1. 2.1 Given a reading selection at the third grade level, the learner will match a series of words in the selection with appropriate definitions.
2. 2.2 Given a set of phrases, the student will indicate those phrases which have the same meaning.
3. 3.1 Given a reading selection at the third grade level, the learner will answer multiple choice questions with words and/or phrases extracted from that selection.
4. 3.2 Given a reading selection at the third grade level in which every fifth word has been replaced with a blank, the learner will choose the exact word appropriate to the blank space at 50% accuracy.
5. 4.1 Given a method of arranging data, the learner will identify the method (e.g., color, size, importance, time, etc.).
6. 4.4 Given a series of randomly placed words, the student will be able to alphabetize the words through the first three letters.
7. 5.1 Given a series of reading selections, the learner will indicate those which are factual.
8. 5.2 Given a series of reading selections, the learner will indicate those which are fictional.
9. 6.1-6.3 Given a reading selection, the learner will be able to identify the author's purpose (e.g., persuasion, entertainment, propaganda, etc.).
10. 7.1 Given a reading selection at the third grade level, the learner will select from a list of possible titles the one most appropriate as the title for that selection.

11. 7.2 Given a reading selection at the third grade level, the learner will select from a series of still pictures the one picture most appropriate in depicting the main idea of the selection.
12. 7.3 Given a reading selection at the third grade level, the learner will select from a number of short summaries the one which best summarizes the selection.
13. 8.4 Given a reading selection at the third grade level, the learner will match a series of direct quotations from the story with the character who is speaking.
14. 9.3 Given a reading selection at the third grade level, the learner will correctly answer a series of multiple choice questions relating to the sequence of events or ideas presented in the selection.
15. 10.2 Given three or more selections at the third grade level, the learner will choose the two most alike in the mood expressed.
16. 10.3 Given a reading selection at the third grade level, the learner will choose from a series of sentences that sentence which best describes how a given character feels in a story.
17. 10.6 Given a selection containing figurative language, the learner will identify the definition of that phrase.
18. 11.1 Given a reading selection at the third grade level, the learner will correctly match a series of causes with a corresponding series of effects.
19. 11.2 Given a reading selection at the third grade level with the conclusion of the story deleted, the learner will select from a series of possible conclusions the one most appropriate to the selection.
20. 13.1 Given a locational question, the learner will choose from a series of reference sources where that item will be found.
21. 13.2 Given a locational question about newspapers, the learner will select the section where he would find the answer.

22. 14.1- Given a reading selection at the third grade level, the
14.3 learner will answer correctly a series of multiple
choice questions relating to meanings, generalizations,
or conclusions not expressed in the selection itself.
23. Given a reading selection at the third grade level, the
learner will correctly answer a series of multiple choice
questions relating to motivation.

APPENDIX B

**ADMINISTRATIVE PROFILE SURVEY
AND LETTERS TO RESPONDENTS**

School

ADMINISTRATOR PROFILE SURVEY

Please respond to the following questions for the administrator of the school noted in the above right hand corner.

Upon completion, please send to MAESP by JANUARY 13.

AUTONOMY

Constraints on building principal's autonomy may come from many sources; i.e., teachers' contracts, district policies, community conditions, etc. Please circle the degree of autonomy/responsibility this principal has (or HE MAY DELEGATE to his staff) in executing the following functions.

The Principal makes decisions in this area:

1. Rarely: less than 20% of the time.
2. Seldom: 20-40% of the time.
3. About Half: 40-60% of the time.
4. Usually: 60-80% of the time.
5. Almost Always: more than 80% of the time.

Rarely
Seldom
About half
Usually
Almost Always

- | | | | | | |
|--|---|---|---|---|---|
| 1. PERSONNEL (Does he select teachers, determine transfers, or termination of teachers in his building?) | 1 | 2 | 3 | 4 | 5 |
| 2. ORGANIZATION (Does he decide the internal structure, placement of teachers and students within the building?) | 1 | 2 | 3 | 4 | 5 |
| 3. BUILDING BUDGET (With the money allocated to the building by the district, does he decide categories for spending; i.e., instructional materials, A-V, etc.?) | 1 | 2 | 3 | 4 | 5 |

	Rarely	Seldom	About half	Usually	Almost Always
4. CURRICULUM DEVELOPMENT (Does he decide on instructional objectives, select classroom materials; i.e., one set of supplemental reading materials over another?)	1	2	3	4	5
5. INSTRUCTIONAL DEVELOPMENT (Does he evaluate and rate teachers, plan teacher in-service?)	1	2	3	4	5
6. SCHOOL--COMMUNITY/PARENT RELATIONS (Does he decide on news releases, news-letters, parent meetings?)	1	2	3	4	5
7. SCHOOL PLANT (Does he determine general facility needs, plan maintenance and renovation needs?)	1	2	3	4	5

TENURE IN POSITION

What is the principal's length of tenure in this position through 1973-74 (excluding the 1974-75 school year)?

2-5 years _____
 6-10 years _____
 Over 10 years _____

If this principal administered buildings in 1973-74 other than the one selected for this study, please list those buildings here

ADMINISTRATOR IMAGE QUESTIONNAIRE*

Please respond to the following questions honestly and frankly regarding this administrator. Fill in the blanks below which represent your reactions to each question. All responses are absolutely confidential. Be sure to fill in only one blank for each question.

WHAT IS YOUR OPINION CONCERNING THIS ADMINISTRATOR'S:	Poor	Fair	Average	Good	Excellent
1. VERBAL FLUENCY: (Does he express his ideas smoothly? Is he articulate?)	—	—	—	—	—
2. CONSIDERATION OF OTHERS: (Is he patient, understanding, considerate and courteous?)	—	—	—	—	—
3. ATTITUDE TOWARD HIS JOB: (Does he show interest and enthusiasm toward his work?)	—	—	—	—	—
4. TECHNICAL COMPETENCE: (Does he have a thorough knowledge and understanding of his field?)	—	—	—	—	—
5. ACHIEVEMENT DRIVE: (Does he have the initiative and persistence needed to accomplish meaningful goals?)	—	—	—	—	—
6. SUPPORTIVENESS: (Does he support those responsible to him?)	—	—	—	—	—
7. FLEXIBILITY: (Is he able to adjust rapidly to changes in plans or procedures?)	—	—	—	—	—
8. PERFORMANCE UNDER STRESS: (How does he function under pressure?)	—	—	—	—	—
9. OPENNESS: (Does he consider divergent views?)	—	—	—	—	—

	Poor	Fair	Average	Good	Excellent
10. ENCOURAGEMENT OF STAFF PARTICIPATION: (Does he encourage staff to raise questions and express opinions?)	—	—	—	—	—
11. ABILITY TO DELEGATE RESPONSIBILITY: (Does he assign tasks to personnel capable of carrying them out?)	—	—	—	—	—
12. INNOVATIVENESS: (Is he willing to try new approaches or methods?)	—	—	—	—	—
13. SUCCESS IN COMMUNICATING EXPECTATIONS: (Does he clearly define and explain what is expected of staff members?)	—	—	—	—	—
14. FAIRNESS: (Does he treat staff members in an unbiased and impartial manner?)	—	—	—	—	—
15. MAINTENANCE OF STAFF MORALE: (Does he create a feeling of unity and enthusiasm among those in contact with him?)	—	—	—	—	—
16. SENSE OF HUMOR: (Does he have a sense of the ridiculous? Does he laugh at his own mistakes?)	—	—	—	—	—
17. DECISION-MAKING ABILITY: (Does the evidence indicate that he is able to make constructive decisions?)	—	—	—	—	—
18. EVALUATING ABILITY: (To what extent does he objectively evaluate programs and practices?)	—	—	—	—	—
20. AWARENESS: (To what extent is he conscious of the problems that exist on the staff level?)	—	—	—	—	—

	Poor	Fair	Average	Good	Excellent
21. SELF-CONTROL: (Does he maintain control of his emotions when things are not going right?)	___	___	___	___	___
22. LEADERSHIP SKILL: (Does his leadership result in the attainment of mutually acceptable goals?)	___	___	___	___	___
23. APPEARANCE: (Are his grooming and attire in good taste?)	___	___	___	___	___

*Prepared by the Educator Feedback Center, Western Michigan University, Kalamazoo, Michigan. (Form CB-968, revised-0869).
Used by permission. Modified by instructions.

SOCIO-ECONOMIC STATUS

Date paralleling that requested below has been previously supplied by your district to the Michigan Department of Education. Your responses to these items for the selected school will help confirm the 1971-72 information which is the most recent data available to the researcher from the Department.

Current data is highly desirable to the study, so please respond to these items.

1. Indicate approximately the percentage of heads of the household that fit in the following occupational categories:

unemployed	_____ %
unskilled, semi-skilled	_____ %
skilled worker	_____ %
clerical, sales	_____ %
manager, professional	_____ %

2. Approximately what percentage of parents have only the following levels of educational attainment;

	Father	Mother
finished elementary and/or some high school	_____ %	_____ %
finished high school	_____ %	_____ %
some college, technical or special training (post high school)	_____ %	_____ %
received college degree	_____ %	_____ %

3. Please approximate the proportion of families in the selected schools whose total income would fall in the following ranges:

Above \$25,000	_____ %
\$15,000 to \$24,999	_____ %
\$10,000 to \$14,999	_____ %
\$5,000 to \$9,999	_____ %
Less than \$5,000	_____ %

THANK YOU VERY MUCH FOR YOUR HELP!

Please mail to MAESP Office, Room 9, Manly Miles Building, 1405 S. Harrison, East Lansing, Michigan 48823 before JANUARY 13.

_____ Please check here if you would like results of the study.



MICHIGAN ASSOCIATION of ELEMENTARY SCHOOL PRINCIPALS

Affiliated With The National Association of Elementary School Principals

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1718 Greencrest
East Lansing 48823

Beryl Gavit, Administrative Assistant
11111 E. Forest Road
Livonia 49127

Dear

How is the effectiveness of a principal judged? What criteria should be used to rate a building principal? How much autonomy should a principal have? These questions are often topics of discussion but little research has been done in this area. As a former Michigan principal turned doctoral student, Shirley Hansen is immersed in an MAESP-endorsed study that addresses these questions.

By random selection, an elementary school in your district has been chosen for inclusion in the study. Would you please take time from your busy schedule to have the person to whom elementary principals are directly responsible in your district, you or your designee, fill in the forms enclosed? Respond regarding the principal who served in that building in the 1972-73 and 1973-74 school years whether or not he is still there. If the principal is no longer in the district, please return the forms and so indicate.

The school name on the form is for your convenience only and can be detached if you prefer. All results will be absolutely confidential. The coding for the school identification will be known only to the researcher and will be destroyed as soon as the data are compiled. No one will ever be able to identify the school or the district in the reporting or publication of the data. At the risk of your "chucking" this, it seems only right that you know state assessment scores will be one component of the study. But please don't file it! The findings will provide you with additional information as the movement rolls along.

Every individual response is really important to assure the validity and accuracy of the results. To insure that your response will be included in the research data, try to return it to the MAESP Office by January 13. Use the stamped, addressed envelop enclosed for your convenience.

In recognition of your valued assistance, the results of the study will gladly be supplied at your request. Thank you very much for your time and consideration.

Sincerely,

Shirley J. Hansen,
Researcher

Edward P. Keller,
Executive Secretary, MAESP

SJH:bh
Encl.



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East 48011

Dr. Edward P. Keller, Executive Secretary
1011 24th Street
East 48011

Beryl Gavit, Administrative Assistant
1011 24th Street
East 48011

January 17, 1975

Dear Superintendent,

This is a follow-up to our initial request dated December 26, requesting your cooperation with an MAESP-endorsed study being done by Shirley Hansen at Michigan State University.

As you may recall, the study will investigate criteria for rating principals and the degree of autonomy principals are perceived to have. At the risk of the request residing in the circular file, you were also informed that state assessment scores will be one component of the study. However, please don't "pitch" this . . . we need you.

Every single response is important! Please take a few minutes from your busy schedule to have the person to whom elementary principals are directly responsible in your district, you or your designee, fill in the forms enclosed. Respond regarding the principal who served in that building in the 1972-73 and 1973-74 school years whether or not he is still there. If the principal is no longer in the district, please return the forms and so indicate.

All results will be absolutely confidential. The school name on the form is for your convenience only and can be detached if you prefer. The coding is known only to the researcher and will be destroyed as soon as the data are compiled. No one will ever be able to identify the school or the district in the reporting or publication of the data.

Your prompt reply will be greatly appreciated so that your responses can be included in the research data. A stamped, addressed envelope is included for your convenience. In recognition of your valued assistance, the results of the study will gladly be supplied at your request.

If you have recently returned the questionnaire, please disregard this request.

Thank you very much for your time and consideration.

Sincerely,

Shirley J. Hansen

Edward P. Keller

SJH:bg
Encl.

APPENDIX C

MICHIGAN PUBLIC ACTS 307 AND 38

MICHIGAN

Act No. 307 enacted in 1969 was initiated by the State Department of Education and authorized a statewide educational assessment program. Public Act No. 38, enacted in 1970, was introduced by the Governor and mandated a more comprehensive assessment program for Michigan. Both Acts are quoted below:

SECTION 14, PUBLIC ACT NO. 307 (Enacted in August, 1969)

Sec. 14. The department of education shall begin to plan and develop a state program for the purpose of conducting a periodic and comprehensive assessment of educational progress. Such plan shall include procedures for the objective measurement of instructional outcomes among the elementary and secondary school students pursuing the various subjects and courses that commonly comprise school curricula. Such plan shall be made statewide in application among the elementary and secondary schools. Such plan shall include procedures for the presentation of periodic evaluation reports of educational progress for the state.

Also the department of education shall provide for an annual test or tests of pupil achievements in the basic skills. Such test or tests shall provide for the objective measurement of pupil learning outcomes in reading, mathematics, language arts and/or other general subject areas. Such test or tests shall be undertaken at one or more grade levels among elementary and/or secondary school pupils and shall be made statewide in application insofar as is necessary and possible.

PUBLIC ACT NO. 38 (Enacted in 1970)

AN ACT TO PROVIDE FOR ASSESSMENT AND REMEDIAL ASSISTANCE PROGRAMS OF STUDENTS IN READING, MATHEMATICS, AND VOCATIONAL EDUCATION.

The people of the State of Michigan enact:

Sec. 1. A statewide program of assessment of educational progress and remedial assistance in the basic skills of students in reading, mathematics, language arts and/or other general subject areas is established in the department of education which program shall:

(a) Establish meaningful achievement goals in the basic skills for students, and identify those students with the greatest educational need in these skills.

(b) Provide the state with the information needed to allocate state funds and professional services in a manner best calculated to equalize educational opportunities for students to achieve competence in such basic skills.

(c) Provide school systems with strong incentives to introduce educational programs to improve the education of students in such basic skills and model programs to raise

the level of achievement of students.

(d) Develop a system for educational self-renewal that would continuously evaluate the programs and by this means help each school to discover and introduce program changes that are most likely to improve the quality of education.

(e) Provide the public periodically with information concerning the progress of the state system of education. Such programs shall extend current department of education efforts to conduct periodic and comprehensive assessment of educational progress.

Sec. 2. (1) The statewide assessment program of educational progress shall cover all students annually at two grade levels in public schools.

(2) The department of education, hereinafter referred to as the department, shall develop and conduct the program, and may utilize the assistance of appropriate testing organizations and/or testing specialist. The program shall expand the current basic skills testing inventory in grades 4 and 7 coordinated by the department.

(3) The program shall assess competencies in the basic skills and collect and utilize other relevant information essential to the assessment program.

(4) Based on information from the program, students shall be identified who have extraordinary need for assistance to improve their competence in the basic skills.

(5) Information from the program shall be given to each school as soon as possible to assist it in its efforts to improve the achievement of students in the basic skills.

Sec. 3. (1) Based on information from the mathematics, reading and language arts assessment program, the department shall provide remedial assistance programs, as funds are made available by law to school districts to raise competencies in basic skills of students identified pursuant to subsection (4) of section 2. A funded program shall include but not be limited to the following components:

(a) Diagnosis of each student's performance difficulties and the development of an instructional program best suited to his individual needs.

(b) Provision for selection, adaption and installation of instructional systems that take account of individual student needs.

(c) Provision for an evaluation of the program in order to identify changes needed to improve program effectiveness.

(2) The department shall establish guidelines and specifications for the program components. The department shall provide technical assistance to each school district in its implementation of the guidelines and specifications. The department shall conduct such evaluation necessary to provide adequate information for the setting of guidelines.

(3) The department shall provide for preservice and in-service training of staff who would be involved in the school programs.

(4) The department with the cooperation of selected schools shall establish demonstration projects in basic skills.

(5) A remedial assistance program shall be audited as

part of its evaluation by an agency independent of the state department of education to facilitate the accountability of each school for its programs.

Sec. 4. A vocational education demonstration program is established in the department of education to develop, test and evaluate the following innovative programs:

(a) A vocational education assessment and counseling system using computer and other automated techniques.

(b) A new career development program to devise curricula and materials for new careers in the labor market.

Sec. 5. (1) The vocational education demonstration program shall be developed and tested in not more than 3 school districts. The department shall formulate plans and rules, select the demonstration districts and develop

instruments for measurement of the program. Demonstration programs shall be operated in school districts during the 1971-72 school year.

(2) The department shall evaluate the program and recommend to the governor and the legislature a statewide vocational education assessment, counseling and evaluation program by December 31, 1972.

Sec. 6. The department shall promulgate rules necessary to carry out the provisions of this act, in accordance with and subject to the provisions of Act No. 306 of the Public Acts of 1969, being sections 24.201 to 24.313 of the Compiled Laws of 1948.

This act is ordered to take immediate effect.

APPENDIX D

LETTERS OF PERMISSION

STATE OF MICHIGAN

DEPARTMENT OF EDUCATION

Lansing, Michigan 48902



JOHN W. PORTER
Superintendent of
Public Instruction

August 28, 1974

Mrs. Shirley Hansen
2013 Highboro Way
Falls Church, Virginia 22043

Dear Mrs. Hansen:

This letter will acknowledge your telephone contact with me on August 27, 1974 in which you requested permission to have access to the state assessment results for 1973-74 in connection with a doctoral dissertation which you plan to complete as part of your doctoral studies at Michigan State University. On the basis of our discussion, I see no serious problems of appropriateness or availability of the data for your study.

As I indicated to you by telephone the results are criterion referenced in nature and contain a great many indices on each school. We have done a little work at combining these indices to get a count of the number of reading objectives and a count of the number of mathematics objectives attained. While the resulting distributions are non-normal, the scores derived by that means have high reliability (in the middle 90's). The results are kept in a standing four drawer file and will be made available for your personal inspection or copying in connection with your doctoral studies.

Please contact me or Dr. Donovan when you are ready to collect the achievement data.

Sincerely yours,

Robert J. Huyser, Supervisor
Assessment Program
Research, Evaluation, and
Assessment Services

RJH:et

cc: David L. Donovan

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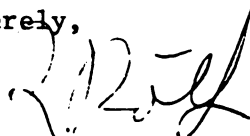
October 7, 1974

Ms. Shirley Hansen
West 719 Owen Hall
Michigan State University
East Lansing, Michigan 48824

Dear Ms. Hansen:

You have my permission to use the Administrator Questionnaire
form for your dissertation.

Sincerely,



Rodney W. Roth, Ph.D.
Director, REDE Center

RWR:ns

APPENDIX E

SCHOOL DISTRICTS AND SCHOOLS IN THE SAMPLE

TABLE E.1.--School districts and schools in sample.

School Districts	Schools
Addison Public Schools	Devils Lake
Adrian City Public Schools	Prairie
Albion Public Schools	North
Alcona Community Schools	Lincoln
Allegan Public Schools	Dawson
Allen Park Public Schools	Arno
Alma Public Schools	Hillcrest
Alpena City School District	Sanborn
Ann Arbor Public Schools	Stone
Auburn Heights School District	Graham
Bangor Township Schools	Edison
Battle Creek City Schools	Roosevelt
Bay City School District	Brissette
Beecher Schools	Northgate
Belding Area Schools	Washington
Bently Schools	Johnson
Benton Harbor School District	Fair Plain West
Benzie County Central Schools	Betsie Valley
Big Rapids Public Schools	Brookside
Birmingham City School District	Valley Woods
Blissfield Community Schools	South
Bloomfield Hills School District	Hickory Grove
Brandon School District	Belle Ann
Bridgeport Community School District	Kaufman
Buchanan Public Schools	Stark
Bullock Creek Schools	Floyd
Byron Center Public Schools	Northwest
Cadillac Area Public Schools	Cooley
Carlton Community Schools	Neidermeier
Caro Community Schools	Schall
Carson-Crystal Area Schools	Crystal
Cass City Public Schools	Deford
Central Montcalm Public Schools	Stanton
Charlotte Public Schools	Galewood
Cheboygan Area Schools	East
Clawson City School District	Hunter
Coldwater Community Schools	Washington
Coleman Community Schools	Coleman
Coloma Community Schools	Pier
Colon Community Schools	Colon

TABLE E.1.--Continued

School Districts	Schools
Comstock Public Schools	East Comstock
Corunna Public Schools	Meyer
Crosswell-Lexington Community School Dist.	Meyer
Davison Community Schools	Central
Dearborn Public Schools	Snow
Dowagiac Union Schools	Justus Gage
Durand Area Schools	Bertha Neal
East Detroit Public Schools	Forest Park
East Lansing School District	Pinecrest
Eaton Rapids Public Schools	Union
Edmore Public Schools	Second Street
Edwardsburg Public Schools	Eagle Lake
Elsie Area Schools	East
Escanaba Area Public Schools	Soo Hill
Essexville-Hampton School District	Bush
Ferndale School District	Grant
Flint City School District	Sobey
Flushing Community Schools	Springview
Fraser Public Schools	Einstein
Fremont Public School District	Cedar
Galesburg Community Schools	Augusta
Gerrish Higgins School District	St. Helen
Grand Blanc Community Schools	Myers
Grand Haven Public Schools	Peach Plains
Grand Rapids Public Schools	Kensington
Granville Public Schools	Riverbend
Gross Isle Township School District	Meridian
Gull Lake Community Schools	Bedford
Hamilton School District	Hamilton
Hamtramck City Schools	Holbrook
Harrison Community Schools	Amble
Haslett Public Schools	Wilkshire
Highland Park City Schools	Willard
Hillsdale Community Schools	Gier
Holland Public Schools	Harrington
Holly Area Schools	Davisburg
Holt Public Schools	Midway
Houghton Lake Community Schools	Merritt
Hudsonville Public Schools	Bauer
Inkster Public Schools	Douglass
Ironwood Area Public Schools	Central
Ishpeming Public Schools	Birchview
Ithaca Public Schools	North
Jackson Union School District	Longfellow

TABLE E.1.--Continued

School Districts	Schools
Jenison Public Schools	Bursley
Kellogsville Public Schools	West Kellogsville
Lake Orion Community Schools	Blanche Sims
Lamphere Public Schools	Lessenger
Lansing Public School District	Forest View
Lapeer Public Schools	Irwin
Lincoln Park Public Schools	Raupp
Linden Community Schools	Linden
Livonia Public Schools	Randolph
Lowell Area Schools	Bushnell
Maple Valley Schools	Fuller
Manchester Public Schools	Pleasant Lake
Manistee Public Schools	Madison
Manistique Area Schools	Lakeside
Marquette Public Schools	Parkview
Marysville Public Schools	Marysville Gardens
Menominee Area Public Schools	Central
Michigan Center Public Schools	Clement
Midland City School District	Chestnut Hill
Milan Public Schools	Brainard
Monroe City Public Schools	Waterloo
Montague Public Schools	Oehrli
Morley Community Schools	Stanwood
Mt. Clemens Community School District	Macomb
Mt. Pleasant Schools	Vowles
Muskegon Heights Public Schools	Edgewood
Muskegon Public Schools	Froebel
Munising Public Schools	Central
Niles Community Schools	Oak Manor
North Dearborn Heights School District	Warren Valley
Northwest School District	Parnell
Novi Community Schools	Orchard Hills
Onaway Area Community Schools	Millersburg
Otesgo Public Schools	Dix Street
Owosso Public Schools	Green Meadows
Oxford Area Community Schools	Oxford
Perry Public Schools	Perry
Petoskey School District	Ottawa
Pinconning Area Schools	Central
Plymouth Community School District	Smith
Pontiac City Public Schools	Emerson
Portage Public Schools	Milham
Port Huron Area Schools	Michigamme
Redford Union Schools	Volney Smith
River Valley School District	Chickaming

TABLE E.1.--Continued

School Districts	Schools
Rockford Public Schools	Crestwood
Rogers City School District No. 1	Rogers City
Romulus Community Schools	Romulus
Roseville Community Schools	Wellington
Saginaw City School District	Longfellow
St. Johns Public Schools	Perrin-Palmer
St. Joseph Public Schools	Brown
St. Louis Public Schools	Michigan
Sault St. Marie Area Public Schools	Malcolm
Sebewaing Unionville Schools	Unionville
Shelby Public Schools	New Era
Sheperd Public Schools	Winn
Spring Lake Public Schools	Nunica
South Lake Schools	Maxine
South Lyon Community Schools	New Hudson
Tahquamenon Area Schools	Newberry
Taylor School District	Taylor Center
Three Rivers Community Schools	Lake Section
Traverse City Public Schools	Bertha Vos
Troy Public Schools	Leonard
Walled Lake Consolidated Schools	Wixom
Watervliet Public Schools	South
Waverly Schools	Elmwood
White Pigeon Community Schools	Central
Willow Run Schools	Ford
Wittmore-Prescott Area Schools	Prescott
Wyandotte City School District	Washington
Yale Public Schools	Yale

APPENDIX F

SOCIOECONOMIC DATA BY COMMUNITY TYPE

TABLE F.1.--Socioeconomic (SES) data by Community Type.

Community Type	n	Composite Index SES Scores			
		Mean	Median	Range	
				Lowest SES	Highest SES
Metropolitan Core	10	53.28	52.92	35.24	77.19
City	20	66.72	66.27	36.47	93.53
Town	31	66.56	61.73	48.99	75.28
Urban Fringe	30	66.51	67.07	43.62	91.82
Rural	30	57.48	57.87	40.17	71.76

APPENDIX G

SCATTER PLOTS: EFFECTIVENESS AND ACHIEVEMENT
BY COMMUNITY TYPE AND SAMPLE

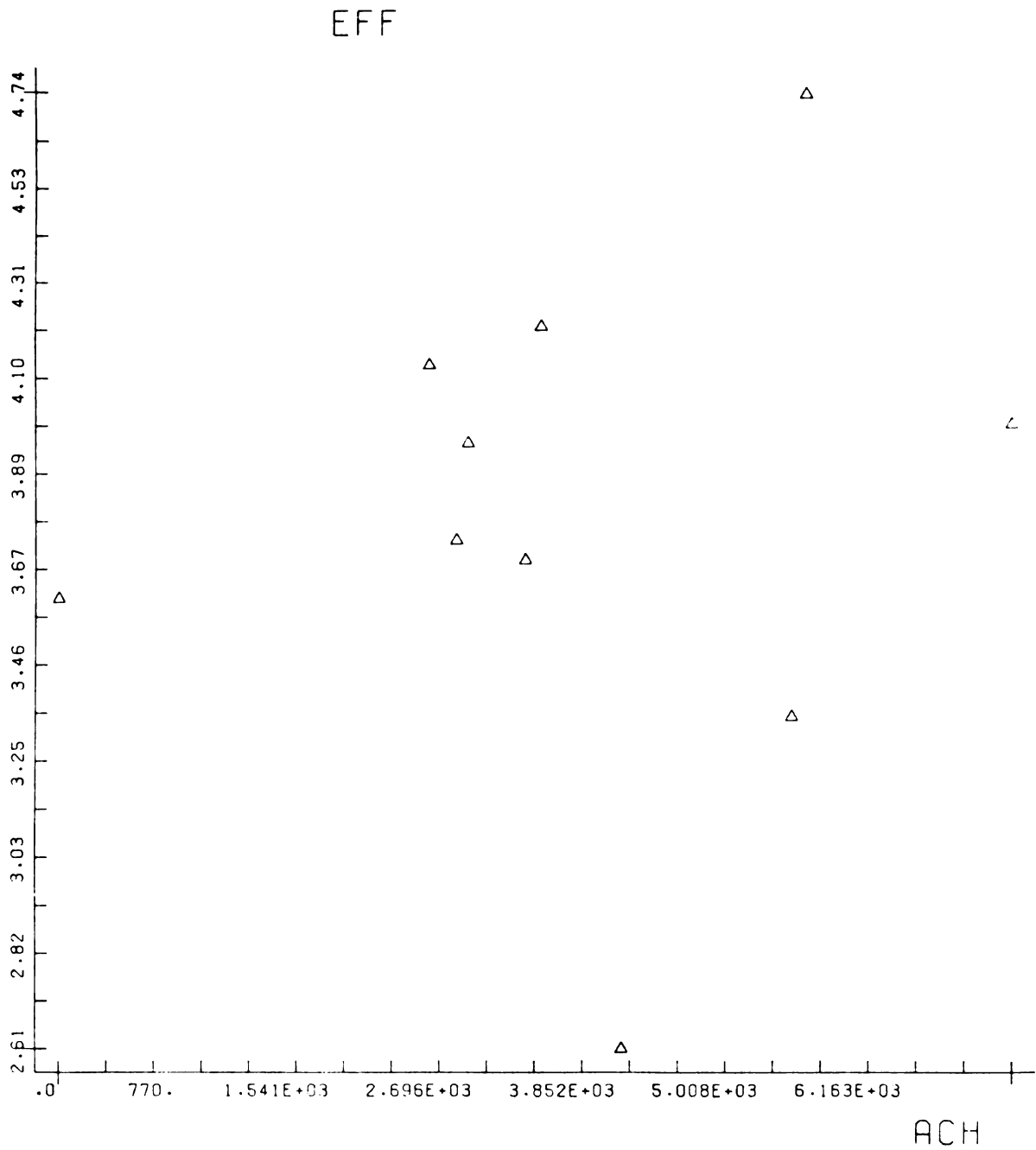


Figure G.1.--Scatter plot: effectiveness and achievement,
Metropolitan Core communities.

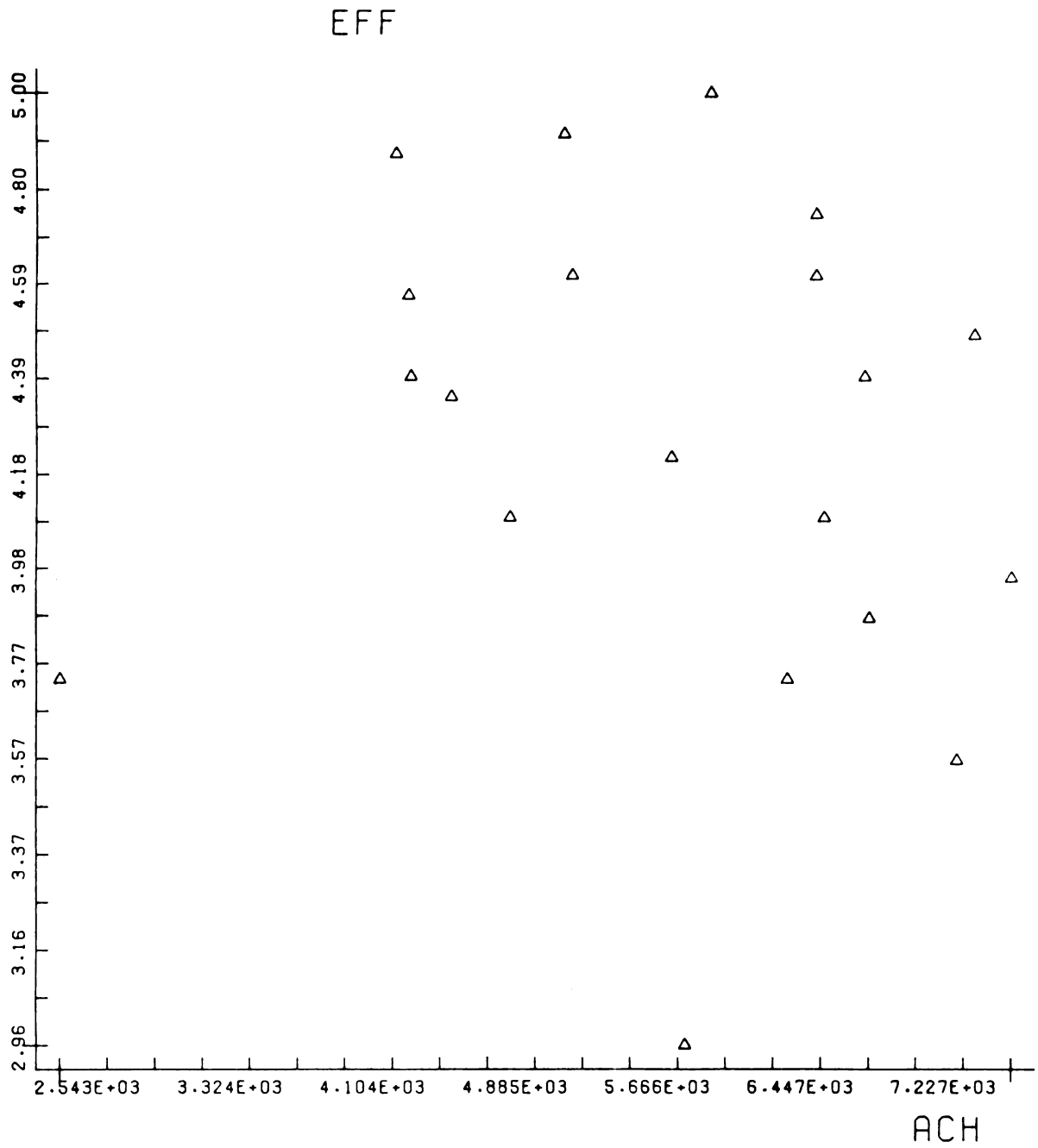


Figure G.2.--Scatter plot: effectiveness and achievement,
City communities.

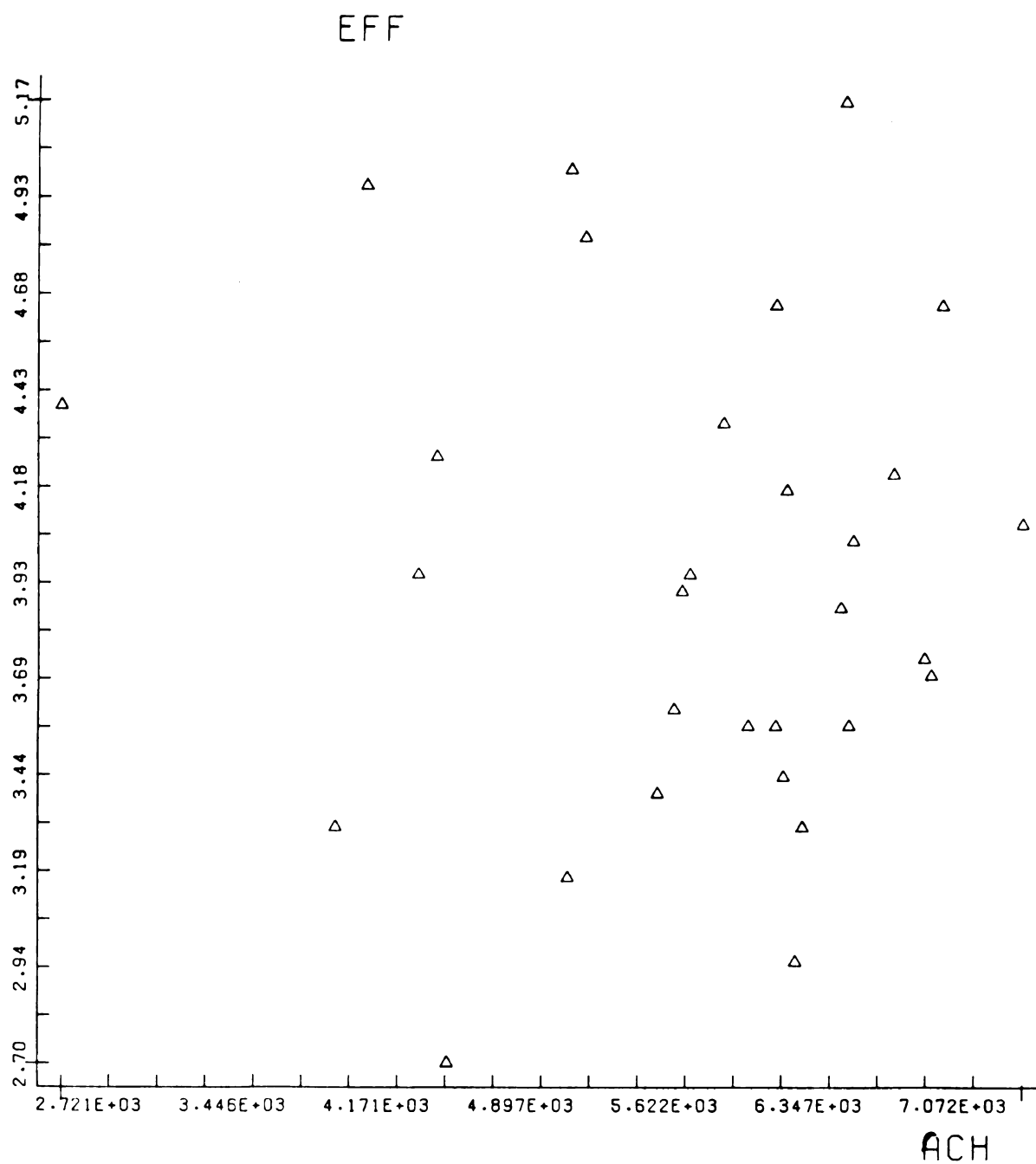


Figure G.3.--Scatter plot: effectiveness and achievement,
Town Communities.

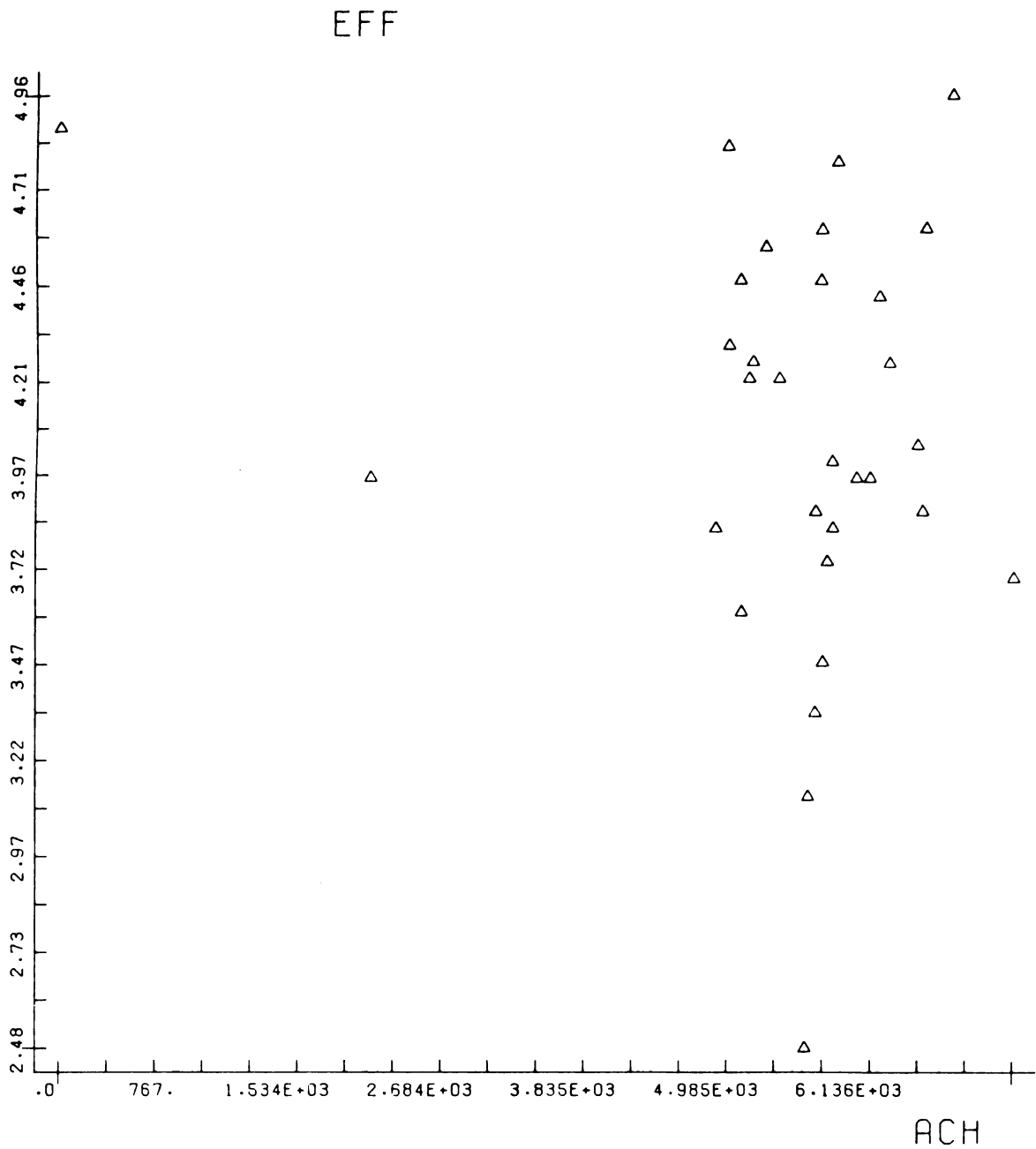


Figure G.4.--Scatter plot: effectiveness and achievement,
Urban Fringe communities.

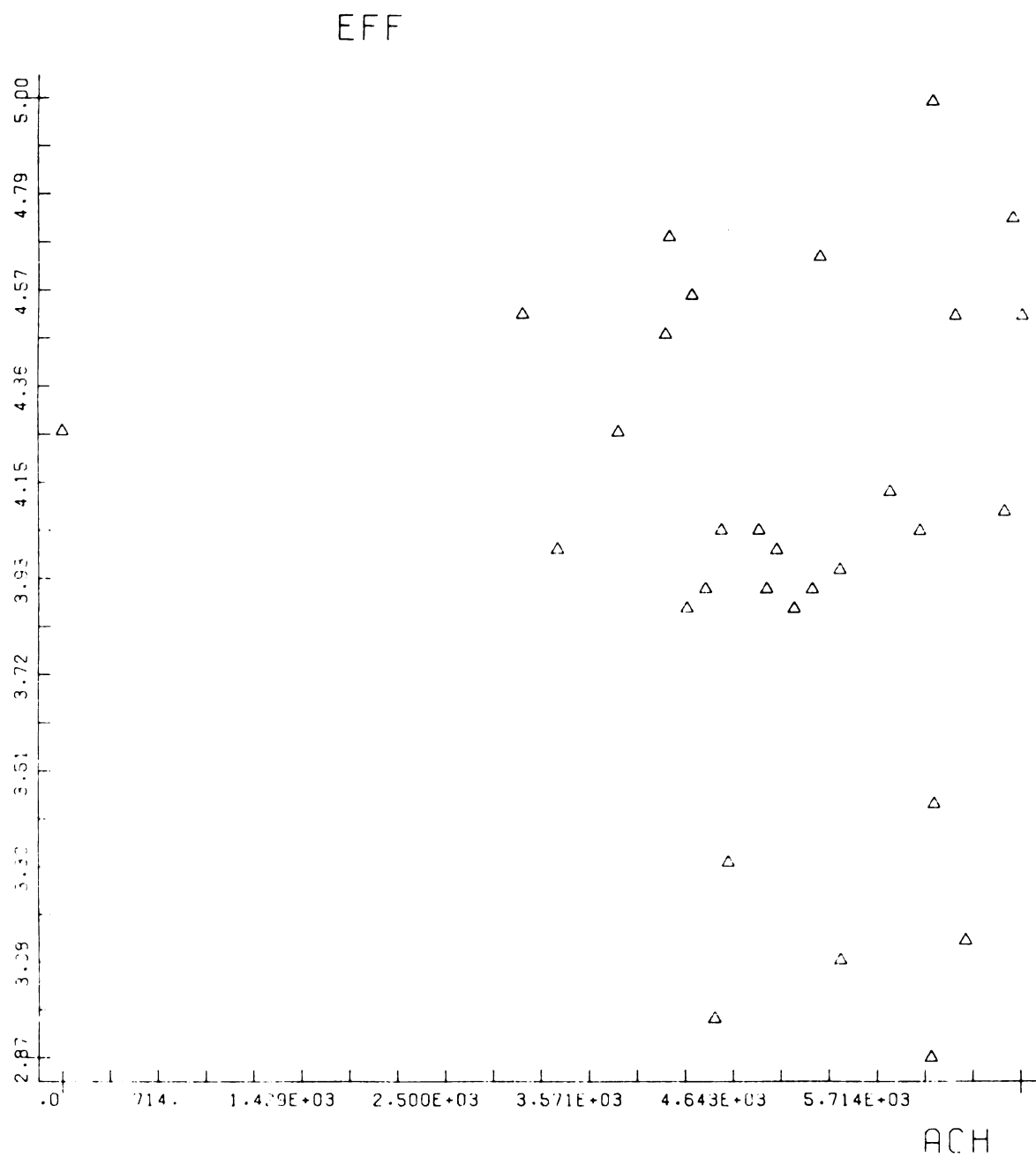


Figure G.5.--Scatter plot: effectiveness and achievement,
Rural communities.

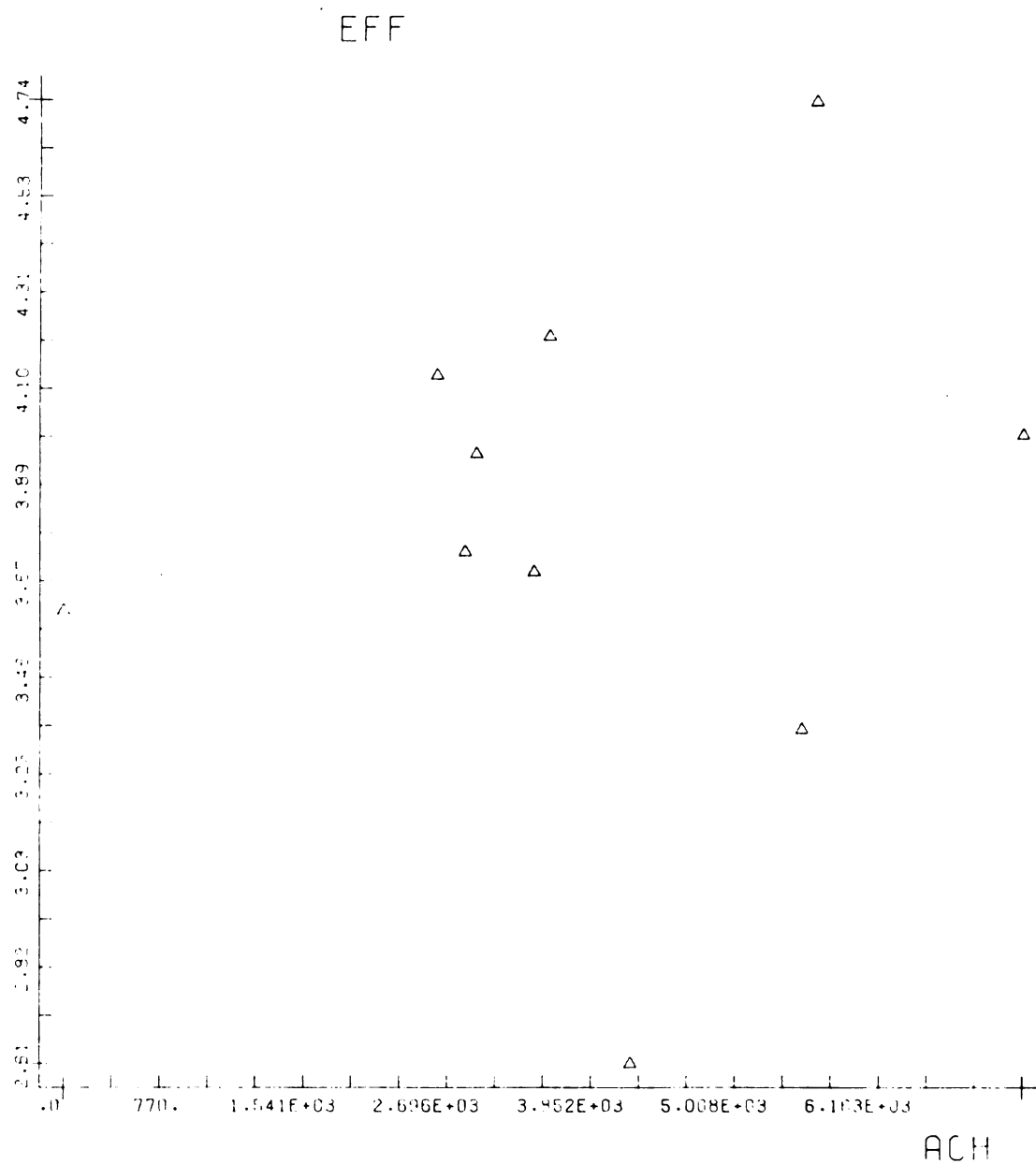


Figure G.6.--Scatter plot: effectiveness and achievement, entire sample.

APPENDIX H

CORRELATIONS OF ADMINISTRATIVE IMAGE QUESTIONNAIRE ITEM MEANS WITH AIQ MEAN

TABLE H.1.--Correlations of Administrative Image Questionnaire
item means with AIQ mean.

AIQ Item Number	Community Type				
	Metropolitan Core	City	Town	Urban Fringe	Rural
1.	.71	.50	.46	.74	.52
2.	.69	.65	.44	.57	.64
3.	.83	.69	.69	.51	.49
4.	.80	.81	.61	.76	.52
5.	.79	.59	.84	.71	.66
6.	.91	.59	.81	.68	.69
7.	.71	.73	.65	.65	.73
8.	.55	.77	.76	.73	.79
9.	.64	.57	.77	.64	.68
10.	.77	.59	.59	.65	.61
11.	.62	.73	.68	.58	.54
12.	.48	.75	.34	.67	.33
13.	.66	.80	.65	.80	.70
14.	.75	.85	.55	.56	.70
15.	.76	.66	.77	.72	.87
16.	.45	.49	.72	.58	.53
17.	.63	.77	.74	.81	.73
18.	.58	.69	.77	.74	.62
19.	.69	.82	.75	.82	.90
20.	.94	.77	.72	.85	.90
21.	.37	.78	.46	.61	.78
22.	.82	.85	.83	.89	.89
23.	.22	.33	.59	.55	.47

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