SCHOOL DISTRICT VARIABLES INCLUDING SUPERINTENDENT/PRINCIPAL CONFLICT AND THEIR CONTRIBUTION TO STUDENT ACHIEVEMENT IN NEBRASKA CLASS III PUBLIC SCHOOL DISTRICTS

by

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GRADUATE COLLEGE
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SCHOOL DISTRICT VARIABLES INCLUDING SUPERINTENDENT/PRINCIPAL CONFLICT AND THEIR CONTRIBUTION TO STUDENT ACHIEVEMENT IN NEBRASKA CLASS III PUBLIC SCHOOL DISTRICTS

Kenton John McLellan, Ed.D.

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Using data from 38 small/rural school districts in Nebraska, this study examined what attributes of a school district affected students' aggregate levels of academic achievement in reading and mathematics. District attributes were measured through four environmental variables, four organizational variables, and an 80-item school district health survey.

District data was collected from a state report card. A survey was administered to a randomly selected sample of five teachers or ten percent of the total number of teachers (whichever was greater) in each of 50 randomly chosen districts. Teachers answered questions about their perceptions of their district. Districts that had a return rate of at least three surveys were included in the study. This resulted in a final sample of 38 districts.

Analysis of data showed the following: 1) there was an insignificant correlation between staff qualifications and pupil teacher ratio and student achievement; 2) number of professional support staff had no significant effect on achievement; 3) increasing

district resources did not correlate with increased student achievement; 4) school size was unrelated to student achievement; and 5) neither levels of conflict nor district leadership had a relationship with student achievement. A significant negative correlation was found between the number of minority students in the district and student achievement.

Multiple regression was used to analyze the contribution of predictor variables to variation in achievement. The one variable that consistently explained variation in achievement was the number of minorities in the district. In several models, measures of organizational health were significant contributors to a model that achieved significance.

Establishing the characteristics of school districts that can be directly linked to student achievement is a difficult task. This study identified little within the control of a school district that could be manipulated to impact student achievement. As a consequence, educators should be wary of reform initiatives that seem to offer easy fixes to raising student achievement.

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Chapter 1

Introduction

Statement of the Problem

Bidwell and Kasarda published a very influential study in 1975 describing determinants of organizational effectiveness in public school systems. The study involved a statistical analysis of data collected from 104 school districts in Colorado. The authors were interested in determining if five environmental conditions, three components of district structure, and one of staff composition were linked in a causal model to the median reading and mathematics achievement test scores of the districts' high school students. The environmental conditions examined were school district size, fiscal resources, percent of the community population that was non-white, and the education and income levels of the parental population. The district structure components included pupil-teacher ratio, administrative intensity, and the number of professional support staff. The staff composition component examined was the qualification level of the professional staff. In their regression analysis, the authors were able to explain almost 50 percent of the variance in dependent achievement variables.

The Nebraska Department of Education published the first State of Nebraska Report Card in 2000. The purpose of the report card was to provide the public with an overview of the effectiveness of Nebraska's schools. In order to produce the report card the Department of Education required all class 2 through class 5 school districts to provide data on items such as pupil teacher ratio, teacher qualifications, student socioeconomic status, student attendance, school district size, graduation rate,

expenditures, and student performance. The report card was a summary of this data presented to the public as a means of demonstrating the progress of Nebraska schools.

The data obtained by the Nebraska Department of Education has not been available in the past. The present study not only broadens the basic understanding of organization structure and effectiveness, but it also sheds light on the question of whether school districts can make changes that will affect student achievement.

Many of the variables analyzed in Bidwell and Kasarda (1975) are also reported on the State Report Card. Using the data collected by the Nebraska Department of education for the State Report Card this study will parallel the Bidwell study and also add an additional independent variable to be analyzed. This study focused on educational systems in Nebraska. The sample contained only class III public schools districts located in Nebraska. Also, the districts investigated in this study were generally rural districts rather than urban districts.

While many of the factors listed in the report card may indeed be valid measures of school effectiveness, it is this researcher's belief that one very important variable is ignored when considering school effectiveness. The relationship between the superintendent and principal is not addressed in the Bidwell study or on the State Report Card.

There has been an abundance of research that documents the importance of the principal in regards to creating and maintaining an effective school. There is much less research that explores the role of the superintendent, and even less research exploring the relationship between the principal and the superintendent (Bidwell, 1965; Bridges, 1982; Crowson, 1987). Grant (1996) noted that "Administrative power is an area to which

relatively little attention has been given. In fact, it is conspicuous by its absence in the literature on management and organizations" (p.13). According to Crowson (1987) the general management behavior of the superintendent is poorly understood. He observed that there was a surprising lack of inquiry as to how superintendents manage the internal affairs of their districts. Murphy and Hallinger (1986) also noted this lack of research. They suggest that further work was necessary (p. 230).

There is even less research that explores the impact that the relationship between the principal and superintendent has on the academic achievement of students. This researcher believed that this relationship would have a significant effect on student achievement. In addition to paralleling the Bidwell and Kasarda study (1975), this study explored the complex relationship between the superintendent and the principal with regard to the impact of conflict between the superintendent and principal on student achievement. It was hoped that by introducing this new variable the researcher will be able to further explain variance among academic achievement levels of students. It was also the intent of the researcher that the results of this study would expand the knowledge base regarding school effectiveness and the nature of superintendent and principal relations.

Purpose of the Study

One of the major purposes of this study was to examine school district variables in terms of their contribution to student achievement. In Nebraska there are a variety of types of schools in terms of size, student demographics, and teacher characteristics. The new State Report Card provided an opportunity to use school district data to determine if there were particular district variables that contributed to student achievement.

Educational administration has long sought to identify the properties of an effective school. The importance of—and confusion about—defining and measuring organizational effectiveness are apparent for schools. When there is a gathering of educators, patrons, or policy makers the conversations generally center on school effectiveness. Terms such as accountability, academic achievement, and student drop-out rates are frequently heard. This interest in organizational effectiveness is neither new nor unique to education. Research in this area has been occurring for more than one hundred years (Hoy & Miskel, 1991).

Bidwell and Kasarda (1975) were interested in determining if there were specific strategies that schools could use to increase effectiveness as indicated by improved academic achievement by students. The results of their study indicated that pupil-teacher ratio, administrative intensity, qualifications of teachers, and the number of professional support staff significantly affected student achievement. These findings seemed to indicate that educational organizations could take steps to improve student achievement.

Educational organizations are often times viewed as loosely coupled systems. As such, one would expect to find employees and sub-units that display a high degree of autonomy. This autonomy would permit the different levels within an organization to pursue different and sometimes even conflicting goals. As a result, conflict may occur between employees (Grant, 1996, p. 14).

In smaller schools such as the class C and D schools of Nebraska the superintendent and principal are expected, to work very closely together. The basic structure of these small schools more or less requires this close working relationship. For instance, most of the small school systems are one or two building systems. In a one

building system the superintendent's office will be located in the same building as the principal's. In a two building system the superintendent's office will be located in either the elementary school or the secondary school. In either situation the superintendent and at least one of the district's principals are working in close proximity to one another.

When superintendents and principals are working in such close relationships the possibility of the development of conflict between the superintendent and principal may occur. While conflict between the superintendent and principal can arise from many things, role confusion is one area that can cause a great deal of conflict. Superintendent or principal role confusion can manifest itself in almost any area of school administration. Administrative duties such as scheduling, budgeting, staff development, discipline, staff recruitment and assignment, public relations, and curriculum development are all prone to the manifestation of conflict due to role confusion.

An additional factor that contributes to the potential development of conflict between the principal and superintendent is administrative turn over. There are several studies that look into superintendent turnover rates. A paper presented at the National Rural Education Research Forum by Grady and Bryant (1988) summarized several of these studies. The studies described both Nebraska and national superintendent turnover rates. The authors noted that Goddard (1977) found that in the mid-seventies the average tenure of Nebraska superintendents was less than five years (p. 7). They noted that in 1983 Cunnigham and Hentges reported a national superintendent tenure rate of 5.9 years (p. 4). Describing a more recent study by Feistritzer (1988) the authors reported a national superintendent rate of 6.7 years (p 5). The American Association of School Administrators (AASA) has been a major sponsor of studies of the superintendency

(Dlugosh, 1995, p. 16). In the most recent study sponsored by AASA Glass (1992) reported that the national superintendent average tenure rate was 6.47 years (p. 16). Dlugosh (1995) reported that according to information provided by the Nebraska Department of Education (NDE) '...the average Nebraska superintendent tenure rate was 5.80 years, almost a year less than the national average" (p. 19). If one examines the data regarding superintendent turnover rates it becomes apparent that the rate is relatively high. As a result of the high turnover rate of superintendents, principals can be exposed to multiple superintendents during their tenure. With this increase in exposure the chances that there will be one superintendent/principal pairing where conflict may develop also increases. This conflict can manifest itself in several ways, but it is most likely that this conflict will have a negative impact on the relationship between the superintendent and principal and therefore, possibly impact the effectiveness of the school. As noted in Argyris (1992) "...there is productive and unproductive or crippling tension. The unproductive or crippling tension is tension that a person experiences but which he cannot control. The reason he cannot control the tension may be external (pressure from his superior) or internal (inability to control his own demands on himself, plus the accompanying feelings of impatience and guilt aimed at himself)" (p. 121). The author also stated that conflict must be managed so that its constructive aspects are emphasized and the destructive aspects are de-emphasized.

Few studies have examined the relationship between the superintendent and the principal with regard to conflict. The lack of available research to review is evidence of this fact. This study began this task by exploring the degree of conflict between the superintendent and his subordinate principals and its impact on school effectiveness as

measured by student achievement. The researcher was interested in studying the aforementioned impact in order to offer suggestions to help improve leadership in Nebraska public school districts.

Research Questions

1. Did organizational characteristics contribute to district achievement levels and if so, how much of the variation in achievement was explained by these organizational characteristics?
2. Did environmental conditions of the district contribute to district achievement levels and if so, how much of the variation in achievement was explained by these environmental conditions?
3. Did conflict between the superintendents and principals of small Nebraska rural schools contribute to district achievement levels and, if so, how much of the variation in achievement was explained by variation in the degree of conflict?
4. How much additional explanatory power was created by the addition of the independent variable of conflict between the superintendent and principal?
5. Did measures of organizational health contribute to district achievement levels and, if so, how much of the variation in achievement was explained by variation in a measure of organizational health?

These research questions are developed more fully in Chapter Three.

Limitations

1. The data used for this study were obtained from the Nebraska State Department of Education. When gathering academic achievement data the Department did not gather the data from uniform statewide achievement testing. Different schools used different achievement tests. Also, individual student scores were not available, but rather the percentage of students in each quartile for each district.
2. The interval data used to represent school district student achievement were obtained by creating interval data from nominal data.
3. Conclusions for the study were applicable to Nebraska schools during the 1999 - 2000 school year.
4. This study was descriptive in nature and relied heavily on self-reporting by teachers.
5. The study was subject to those strengths and weaknesses inherent in the researcher-developed questionnaire.
6. The model proposed in this study may yield Type One Errors by missing critical factors.

Delimitations

1. Only schools in Nebraska were used for this study. The results of this study cannot be generalized beyond Nebraska.
2. The generalizability of the findings from this study are limited to the characteristics of the schools used in this study. Only class III schools were used for the study.

3. It may not be possible to get accurate measures of a school district by asking a limited number of teachers.
4. The model proposed in this study is a limited explanation of the variation in student achievement.

Assumptions

1. Academic achievement is an appropriate indicator of school effectiveness.
2. The instrument used in this study is a valid means of capturing opinion about school district variables.
3. The respondents will be truthful in their responses.
4. The data gathered in this study will distribute normally.
5. It is reasonable to create a weighted score to represent district achievement.
6. Multiple regression is an appropriate statistical method for analyzing the type of data investigated in this study.

Definitions

1. Student Outcomes: The degree to which the school district places a high value on student outcomes as measured by the Organizational Health Survey.
2. Leadership: The degree of effective leadership in the school district as measured by the Organizational Health Survey.
3. Organization Structure: The appropriateness of the organizational structure of the school district as measured by the Organizational Health Survey.

4. Communication: The degree of open communication in the school district as measured by the Organizational Health Survey.
5. Conflict Management: The degree of disagreement in the school district as measured by the Organizational Health Survey.
6. Human Resource Management: The degree to which the school district's human resources are well utilized as measured by the Organizational Health Survey.
7. Participation: The degree to which participation is used in the school district as measured by the Organizational Health Survey.
8. Creativity: The degree of creativity in the school district as measured by the Organizational Health Survey.
9. Social-Ecological Approach: A process of asking whether and how attributes of school district organization affect the transformation of environmental inputs into students' aggregate levels of academic achievement (Bidwell & Kasarda, 1975).
10. Organizational Effectiveness: Goal attainment; while the goals of schooling are many and vague, the academic achievement of students is clearly among them (Bidwell & Kasarda, 1975).
11. Environmental Conditions: Those conditions that an organization can do little to control such as district size, fiscal resources, disadvantaged students, and percent of students non-white (Bidwell & Kasarda, 1975).
12. School District Size: Total student population of the school district as reported in the 2000-2001 School District Membership Report.

13. Fiscal Resources: The sum of all local, state, and federal revenue received by the school district, as reported in the 2000-2001 Annual Financial Report submitted by Nebraska public school districts and confirmed by their audit reports.

14. Disadvantaged Students: The percent of all school-age children residing in the school district who are eligible for Free and Reduced-priced meals as reported in the 2000-2001 School District Membership Report.

15. Percent Non-white: The percent of the student population residing in the school district who were not classified as white as reported in the 2000-2001 School District Membership Report.

16. Organizational Attributes: Those attributes of district structure such as pupil-teacher ratio, administrative intensity and the number of supporting professional staff.

17. Pupil-Teacher Ratio: The number of students (as reported on the 2000-2001 School District Membership Report) per teacher (as reported on the 2000-2001 Fall Personnel Report) calculated by dividing the number of students by the number of teachers in each district.

18. Administrative Intensity: The full time equivalency (FTE) of personnel in the school district who must hold a valid administrative certificate as reported in a document specifically requested by the researchers from the Nebraska Department of Education Data Center.

19. Professional Support Component: The full time equivalency (FTE) of personnel in the school district who are employed as counselors, nurses,

and/or speech personnel as reported in a document specifically requested by the researchers from the Nebraska Department of Education Data Center.

20. Certificated Staff Qualifications: The percent of total certificated staff that held at least the Master's degree as reported on the 2000-2001 Fall Personnel Report.

21. Student Math Achievement Score for the District: The percentage of students that fall in each quartile of a standardized math test as reported on the Nebraska Department of Education State Report Card Web Site (http://reportcard.nde.state.ne.us) converted to interval data by weighting the quartiles and multiplying those weights times the number of students in each quartile in grades three, eight, and eleven.

22. Student Reading Achievement Score for the District: The percentage of students that fall in each quartile of a standardized reading test as reported on the Nebraska Department of Education State Report Card Web Site (http://reportcard.nde.state.ne.us) converted to interval data by weighting the quartiles and multiplying those weights times the number of students in each quartile in grades three, eight, and eleven.

Significance of the Study

There is a great need for empirical studies, conducted in a variety of organizational settings, which use well-defined models of the links between input and output. Bidwell and Kasarda note that "The school district is one such setting, and since Equality of Educational Opportunity (Coleman et. al, 1966) there has been a good deal of

attention to the outputs (especially the academic outputs) of schools" (p. 55) Much of this work however, has not been conducted from the standpoint of organizational analysis. This study was conducted from the standpoint of organizational analysis. Using a social-ecological approach the researcher asked whether and how attributes of school district organization affect the transformation of environmental inputs into students' aggregate levels of academic achievement. The present study added an additional variable to those investigated by Bidwell and Kasarda (1975) in an attempt to improve their model. It was hoped that by introducing this new variable the researcher would be able to further explain variance among academic achievement levels of students.

Organization of the Study

Chapter 1 contains the Statement of the Problem, Purpose of the Study, Research Questions, Limitations, Delimitations, Assumptions, Significance of the Study, and Definitions. Chapter 2 consists of a review of selected resources. In Chapter 3, the methods and design are presented. The analysis of data is covered in Chapter 4. Chapter 5 contains the summary, conclusions, and recommendations.

Chapter 2

Review of Selected References

The theoretical backgrounds of the areas related to this study are reviewed in this chapter. The history of the search for indicators of school effectiveness, theoretical approaches to organizational effectiveness, research on achievement as an effectiveness indicator, organizational conflict, and the superintendent/principal relationship are reviewed.

Identifying the Properties of Effective Schools

Scientific Management

In 1962 Calahan published a study entitled *Education and the Cult of Efficiency*. This study described the social forces that had shaped the administration of public schools. The author's intent was to explore the origin and development of the adoption of business values and practices in educational administration. Calahan was not surprised to find business ideas and practices being used in education, but what was unexpected was the extent, not only of the power or the business-industrial groups, but of the strength of the business ideology in the American culture on the one hand and the extreme weakness and vulnerability of administrators on the other. The author noted "I was surprised and then dismayed to learn ho many decisions they made or were forced to make, not on educational ground, but as a means of appeasing their critics in order to maintain their positions in the school" (p. ii).

The search for educational effectiveness can be traced to the early 1900s. From 1900 to 1910 American schools experienced growing pains: teachers were inadequately

prepared, classrooms were over crowded, school buildings and equipment were inadequate, and the education of minorities had been neglected. But the basic framework for the concept of a free public school from kindergarten through the college years had been established. Still, as noted by Callahan (1962) "At the turn of the century America had reason to be proud of the educational progress it had made" (p.1).

Over the next quarter century several forces shaped American society. As part of American society public schools reflect to some extent the culture of which they are a part and respond to forces within that culture. Due to the nature of their organization, support, and control schools are especially vulnerable and respond quickly to the strongest social forces. Industrial capitalism – the application of mechanical power to the production of goods under the influence of free enterprise - was the most powerful force during this period as well as the decades immediately preceding it (Callahan, 1962).

Industrial capitalism resulted in two developments that had a major impact on American society and education after 1900. One of these was the rise of business and industry to a position of prestige and influence, and America's subsequent obsession with business-industrial practices and values. The other was the reform movement historically associated with Theodore Roosevelt. When combined with the vulnerability of the school administrator these factors contributed to the conditions in American society, which explain the impact of Frederick Taylor's system of scientific management and the continuing influence of the business-industrial ideology on American Society and education after 1911. It became commonplace for Americans, when they thought of reforming schools, to apply business methods to achieve their ends. As noted by Callahan (1962) "The direct influence of business on school administrators and through them, on

the schools, sprang from twin factors that were like the two sides of a coin: the vulnerability of the schools and schoolmen; and the great strength of the business community and the business philosophy in an age of efficiency" (p. 179).

The introduction of businesslike organization and operation into schools was fairly well standardized from 1900 to 1925. Unfavorable comparisons between business and schools, applying business-industrial criteria (e.g., economy and efficiency) to education, and suggesting that business and industrial practices be adopted by educators were common during this time period. In 1903, for example, a writer for the *Atlantic Monthly* stated, "The management of school affairs is a large business involving a city of 100,000 inhabitants and expenditure of probably $500,000 annually; the same business principles should be adopted in modern industry should be employed here" (Callahan, 1962, p.6). William C. Bagley published a textbook on education entitled *Classroom Management* that was written for teachers in training and reprinted more than thirty times. In his text Bagley used an extensive amount of business terminology. For example, Bagley stated the problem of classroom management was primarily a "...problem of economy: it seeks to determine in what manner the working unit of the school plant may be made to return the largest dividend upon the material investment of time, energy, and money. From this point of view, classroom management may be looked upon as a 'business' problem" (Bagley, 1910, p. 2).

School boards also contributed to the adoption of business methods in the public school arena. Before 1900 most boards were unwieldy organizations that were governed to some extent by politics. Slowly they were reorganized and paralleled the municipal reform movement. This process resulted in fewer members and those members were

usually businessmen who relied on their business skills to solve educational problems (Callahan, 1962).

Leonard Ayres, an educator, was also a major contributor to the adoption of business methods by public schools. Ayres (1909) published an allegedly scientific study of retardation and elimination entitled *Laggards in our Schools*. Using school records, reports, and statistics collected by government agencies Ayres collected data which he claimed indicated that schools were filled with retarded children and that most dropped out of school before finishing the eighth grade. He defined a retarded child as one who was over-age for their grade regardless of how well they were doing in their course work. Ayres claimed that "the extent of retardation varied from 7 percent in Medford, Massachusetts, to 75 percent for Negro children in Memphis, Tennessee, with the average being about 33 percent for all pupils in public schools" (Ayres, 1909, p. 3). While his data showed that large numbers of children were over-age for their grade without regard for the social or educational reasons, he blamed the schools. Ayres described the schools as "fitted not to the slow child or to the average child but to the unusually bright one" (Ayres, 1909, p. 5).

In addition to reporting the percentages of "retarded" children in school Ayres proposed that schools should be ran as a factory and that business and industrial values should be applied in a systematic way. By using the normal year-by-year progress through schools as a criterion for measuring the relative "efficiency" of a school he developed a system for presenting this "Index of Efficiency" in a percentage form. Ayres found that the most "efficient" school systems spent approximately 6.5 percent of their

annual budget on repeaters, and the least "efficient" school systems spent approximately 30.3 percent on these students (Ayres, 1909).

While these numbers would seem to indicate serious problems with public schools it is important to note that Ayres only used the grade and age distribution of students to come up with these findings. He failed to take into account the many social and economical reasons that were beyond the control of the school to explain why many children were over-age and did not fit into a neat, mechanical age-grade schedule. While Ayres' report could have made a significant contribution to solving educational problems, he choose to ignore the social and economical issues which contributed to student success or lack thereof. Instead Ayres focused on the financial drain of the "repeater." This fact, combined with the fact that this material was written by a prominent educator and presented as what appeared to be a valid scientific study, resulted in an economy-minded public developing a critical view of public schools and their administrators (Callahan, 1962).

The combination of the widely publicized Ayres report, the dominance of business men and acceptance of their business values, the creation of a reform minded public, the perception that all American institutions were mismanaged, and the increased cost of living created the perfect setting for a new system of management in public schools called "scientific management." The system was becoming known throughout the world, even finding its way into China and Russia. Frederick W. Taylor, credited with the origin and development of this system, claimed that his principles could be applied to all institutions and the system was also often described as a panacea for the ills of mankind by many of Taylor's most prominent supporters (Callahan, 1962).

Scientific management was essentially a system for "...getting greater productivity from human labor..." (Callahan, 1962, p.25). There were four basic principles of scientific management. First, a science for each element of a man's work was developed. This replaced the old "rule-of-thumb" method (strategies handed down from generation to generation) used in most organizations. Taylor believed that "there was one best way of doing a job and this method could be determined only through scientific study of that job by experts with proper implements, i.e., a stop watch and recording card" (Taylor, 1911, p. 25). Second, workers were selected, trained, taught, and developed, rather than being allowed to choose their own work and train themselves the best they could. Third, management heartily cooperated with the workers so as to insure that all of the work was done in accordance with the principles of the science that had been developed. Fourth, there was an almost equal division of the work and responsibility between the management and the workers. "The management take over all work for which they are better fitted than the workmen, while in the past almost all work and the greater part of the responsibility were thrown upon the men" (Callahan, 1962, p. 27).

While Taylor's system of scientific management was originally proposed as a method of increasing effectiveness in the business & industry section, it was also adopted, interpreted, and applied to public schools. While the greatest impact was upon administration, the administrator, and the professional training programs for administrators, the influence of scientific management extended to all American education from the elementary schools to the universities (Calahan, 1962).

The widespread publicity given scientific management and the great claims made in its behalf intensified the public's feeling that waste existed everywhere, and at the

same time offered a means of eliminating it. A major result was that public criticism was directed towards institutions that were large enough to be suspected of gross managerial inefficiency and those supported by public taxation. Public schools, especially those in larger cities, met both of these criteria (Callahan, 1962).

With the onset of numerous articles that were critical of schools appearing in popular and professional journals educators were forced to respond accordingly. As noted by Callahan (1962) "The sudden propulsion of scientific management into prominence and the subsequent saturation of American society with the idea of efficiency together with the attacks on education by the popular journals made it certain that public education would be influenced greatly. But the extent of this influence was increased by the vulnerability of the leaders in the schools - the superintendents - to public opinion" (p. 52). As early as 1900 the survival of school superintendents depended on their ability to appease their most powerful and vocal critics (Callahan, 1962).

In 1913 two events occurred which demonstrated the fact that public school administrators were moving quickly to appease their critics. The first event was the annual meeting of the Department of Superintendence of the National Education Association. This meeting of "...every superintendent who is alive to the responsibilities of his office and the opportunities his profession must look forward to..." (Callahan, 1962, p. 64) contained a major session devoted to improving school systems by scientific management. The second event was the devotion of Part 1 of The Twelfth Yearbook of the National Society for the Study of Education to the application of scientific management to city school systems. This organizations membership was comprised of

the leading educators in America, and its yearbook was one of the most prominent professional publications at that time (Callahan, 1962).

As scientific management was being implemented in public schools there was an oversimplification of the knowledge, skills, and time necessary even to begin building the foundation upon which the art of teaching would be based. As a result, educators were forced to assume the role of experts and in so doing turned their attention to cost accounting or to simple mechanical problems. This resulted in the original meaning of scientific management being changed as it was being applied to education. Educators were not qualified to carry on the difficult research work that was necessary. Their inability to carry out the necessary scientific research led them to focus their attention on applying the scientific method to the financial and mechanical aspects of education. In response to criticism administrators both studied and applied the advice of "experts" or they called them in to assist with their efforts (Callahan, 1962).

In his textbook entitled *Public School Administration* Cubberley (1916) described the emergence of the educational efficiency expert as "... one of the most significant movements in all of our education history" and that "...their work would "change the whole character of school administration" (p. 325). The author noted that the work of efficiency experts fell into two categories. The first category was that of constructing tests and rating scales for measuring school efficiency. The second category was that of developing school surveys. While some efficiency experts were competent in both categories, most experts specialized in one or the other.

In an effort to measure efficiency within the schools, efficiency experts engaged in a wide variety of activities many of which involved the development and utilization of

"objective" achievement tests in the areas of math and language arts. As noted by Strayer (1913) "...if scientific measurement is to be accomplished, we must have units or scales of measurement which will enable us to make measurements which are verifiable by other observers. We may not hope to achieve progress except as such measuring sticks are available or may be derived" (p. 253). The testing of students became commonplace during this time period. One district was noted as administrating approximately fifty thousand examinations to its students. It was reported that the testing made it possible to determine the districts strong and weak points in a fashion much like the methods used in factories and commercial establishments in the sense that it offered a method of determining where the city's money is being invested most wisely, and where the city's money was not producing the expected results (Callahan, 1962).

Teacher rating scales were also being developed as a major part of the effort to measure school efficiency. In the beginning these scales were developed based on Taylor's work, but as time passed they became more dependent upon the business and industrial world's concept of promoting workers based on merit. The desire to apply sound business principles had prompted most large city administrators to adopt some form of the merit system when promoting teachers or determining their salaries (Callahan, 1962).

As teacher-rating scales became more and more popular the development of rating scales for all other individuals in schools were developed. Rating scales for superintendents, principals, students, and even janitors became widespread. In this age of "weighing and counting" it was a common belief that accurate descriptions and efficiency

measures should be developed for all who were employed by the school (Callahan, 1962).

School surveys were also being performed by efficiency experts during this time period. The growing use of surveys occurred as response to the growing concern for efficiency, which was sweeping the country, and the increasing criticism of schools. The popularity of the survey was explained by Sears (1925)

> With a critical public opinion demanding economy and efficiency, and with a new conception of education growing rapidly into a science of education, we had both the motive and the means by which the survey movement could take form. Under these circumstances it was not strange that the public should take readily to the survey idea. People were already familiar with the work of the efficiency engineer and the accounting expert in business and industry. Naturally, then, when boards of education called upon educational experts to help point the way out of difficulties, the idea was promptly understood and sanctioned by the public, and the school survey movement had begun (p 3-4).

Outside efficiency experts were commonly used to develop and implement surveys. Outsiders were used as these individuals or groups would have no interest in the local situation whereas local personnel were not trusted to be non-biased in their reporting of results. The motivating force behind most surveys was economic, not educational. Financial aspects of the operation of schools were very prominent in most surveys. This makes sense when one considers that most of the surveys were developed as part of the scientific management movement and financial savings was a major aspect of this process (Callahan, 1962).

An additional logical application of Frederick Taylor's gospel of efficiency was that of complete and intensive use of "plant" facilities. In the name of efficiency, administrators were being put under increasing pressure to demonstrate that none of the plant was being allowed to stand idle. Between 1911 and 1925 administrators worked to

attain greater efficiency and economy by developing a more intensive and extensive use of the school "plant." One of the responses to these pressures was the theme of 12-month schooling. This theme had appeared before and was repeated from time to time in the years that followed. While this concept was a definite must for business and industry there were several problems with its adoption by public schools. Despite the fact that such a plan may have tremendous educational value, the school-factory analogy was unsound. Callahan (1962) noted that "Operating schools in this way undoubtedly increased the educational "production," but this production was difficult to see or measure. What could be seen, of course, was increased costs" (p. 127). Much of the public opposed this type of plan because it meant additional expense and therefore the consequent raising of taxes. While there were isolated pockets of successful implementation of 12-month schooling, it was not successful on a widespread permanent basis.

An alternate plan developed in response to the rejection of 12-month schooling was the Platoon School. This plan was proposed as a method of fully utilizing the school building during the regular school year. The economic benefits obtained by implementing this plan were the major reason that it was so appealing to superintendents and boards of education. The plan became so popular that by 1929, school districts had implemented this in 1068 schools in 202 cities and 41 states. These schools accounted for an estimated 730,000 students (Case, 1931).

The plan involved the use of all rooms in the building at all times during the school day. This type of plan required a high degree of administrative planning and precision timing in moving students. In his book, *The Platoon School in America*, Case

(1931) described a sample platoon school "...while one group was in its home room receiving instruction in reading, writing and arithmetic, another group was in the music room, another in the shop, another on the playground, etc. When the bell rang the students would shift to their next class. Generally, children had two ninety-minute periods or three hours a day in basic subjects, and six thirty-minute periods in special subjects the other three hours of the school day" (p. 21). Regular classroom teachers taught the regular subjects to many groups of children, while the specialized teachers taught their special subjects to these groups which rotated through their classes.

The reasons for the popularity of platoon schools were not difficult to understand. Not only did the plan save schools money, but it also provided an enriched educational program for students. Some experts also presented it as "...being an example of the application of scientific management to education" (Callahan, 1962, p. 130). This resulted in the plan being associated with the panacea of scientific management, which was popular at the time. The plan also provided a solution to the problems of overcrowded classrooms that were occurring due to an increasing school population. Administrators supported the plan as it allowed them to economize and defend themselves against charges of inefficiency while at the same time it allowed them to prove their administrative ability (Callahan, 1962).

While superintendents and boards were optimistic about platoon schools due to the promises of economic benefits, teachers were less than enthusiastic. Many teachers saw platoon schools as being impersonal, demoralizing, having a higher rate of mortality in the terms of student failure, and that they actually cost more money than current systems. Margaret Hayle (1924), a veteran Chicago teacher and representative of the

American Federation of Teachers, voiced her opinion in the *New Republic* a national publication. In her article Hayle quoted a letter written by a mother who had withdrawn her child from a platoon school. The mother described the platoon school as a school that "looked to me like nothing so much as the lines of uncompleted Ford cars in the factory, moving always on, with a screw put in or a burr tightened as they pass—standardized, mechanical, pitiful" (p. 18). As a result of widespread criticism of platoon schools by teachers and parents the platoon school declined steadily after 1930, but many of its original elements can be seen in today's public schools (Callahan, 1962).

The major problem with the adaptation of business and industry values and practices to education was that they were adopted indiscriminately and applied with little or no consideration of educational values or purposes. As noted by Callahan (1962)

> It was not that some of the ideas from the business world night not have been used to advantage in educational administration, but that the wholesale adoption of the basic values, as well as the techniques of the business-industrial world, was a serious mistake in an institution whose primary purpose was the education of children. Perhaps the tragedy was not inherent in the borrowing from business and industry but only in the application. It is possible that if educators had sought "the finest product at the lowest cost"—a dictum which is sometimes claimed to be a basic premise in American manufacturing—the result would not have been unfortunate. But the record shows that the emphasis was not at all on "producing the finest product" but on the "lowest cost" (p. 244).

The impact of business and scientific management would continue to be felt in education for many decades. As a result of these forces other actions taken by school administrators in an effort to cut costs were developed in secondary schools. These actions included increasing class size, teacher load, and school size. While the actions were actually taken for financial reasons, they were rationalized to the public through the use of unsubstantiated claims of educational gain. These actions resulted in schools becoming even more impersonal and factory like throughout the sixties (Callahan, 1962).

The Effective Schools Movement

The early beginnings of the Effective Schools Movement can be traced to the late 1960s. Larry Lezotte (1986) provided a useful framework for the movement in the form of "four critical periods." The critical periods marked the epochs of the Movement's evolution. The first critical period, 1966-1976, included input/output equity studies, the first search for effective schools, and outlier studies. The second critical period, 1976-1980, included case studies, program evaluation studies, the formation of coalitions of researchers and practitioners to improve schools, and the emergence of definitions of effective schools. The third critical period, 1980-1983, was crucial encompassing criticism, competition, and growth. The major features included synthesis of the literature, and the advent of the Excellence Movement. The fourth critical period, 1983-1990s, included the loss of a leader, Ron Edmonds, but gained a patron saint and others stepped forward to accept leadership roles (Mace-Matluck, 1990).

In 1966, James Coleman and several colleagues conducted a national survey entitled, *Equal Educational Opportunities Survey*. The purpose of this survey was to assess the distribution of educational resources by race and, based on these descriptive data, assess equality of educational opportunity in public school. This study seemed to indicate that the school did not significantly affect student performance. It appeared that the students' social environment was more directly related to student success. Coleman et. al. (1966) noted that

> ...schools bring little influence to bear on a child's achievement that is independent of his background and general social context;...this very lack of an independent effect means that the inequalities imposed on children by their home, neighborhood, and peer environment are carried along to become the inequalities with which they confront adult life at the end of school. For equality of educational opportunity through the schools must imply a strong effect of schools

> that is independent of the child's immediate social environment, and that strong independent effect is not present in American schools (p. 325).

In 1972, another study by Jencks and a group of Harvard colleagues, *Inequality: A Reassessment of the Effect of Family and Schooling in America*, also supported the idea that schools didn't seem to make a difference. One of their summarizing statements was: "We cannot blame economic inequality on differences between schools, since differences between schools seem to have very little effect on any measurable attribute of those who attend them" (p. 8). These findings were to become widely accepted by the public sector of the United States. According to Mace-Matluck (1990) "The results, released in 1966, included many findings that enjoyed wide public acceptance but which actually proved detrimental to advancing educational equity for poor and minority students" (p. 3).

Fortunately, for public education, many researchers did not accept the "Coleman hypothesis." As a result of the previously mentioned studies, the question of whether effective schools actually exist surfaced. Good and Brophy (1985) noted that "Student progress clearly varies from school to school, but the real question is whether this variation in achievement among schools is affected by school process or whether this variation can be explained completely in terms of student factors (e.g., aptitude)" (p. 7).

The first rigorous, large-scale effort to identify effective schools was attributed to Klitgaard and Hall, in 1974. The authors believed that there were a number of methodological problems with Coleman's work. They maintained that, because input/output studies examined the average effect of all schools in a sample on student outcomes, they measured only general effects. Since effectiveness of an individual school could be masked, there could be some unusually effective individual schools.

Klitgaard and Hall used student performance on standardized reading and mathematics achievement tests as their measure of school effectiveness. Their study seemed to be in contrast to the Coleman study. It revealed schools in which students consistently achieved at higher-than-average levels. The study also indicated that there were also unusually effective school districts (Mace-Matluck, 1990).

While there were many criticisms of the Effective Schools movement, one fact appeared to be evident: there were schools that were able to attain unusually high levels of student achievement even though the schools were serving large proportions of economically poor and disadvantaged students, minorities and nonminorities. Most studies during this time period "...attempted to examine whether school resources (e.g., ratio of adults to children; number of books in the library) were associated with student outcomes (typically, performance on standardized achievement test)" (Mace-Matluck, 1990, p. 3).

The 1966 – 1976 time span provided evidence that effective schools did indeed exist. The questions then became, Can ineffective schools be changed to effective schools? This question became the focus of the 1976-1980 time span (Mace-Matluck, 1990).

The period of the late 1970's brought about case studies, program evaluations, and coalitions that attempted to define "effective school." Most definitions shared the common factors of student achievement focus, an emphasis on all students, and a goal of mastery of basic skills. Mace-Matluck (1990) offered the following synthesis of definitions commonly found in literature, "An effective school is one in which the conditions are such that student achievement data show that all students evidence an

acceptable minimum mastery of those essential basic skills that are prerequisite to success at the next level of schooling" (p. 11). With the development of definitions of effective schools, the 1980's brought about research aimed at determining the characteristic of the effective school.

During the 1980-1983 period, there were several summaries, critical reviews, and syntheses of effective schools literature. Different reviewers often found different characteristics, but most found definite characteristics that were common to effective programs. Ron Edmonds (1979a, 1979b, 1981) proposed that there were five correlates of effective schools:

1. The leadership of the principal is characterized by substantial attention to the quality of instruction.
2. There is a pervasive and broadly understood instructional focus.
3. An orderly, safe climate exists that is conducive to teaching and learning.
4. Teacher behaviors convey the expectation that all students are to obtain at least minimum mastery.
5. Pupil achievement is used as the measure for program evaluation.

In using the term correlates Edmonds argued that the above factors are related to each of the others, they are interactive, and they are all present in an effective school.

Edmonds' model for effective schools became very popular in public education. The model was seen by many as an answer to low test scores. Others saw it as a method to educate minority children without desegregation. As noted in Grady, et. al. (1989) "Propelled by his eloquence and commitment, Edmonds' model became popular and was adopted readily because it promised success in situations where others offered little hope"

and "A number of researchers, developers, and entrepreneurs joined the movement, many for the purpose of giving technical assistance to school personnel who were trying to implement the guidelines" (p. 8).

Several variations of Edmonds' model were developed by other researchers of the times (Eubanks & Levine, 1983; Firestone & Herriott, 1982; Shoemaker & Fraser, 1981; Stedman, 1985). While sharing many of the same features, the number of features often times varied (Tomlinson, 1980; Austin, 1979; 1981; Phi Delta Kappa, 1980; Purkey & Smith, 1983). Typically, most researchers other than Edmonds referred to the features as "characteristics" or "variables" when discussing the factors associated with effective schools. Purkey & Smith (1983) in their often-cited review identified two sets of "variables" that taken together define the climate and culture of a school. They described the school as a system of "nested layers" in which the outer layer, the school, sets the context for the adjacent inside layer, the classroom. They described the components of an effective schools as follows:

> While the characteristics are interdependent, certain ones seem logically to form a framework within which the others function. The framework or first group is composed of organizational and structural variables that can be set into place by administrative and bureaucratic means. They precede and facilitate the development of the second group of variables. The second group of variables can be labeled, somewhat loosely, as 'process variables.' Taken together these variables define the climate and culture of the school – characteristics that need to grow organically in a school and are not directly susceptible to bureaucratic manipulation (p. 443).

The next period, 1983-1990s dealt with implementing effective schools research into preexisting schools. It was a time that saw the production of a plethora of resources and materials designed to aid people in the implementation of effective school concepts. Professional journals were constantly publishing reports that dealt with effective schools.

The U.S. Office of Education funded two Research and Development Centers that were charged with conducting basic research and supporting the development of effective programs in U.S. schools. The generic model of school improvement as put forth by Edmonds was refined by others as public schools moved towards becoming effective (Mace-Matluck, 1990).

While the Effective Schools movement was growing in popularity there were also those who were not convinced it was a panacea for education. Cuban (1983) cautioned against rushing to implement the changes called for by effective schools advocates. He listed and described several significant problems and unanticipated consequences that occur in the research and application of the effective schools findings. The problems included the following: no one knew how to grow effective schools; there was not agreement on definitions on key concepts; and effectiveness was defined too narrowly. The unanticipated consequences included the following: increased uniformity; a narrowed educational agenda; and heightened conflict between teachers and administrators over instructional leadership.

Public schools as organizations were never designed to teach all students, especially those from poor families, to a high level of achievement. Furthermore, all teachers and administrators have had a minimum of 12 years of acculturation as students to the norms, beliefs, and behaviors of an institution whose mission seems to be teaching and learning for all. Although many criticisms of the Effective Schools movement have been documented, one fact appears to be evident, schools exist that are able to attain remarkably high levels of pupil mastery of basic school skills even though these schools

are serving large proportions of economically poor and disadvantaged students, minority and nonminority (Lezotte, 1990).

A similar movement, The Excellence Movement, also evolved during the time the Effective Schools work was being performed. Appearing between 1980 and 1983 this top-down educational reform campaign threatened to overcome the more modest Effective Schools movement. Those involved with the Effective Schools movement felt there was cause for concern (Mace-Matluck. 1990).

The Effective Schools movement and the Excellence Movement shared some similarities. The two movements were similar in that each: (a) was fundamentally a positive effort to improve schools, and each assumed that schools can and should do better; (b) was concerned with student outcomes; (c) produced models which are intended to increase school effectiveness and called for schools to become more orderly and focused on academics; and (d) criticized former practices for less than adequate expectations for student learning (Mace-Matluck, 1990).

While the two movements did share some similarities there were very important differences between the two. These significant differences were well described by Zerchykor (1985). The Excellence Movement focused on the secondary level, while the Effective Schools movement focused primarily on the elementary level. The Effective Schools movement targeted basic skills, such as reading and math, while the Excellence Movement focused on higher-order skills and competencies and mastery of subject matter above and beyond basic skills and minimum competencies. The Excellence movement encouraged the nurturing of the top students, calling for tighter standards, the development of more demanding curriculum, and an increase in achievement and

aptitude scores. While schools adopting the Excellence Movement could be effective for the "best-and-the-brightest" students, they wouldn't necessarily be effective for all students. This is in sharp contrast to the Effective Schools movement, which promoted a goal of success for all. The importance of this difference is noted by Mace-Matluck (1990), "There is a growing realization at the national level, for example, that the economic and social good of the country cannot be served if a burgeoning population of minority students is left behind" (p. 16).

Trends of the 1990s

In 1983 The National Commission on Excellence in Education released its report and recommendations in a report entitled *A Nation at Risk*. The report immediately elevated the concern for improvement of the U.S. educational system. The report concluded that there was a rising tide of mediocrity in education and that the U.S. had been moving toward unthinkable, unilateral educational disarmament. The commission concluded, "...if an unfriendly foreign government had attempted to impose on America the mediocre educational performance that exists today, we might well have viewed it as an act of war" (Levine & Levine, 1996, p. 401).

A Nation at Risk called several factors to the attention of the American public. The report noted that there was a decline or inadequacy in the public education system. Evidence of this decline was the weakening of high school graduation requirements, declining achievement scores, and unacceptable graduation rates. The commission called for more stringent requirements and higher expectations for students in what it called the "Five New Basics." These areas of study included English, mathematics, science, social studies, and computer science. To improve achievement the commission recommended

assigning more homework, emphasizing study skills, increasing the length of the school day and school year, and improving the management and organization of schools. The commission also had the following recommendations regarding teachers: Higher standards for teacher preparation programs; competitive performance based salaries; career ladders; eleven month contracts; mentoring for new teachers; and alternative routes to certification (Levine & Levine, 1996).

A number of other reports that addressed the status of education and made improvement recommendations were released at approximately the same time as *A Nation at Risk*. The Education Commission of the States published a report produced by its Task Force on Education for Economic Growth (1983), that also called for higher academic standards and improvements in the areas of discipline, curriculum, teaching, and the status of teachers. The College Board (1983) also released a report that recommended school officials dramatically increase requirements and standards for high school graduation and entry into post-secondary education (Levine & Levine, 1996).

By the latter part of the 1980s there was a sense of urgency regarding public education. Many felt that students, especially minority students, were graduating without possessing adequate skills to succeed on the job or to progress beyond initial low-level jobs. An additional concern was that many other students who were entering the labor force had poor reasoning skills, problem-solving abilities, and other higher-order skills. As noted in Levine & Levine (1996) "...public education in our postindustrial, metropolitan society is in a state of crisis related to the deepening problems posed by international economic competition, introduction of high technology as a fundamental consideration in social and economic development, and inadequate functioning of the

educational system for a large proportion of students, particularly minority students in concentrated poverty neighborhoods" (p. 396). This statement became especially significant in light of demographic studies that indicated that more than one-third of new entrants in the labor force of the future would be minorities (Levine & Levine, 1996).

Much of the data on achievement levels and patterns in public schools has been collected through the National Assessment of Education Progress (NAEP) tests, which have been administered since the early 1970s. Some major conclusions were drawn from this data: 1. Average performance levels have been mostly stable for the past two decades. Reform efforts of the 1980s have not resulted in significant changes. 2. Relatively low percentages of students reach high performance levels on NAEP tests. 3. When compared to students from developing countries, U.S. students are at the bottom rank on higher-order mathematics skills. Similarly, science skills scores were below Japanese school scores in one-third of the U.S. schools (Levine & Levine, 1996).

There were numerous possible explanations for the performance levels of U.S. schools on the NAEP. One contributing factor was the tendency for teachers to emphasize instructional practices that concentrate on enhancing lower-level skills. Levine & Levine (1996) noted "Analysts working with NAEP data...found that approximately half of the eighth-grade English teachers in their surveys admit to focusing on the mechanics of English as a central part of instruction" (p. 397). Applebee, Langer, and Mullis (1990) found that most classrooms relied on

> ...teacher presentations, textbooks, and workbooks or teacher-prepared exercises. Such patterns of instruction appear to have been successful in helping large numbers of students attain basic levels of proficiency in each subject...[but] do not seem to have been successful...[in developing higher-order skills involving complex reasoning and problem solving]. For gains in higher-order skills to occur the goals of instruction need to be reconsidered. Teaching decisions were once

> guided by a hierarchy suggesting that students must first learn the facts and skills and later learn to apply them. Yet many educators now recognize the limitations of this stepping-stone view of education. Educational theory and research suggest a different pattern...[in which content mastery and learning of higher-order skills occur together.
>
> For more thoughtful learning to occur, teachers will need to orchestrate a broader range of instructional experiences (p. 40-41).

There have been many others who have made analyses and recommendations similar to those proposed by NAEP. In 1990, representatives from twenty national educational educators' associations met and agreed that it was imperative to improve teaching and learning of critical thinking and problem solving. A short time later the National Academy of Sciences released a three-year study that indicated that biology was being taught in ways that mainly involved exercises in memorization rather than intellectual exploration (Levine & Levine, 1996). Several other studies (Schaub and Baker, 1991; Stigler and Stevenson, 1991; Anderson and Soniak, 1994) found that emphasizing rote learning accounted for the generally low performance in science and math by U.S. students when compared to students in Japan and other Asian countries.

Many educators have also called for the reexamination and massive transformation and reform of traditional education in the U.S. The National Council of Teachers of Math developed a program to train and retrain teachers so that they may place emphasis on problem solving rather than mechanistic answer-finding. Albert Shanker, president of the American Federation of Teachers in 1990 put it very succinctly

> Every child in a given community still starts school by virtue of having passed a certain birthday. Children arrive together on the same day that the beginning of school and leave on the same day at the end. They still are organized into large classes where, at the elementary level, they spend most of the day listening to a teacher who must push or pull them through the various lessons so they can all get more or less to the same point at he end of the year. At the secondary level, students still are passed as a group from classroom to classroom, teacher to teacher and subject to subject about every 40 to 50 minutes. Instruction still is

> organized by curriculum, and curriculum is organized into units to be "covered" and tested by a certain time. We live in a technologically sophisticated society, but "chalk and talk" still is the main technology of schooling from K through 12.
>
> In other words, most schools still act though education is something done to a child—poured in or glued on—rather than something the child, with the help of the school, makes happen (Levine & Levine, 1996, p. 400).

Major national reports calling for an increase in schools effectiveness continued to be published in the late 1980s and 1990s. The reports generally carried a similar theme, calling for radical reform in elementary and secondary education. It was common for the reports to stress the mismatch between national requirements for a more highly skilled work force and current performance levels in schools; the need for a comprehensive response that included schools, business, labor, public-interest groups, and government; and that schools be restructured in order to bring about noticeable gains in student performance (Levine & Levine, 1996).

Theory Years and the Search for Theories Related to Organizational Performance

Reasons for Studying Organizational Effectiveness

There are several reasons for studying organizational effectiveness. As noted by Cameron (1984)

> Organizational effectiveness is a puzzle. While its meaning and measurement are ambiguous, it is a central concept in organizational analysis. Effectiveness is both the apex and abyss in organization research. It is the apex because all theories of organization and administrative practices are ultimately aimed at identifying and producing effective performance. It is a abyss because no valid theories of organizational effectiveness exist and no list of criteria has ever been formulated that is either necessary or sufficient for evaluating the concept (p. 236).

Writers representing both the public and private sectors have been expressing concern about the effective and efficient operation of all types of organizations for over a century. The importance of—and confusion about—defining and measuring school organizational effectiveness are apparent. At gatherings of educators there are frequent

and highly salient conversations regarding school effectiveness. Terms frequently heard in these discussions include accountability, academic achievement, competency tests for educators, student dropout rates, teacher job satisfaction, and faculty morale. This acute interest in organizational effectiveness is neither new nor unique to education. However, the focus has become more intense due to the world economy becoming more competitive and interdependent (Hoy & Miskel, 1991).

Organizational effectiveness of schools has been a controversial topic for sometime with few signs of abating. David K. Cohen (1987) noted that the more schools have succeeded, the more they have appeared to fail. He suggests that there have been great improvements in education during the twentieth century, such as the creation of an entire system of public secondary education, but critics of schools have become more vocal on a nation wide basis. Both professional and popular literature are inundated with wave after wave of reports calling attention to the need for educational reform in order to meet the changing demographic and economic needs of the country. Reports and discussions revolving around changing schools frequently involve intense arguments dealing with the complex and tough issues of appropriate definitions and measurements. While there is very little consensus organizational effectiveness "...represents such a central theme in the theory and practice of educational administration that the difficult questions regarding the concept cannot be avoided" (Hoy & Miskel, 1991, p. 374). Similarly, Hall (1980) noted that no matter the political, ideological, or organizational bias, effectiveness is the dependent variable explained, sought, or exposed. This issue will not go away, nor should it.

Hoy & Miskell (1991) noted, "Education is not devoid of effectiveness indicators" (p. 374). Both educators and the general public acknowledge differences in levels of success between different schools with similar students. Decisions on what schools to attend can be made based on real or imagined information such as that regarding the academic standards or discipline of a school. Schools report information to the public that they believe represents their achievements (Hoy & Miskel, 1991).

While there are effectiveness indicators for schools there are also serious problems with the theory, research, and practice in organizational effectiveness of schools. Hoy & Miskel (1991) noted but a few of these issues, "...when specific questions about effectiveness are raised, the controversy intensifies. What criteria? How are the criteria to be defined? Who determines the criteria? How are the indicators to be measured? Is effectiveness a short-term or long-term phenomenon?" (p. 374). While there has been an abundance of arguments over the correct answer to these questions, few concrete answers have emerged. Nevertheless, there have been some theoretical approaches to organizational effectiveness that offer the hope of integrating and focusing future efforts to answering these questions (Hoy & Miskel, 1991).

Asking whether a school is effective or ineffective is inappropriate. Effectiveness is not one thing so a one-dimensional definition is of limited value. A school can be effective or ineffective depending on the criteria selected for measurement. Hoy & Miskel (1991) noted that "Without a theoretical model as a guide, it is impossible to state that one school is more effective than another, or to say that a given indicator is a measure of effectiveness, or to plan ways to change the school" (p. 374-375). They then offered two theoretical models, the goal model and the system resource model, which

provides the basis for making these types of judgments regarding schools. The models also provided a means for taking the action necessary to work toward school effectiveness.

The Goal Attainment Model

Hoy & Miskel (1991) noted "Traditionally, organizational effectiveness has been defined in the terms of the degree of goal attainment" (p. 375). Amitai Etzioni (1964) defined goal attainment as "...an organizational goal is a desired state of affairs which the organization attempts to realize" (p. 6). An organization is considered to be effective if the results of its activities meet or exceed its organizational goals. While there are several weaknesses associated with the goal model, a number of researchers maintain that goals and their relative accomplishment are essential in defining organizational effectiveness. Goals are a source of direction and certainty for organizational members and they present standards for assessment of the organization (Hoy & Miskel, 1991).

Steers (1977) described two types of goals, official and operative, in the goal model of organizational effectiveness. Official goals were typically abstract and aspirational in nature (e.g. all students will learn). They were usually timeless, and serve the purpose of securing support and legitimacy rather than guiding the behavior of members of the organization. Operative goals reflected the true intentions of an organization. As noted in Hoy & Miskel (1991) they "mirror the actual tasks and activities performed in the school, irrespective of what it claims to be doing" (p. 375). Goals can be operative or inoperative depending on the extent to which they represent actual practices. They may be widely published or not.

There are two assumptions that underlie the goal model. First, a group of decision-makers in the organization have a set of goals that they wish to pursue. Second there are a limited number of goals so that they can be administered and they are defined thoroughly so all participants understand them. By accepting these assumptions one can infer that decision-makers will be able to assess organizational effectiveness and develop measures, which will determine how well the goals are being achieved. However, there are several shortcomings of the goal concept and goal model that can not be overlooked (Hoy & Miskel, 1991).

Kim Cameron (1978) provided the following analyses of criticisms of the goal approach:

1. Too often the focus is on goals of administrators rather than those set by teachers, students, parents, and other constituencies.
2. In many instances, the researchers overlook the multiplicity of goals and their contradictory nature.
3. Organizational goals are retrospective.
4. Organizational goals are dynamic, while the goal model is static.
5. The official goals of the organization may not be its operative goals.
6. Outcome measures are never pure indicators of performance quality because they are influenced by other factors.

The System Resource Model

These strong criticisms have caused several researchers to question whether the goal model of organizational effectiveness is inadequate. As a result, a system resource model was proposed, which relied heavily on earlier works (Etzioni, 1960; Katz and

Kahn, 1966). The system resource model defined effectiveness as "...an organization's ability to secure an advantageous bargaining position in its environment and to capitalize on that position to acquire scarce and valued resources" (Hoy & Miskel, 1991, p. 377). The bargaining position of the system resource model implied the exclusion of goals as an effectiveness criterion. Instead, it directed attention toward the general capacity of the organization to secure assets. There was a focus on the continuous, never-ending process of exchange of, and competition over, scarce and valued resources.

A review of literature revealed that there were also assumptions that underlie the system resource model. First, the organization was assumed to be an open system that exploits its external environment. Second, before an organization attained any size at all, the demands it faced become so complex that developing a small number of meaningful goals may be impossible (Yuchtman and Seashore, 1967; Campbell, 1977; Goodman and Pennings, 1977).

These assumptions resulted in the generalization that in more effective organizations bureaucratic expectations, informal groups, and individual needs all work together better to produce an impact on the environment than they do in less effective organizations. All organizations emphasize the need for adequate resources and avoidance of undue strain. For example, educational administrators put forth great efforts to maintain harmony because harmonious actions in a system resource framework will enhance the organizations effectiveness (Hoy & Miskel, 1991).

As a result of the strong dependence on the environment the organization must focus on adaptive measures to compete successfully for resources. Hoy and Miskel (1991) described an effective organization as "...those with sensitive monitoring

mechanisms that provide information about new behaviors that can lead to the acquisition of more assets" (p. 378). Also, in the system resource model, the researcher assesses organizational effectiveness using internal consistency. An organization is effective if it judiciously distributes resources over a wide variety of coping and monitoring mechanisms.

The system resource model of organizational effectiveness had several criticisms. This is especially true when the model was applied to educational organizations. First, placing too much emphasis on inputs may have damaging effects on outcomes. In education, if an institution becomes too focused on acquiring resources, other functions may be neglected (Cameron, 1978; Scott, 1977; Steers, 1977; Kirchhoff, 1977).

Critics of the system resource model also noted that since increasing inputs or acquiring resources is an operative goal for the organization, it is actually a goal model. Some researchers believed that the differences between the goal and system resource approach may represent an argument over semantics. Hall (1972) noted that "The acquisition of resources does not just happen. It is basted through the operative goals" (p. 100). Thus, the system resource model verifies the operative goal concept and the two models can actually be complementary to each other. As noted in Hall & Miskel (1991) "Indeed, a possible—even, highly desirable—approach is to conceptualize organizational effectiveness by combining two perspectives" (p. 378).

The Integrated Model

Conolly et. al. (1980) noted that the goal and resource models shared one crucial assumption, "...it is possible, and desirable, to arrive at the single set of evaluative criteria, and thus at a single statement of organizational effectiveness" (p. 212). Realizing

this common assumption several theorists (Goodman and Pennings, 1977; Steers, 1977, Campbell, 1977) have attempted to integrate the two approaches. While their theories differ slightly, they all agreed that the use of goals cannot be avoided. Hoy & Miskel (1991) described the nature of goals in a resource system. They note that

> Behavior is explicitly or implicitly goal directed, and organizational behavior is no exception. However, from a system resource framework, goals become more diverse and dynamic; they are not static, ultimate states, but are subject to change over relatively short periods of time. Moreover, the attainment of some short-term goals can represent new resources to achieve subsequent goals. Thus when a systems framework is used, a cyclic nature characterizes goals in organizations (p. 379).

There are several subtle nuances of organizational effectiveness. In order to understand these issues the integrated model must be expanded to include three additional characteristics—a time dimension, multiple constituencies, and multiple criteria (Hoy & Miskel, 1991).

Time is a frequently neglected factor in the study of organizations and the assessment of their effectiveness. Yet issues of time are of central importance. Gibson, Ivancevich, and Donnelly (1976) proposed that the influence of time on organizational effectiveness could be conceptualized along a continuum of success ranging from short-term, through intermediate, to long-term.

Another influence of time is that the criteria for organizational effectiveness are constantly changing. As constituents' preferences change, new constraints and expectations evolve to define school effectiveness. As a consequence, performance that is effective today is likely to be ineffective at a later date as preferences and constraints change. Also, specific criteria of effectiveness shift as organizations move through their

life cycles from their early entrepreneurial stages through their mature stages (Cameron, 1984).

Multiple constituencies must also be considered when one is studying organizations and the assessment of their effectiveness. The values and biases of stakeholders always influence effectiveness criteria. Organizations that have multiple constituencies typically have effectiveness criteria that are derived from a number of different perspectives. As a result, multiple stakeholders play critical roles that define goals and provide information for their assessment. An additional complicating factor of multiple constituencies is that they actively prefer different criteria. This often results in effectiveness becoming less a scientific concept and more a political concept (Connolly, Conlon, and Deutsch, 1980).

Integrating the goal and resource models required the inclusion of multiple constituencies who define and evaluate effectiveness using a variety of criteria. Termed by Keeley (1984) as a relativistic multiple-contingency approach to organizational effectiveness, this approach assumed that no single statement about organizational effectiveness is possible or desirable. No single effectiveness indicator or simple list is appropriate. Politics and power affect the definition and measurement of effectiveness (Kanter and Brinkerhoff, 1981).

Multiple criteria is an additional concept that must also be considered when one is studying organizations and the assessment of their effectiveness. There is no single ultimate criterion that can capture the complex nature of organizational effectiveness. Hoy & Miskel noted that "In the combined goal-system resource approach, effectiveness indicators must be derived for each phase of the open-system cycle—input,

transformation, and output. Virtually every phase, process, or outcome variable can be and has been used as an indicator of effectiveness" (p. 381).

In order to develop a multidimensional measurement of organizational effectiveness one must select key concepts. The selection of the most appropriate variables that represent effectiveness can be an overwhelming task. Campbell (1977) chose to use thirty categories to classify a list of organizational effectiveness indicators. Likewise, Steers (1975) needed to use fifteen different criteria for a sample of only seventeen studies of effectiveness (Hoy & Miskel, 1991).

As a result of the difficulties of selecting appropriate effectiveness variables a theoretical model must be followed. Zammuto (1982) believed that researchers must remain cognizant of the fact that organizations are social interventions to satisfy human needs. People participate in exchange relationships with an organization in order to receive a valued outcome. Continued participation or support of the organization is dependent on the continued creation of valued outcomes by the organization as perceived by the participants. In the context of valued outcomes, Talcott Parsons (1960) provided an excellent model to guide the selection process of specific criteria. Parson proposed that a system's survival depends on the exercise of four critical functions, which are fundamental to resource acquisition and can be considered organizational goals: adaptation, goal achievement, integration, and latency. Adaptation is the process of an organization controlling its environment. Goal achievement is the gratification of system goals. Integration is the social solidarity within the system—the process of organizing, coordinating, and unifying relations into a single unit. Finally, latency is the maintenance of the integrity of the value system—the system's motivational and cultural patterns.

Campbell (1977) and Steers (1975) have developed specific criteria to measure each of these. Hoy and Miskel's (1991) summary of the results of merging the general dimensions, specific criteria or indicators, and other perspectives of effectiveness can be seen in Figure 2.1. In explaining the model the authors noted that "An integrated goal-system resource model of organizational effectiveness can be derived by having the four necessary functions of social systems act as operative goals. By adding specific indicators of attainment for the four goals and by considering the time frame and constituencies applicable to each indicator, we can complete the model" (p. 382).

Effectiveness Dimensions	*Added Perspectives*	*Multiple Indicators*
Adaptation - - - - - >	Time - - - - - - - >	Adaptability
	Constituencies	Innovation
		Growth
		Development
Goal attainment - - >	Time - - - - - - - >	Achievement
	Constituencies	Quality
		Resource acquisition
		Efficiency
Integration - - - - >	Time - - - - - - - >	Satisfaction
	Constituencies	Climate
		Communication
		Conflict
Latency - - - - - - >	Time - - - - - - >	Loyalty
	Constituencies	Central life interests
		Motivation
		Identity

Figure 2.1 Integrated Model of Organizational Effectiveness

When using the model illustrated in Figure 2.1 the authors recommend that researchers proceed in three steps. First, determine the constituencies who will define the operative goal. Second, specify a time dimension, focusing on short-term, medium-term,

or long-term goals. Third, identify several criterion indicators. When making a comprehensive evaluation of organizational effectiveness you must also include outcomes for each of the four critical goals (Hoy & Miskel, 1991).

Research Based on Achievement as an Effectiveness Criteria

Standardized Test Scores

Many times in education parents, patrons, policy makers, and scholars define organizational effectiveness very narrowly. Student scores on standardized tests measuring cognitive skills are usually the indicators mentioned. The fact that schools develop motivation, creativity, self-confidence, aspirations, and expectations—all of which are important to future success—is generally ignored. For example, while Madaus, Airasian, and Kellaghan (1980) mentioned the importance of these indicators of effectiveness, they confine their discussion of effectiveness almost totally to cognitive skills (Hoy & Miskell, 1991).

There are two apparent reasons for the overreliance on standardized test scores. One is practical and the other is political. Hanushek (1989) argued that several important constituencies see test scores as having intrinsic value. While many educators disagree, parents, students, and policy makers generally believe that the tests are essential for measuring accountability. Also, these scores are commonly available to the public; therefore, the measurement of cognitive outcomes is easier than the measurement of noncognitive ones. This is echoed in Bidwell and Kasrda's (1975) statement that "While the goals of schooling are many and vague, the academic attainment of students is clearly among them. Moreover, it is the only output of schools and school districts that is widely and publicly measured" (p. 57).

While expediency, rather than theory, has too often guided research on school effectiveness, student achievement is an important indicator of goal attainment. As a result of so many influential constituencies believing in the ultimate value of student achievement as measured by standardized tests administrators and teachers continually face questions about what factors in schooling lead to higher test scores (Hoy & Miskell, 1991).

All of these factors have contributed to the fact that essentially, all schools and school districts have testing programs. Many states have followed suit and developed tests. In the late 1970s twenty-nine states had or were considering competency-base testing programs. By the late 1980s, virtually all states had implemented some type of testing program (Madaus, et. al., 1980). This trend continued into the 1990s.

The most common testing instruments are composed of subscales that purport to measure a variety of skills. The Iowa Test of Basic Skills and the Metropolitan Achievement Tests are two widely used standardized achievement tests. Virtually all of the test batteries measure student performance in the areas of English and mathematics. Science, social studies, and other subject areas are also measured in additional subscales of many tests. The SAT and ACT have also become a popular barometer of school effectiveness. New roles and expectations for standardized tests have arisen over the past two decades. Of particular interest is the fact that the internal control of testing to guide classroom decisions now coexists with the external control of testing to drive policy choices (Airasian, 1987).

Madaus et. al. (1980) raise an important concern regarding standardized tests. The authors note that while ready access to achievement data eases the data collection tasks of

researchers, standardized tests are relatively insensitive to school-specific pupil achievement.

Production Function Research

A review of the literature reveals two approaches to using cognitive achievement as an indicator of organizational effectiveness. The first, production function research, was popular in the mid-1960s. This technique, also termed input-output analysis, was developed by microeconomists to predict the output of a system using sets of input, or independent, variables. Hanushek (1989) believed that the underlying model is forthright. It assumes that the output of the educational process, scores on achievement tests, is related directly to a series of inputs such as family resources, school resources, student resources, community characteristics, and peer group characteristics. The purpose of this approach is primarily to predict an outcome, rather than to explain how the result was produced. Therefore, statistical analysis, usually some form of regression analysis, is used to infer specific determinants of achievement and the importance of each input on student performance (Hoy & Miskel, 1991).

The previously discussed report by Coleman and his associates (1966) *Equality of Educational Opportunity* is the most influential educational study reflecting this approach. 645,000 students across the nation completed standardized ability and achievement tests as well as forms to describe their family backgrounds. Approximately 60,000 teachers completed questionnaires designed to assess their educational experiences, teaching tenure, attitudes, and verbal ability. Also, data on a variety of organizational variables such as class size, school organization, libraries, and laboratory

facilities were collected from over 4,000 schools. This study remains the largest survey of American public education ever taken (Hoy & Miskel, 1991).

The production function studies leave little doubt that the home environment influences student achievement. Regardless of how they are measured, differences in socioeconomic background of the family result in differences in student achievement. This is explained by Hoy & Miskell (1991) "A reasonable interpretation is that measures of socioeconomic status are simply proxies for the quality of learning environment in the home—nutrition, physical surrounding, parental attitudes, education and so forth" (p. 388). While this is a valid explanation, little room for doubt exists that differences among schools and teachers are important to achievement. Schools are not homogenous in their effects on students; schools differ in effectiveness.

Organizational Research

Unlike production function research, organizational research or more commonly referred to as effective schools research, focuses on educational processes such as instructional methods, classroom organization, and climate or culture. In doing so, school characteristics can be found that are consistently related to achievement on standardized tests and other important indicators of organizational effectiveness. Although the phrase "effective schools" is commonly used in the literature, student achievement on standardized tests is but one indicator of organizational effectiveness.

Lawrence C. Steadman (1987) reported that most educators are familiar with the five-factor effective school formula that was popularized by Ronald Edmonds: (1) strong leadership by the principal, especially in instructional matters; (2) high expectations of students by teachers; (3) an emphasis on basic skills; (4) an orderly environment; and (5)

frequent, systematic evaluation of students. While he was critical of previous attempts to synthesize the literature of effective schools, Stedman offered his own nine-factor formula: (1) ethnic and racial pluralism; (2) parent participation; (3) shared governance; (4) academically rich programs; (5) skilled use and training of teachers; (6) personal attention to students; (7) student responsibility; (8) an accepting and supportive environment; and (9) teaching aimed at preventing academic problems. Although this small set of school variables is limited in its ability to describe and explain the complex processes involved in academic achievement, Stedman concentrated on case studies of the best examples of schools—those that had grade-level success with low-income students for several years. Stedman claimed that these studies provided detailed descriptions of school organizations and practices.

The findings and claims of the effective schools literature are not surprising to the average educator, but they do present a method of verifying the ways that schools influence cognitive development. However, these same educators are aware that school organizations and academic achievement are highly complex and five or even ten-item formulas will not solve the problem of increasing school effectiveness. School climate or culture, instructional behaviors of teachers, classroom organization, bureaucratic motivation, leadership, and communication processes should be studied in schools to add further explanations about how schools influence academic achievement. While standardized achievement tests contain conceptual, empirical, and political traps, they are essential in measuring performance (Hoy & Miskel, 1991).

The Bidwell and Kasarda Study

Charles E. Bidwell and John D. Kasarda (1975) published a very influential study entitled *School District Organization and Student Achievement*. The authors used data from 104 school districts in Colorado to examine determinates of organizational effectiveness. The authors were interested in analyzing the effect of specific variables on reading and math achievement scores. Five environmental conditions of the districts, three components of district structure and one of staff composition were linked in a causal model to the median reading and mathematics achievement scores of the district's high school students. The authors included the environmental variables of size, fiscal resources, percent non-white in the population of the district's community, and the education and income levels of the parental risk population. District variables that were included were pupil-teacher ratio, administrative intensity, staff composition, and the number of supporting professional staff.

This study was an answer to some of the negative findings reported in the Coleman Report. The authors believed that there were good reasons to suspend judgment about the negative conclusions in the report. The authors noted that "Some of these are technical and center largely on errors of measurement (Jencks, 1972). Others are substantive and have to do with the failure of EEO to take school and school district structure into account" (p. 56). They claimed that some of the within-school variance in pupil achievement reported in EEO was not the result of extra-school influences, but rather of curricular differentiation and variation in the allocation of resources to the multiple curricular tracks (Bidwell & Kasarda, 1975).

Bidwell and Kasarda (1975) also criticized Coleman and his associates for not investigating organization structures or practices in their schools deep enough. As a

result, the EEO study could say relatively little about co-variation of organization variables and pupil achievement. The authors found that "They did not consider how between school differences in such organization attributes as the division of labor, formalization of teaching activities, supervision of teaching, or the morphology of control might have mediated or otherwise affected relationships between inputs to schools and pupil achievement" (p. 56).

An additional problem to the EEO study listed by Bidwell and Kasarda (1975) was that it used the school as the unit of analysis rather than the school district. The authors believed that the school was not the appropriate unit of analysis for discovering effects of schooling on pupils' achievement, especially if organizational attributes were used as an independent variable. The authors noted that

> On the one hand, within-school variation in resource allocation, classroom-group composition and norms and similar characteristics of pupils' proximal school environments may have greater salience for the activities of both teachers and students than such attributes when measured at the school level.
>
> On the other hand, if we view organizational phenomena as a means for transforming environmental inputs into outputs, then one principal locus of these phenomena may be the school district rather than the individual school. There is little variation between schools in the centralization of administrative control, more between school districts (p. 56).

They also noted that there was a discrepancy in the EEO study due to the fact that the study measured expenditures at the school district level, despite the fact that the school was the unit of analysis (Bidwell & Kasarda, 1975).

Despite the previously mentioned shortcomings, according to Bidwell and Kasarda (1975), the main shortcoming of the EEO study was that it failed to explore ways in which the organization of education may intervene between inputs to schooling and its outcomes. The authors noted that "Specific models of this organizational

mediation are required, whether the level of analysis is the school district or the individual school (or, indeed, still higher levels of aggregation, such as the national systems of education" (p. 57). Despite the fact that there had been an early study conducted in schools on the relation between organization size and administrative morphology the effect of this relationship on schools and school districts has not been considered (Bidwell & Kasarda, 1975).

While there are many ways to define effectiveness, Bidwell and Kasarda chose to regard effectiveness as goal attainment. They were interested in what influences that ability of a school to produce what it sets out to produce in an appropriate volume. While schools have many goals, academic achievement of students is clearly one of them. The authors were also interested in using this indicator due to the fact that it was the only output of schools and school districts that was widely and publicly measured (Bidwell & Kasarda, 1975).

Bidwell and Kasarda also limited their focus to the short-run effectiveness of schools districts. The short-run mission for school districts is to transform inputs such as students, resources, staff, technology, and community preferences into outputs such as student achievement. Their hypothesis was "...that the environmental conditions that confront a school district will affect levels of student achievement primarily through their effects on the structure and staff composition of these districts" (p. 57).

Bidwell and Kasarda's (1975) study involved using a sample of districts for which there was a wide range of size and fiscal resources. There was also an easily determined division of labor among instructional, administrative and supporting professional staff. The authors also gathered data describing the professional qualifications of key school

district personnel, the socioeconomic characteristics of the school district population and the academic achievement of the district's students. The variables and their operationalization are as follows:

Environmental Conditions (Exogenous Variables)

(1) *School District Size* – Average daily student attendance (SIZE).
(2) *Fiscal Resources* – The sum of all local, state, and federal revenue received by the school district, divided by pupils on average daily attendance to standardize for size (RESOURCES).
(3) *Disadvantaged Students* – The percent of all school-age children residing in the school district who came from families with incomes below the nationally defined poverty level (DISAD).
(4) *Education* (parent risk population) – The percent of males 20-29 years old and females 15-44 years old residing in the school district who had completed at least 4 years of high school educational (EDUC).
(5) *Percent Non-white* – the percent of the population residing in the school district who were classified by Census definition as non-white (PNONW).

Organizational Attributes (Intervening Variables)

(1) *Pupil-Teacher Ratio* – The number of pupils in average daily attendance divided by the number of classroom teachers, converted to full-time equivalents (PTRATIO).
(2) *Administrative Intensity* – The ration of administrators to classroom teachers (ADMIN).
(3) *Professional Support Component* – The ratio of professional support staff to classroom teachers (PROF).
(4) *Certificated Staff Qualifications* – The percent of total certificated staff who held at least the Master's degree (QUALIF).

Achievement (Dependent Variables)

(1) *Reading Achievement* – Median grade-standardized reading achievement level (nationally-normed percentile) for high school students (RACH).
(2) *Mathematics Achievement* – Median grade-standardized mathematics achievement level (nationally-normed percentile) for high school students (MACH) (Bidwell & Kasarda, 1975).

Using these variables Bidwell and Kasarda developed a model of school district organization and student achievement. In the model, the exogenous variables measure certain environmental conditions that impact a school district in the short-run. Intervening between these variables and the output of the district (student achievement) is a set of

organizational attributes that involve key district functions: classroom teaching, professional support and administration. The authors also indicated whether there was a positive or negative correlation between the variables of the model (See Figure 2.2) (Bidwell & Kasarda, 1975).

Bidwell and Kasarda (1975) predicted that none of the environmental conditions would have a direct effect on achievement, except for the percent non-white. They believed that "...if there were any school district effects at all on aggregate student achievement, then attainment should be influenced by student-teacher ratio, teacher qualifications, administrative intensity and the relative size of the professional support staff—more heavily by the first three than by the fourth" (p. 62).

Bidwell and Kasarda (1975) found that their study provided "...substantial evidence of the significance of organizational structure and staffing for school districts" (p. 68). The variables of pupil-teacher ratio, administrative intensity, certificated staff qualifications, professional support component, and percent non-white accounted for almost 50 percent of the variation in achievement within their sample. Pupil teacher ratio and administrative intensity depressed median levels of achievement; whereas, staff qualifications fostered student achievement. Of the environmental conditions, percent non-white was the only variable that had a consistently significant direct effect on median achievement levels. It is important to note however that other environmental conditions have important indirect effects on achievement due to their direct effects on school district structure and staff qualifications. This is especially true for district resources.

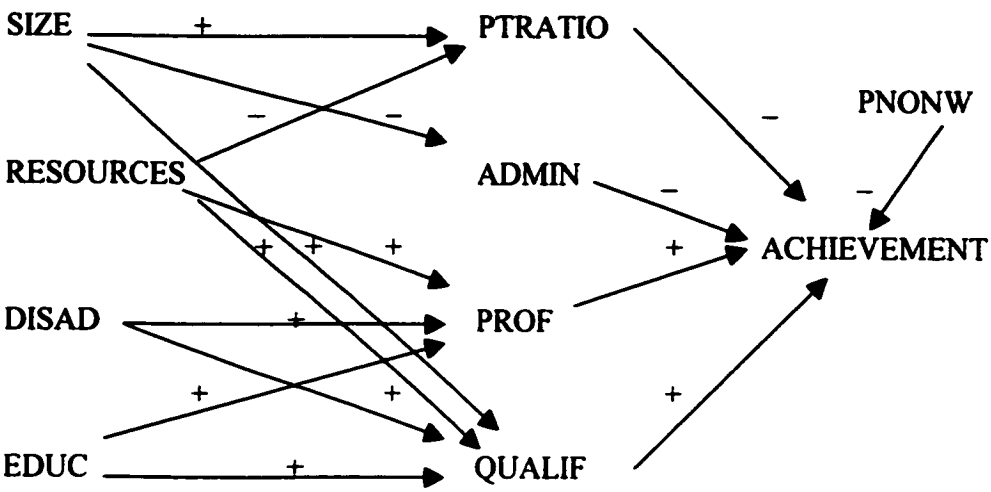

Figure 2.2 A Model of School District Organization and Student Achievement

These finding were especially significant in light of the earlier research such as the Coleman Report that suggested student achievement was not affected by the attributes of educational organizations. The authors found that the structure and staffing of school districts appeared to transform inputs to school districts into outputs of student achievement (Bidwell & Kasarda, 1975).

Based on their study Bidwell and Kasarda (1975) made several recommendations that school districts could take to maximize aggregate levels of students' academic achievement. First, hire relatively large numbers of well-qualified teachers. Second, school district revenue should be reaffirmed as a major influence on attaining sufficient high quality teachers. Third, realize that while large school districts do a better job of instruction due to the amount and diversity of resources for instruction increases in size are limited. At some point the student achievement will suffer due to unfavorable pupil-teacher ratios.

Organizational Conflict

What is Organizational Conflict?

All organizations experience conflict. Struck (1994) noted, "Whenever people are gathered together to interact and work as a group, conflict is one of the inevitable outcomes" (p. 1). Costantino and Merchant (1996) noted, "Organizations are rife with conflict that can take many forms and wear many faces. They can hide it, quash it, control it, fight it, deny it, or avoid it, but whatever they do, they cannot make it disappear: conflict is an organizational fact of life" (p. 3). Weeks (1992) stated "Conflict is an inescapable part of our daily lives, an inevitable result of our highly complex, competitive and often litigious society" (p. 9). In her discussion regarding organizational conflict Stone (1999) noted "Nowhere are conflicts more likely to be found than in today's work environments where stress, lean staffing, and job insecurity make it much easier for them to develop" (p 3). Bailey (1971) described three major types of conflict situations that occur in public schools: subordinate conflict between the administrator and a person or group over which he has authority or responsibility; superordinate conflict between the administrator and a person or group which has authority over him; and lateral conflict between the administrator and a person or group with which he has equal authority.

Due to the complexity of conflict, definitions tend to focus on a combination of factors, such as circumstances that lead up to conflict or the behaviors of the disputants the produce perceptions of disagreement. While the literature contains many definitions of conflict, most are very similar. Coser (1956) defined conflict as a "struggle...in which the aims of the conflicting parties are not only to gain the desired values, but also to

neutralize, injure, or eliminate their rivals" (p. 28). Kriesburg (1973) defined conflict as a relationship between two or more parties who believe they have incompatible goals. Costantino and Merchant (1996) define organizational conflict as "...an expression of dissatisfaction or disagreement with an interaction, process, product, or service" (p. 4). Slaikeu and Hasson (1998) noted that conflict occurs when the ideas, interests, or behavior of two or more individuals or groups clash. Bush & Folger (1994) noted, "A conflict exists because of a real or apparent incompatibility of parties needs or interests" (p. 56). Schellenberg (1996) defined conflict as "...the opposition between individuals and groups on the basis of competing interests, different identities, or differing attitudes" (p. 15). Fisher et al (2000) suggested the following as a basic working definition of conflict "...a relationship between two or more parties (individuals or groups) who have, or think they have, incompatible goals" (p 4).

Conflict does not arise without a cause and there can be multiple reasons for conflict in an organization. Costantino and Merchant (1996) noted that differing expectations, competing goals, conflicting interests, confusing communications, or unsatisfactory interpersonal relations are common causes of conflict. Slaikeu and Hasson (1998) listed conflicting interests, poor communications, evil intent on the part of one party, selfishness, personality disorders, or scarce resources as common causes. Stone (1999) noted that most conflicts are founded in resource limitations, psychological needs, different view points, competition or rivalry, blurred lines of authority, or value differences. Isenhart & Spangle (2000) listed the common sources of conflict as data, interests, procedures, values, relationships, roles, and communication. The authors also noted that each of the sources may affect the others.

Conflict should not always be seen as a villain. A certain amount of conflict can actually be healthy for an organization. Stone (1999) noted "There is nothing wrong with conflict up to a point. Conflicts can be productive and can even motivate people to excel. Conflict can generate constructive dialogue, form which new ideas are developed, refined, and ultimately successfully implemented" (p. 13). Positive conflict can actually stimulate increased productivity and improve decision-making. It can generate new ways of looking at situations and, result in greater creativity. Robbins (1994) noted "Without conflict, there would be few new challenges; there would be no stimulation to think through ideas; organizations would be only apathetic and stagnant" (p. 150). While a certain amount of conflict may be acceptable, if left unchecked it can create problems for an organization (Stone, 1999).

If conflict results in problems rather than solutions it is no longer a constructive process. Several problems can arise when this situation occurs. Neuhauser (1988) confirmed that conflict is a major source of increased stress and decreased organizational productivity. Stone (1999) noted the following: Conflict can add to the tension in a workplace that is already stressful; Conflict can mean poor decisions; Conflict can mean decisions, good or bad, don't get implemented; Conflict can mean confusion and ambiguity; Conflict can generate a "get-even" attitude; and Conflict can destroy professional relationships. Slaikeu and Hasson (1998) noted that litigation expenses, lost time, employee turnover, are common results of conflict. Isenhart and Spangle (2000) noted, "Conflict can be expensive. Organizationally, costs include low morale, high employee turnover, and loss of productive work time. Personally, costs often involve loss of sleep, loss of motivation, and damage to relationships" (p. 13).

Many times, as conflict occurs people reciprocate in an intensified and negative manner resulting in a conflict spiral. Isenhart and Spangle (2000) noted "Each threatening communication incites even more threatening responses in a move-countermove sequence. In addition, the number of issues proliferates as the parties become absorbed in the emotions of the situation. Blame fear, and anger produce psychological states that fuel self-perpetuation sequences" (p. 17). Carpenter and Kennedy (1988) identified the typical sequence of events for conflict spirals:

1. A problem emerges.
2. Sides form as the controversy grows.
3. Positions harden as each side becomes narrower and more rigid in their perspectives.
4. Communication stops and the parties become adversarial.
5. Conflict goes outside of the immediate context as parties look for support and power.
6. Perceptions become distorted and parties lose objectivity.
7. A sense of crisis emerges as factions and coalitions emerge.
8. Uncertainty arises about outcomes, as options for parties become fewer.

The spiral becomes destructive as mistrust and suspicion grow. Those involved raise the stakes and reduce constructive options as they form coalitions for support instead of dealing directly with their perceived enemy (Isenhart and Spangle, 2000).

There are many costs to an organization when one of these destructive spirals forms. Breakdowns in relationships, disruption of the work process, loss of time and energy due to the diversion cause by the conflict, and even the loss of employees may

occur. Carpenter and Kennedy (1988) noted "The lesson of the conflict spiral is not that the progress is inevitable, but that it is predictable when nothing is done to manage conflict" (p. 17).

People approach conflict in a variety of ways. Aggression, assertion, threats, and demands may be reactions to conflict. Also, people may become quiet and passive, and avoid conflict. Isenhart and Spangle (2000) described the five most common ways that approach conflict:

1. Avoiding - One party denies that there is a conflict. The party may change topics, avoid discussion, and be noncommittal. This conflict style is most effective in situations in which there is danger of physical violence, the issue is not important, there is no chance of achieving goals, or the complexity of the situation prevents solutions.
2. Accommodation - One party sacrifices its interests and concerns in order to allow the other to achieve their interests. This conflict style is most effective when there is not much of a chance of achieving one's own interests, when the outcome is not important, or when there is a belief that satisfying one's own interests will in some way have a negative impact on the relationship between the parties involved.
3. Compromising - Each party involved settles for partial satisfaction of their interests. This conflict style is most effective in situations that require quick resolution of issues.
4. Competitive - Characterized by aggressive, self-focused, forcing, verbally assertive, and uncooperative behaviors that are aimed at satisfying one party's

interests at the expense of the interests of the other party. This style is most effective in situations where decisions must be made quickly, options are restricted, there is nothing to lose by pushing, other parties resist cooperation, and there is no concern about potential damage to the relationship between the parties involved.

5. Collaborative - Characterized by active listening and issue-focused, empathic communication that strives to satisfy the concerns of all parties involved. It is most effective in situations where power is reasonably balanced, the long-term relationship between parties is valued, both parties display cooperative behaviors, and there is sufficient time and energy to create an integrative solution that is acceptable to both parties.

There have been many studies regarding which conflict style is most appropriate. Several studies have found that the collaborative, problem-solving approach to solving conflict generally produces better decisions and greater satisfaction with the decisions produced (Lawrence & Lorsch, 1967; Phillips and Cheston, 1979; Tutzauer & Roloff, 1988; Wells & Galanes, 1986). Weeks (1992) described the most effective style as a conflict partnership. A style that emphasized a "we, not I-versus you orientation"; solves current problems in a way that protects the long-term relationship; and resolves conflict in a manner that parties see they have received something of value to them.

While many studies support the collaborative approach to resolving conflict it is also important to know when to use this approach. Phillips and Cheston (1979) found that problem solving is most effective in situations which:

1. The parties are highly interdependent and have to work together in the future.

2. There is a willingness to ignore power issues
3. Formal procedures for problem solving are available to parties.
4. One or both people detect the conflict early and initiate problem solving before things get bad.
5. Attention is focused on solving a common problem rather than defeating or adopting one person's preferred solution.

Hocker and Wilmot (1991) warn, "If investment in relationship or issue is low, then collaboration is not worth the effort, for it is time and energy consuming. Further, collaboration can be used in very manipulative ways....Often high-power persons use pseudo-collaboration to maintain the power imbalance" (p. 125).

Responding to Conflict

Organizations have a multitude of ways in which they may respond to conflict. Slaikeu and Hasson (1998) noted "Human beings have four distinct options for dealing with conflict: avoidance, power plays, higher authority, and collaboration (and variations on these themes)" (p. 17). Costantino and Merchant (1996) grouped organizational responses to conflict in the general categories of "fight" or "flight". The category of fight included the responses of arrogance, the "were above it all reaction", and engagement, the "bulldozer approach." The category of flight included the responses of denial, avoidance, and accommodation. Stone (1999) noted that when faced with conflict people respond in one of the following ways: ignore the situation; get aggressive; make love, not war; seek the middle ground; or take an ideal conflict resolution approach, one that leads to a solution that represents the best interests of all in the conflict, including the organization.

The method of response selected is generally based on the perceived importance of the conflict, the context of the conflict or the players involved. To a certain extent, organizational responses to conflict are situation or context specific. Whether the conflict is interpersonal, intergroup, or interorganizational is also an important factor to be considered (Costantino and Merchant, 1996).

Conflict is a signal of distress in an organization. If the organization does not respond to the distress call the conflict will not go away and problems may arise. Stone (1999) noted "Clearly, ignoring a conflict may only make it worse; it doesn't guarantee the problem will disappear" (p7). When addressing conflict it should be viewed as a process, not a product. Organizational conflict is an indicator of dissatisfaction. If conflict is viewed as a process, we move away from the notion that it is a tangible "problem" that can be solved, tamed, managed, or controlled. Isenhart and Spangle (2000) noted "We can approach conflict expecting a fight and a host of negative consequences, or we can approach it as an opportunity to create alliances. We can view others as adversaries and remain forever entrenched, or we can build bridges with strategic partnerships that advance our objectives further than we could do alone" (p. 13).

The Superintendent and Principal Relationship

The Superintendent

The position of Superintendent of schools is a relatively new position in public schools. The position was generally only found in the larger urban districts prior to this century. The development of the position of superintendent occurred in four stages (Campbell, Cunnignham, et al, 1990).

During the first stage the position of superintendent was mainly a clerical position arising due to board members needing someone to relieve them of minor details. During this stage many times those hired to be superintendents were not trained in the field of education (Campbell, Cunnignham, et al, 1990).

The second stage arose due to educational programs becoming more complex. As a result, board members began to rely more heavily on the superintendent to assist with educational problems and concerns. This stage resulted in boards searching for candidates who were educators, often a scholar of some reputation (Campbell, Cunnignham, et al, 1990).

In the third stage boards were looking for a superintendent who could handle the business affairs of the district. Activities such as directing elections to pass bond issues or tax levies, building budgets, and managing property consumed most of their time. During this stage, as business directors, superintendents often times tended to neglect educational purposes and instructional procedures (Campbell, Cunnignham, et al, 1990).

In the fourth stage superintendents became the chief executive and professional adviser for the board. This is the stage we find the position of the superintendent in today. While still evolving, in this stage we see the superintendent involved in improvements in instructional programs and student achievement (Campbell, Cunnignham, et al, 1990).

Campbell, Cunningham and associates (1990) describe the four major approaches and philosophies that have influenced the concept of the superintendency during this century: 1) Scientific Management which stresses efficiency, coordination of workers, and the training of workers by supervisors; 2) human relations which focuses on building dynamic, yet harmonious, human relationships and indicates an increased awareness by

management of the limited importance of wages and physical conditions to employees; 3) bureaucracy which stresses the division of labor which allows specialization, hierarchical structure, rules and regulation, and an impersonal orientation on the part of officials, and 4) open systems which focuses on the interdependence between an organization and its environment while recognizing the importance of input and output.

All of these movements are with us today, but the majority of superintendents cling to a bureaucratic approach to management. The open systems approach is the most recent approach and many superintendents are being impacted by this view of administration. As noted by Campbell, et al (1990) "Concepts springing from scientific management, human relations, and bureaucracy are still with us even though open systems is now affecting thought and practice. Indeed, it may be that each view has some usefulness depending on the problem at hand." (p. 247). Of the four concepts described the open systems concept is the most applicable to the social systems model described earlier in this chapter.

Cuban (1988) described three images of the superintendent and the corresponding roles of each: 1) the instructional supervisor's role is that of teacher of teachers; 2) the administrative chief's role is that of control and efficiency, and 3) the negotiator statesman's role is that of politician. According to Cuban the three images rise and fall in popularity based on the circumstances surrounding the position and the personality of the superintendent in question (Grant, 1996)

Konnert and Augenstein (1990) described the historical political aspects of public schools. Even in the beginning schools were political, they were places for gatherings and struggles for local control. As public schools continue to be political in nature it is only

natural that the position of superintendent is also influenced by politics. As such, it is critical that the superintendent makes a focused effort to provide leadership that is based on the principles of human respect, social justice, and equity. There has been an emergence of a new conventional wisdom that supports the notion of training future school superintendents for the political arena found in today's public school (Grant, 1996).

In most public school system the superintendent of schools is analogous to the president or CEO of a company in the private sector. He is formally recognized as the chief executive of the district. As noted by Campbell, Cunnignham, et al, (1990) "He is the most visible, most vulnerable, and potentially most influential member of the organization" (p. 250). Schlechty (1993) described the primary role of the superintendent as being "...the communities chief educator in educational matters" (p. 20). Blumberg (1985) describes the superintendent as "...chief guardian of the "sacred" function of educating the community's children..." (p. 188). Grady and Bryant (1988) described the superintendent as "...a critical force in developing and institutionalizing operational policy" (p. 4).

There has been a surprising lack of research into how superintendents impact educational programs. As noted by Behrens (1992) "...research continues to overlook the significance of the role of the superintendent in improvement efforts" (p. 2). Crowson (1987) noted "Surprisingly, the local school district superintendency is one of the least thoroughly researched roles in educational administration" (p. 49). Bridges (1982) pointed out that there are numerous studies on the principal in effective schools, but there are "less than a handful of studies" that investigate the impact of the superintendent (p.

26). This trend does however appear to be reversing. Wimpelberg (1988) has found that many of those researchers who have studied the impact of the principal are now looking into the impact of the superintendent.

Hoy & Miskel (1987) described two distinct types of school superintendents – placebound and careerbound. Placebound administrators were described as "...insiders with a local orientation" (p. 159). These individuals generally remain in one school system, moving up the career ladder of that system, and completing their careers in this system. If the individual leaves the superintendency before retiring, they remain in the district and often times assume a lower level administrative position. Generally, placebound superintendents have a strong commitment to the community, and since they operate as an "insider" they are interested in maintaining the existing structure within an organization (Hoy & Miskel, 1987).

Careerbound superintendents are those from outside the district who move up the administrative ladder by assuming positions wherever they are available. These individuals are "...strangers in a sociological sense and, lacking a history in the school system, are unknown quantities" (Hoy & Miskel, 1987, p. 159). Generally careerbound superintendents tend to be more involved with change, reform, and improvement and they realize that as a result of their involvement in these activities there will be periodic movement in their careers.

Regardless of the type of superintendent, careerbound or placebound, the tenure of a superintendent is relatively brief. The American Association of School Administrators (AASA) has been a major sponsor of studies of superintendent tenure (Dlugosh, 1995). In a recent study sponsored by AASA Glass (1992) reported that the

national superintendent average tenure rate was 6.47 years and the average tenure for a Nebraska school superintendent was 5.80 years (p. 16-19). Ossian (1999) found that the average tenure for superintendents in Nebraska was 6.84 years (p. 1).

The implementation of school board policies and the day-to-day operation of today's public schools require the expertise of a professionally trained administrator. The administrator that assumes this challenge is generally the superintendent of schools. While today's superintendent's duties are numerous a few of the basic duties would include recommending and assigning staff, implementing and administering new programs and policies, and developing budgetary proposals. The superintendent is the person chosen by the board of education to translate the will of the board and board policy into action throughout the district (Ingraham, 1998).

The actual role of the superintendent is often times determined by the size of the school district. In smaller districts, those with fewer that 1500 students, the superintendent is much more involved in duties such as preparing budgets, chairing various committees, and coordinating a multitude of projects. In contrast, those superintendents in larger systems generally have subordinates who specialize in many of these areas so the superintendent delegates these duties. It is not uncommon for the superintendent of a larger district to devote a large amount of time to public relations or strategic planning (Wyatt, 1996).

Boyd (1976) proposed two views on the role of the superintendent with regard to policy making. The first view is that of the superintendent as the expert and as such should dominate the policy making process. In contrast, the second view is that of the superintendent as one who is forced to compromise his professionalism in order to gain

support and build coalitions. This view is becoming more and more apparent according to Boyd. The superintendent of today faces financial constraints, pressure from special interest groups, teacher organizations and parent groups. Politics and directives from the courts and legislatures have also brought about pressures on the "once all-powerful superintendent" (Grant, 1996, p. 40).

School boards generally look for several leadership skills in superintendents such as the ability to foresee future needs and project this vision, and the ability to establish realistic goals and lead in the implementation of these goals. Much of today's superintendent day will be spent building consensus, developing policy, and facilitating strategic planning. Communication skills, public relations, instructional leadership, fiscal management, and political insight are also considered crucial to the success of any superintendent (Wyatt, 1996).

The Principal

The development of the position of principal can be traced back to schools becoming large enough to require more than one teacher. The non-teaching principal was first seen in the mid-nineteenth century in urban schools (Cuban, 1988). Cincinnati established a principal-teacher in 1838. A school in Boston reported that it had combined all of the department heads under a single principal in 1847. The schools of Saint Louis were all under the administration of one principal by 1859. By the 1920's the concept of the non-teaching principal was a generally accepted administrative strategy. (Campbell, et al, 1990).

As schools became larger they became more complex and members of the governing boards felt it was in the best interest of the school to have someone "in

charge." The term principal is derived from prince, which would imply first in rank, degree, importance and authority. The principal was the "...one authority to make decisions about the operation of the school" (Kimbrough & Burkett, 1990, p. 3).

Since its inception, the position and the functions of the position have undergone rapid change. In the beginning principals assumed a managerial role, involved with duties such as setting schedules, compiling attendance figures, and seeing that the building was heated. With the development of issues such as pupil transportation, special education, curriculum and instruction, finances, faculty relations and school-community relations the administrative functions of the principal have become increasingly complex. As noted by Kimbrough & Burkett (1990) "In summary, the position of principals has developed from the appointment of head teachers, teaching principals, and full-time principals to the position of executive head of a large administrative staff faculty and student body" (p. 4).

There is an abundance of literature that addresses the importance of the public school principal. As noted by Flanigan (1990), "[t]he decade of the 1980's has produced a growing body of knowledge concerning effective schools and the key role the principal shares in such schools" (p. 2). When discussing the principal Goldman (1998) stated that "...the school's characteristics are a reflection of the educational values of its leader" (p. 20). Koll, Lampe, and Hegedus (1996) noted that "[t]he school principal is seen by many as the key element in establishing a productive and satisfying work climate..." (p. 102). Raisch (1995) stated "[s]uccessful school districts are composed of effective schools, and the presence of a strong principal is a prerequisite to individual school effectiveness" (p. 12). Brubaker and Coble noted that "[i]t is important that an assistant principal or principal accepts responsibility or takes the heat when things go wrong in school. This

may even mean that the school administrator will take blame for errors made by his or her superordinates on occasion" (p. 13).

Krug (1992) proposed a five-factor taxonomy that describes behaviors of instructional leaders. The five levels were: 1) Defining mission; 2) Managing curriculum and instruction; 3) Supervising teaching; 4) Monitoring student progress; and 5) Promoting instructional climate. Krug did however emphasizes that "What distinguishes effective instructional leaders form others is not a distinctive set of characteristics but an approach to their work that is guided by a distinctive set of beliefs about what is possible" (p. 441).

A principal has the potential to become the instructional leader for the district. As an instructional leader the principal can make a major impact on a schools educational program (Andrews & Soder, 1987; Roueche & Baker, 1988; Rutherford, 1985; Sergiovanni, 1990; Smith & Andrews, 1989; Ubben & Hughes, 1992; and numerous others). Statements such as "Effective school, effective principal" (Lipham, 1981); "The principal is the key element in the school improvement process" (La Plant, 1987); "...the success of policy implementation, in large part, can be measured against the effectiveness of the principal" (Carr, 1997); and "...the principal...constitutes a force powerful enough to alter what has been the normal flow of that school" (Lezotte, 1994) serve as evidence of the findings that stresses the importance of the principal.

In a review of an in-depth study of successful schools, Wellisch and associates (1978) noted that administrative leaders in successful schools shared the following characteristics: 1) Concerned with instruction; 2) Communicate their views about instruction; 3) Took responsibility for decisions relating to instruction; 4) Coordinate

instructional programs; and 5) Emphasize academic standards. Edmonds (1982) also found that in effective schools principals were instructional leaders. Edmonds noted that the principal as an instructional leader frequently engages in "...discourse focused on diagnosing and solving instructional problems in the classroom" (p. 11). As a result of these activities by the principal a school climate that encourages teachers to use the correlates of effective teaching is produced.

Instructional leaders are involved in many aspects of an effective school. In dealing with issues such as the scope and sequence of instruction, staff assignment, class size and composition, scheduling, the distribution of instructional materials, and even teaching styles, instructional leaders impact school outcomes. It is the involvement of the principal with instructional coordination/organization of activities that impacts school effectiveness (Grant, 1996). The previous statements are reflected in Morris and associates' (1984) statements that "...the principal should devote by far the largest portion of the day to direct supervision of instruction and to staff development. As much as three-quarters of the principal's time should be given to the improvement of instruction" (p. 13).

Firestone and Wilson (1985) also addressed the importance of the principal as an instructional leader. The authors noted that principals "...develop a clear vision of the purposes of the school that gives primacy to instruction and carry it through consistently ..." through the interactions that take place during the day (p. 22). The principal uses a combination of bureaucratic and cultural linkages to assist in implementing the school's vision. As described by the authors, bureaucratic linkages are the formal, enduring arrangements of an organization while cultural linkages are those that refer to the

subjective side of an organization. Bureaucratic linkages generally "...establish constraints on and opportunities for how teachers teach [while] cultural linkages shape what teachers want to do or how they take advantage of those constraints" (p. 11). By using these linkages teacher behavior becomes more predictable and principals have a more direct impact on what students learn.

Smith and Andrews (1989) noted that principals who make a difference are those who are instructional leaders. Principals who are strong leaders generally display characteristics such as high energy, assertiveness, the ability to assume the initiative, openness to new ideas, tolerance for ambiguity, a sense of humor, analytic ability, and a practical stance toward life. In interacting with teachers effective principals serve as resource leaders, instructional resources, communicators, and are very visible.

As a result of organizational and community expectations a principal's role will vary from place to place. While a principal's role may vary the functions of a principal are similar regardless of where he or she works. Ubben and Hughes (1992) described five functional aspects of the principalship, four of which took place inside the school and the other occurring due to interactions with the outside world. As noted by the authors "The inside functions include staffing and instructional improvement, curriculum development, student services, and resource procurement and building utilization, including budgeting and maintenance. The outside function is public relations" (p. 9).

Ubben and Hughes (1992) also believed that the dimensions of leadership and management cut across the five functions of the principal. The authors noted, "Leadership is the way principals *use themselves* to create a school climate characterized by student productivity, staff productivity, and creative thought. Think of good

management as the systematic application of an array of skills to provide for an orderly and efficient school environment" (p. 10).

There is a broad range of approaches to the job of principal. A new principal may see himself as a servant of the system, assuming more of a managerial role, while others may try to develop a balanced approach to what they see as an unwieldy job. Others may disregard organizational restraints and proceed in their own fashion. Such a person would need a clear view of their personal and professional values as well as a strong commitment to the belief that generating new ideas is one of their key responsibilities. These individuals are seen as educational leaders rather than as simple managers (Grant, 1996).

In studying principal behavior Kmetz and Willower (1982) discovered that "Events ordinarily controlled the principals rather than the other way around" (p. 77). A principals day was described as a "...fast paced, unrelenting...kaleidoscopic, garbage can of decision-making" (p. 77). It was also a "...high volume of work completed at an unrelenting pace, variety, brevity and fragmentation of tasks, and preferences for verbal media and live action" (p. 73). The authors also addressed the unpredictability of the principal's job. They noted that principals were victims of "domino eruptions". "Domino eruptions are events that usually occur early in the day and lead directly to a series of additional episodes" (p. 73). As a result of the many demands placed on principals the authors noted, "...a key concern for the practitioner should be how to allocate attention to valid pursuits while handling the continuous action demands of administration" (p. 77).

Crowson and Porter-Gehrie (1980) have noted that while school principals play a key role in the accumulated decisions that lead to the implementation of education policy

they appear to vary in their enactment of this role. Some principals may be heavily constrained by directives and rules from above, but still remain flexible in interpreting what the system would allow. Principals may also exercise informal authority that exceeds the position's formally designated powers and responsibilities. In essence, principals adapt to differing conditions of the system such as school size, the community, and the collegial mix of the school.

Principals are seen as middle managers. As noted by Crowson and Porter-Gehrie (1980) "More than any other single position in the American school hierarchy, the principalship represents the pivotal exchange point, the most important point of connection between the teachers, students, and parents on the one hand, and the educational policy making structure – superintendents, school boards, and tax-payer – on the other" (p. 65). Bridges (in Erickson & Reller, 1979) referred to the principalship as a position that is "caught in the middle." Teachers want the principal to keep things running smoothly, cater to the individual needs of the staff, and seek the teachers' opinions before decisions are made. Superintendents, on the other hand, expect the principal to be forceful in their relationship with staff, initiate action, stress accomplishing organizational goals, and show loyalty to the organization over the individual.

Effective instructional management by principals is important to school effectiveness. While there are many studies that indicate an effective school requires an effective principal the studies generally indicate that it is the indirect actions of the principal that impact the teaching/learning process. Principal activities such as goal setting, communicating high expectations, organizing classrooms for instruction,

allocating resources, supervising and monitoring activities, and promoting a positive climate in the school are effective instructional management strategies that impact school effectiveness (Grant, 1996).

Effective principals come in all shapes and sizes, but tend to have some general characteristics in common. Blumberg and Greenfield (1980) discovered several common characteristics of effective principals. Effective principals "... all had a vision of what a school should be; they were clear about and oriented toward their goal; and they tended to test limits, to be sensitive to the dynamics of power, and to approach problems intuitively, it seemed, from a highly analytical perspective" (p. 26).

Leithwood and Montgomery (1986) indicated that effective principals are concerned with promoting student cognitive growth and happiness above all else. Decisions are based on what is best for the students. The authors claimed that the principal "...can have a positive effect on learning outcomes through assertive, achievement-oriented leadership" (p. 226). They also noted that effective principals can "...define priorities focused on the central mission of the school and gain support for these priorities from all stakeholders" (p. 227).

Rutherford (1984) noted that effective principals have vision and can articulate that vision in terms of schools goals that then become the driving force for the school. Effective principals also take action to see that goals are accomplished and will provide whatever support and assistance is necessary, even resorting to "creative insubordination" if need be in order to do what is in the best interest of students. Finally, effective principals are highly involved in teacher work and progress. "They know what is going

on in the classrooms of their school, and if things are not going as they should they will intervene" (p. 24).

Vaill (1982) discussed the importance of the vision of the principal. He noted that purposing was the "...continuous stream of actions by an organization's formal leadership that has the effect of inducing clarity, consensus, and commitment regarding the organization's purposes" (p. 29). He found that leaders, such as principals, of high-performing systems have strong feelings about the attainment of the system's goals, put in extraordinary amounts of time to achieve their goals, and focus on key issues and variables.

Manasse (1984) in her description of high performing systems noted that effective principals have a vision of their schools and of their role in making the vision a reality. She noted that effective principals have the ability to combine "...personal vision, information sensing and analysis skills, and interpersonal skills that generate commitment to a common set of values..." (p. 65).

Visioning is an essential quality of effective principals. Sergiovanni (1987) defined vision as "...the capacity to create and communicate a view of the desired state of affairs that induces commitment among those working in the organization" (p. 57). Ubben & Hughes (1992) noted that vision requires "...asking questions about what might be, standing for something, making certain others know what that thing is, and determining appropriate courses of action for getting to expressed goals" (p. 8). They also noted that "It is vision that seems to distinguish leaders from those who are simply good managers" (p. 7). Leithwood and Montgomery (1986) supported the importance of vision

by pointing out that "No other dimension of principal behavior is more consistently linked to school improvement by current empirical research than goal setting" (p. 118).

Shashkin (1988) described three major aspects of visionary leadership. The first consists of constructing the vision, the second involves developing an organizational philosophy that correlates with the vision, and the third centers on the leaders' behaviors that create support from others for the vision. The authors noted, "...it is only through the actions of visionary principals that we can attain the ideal of effective schools" (p. 248).

While it is important for principals to be visionary it should also be pointed out that vision can blind leaders in a number of ways. Principals who are over attached to particular philosophies or innovations restrict the consideration of alternatives and often times suppress the voices of teachers who may have questions or other ideas. Those who are over reliant on charisma result in at best short-term gains, at worst superficial solutions and dependency. As noted by Fullan (1992) "Rather than impose their individual visions, principals would do well to develop collaborative work cultures..." (p. 19). This is also referred to as the principal being a "leader of leaders" (Brandt, 1993, p. 11).

Today principals are faced with an ever-growing number of new policies that are being developed at the local, state, and national levels. As such principals are being called upon to be effective change facilitators. After an extensive review of research regarding change agents, Hall & Hord (1987) developed definitions for three change facilitator styles as related to principals. The authors found that of the three styles, responder, manager, and initiator, that it is the principal who displays the initiator style that experiences the most overall success at implementing change. The authors

contributed this finding to the fact that the initiator style principal has "...strong vision, push, consistent decision making, and priority setting ..." characteristics (p. 253). As a result of the multiple demands of the principalship, principals must often times rely on others to accomplish organizational goals. As a result, principals must acquire many different skills that enable them to be effective at working with adults. While professional development programs that improve these skills in a principal are seen to be useful, there are few programs readily available for the training of administrators (Grant, S., 1996).

There have been many studies that indicate principals have a positive influence on the instructional performance of a school. A two-year study by Andrews and Soder (1987) which used gains in individual student normal curve equivalent scores on the California Achievement Test as a measure of improved academic performance indicated that principals who were strong-leaders were found in those schools with statistically significant gains in reading and math. Ogawa and Hart (1985) found that the principal accounted for up to eight percent of the variance of test scores for schools in their study. Heck, Larsen, and Marcoulides (1990) go so far as to state that their study indicates that "... the principal must now be considered as one "school effects" variable that directly influences student achievement" (p. 121). The authors noted that these effects were still present after the effects of students' socioeconomic status and language background were controlled.

While there is an abundance of literature supporting the notion of the importance of the principal, it is important to note that there is also literature that questions much of the early research regarding this matter. Kroeze (1982) described critical problems with the research. The author noted, "Much of the effective school and effective principal

research tends to oversimplify the role of the principal as an instructional leader. While many of the findings are easy to understand, they do not grasp the complexity of the principal's work or the issues related to the instructional area. Consequently, these findings are not usable at a practical level" (p. 4). Ginsberg (1998) discussed methodological concerns regarding previous studies on school effectiveness and instructional leadership. He noted that many of the previous studies needed tighter controls, and better matching of treatment and control groups in order to eliminate extraneous variable influence and heighten confidence in the conclusions found in the studies. Ginsberg noted that more representative samples needed to be studied in order to improve the generalizability of findings. He also noted that other outcome variables, such as pupil teacher satisfaction, average pupil attendance, and the attainment of higher order thinking skills, as well as others needed to be added as indicators of student achievement (Ginsberg, 1988).

Pitner (1987) noted that instructional leadership is not the central focus for most principals. In her review of several descriptive studies she noted that "...principals spend most of their time working with students who are discipline problems and with teachers who have non-instructional needs (Peterson, 1978); attending to logistics, external requirements and social pleasantries (Sproull, 1979); and overseeing organizational maintenance, pupil control, and extracurricular activities (Martin, 1980)" (p. 57). While believing that instructional leadership should be the fundamental tenet of principals her study would indicate that in reality this is generally not the case.

Hallinger's (1992) study tracing the evolving role of the principal would seem to support Pitner's findings. Hallinger traced the evolution of the role of the principal from

program manager in the 1960s and 1970s to instructional leaders in the 1980s to transformational leaders in the 1990s. He discovered that while there was an abundance of professional rhetoric about the principal as instructional leader, there was very little evidence that schools districts adapted to support the principal assuming this role. He noted, "...recent evaluations of state leadership centers find that relatively few resources were actually allocated for ...necessary ingredients for change in practice at the school site" (p. 38).

The Superintendent and Principal Relationship

Sergiovanni (1984) identified five leadership forces, which determine whether a school is incompetent, competent, or excellent. The forces are technical, human, educational, symbolic, and cultural. The five leadership forces are illustrated in the form of a leadership hierarchy as depicted in Figure 2.3 as proposed by Sergiovanni (1984, p. 9). The combination of technical, human, and educational leadership forces while not necessarily guaranteeing excellence generally result in competent schools. A deficit in any of the three generally results in less effective schools. As a result, the relationship between the superintendent and principal becomes a critical one. In order to achieve the excellent level, the forces of symbolic and cultural leadership must be present. The greater the presence of the higher leadership forces, the less important the ones below become. In discussing the importance of principal leadership, Owens (1987) stressed the importance of symbolic leadership in his statement that principals who would be effective leaders "...must be prepared to engage in symbolic leadership and develop organizational cultures of a new and higher order" (p. 23).

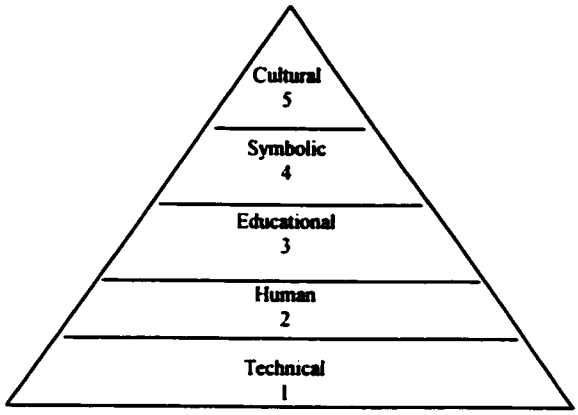

Figure 2.3 The Forces of Leadership Hierarchy
(Sergiovani, 1984, p. 9)

While there is an abundance of literature regarding administrative leadership and also an extensive amount of literature addressing relationships there is a limited amount of research into relationships between the superintendent and principal. The tasks, which constitute the work of administrators, have been and continue to be a perennial theme in the literature concerned with management, administration, and organization (Barnard, 1968; Machiavelli, 1952; Simon, 1976; Struck, 1994).

With respect to the administration of public schools, a variety of studies have been conducted which focus on the work associated with and the roles of various administrative positions. For example Wolcott (1973) conducted an ethnographic study focusing on the elementary school principalship. Austin and Brown (1970) investigated the work and roles of secondary assistant principals. Even though there are several studies that examine the work and roles of various administrative positions in public schools, the majority of these studies have tended to focus on a single administrative position in isolation with respect to other administrative positions within a school district. Reed & Conners (1983) also noted that while "...research has been conducted which addresses both the nature of the work of school administrators and the nature of work arrangements among school administrators, little specific attention has been give to this

area of research in the literature concerned with public school administration" (p. 2). In an additional study Goldman (1998) stressed the importance of exploring this area by stating that "[i]n a learning environment, leadership style says everything about the leader's deeply held educational beliefs – and these are mirrored in the culture of the school" (p. 40). It is the intent of the researcher that this study will result in information that may help administrators perform their jobs more effectively and as a result improve educational opportunities for students.

Chapter 3

Methodology

Introductory Overview

The methodology for this study was modeled after the Bidwell and Kasarda study, with a few exceptions. This study examined the relationship between organizational health factors and district achievement, whereas the Bidwell and Kasarda study did not. Also, the Bidwell and Kasarda study examined the relationship between parental education levels and district achievement, whereas this study did not.

The Unit of Analysis

The school district was selected as the unit of analysis.

State Report Card Data

The Nebraska Department of Education published the first State of Nebraska Report Card in 2000. The purpose of the report card was to provide the public with an overview of the effectiveness of Nebraska's schools. In order to produce the report card the Department of Education required all class II through class V school districts to provide data on items such as pupil teacher ratio, teacher qualifications, student socioeconomic status, student attendance, school district size, graduation rate, expenditures, and student performance. The report card was a summary of this data presented to the public as a means of demonstrating the progress of Nebraska schools.

The data obtained by the Nebraska Department of Education has not been readily available in the past. The present study not only broadened the basic understanding of

organization structure and effectiveness, but it also shed light on the question of whether school districts can make changes that may reasonably affect student achievement.

Many of the variables analyzed in Bidwell and Kasarda (1975) are also reported on the Nebraska State Report Card. Using the data collected by the Nebraska Department of Education for the State Report Card this study partially replicated the Bidwell study, but also added additional variables that were analyzed. This study focused on class III school districts in Nebraska.

Selection of School Districts

The school districts selected for this study were randomly selected from all Class III schools with a student population larger than 150, but smaller than 900. There were 227 Class III school districts in Nebraska during the 1999 – 2000 school year. Fifty school districts were randomly selected as the sample population. An alphabetical list of schools meeting the aforementioned criteria was developed using the Nebraska Education Directory. Each school was numbered and a random numbers table was then used to select districts for the sample population. The teacher selection process is described in the Survey Administration section.

Study Design

This study is a quantitative study which uses both pre-existing data and data collected through the use of a survey instrument.

Dependent Variables

The dependent variables for this study were reading and mathematics achievement. The degree of achievement in these areas was determined by the percentage of students in each district that fall into each quartile of the standardized achievement test

administered in each district. This percentage was then converted to a weighted percentage score. The percent of students in the first quartile (highest scorers) was multiplied by four, the percent of students in the second quartile was multiplied by three, the percent of students in the third quartile was multiplied by two, and the percent of students in the fourth quartile by was multiplied by one. The four weighted scores are then added to create a district score.

Independent Variables

The independent variables for this study can be divided into two groups, environmental conditions and organizational attributes. While many of the factors listed in the report card may indeed be valid measures of school effectiveness it is this researchers belief that one very important variable is being ignored when considering school effectiveness. The many studies identified in the literature review section speak to this point. The relationship between the superintendent and principal is not addressed in the Bidwell study. This variable has been added to this study in hopes to strengthening the Bidwell and Kasarda model and also to increase the explanatory power of the original study.

The variables and their operationalization are as follows:

Environmental Conditions (Exogenous Variables)

(1) School District Size – Total student population of the school district as reported in the 2000-2001 School District Membership Report.

(2) Fiscal Resources – The sum of all local, state, and federal revenue received by the school district, as reported in the

2000-2001 Annual Financial Report submitted by Nebraska public school districts and confirmed by their audit reports.

(3) Disadvantaged Students – The percent of all school-age children residing in the school district who are eligible for Free and Reduced-priced meals as reported in the 2000-2001 School District Membership Report.

(4) Percent Non-white – The percent of the population residing in the school district who were not classified as white as reported in the 2000-2001 School District Membership Report.

Organizational Attributes (Intervening Variables)

(1) Pupil-Teacher Ratio – The number of students (as reported on the 2000-2001 School District Membership Report) per teacher (as reported on the 2000-2001 Fall Personnel Report) calculated by dividing the number of students by the number of teachers in each district.

(2) Administrative Intensity – The full time equivalency (FTE) of personnel in the school district who must hold a valid administrative certificate as reported in a document specifically requested by the researchers from the Nebraska Department of Education Data Center.

(3) Professional Support Component – The full time equivalency (FTE) of personnel in the school district who are employed as counselors, nurses, and/or speech personnel as reported in a

document specifically requested by the researchers from the Nebraska Department of Education Data Center.

(4) Certificated Staff Qualifications – The percent of total certificated staff that held at least the Master's degree as reported on the 2000-2001 Fall Personnel Report.

Survey Instrument

The instrument used in this study (Appendix B) was developed by modifying a survey entitled *Organizational Health Survey* (1970) that was developed by P.T. Kehoe and W.J. Reddin. The original instrument was intended to measure organizational health in the business setting. The survey consisted of 80 items, which were grouped into eight categories with ten items each. The items on the original instrument were rewritten to measure perceptions of teachers in a school setting rather than employees in a business setting. Measures were obtained for each of the following categories: productivity, leadership, organization structure, communication, conflict management, human resource management, and participation.

The instrument was piloted in two Nebraska school districts that met the same criteria used when randomly selecting the 50 districts used in the study. Ten teachers were recruited in each district to participate in the pilot study in order to accumulate feedback on the instrument. Each teacher was mailed a letter (Appendix C) requesting their participation in the pilot study. Feedback was also obtained from the researcher's supervisory committee.

A review conducted through the Burros Institute found three major problems with the Organizational Health Survey. First is that the authors did not control for response styles. In The Ninth Mental Measurements Yearbook (1985) Dey noted "All the keyed responses are "agree" and this leaves the survey open to socially desirable responses. In effect the scale could well be measuring acquiescence rather than providing an accurate report on organizational attitudes" (p.1101). To compensate for this concern the survey was modified to include a four-point Likert Scale. The next issue the author had with the survey was that once scale scores have been obtained there's no information provided for interpreting the results. Finally, the organizational climate literature suggested that factors such as technology and organizational size have moderate to strong positive correlation with organizational climate scores. There is no direction as to what size of organization and at what level of technology the survey should be used. The last two concerns of the author were not factors in this study as all schools selected were limited in size.

Survey Administration

The superintendent of each of the districts selected to participate in this study was identified using the 2001 – 2002 *Nebraska Education Directory*. Each superintendent was mailed a letter (Appendix D) describing the study and informing him or her that his or her district was selected to participate in the study.

Data were collected by mailing a cover letter outlining the study (Appendix E), the questionnaire, and a self-addressed stamped envelope to a randomly selected group of teachers from each district. Five teachers or ten percent of the total number of teachers, whichever was greater, were selected to be surveyed in each district. A follow-up questionnaire was sent to all subjects who did not return the questionnaire within ten days

of the first mailing. Only those districts that had a return rate of at least three surveys were included in the study. In order to insure the confidentiality of the participants' responses the questionnaires were identified by number only. The surveys were kept in a locked file and destroyed after June 2002.

The Relationship of Dependent and Independent Variables

It is predicted that none of the environmental conditions will have a direct affect on achievement, except for percent non-white. If there are any school district effects at all on aggregate student attainment, then attainment should be influenced by student-teacher ratio, teacher qualifications, administrative intensity and the relative size of the professional support staff—more heavily by the first three than by the fourth.

This prediction is derived from the researchers view of instruction: that it is teacher-intensive, that it involves at its center teacher response to feedback from students, and that it generates a low level of interdependence between the sub-units of school districts.

Research Questions

Major Research Questions

1. Did organizational characteristics contribute to district achievement levels and if so, how much of the variation in student achievement was explained by these organizational characteristics?
2. Did environmental conditions of the district contribute to district achievement levels and if so, how much of the variation in achievement was explained by these environmental conditions?

3. Did the level of conflict within a district contribute to district achievement levels and if so, how much of the variation in achievement was explained by variation in a measure of conflict.
4. Did measures of organizational health contribute to district achievement levels and if so, how much of the variation in achievement was explained by variation in these measures?
5. How much additional explanatory power was created by the addition of the independent variable of conflict?

Sub-questions

1. Did environmental conditions of the school district (size, number of minorities, cost per pupil, number of disadvantage students, and fiscal resources) contribute to district achievement levels and if so how much of the variation in achievement was explained by these environmental variables?
    1.1 What percentage of the variation in district achievement as measured by adjusted district math and reading scores was explained by school size? Correlation coefficients determined through multiple regression were used to answer this question.
    1.2 What percentage of the variation in district achievement as measured by researcher converted district math and reading scores was explained by fiscal resources? Correlation coefficients determined through multiple regression were used to answer this question.

1.3 What percentage of the variation in district achievement as measured by researcher converted district math and reading scores was explained by the percentage of disadvantaged students in a district? Correlation coefficients determined through multiple regression were used to answer this question.

1.4 What percentage of the variation in district achievement as measured by researcher converted district math and reading scores was explained by the percent of non-white students in a district? Correlation coefficients determined through multiple regression were used to answer this question.

2. Did organizational characteristics (pupil-teacher ratio, administrative intensity, numbers of professional support staff, and certificated staff qualifications) contribute to district achievement levels and if so how much of the variation in achievement was explained by these organizational characteristics?

2.1 What percentage of the variation in district achievement as measured by adjusted district math and reading scores was explained by pupil-teacher ratio? Correlation coefficients determined through multiple regression were used to answer this question.

2.2 What percentage of the variation in district achievement as measured by adjusted district math and reading scores was explained by administrative intensity? Correlation coefficients

determined through multiple regression were used to answer this question.

2.3 What percentage of the variation in district achievement as measured by adjusted district math and reading scores was explained by the professional support staff component? Correlation coefficients determined through multiple regression were used to answer this question.

2.4 What percentage of the variation in district achievement as measured by adjusted district math and reading scores was explained by certificated staff qualifications? Correlation coefficients determined through multiple regression were used to answer this question.

3. Did conflict between the superintendent and principal as measured by the Organizational Health Survey subscale result in lower district achievement levels and if so how much of the variation in achievement was explained by variation in a measure of administrative conflict.

The researcher computed and reported the results of regression analysis. As defined by Borg and Gall (1989) "Multiple regression is a multivariate technique for determining the correlation between a criterion variable and a combination of two or more predictor variables" (p. 601). The criterion variables were math and reading weighted percentage scores. The predictor variables were those variables listed as our independent variables.