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RELATIONSHIPS BETWEEN ADMINISTRATOR EMPHASIS ON STAFF  
EVALUATION PROCESSES AND SECONDARY SCHOOL EFFECTIVENESS IN  
WASHINGTON STATE

*University of Washington*

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EVALUATION PROCESSES AND SECONDARY SCHOOL  
EFFECTIVENESS IN WASHINGTON STATE

by

DAISY ELLEN BRAWLEY ARREDONDO

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Doctoral Dissertation

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## Chapter I

### INTRODUCTION

This study was designed to examine the extent of the relationships between the process variables related to staff evaluation and the overall effectiveness of secondary schools.

#### Statement of the Problem

It is evident that there is a growing body of research concerned with the impact of particular types of input variables on student achievement. Research findings suggest that relationships between school input and output variables are complex and that simple one-variable linear relationships are not obvious to the casual observer (Madaus et al, 1980). The variables that seem to be affecting scholastic attainment are those that reflect the activity or processes of the school rather than status variables such as size, physical amenities, or average number of elective classes taught. Staff evaluation is the process examined in this study.

While preliminary studies indicate that staff evaluation processes may improve the quality of classroom instruction (Moe, 1975; Diamond, 1975; Havighurst, 1972), and practicing educational administrators apparently believe

staff evaluation makes a difference in instructional quality (Redfern, 1963, Hoy and Miskel, 1982), to date, research designed to show a direct relationship between administrator emphasis on staff evaluation and overall school effectiveness has not been reported. This study was designed to show the extent of such a relationship and to provide a positive contribution to both practical and theoretical knowledge bases for school administration.

#### Background Information and Rationale for the Study

The notion that schools don't make a difference in the achievement of children has done much to obstruct educational progress. Some educators have used this idea as an excuse for believing that poor and minority children cannot be expected to learn as much as or as well as others; some principals have used it as license to administer ineffective schools (Shoemaker and Fraser, 1981:178).

Of primary impetus to this belief were two United States publications, Equality of Educational Opportunity, James Coleman et al (1966), and Inequality: A Reassessment of the Effect of Family and Schooling in America, Christopher Jencks (1972). Both Coleman's and Jenck's reports were aimed at investigating the influence that societal, socio-economic, and family factors have on student achievement. Coleman conducted a large-scale survey of some 645,000 United States students and concluded that educational attainment was largely independent of the schooling the students received. Jencks reanalyzed data from a variety of investigations, including Coleman's, and summarized his

findings by stating that "...equalizing the quality of high schools would reduce cognitive inequality by one percent or less..." and that "...additional school expenditures are unlikely to increase achievement, and redistributing resources will not reduce test score inequality." (1972:8).

At least part of this concern over the effect of schooling was undoubtedly due to the financial and moral commitment to education being made on a grand scale by the United States Congress. This substantial commitment was evident both in policy areas, where efforts were being made to correct inequalities in education and society, and in financial terms, as vast amounts of money were allocated for Head Start and Title I programs. As the primarily unfavorable evaluations of these compensatory education programs became available, a growing pessimism about the public school's ability to make any real difference in achievement surfaced. Was this pessimism justified? To some researchers, the empirical evidence appeared sound. But to others, the data were counter intuitive, and served as a challenge to stimulate further study. During the past ten years considerable evidence has emerged to show that schools can make a difference in the achievement of children. A review of related school effectiveness literature is presented in Chapter II of this dissertation; however, some introductory comments are appropriate here. Paired case studies on school effectiveness have been completed by George Weber (1971), by

the Office of Education Performance Review for the State of New York (1974), and by Madden, Lawsen, and Sweet (1976) in California. These researchers classified schools as effective or non-effective (usually on the basis of standardized achievement test scores) and then carried out in-depth analyses, using interviews, questionnaires, and on-site observations, to identify institutional differences that seemed responsible for the observed differences in achievement.

Gilbert Austin (1978) along with several University of Maryland researchers, used Maryland's accountability data to identify 30 "outlier" schools. Eighteen were classified as high achieving schools and twelve as low achieving. Their study aimed at determining the characteristics of both the higher and lower achieving schools. Wilbur Brookover and Lawrence Lezotte (1977) conducted an in-depth analysis of eight "declining" and "improving" elementary schools. Their purpose was to identify relationships among school structures, climate, program, or personnel changes, and any consistent patterns of improvement or decline in achievement. Ron Edmonds' and J.R. Frederiksen's (1978) Search for Effective Schools Project used a similar approach to ascertain effectiveness characteristics after locating 20 sample schools to study.

Studies of secondary school effectiveness have recently been completed by school researchers in London and Ireland.

Michael Rutter, University of London (1979), gathered data on twelve London schools over a three-year period, using interviews, questionnaires, and class observations. Rutter and his colleagues showed that schools only a few miles apart, serving students with similar social backgrounds and intellectual abilities, can produce very different educational results. George Madaus and Peter Airasian at Boston College, along with Thomas Kellaghan at Saint Patrick's College in Dublin (1980), have just completed a five-year study comparing standardized achievement tests and ability tests as measures of differential achievement in Irish schools. It is from the results of such a wide variety of studies that many educators now optimistically conclude that schools can and do make a difference.

A review of recent literature on school effectiveness shows the reader that a number of input variables exist that may be related to student achievement and hence to effective schools. Several of these variables consistently emerge as being important in an effective school organization. A partial listing of these factors would include the following items.

Effective schools tend to have staffs who believe that students can learn. A consistent factor in a majority of the studies on school effectiveness is this crucial connection between staff expectations and achievement (Edmonds, 1978, Journalism Research Fellows, 1979, Behling, 1981, Brookover and Lezotte, 1977, Persell, 1977). Brookover and Lezotte found that positive factors in the "improving" schools included an acceptance and belief that all children could reach at least minimum mastery in reading and math. These

researchers concluded that because a commitment to the mastery of basic skills was made, more time was spent on direct instruction in these areas which led to higher achievement.

Strong leadership appears to be present in effective schools. This factor may also be what is showing up in studies that find a sense of purpose or direction as being important. What is meant by strong leadership is not entirely clear. Shoemaker and Fraser (1981) prefer the term "assertive leadership" and define it as including both what the principal does and what he/she allows to happen.

The quantity of schooling, both student attendance and instructional time on task, frequently appears as an important and variable in student achievement (Rutter, 1979, Rosenshine and Furst, 1973, Fisher et al, 1978, Stallings, 1980, Denham and Lieberman, 1980). As Bennett (1978:129) says "...schools vary greatly in the amount of time spent waiting for the teachers, and it seems that children show greater involvement in lessons when there is little time wasting of this kind."

Consistent, fair, and well-defined disciplinary procedures and the implementation of those procedures is found to correlate positively with effective schools, (Journalism Research Fellows, 1978, Rutter, 1979).

A number of studies reviewed by Rosenshine and Furst (1973) confirm that quality of instruction is related to student achievement. Bloom (1971) defines this variable as the degree to which lesson presentation, explanations, and sequencing of the tasks to be learned approach an optimum for specific learners.

Academic emphasis and homework assignments are factors resulting in higher student achievement in other studies and are perhaps related to the expectation factor or to time on task.

Emphasis on staff evaluation was selected as an independent variable for this study because of the continued high level of both public and researcher interest in teacher accountability. Washington State's Basic Education Act, Learning Objectives Law and the accountability legislation are examples of public concern with instructional quality.

Educational researcher interest in both teacher and organizational accountability is obvious when we examine the volume of work presently being completed on direct instruction, mastery learning, instructional theory into practice (ITIP), and the increased attention being given to process/product relationships in education. Additionally, media attention to voucher requests, increased graduation requirements, basic skills approaches, college prep programs, and quality instruction itself, reflect specific coalitional concern that maximum effect be obtained from the increasingly tighter dollars available.

The current interest in effectiveness of schools as organizations is a natural extension of this concern with accountability in our public schools and classrooms. It was believed that a research project that examined the relationship between a building administrator's staff evaluation process and the school's overall effectiveness would provide a positive contribution to both theoretical and practical knowledge bases for school administration. Knowledge about the impact of administrative emphasis on the substeps of the teacher evaluation process would be valuable to practicing administrators because it would allow them to predict the specific contribution to organizational effectiveness that this emphasis makes.

Additionally, it was believed that this study would enlarge our understanding of employee performance and

motivation. The research findings of Porter and Lawler (1965, 1975), Hoy and Miskel (1982), Shetty and Carlisle (1974), and others summarized in Chapter II, support the idea that the setting of performance goals for improvement of administrative skills in staff evaluation processes might lead to better staff evaluations; and since a relationship between staff evaluations and instructional quality was hypothesized in this study, it seemed reasonable that through this goal-setting process, the administrator would be contributing to the effectiveness of the school.

#### Purpose of the Study and Overview of the Project Design

The general purpose of this study was to explore a number of questions regarding relationships between administrator emphasis on staff evaluation and the overall effectiveness rating of the senior high schools.

Both conventional wisdom and research findings indicate that instructional quality is related to school effectiveness. It seems reasonable that the quality of the staff evaluation process can affect the quality of instruction, and that this in turn could impact a school's overall effectiveness. In this study, variables that appear to indicate quality in the staff evaluation process have been identified and defined as the administrative emphasis on staff evaluation. The relationships between these variables and the overall effectiveness of the school were then examined.

The effectiveness rating of the school was defined as a composite of standardized scores for a set of selected component variables. Using a list of school characteristics shown by recent research to be associated with effective schools, effectiveness ratings were calculated for a sample of Washington State secondary schools. Correlations of these ratings were then made with administrative emphasis on the teacher evaluation process.

The data source for this dissertation was the Washington State sample of the 1980 High School and Beyond Study. The High School and Beyond Study was sponsored by the National Center for Education Statistics and directed by James Coleman of the National Opinion Research Center at the University of Chicago. While the study had as its primary purpose the collection of information of value in future educational policy development at the federal, state, and local levels, the study generated a large bank of data about high school student opinions, their family background, education, expectations, plans for the future, their educational achievement levels, and their school characteristics and practices. This research project made use of these data to provide answers to the questions identified below.

### Research Questions

Q 1: Is there a positive relationship between administrator emphasis on staff evaluation (through time spent on evaluation processes, personal goal-setting, and development

of improvement plans for "marginal teachers") and the effectiveness rating of Washington State High Schools?

Q 2: Do Washington State High Schools having administrators who spend more time on teacher evaluation processes than that required by the Master Contract have a higher effectiveness rating? (i.e. Is the administrator's extra effort on staff evaluation related to the effectiveness rating of the school?)

Q 3: Do Washington State High Schools, administered by principals who attended an inservice program during the previous school year, have a higher effectiveness rating?

Q 4: Is there a relationship between administrator time spent on staff evaluation processes and the percent of staff with advanced degrees, and if so, does this relationship vary with the effectiveness rating of the Washington State High School?

Q 5: Is there a relationship between administrative time spent on staff evaluation processes and the percent of staff who have worked in the same building for more than ten years, and if so, does this relationship vary with the effectiveness rating of Washington State High Schools?

Q 6: Do Washington State High Schools where administrators report that teachers spend a greater percentage of class time on instructional activities have a higher effectiveness rating?

Summary

The purpose of this study was to explore relationships between administrator emphasis on staff evaluation processes and the overall effectiveness ratings of a sample of Washington State senior high schools. The project defined administrative emphasis on staff evaluation as being composed of variables which were believed to be indicative of the quality of the staff evaluation process. The effectiveness rating was defined as consisting of a set of component variables identified in recent research as being characteristic of effective schools. Correlations of the effectiveness ratings were made with the variables making up the administrative emphasis on staff evaluation processes. The data source for this research was the Washington State sample of the 1980 High School and Beyond Study.

It was believed that a research project that examined the relationships between administrative emphasis on staff evaluation processes and overall school effectiveness would provide a positive contribution to both theoretical and practical knowledge bases for school administration.

## Chapter II

### RELATED STUDIES FROM THE LITERATURE

The purposes of the literature review are to expand upon the context and background of this research project, to assist in further definition of the study, and to provide a theoretical basis for hypotheses development.

The scope of the selected project dictates general content area reviews in (1) organizational effectiveness, (2) motivation, goal-setting, and employee evaluation, and (3) school/classroom effectiveness research. This chapter will present a discussion of each of these.

#### Organizational Effectiveness

The organization as a unit of consideration in effectiveness questions is a comparatively new concept in education. However, in the social and behavioral sciences, researchers have been concerned with the effectiveness of organizations for the past 50 years (Cameron, 1978, Georgopolous and Tannenbaum, 1957). Although the body of research on organizational effectiveness is large and growing, there is little agreement about how to define and measure the concept. For example, Argyris (1962) refers to organizational effectiveness as the condition in which the organization manages to increase outputs while decreasing

inputs. Yuchtman and Seashore (1967) define effectiveness in terms of ability to exploit the environment for acquisition of scarce resources. Steers (1975) reviewed 17 major studies of organizational effectiveness and found 15 different evaluative criteria used. He says these divergent definitions are reflective of the individual's frame of reference. For example, to an economist an organization's effectiveness is synonymous with profit margins or investment returns; to a production manager the quality or quantity of goods or services determines effectiveness; a research scientist may see it in terms of patents, inventions or new products, while to the social scientist the quality of life may determine organizational effectiveness. Steers (1975:225) adds that:

One of the most apparent conclusions emerging from a comparison of these multivariate models is the lack of consensus as to what constitutes a useful and valid set of effectiveness measures. While each model sets forth its three or four defining characteristics for success, there is surprisingly little overlap across the various approaches.

Coulter (1979) groups the different ways of viewing organizational effectiveness into three major categories. These are: (1) behavioral/attitudinal, which includes employee satisfaction, absence of tension and conflict, psychological commitment, turnover and absenteeism, interpersonal relations and morale; (2) the processes of the organization, (i.e. the internal operations and those exchanges between the organization and its environment);

and (3) the goal attainment model, or the extent to which an organization achieves goals and objectives.

The goal attainment model appears, at least on the surface, to be the most objective manner of examining an organization's effectiveness. However, two major doctrines exist relative to goals. The first, a "prescribed" goal approach, looks at the effectiveness in terms of the goals found in organization charters and those usually expounded by management personnel. The second is referred to as a "derived" goal approach, and examines functional or end-state goals of the organization. Both of these approaches have been criticized.

Etzioni (1960:258) rejects the goal approach because of its subjective biases.

The goal model is considered an objective and reliable analytical tool because it omits the values of the explorer, and applies the values of the subject under study as the criteria of judgment. We suggest, however, that this model has some methodological shortcomings and it is not as objective as it seems to be.

He further criticizes the assessment of organizational effectiveness in terms of goal attainment on a theoretical basis (p. 258).

Goals, as norms, as sets of meanings depicting target states, are cultural entities. Organizations as systems of coordinated activities of more than one actor, are social systems.

Katz and Kahn (1978:15) add that:

...the stated purpose of an organization as given by its by-laws or in the reports of its leaders can be misleading. Such statements of objectives

may idealize, rationalize, distort, omit, or even conceal some essential aspects of the functioning of the organization.

These and other critics of the goal approach essentially are telling us that goals as ideal statements do not offer the possibility of realistic measurement, and as cultural entities arise outside of the organization in a social system and can't be assigned arbitrarily as properties of the organization itself. Starbuck's (1965) criticism is even more direct. He says that organizational goals are essentially nothing more than courses of action imposed on the organization by its environment and not at all preferred end states to which an organization is striving. To this Yuchtman and Seashore (1967) ask how can a given social unit be regarded as "effective" if it cannot even determine goals for itself? In addition to these concerns, managers within the system will have differences in perception and emphasis regarding the organization's goals.

The "derived" goal approach to organizational effectiveness is normative in the sense that the researcher determines what the goals are, or should be, from the logical relationships among the parts of the larger social system. This is also one of the major weaknesses to the measurement of an organization's effectiveness because the researcher's frame of reference tends to cloud the picture here. This viewpoint tends to put the focal frame of reference for assessment of effectiveness not within the organization but rather

into the superordinate system. Is it valid to consider the organization's effectiveness only within the total system?

The goal attainment model is also apparently the common sense answer to examining an organization's effectiveness and hence appeals to educational researchers. Katz and Kahn (1978) have attempted to specify a satisfactory definition for organizational effectiveness by focusing on questions about goals and preferences in terms of some constituent group. These are (1) the preferential ordering of constituencies, (2) the linear programming solution, (3) survival as the sovereign criterion, (4) throughput as the organizational goal, and (5) the organizational contribution to the suprasystem.

Various arguments have been developed to support claims (or goals) of one or another constituent group and an organization is likely to have several constituencies, each with specifiable values and preferences for different organizational outcomes. The political problem then becomes one of determining which constituent group should make goal-setting decisions. Katz and Kahn (1978) use the concept of the coalition (or combination of constituencies) first proposed by Pennings and Goodman (1977) as being the determining force in goal decisions. This concept of a dominant coalition is appealing as a description of complex organizational effectiveness because of the extent to which factional differences must be resolved in order for organizational functioning to occur.

The linear programming solution examines effectiveness as a process of optimization among competing criteria. Here an optimal solution is sought by defining the constraints and maximizing some specific outcome within those constraints. For example, profitability may be the criterion to be optimized in business and student achievement is the important one for public schools. Katz and Kahn (1978) note that because complex organizations are frequently loosely coupled systems and constraints often minimal, the choice of criterion for optimization is arbitrary and a great deal of internal discretion about performance dimensions exists.

Katz and Kahn (1978) argue that this limited applicability of the profit criterion encourages a search for a concept of wider relevance and suggest that organizational survival may be the most important criterion. However, the survival concept has limited usefulness as a measure of short term effectiveness because of its finality.

The throughput of an organization as described by Katz and Kahn (1978), appears to be more closely related to the concept of the efficiency of an organization than to its effectiveness. Additionally, it pays little attention to the conflicting definitions of different constituent groups and motivations of management. This limits the applicability of the concept to the clarification of organizational goals.

In an examination of the effectiveness of an organization in terms of the suprasystem, a major limiting factor is that value judgments are made about the organization that

are dependent upon the individual's reference point. Such effectiveness judgments may ignore the multiple outputs of the organization and deny any organizational autonomy.

From this brief review of some of the organizational effectiveness literature, it is apparent that no single definition of effectiveness exists. It is also obvious that the identified evaluative criteria differ widely and reflect little agreement among researchers in the field. This diversity is not as strong in the educational research specifying the organization as a unit for effectiveness measures. The larger degree of agreement on effectiveness criteria and definitions in education may be reflective of consensus opinion or it may only indicate that the early stages of school effectiveness research have not identified other equally important criteria nor developed methodology for measuring such criteria.

#### Motivation, Goal-setting, and Employee Evaluation

Any organization's overall effectiveness is certainly dependent to some degree on the employee's level of task performance. Individual employee motivation has been a subject of interest in organizational research since Max Weber's 1917 studies of bureaucratic functioning. Over the past 75 years, organization and management researchers have progressed through a series of motivational theories in their attempts to explain work motivation (Behling and Shapiro, 1974). Each theory posited was based on a

generalized conception of man, historically tended to be an oversimplified viewpoint of the worker, and usually left much observed human behavior unexplained. Taylor's conception of the worker as a rational-economic man probably has roots in the philosophy of hedonism and argues that people calculate actions which maximize self interest and then behave accordingly. A social conception of the worker says he/she is motivated by social needs and obtains a basic sense of identity through relationships with others. This theory assumes the employee is more responsive to the social forces of the peer group, as demonstrated by the Hawthorne studies (Rothlisberger and Dickson, 1929) than to the controls and incentives of management. The self-actualizing conception of the worker (Argyris, 1962, Maslow, 1970, Likert, 1967 and McGregor, 1960) argues that the meaning inherent in the job is not related so much to social needs as to the worker's need to use his/her skills in mature, productive and self-actualizing work. Here the organizational emphasis shifts from "doing something to arouse employee motivation" to providing an opportunity for the employee's existing motivation to be released and harnessed to organizational goals. The behaviorists added the environmental component to the organizational framework, and asked managers to structure the environment through work incentives so that desired employee behaviors were rewarded.

More recent motivational research supports the conception of the worker as being both highly complex and

highly variable. Hughes and Flowers (1973), and Graves (1973) have found that workers exhibit very different motives dependent upon the time, the organization, and even the subparts of the organization. These studies show that managers need to look more closely at individuals and value systems, rather than trying to aim personnel strategies at an "average employee". Vroom (1964) and Atkinson (1964) have separately proposed the expectancy theory of work motivation which states that motivation is the product of expectancy, valence, and instrumentality. These components are defined as follows: (1) expectancy is the belief that one's efforts lead to successful performances; (2) valence is the attractiveness or desirability an individual attaches to a reward; and (3) instrumentality is the perceived correlation between doing a good job and attaining specific rewards. While considerable research support exists for expectancy theory in organizational psychology (Mitchell, 1974) little work has been done with this model in educational research (Hoy and Miskel, 1982).

Because effective work performance is clearly related to motivation, with performance being a direct function of ability and motivation, one is tempted to argue that the overall organizational effectiveness is directly dependent on employee task performance. In his 1979 review article, Coulter says that while organizational effectiveness probably depends on the behavior and attitude of its members, the internal processes of the organization and

interactions with its environment cannot be ignored. Katz (1973) attempts to place individual motivational concepts within the framework of the organization in his identification of six major motivational patterns found in organizations. These six are: (1) conformity with legal norm and rule compliance; (2) instrumental individual rewards; (3) instrumental system rewards; (4) intrinsic satisfaction from role performance; (5) internalization of organizational goals and values; and (6) involvement of primary group relationships. He then argues that managers need to examine the consequences of these motivational patterns for organizational performance and identify specific conditions which must be established for obtaining the desired consequences.

Katz goes on to define three basic types of behavior which organizational employees must exhibit in order for the organization to function. These are: (1) people must enter and remain with the organization; (2) role assignments must be carried out in a dependable fashion; and (3) innovative and spontaneous activity beyond role specification must exist.

In addition to the members' attitude and behavior impacting the organizational effectiveness, Blau and Schoenherr (1972) list organization size, degree of complexity, decentralization, and administrative overhead as being relevant to effectiveness. Research findings by Morse (1969) and by Brass (1981) support the idea that both

the structure of the organization and the nature of the task directly affect the motivation of organizational members. For example, highly structured formal organizational practices seem to fit with a predictable task because employee behavior has to be rigidly defined and controlled around high speed production lines. On the other hand, unstructured formal practices make a lot of sense when the task cannot be defined in advance and is highly unpredictable as in a research lab.

Janowitz (1969) and Katz and Kahn (1978) argue that educational organizations must be viewed somewhat differently than economic organizations. Since schools are concerned with the shaping of human beings rather than the transformation of objects, the teacher's role cannot be precisely defined or prescribed. Katz and Kahn (1978) state that learning and reeducation occur through "...techniques of spacing material, mechanical reinforcement, and deeper motivational processes..." (p.159) and therefore require that wider discretionary power be allocated to the staff member in this type of organization. This necessity for researcher sensitivity to particular organizational types is further supported by Karl Weick who uses educational organizations as prime examples of loosely coupled systems which:

...(incorporate) a surprising number of disparate observations about organizations, suggest novel functions, create stubborn problems for methodologists, and generate intriguing questions for scholars. (Weick, 1976:1).

From these research findings, it is apparent that in an organization such as a school, where the molding of people is a major goal, and where the task is somewhat unpredictable, we cannot rely solely on organizational control to guarantee minimum effort of employees. Instead, we must attract, retain, and motivate employees capable of carrying out "...the innovative and spontaneous activity to meet objectives beyond role specifications..." (Katz, 1978:128).

The literature on goal theory (Locke, 1968, Locke et al, 1970) consistently shows strong positive relationships between goal setting and task performance. Locke summarizes these studies as follows:

(a) the most immediate, direct motivational determinant of task performance is the individual's goal or intention; (b) external incentives affect action through their effects on the individual's goals and intentions; and (c) affective reactions are the result of evaluations, which consist of estimating the relationship between the existents one perceives and one's values or value standards. (1970:133).

While existing research indicates that some of the activities involved in employee appraisal processes in the private sector may play a mediating role in task completion and motivation (Porter and Lawler, 1965, 1973), little work connecting staff evaluation and employee motivation has been completed in public organizations. Fuller and Miskel (1972) did complete an employee incentive survey with 550 educators and found that 77% reported that how they were evaluated was a source of incentive in their school work situation. Additionally, goal-setting in an MBO process has been

studied by Shetty and Carlisle (1974) in higher education. They found that use of a goal-setting process provided objective data for faculty performance evaluation and appeared to be consistent with the high values professionals place on involvement, participation and freedom of action. They concluded that the goal-setting process also contributed to the faculty's knowledge of organizational goals, and improved planning, performance, and communication. Since the Shetty and Carlisle study was completed in a college setting, it would be helpful to know the extent to which these conclusions are generalizable to the lower level professionals in senior high schools.

#### School and Classroom Effectiveness Research

Since 1970, a number of research projects have focused on identification of school and classroom variables that appear to be related to student achievement, or to overall effectiveness of the school as an organization, or to the classroom as a unit. Not all of these identified variables are addressed by this particular research effort. In this study, the dependent variable (effectiveness) is a composite of factors identified by other researchers as contributing to or determining the effectiveness of the school as an organization. This composite includes: student achievement, instructional quality, academic emphasis of the school, teacher expectations, fairness of discipline, student attendance, teacher interest in the students, amount of

homework, student drop-out rate, and teacher absenteeism. This research review is organized around these effectiveness component variables.

Student Achievement. Many of the school effectiveness research projects have used student achievement on standardized tests as the sole criterion for the effectiveness rating. Weber (1971) identified four inner-city schools which were achieving success in reading. He defined the "successful" schools as those achieving the national grade norm as a median score and as having a low percentage of gross failures. The New York Office of Education Performance Review (1974) identified two schools for case studies, one high-achieving and one low-achieving, on the basis of results from the statewide testing program. The Madden, Lawsen, and Sweet (1976) study of 21 pairs of California elementary schools categorized schools as high or low achieving on the basis of pupil performance on standardized achievement measures. The Maryland State Department of Education's Process Evaluation Study (Austin, 1978) of outlier schools based selection of the statistical outliers primarily on the residual Iowa Test of Basic Skills grade equivalent distributions. The 1977 Brookover and Lezotte research project identified six improving and two declining schools by using data collected over several years by the Michigan Department of Education with tests of the state's

grades four and seven students. These tests are criterion-referenced standardized measures of student performance in basic skills. The Philadelphia Study (Kean et al, 1979), and the Los Angeles Analysis of Reading in Selected Minority Schools (1976) used gains in reading test scores as the criterion for effectiveness, and Richard Murnane (1975) investigated the relationship between school resources and effectiveness, with the cognitive achievement of 875 black children as the effectiveness criterion.

Other researchers have used student achievement as a major effectiveness component variable but have expanded the definition of effectiveness slightly. For example, Edmonds (1979) and Edmonds and Frederiksen (1978) have used differential failure rates between white, middle income students and black, low income students as a measure of the effectiveness of the school. In their Search for Effective Schools projects they have defined effective schools as those where black and white students are failed or retained at the same rates. Rutter's (1979) study of London secondary schools defined effectiveness as including a student achievement component, along with rates of behavior problems, delinquency, attendance, and acts of insubordination.

The Madaus (1980) report on Irish and English secondary schools along with other effective schools research projects argue that the use of standardized achievement test scores as a single measure of effectiveness has definite constraints.

In their research, Madaus and colleagues found that curriculum specific tests were more valid than standardized achievement or ability tests.

And rather than being willing to judge a school's effectiveness on the basis of any tests, researchers associated with Goodlad's (1979) Study of Schooling argue that we cannot as yet properly study achievement outcomes because the school's contextual variables must first be delineated and described. This California based Study of Schooling is a comprehensive 6-year examination of sets of schools, consisting of a senior high school and the feeder junior high(s) and elementary schools. The data collection teams concentrated on perceptions of people in schools and observations made during on-site visits. Goodlad (1979) says the major purpose of the study is to provide insight into the schools examined and to raise thoughtful questions about what they appear to be doing and why they do what they seem to be doing. In other words, the study is an examination of school processes rather than outcomes.

Instructional Quality. The relationship between teacher behaviors and student achievement has been studied by a number of researchers over the past 12-15 years and certain of these behaviors are now rather commonly linked with the concept of instructional quality or instructional effectiveness. Rosenshine and Furst (1973) present a comprehensive summary of research on teaching that indicates consistently

significant correlations between certain teacher behaviors and student learning. These include: (1) clarity--the cognitive clarity of teacher presentations; (2) variability--the teacher's use of variety in instructional techniques; (3) enthusiasm--the teacher's excitement, involvement, power and vigor of presentation; (4) task orientation--the degree to which the teacher is business-like or achievement oriented; and (5) student opportunity to learn criterion material--the relationship between material covered in class and test performance. Rosenshine and Furst (1973) also rated six other teacher behaviors as being of secondary significance. These are: (1) use of student ideas and general directedness; (2) appropriate use of criticism; (3) use of structuring comments--teacher cues or transition statements; (4) type of questions asked; (5) teacher probing of student response; and (6) level of difficulty of the instructions. They further define teacher effectiveness as the degree to which the teacher's behavior results in student learning, positive student attitudes toward school and a climate of mutual interpersonal regard.

This early research effort has served as a frame of reference for more recent studies of instructional effectiveness. The concept of direct instruction as offered by Rosenshine (1976) is one in which the teacher is the dominant leader who decides which activities will take place; learning is approached in a direct business-like manner,

and is organized around questions posed by the teacher or curricular materials. Materials and instruction are well organized, and instruction proceeds in small specific steps with learning objectives clear and known to students. Within this task oriented atmosphere, the teacher is warm and convivial, showing high expectations, and frequently giving praise and encouragement for quality academic work. Good (1979:55) calls this type of teaching active teaching and defines it as occurring when

...a teacher sets and articulates the learning goals, actively assesses student progress, and frequently makes clear presentations illustrating how to do the assigned work. Direct (or active) instruction does not occur when teachers do not actively present the process or concept under study, when they fail to supervise student seatwork actively, or if they do not hold students accountable for their work.

Other researchers use the term direct instruction for this concept and say it represents a conceptual framework within which an individual teacher adjusts for the particular students involved and type of materials being taught. Evertson, Anderson, and Brophy (1978, 1979) provide examples showing that different patterns of teacher behavior correlate with student achievement gains in high- and low-socio-economic status (SES) classrooms. From this study, they conclude that if teachers don't adjust teacher behaviors to the context, student achievement will be lower. Powell (1978) supports these ideas and notes that direct instruction should not be viewed as a set of prescriptive rules but

instead as a conceptual orientation that values active teaching, expository and focused learning, and accountability.

Stallings and Hentzell (1978) have reviewed process-product research studies and concluded that higher achievement gains are associated with orderly classrooms, persistent application to academic tasks, teachers' active involvement with students, and with a well-organized and structured learning situation. Additionally, they note that the finding that direct instruction is correlated with increased learning gains is a common and almost universal conclusion of recent research.

While some researchers have looked at the components of effective instruction, Bloom (1974) has addressed the quality of instruction more directly through his work with mastery learning. He has found that when the quality of instruction (the processes of original instruction, feedback, and corrections) is high, student achievement levels and time on task increase. Bloom (1976) defines the quality of instruction variable in terms of particular characteristics of the interaction between students and instruction. The student's level of participation appears to be the strongest element in this interaction. His research shows that teacher cues, student participation and reinforcement account for at least 20% of the variation in student learning. This finding that quality of

instructional processes is highly related to student achievement is also supported by the Washington State sample of the High School and Beyond Study, Rasp and Ensign (1982) and Ensign and Rasp (1981). In this study of more than 3600 Washington State students, positive correlations were found between student ratings of the school's instructional quality and higher student scores on the achievement test battery.

Academic Emphasis. Much of the effective schools research identifies academic emphasis as an important variable, even though some of the studies use other terms to describe the concept. Edmonds (1982) describes a "pervasive and broadly understood instructional focus" as being characteristic of effective schools. Murphy et al (1982) described an "academic press" concept in their Santa Clara County study of California schools. Quimby (1981) discusses the importance of "outcome based education". Stallings et al (1981) use "high academic expectations" as a variable related to student achievement.

Several other studies characterized effective schools as emphasizing pupil acquisition of basic skills in reading (Weber, 1971); as having an administrative and teaching staff who accepted responsibility for changing reading skills (N.Y. Office of Education Performance Review, 1974); and as having teachers who spent more time emphasizing instruction

in social studies, reading, and language development (Madden, Lawsen and Sweet, 1976). Brophy's (1979) review of effective classrooms also supports academic emphasis. He lists the teacher's focus on academic goals as a correlate with student achievement. Rutter et al (1979) list the degree of academic emphasis as a relevant characteristic of effective schools. Madaus et al (1980) note that successful schools are working toward attainment of fairly well-defined cognitive objectives. Brookover and Lezotte's (1977) Changing Schools Study showed improving schools emphasized accomplishment of basic reading and math skills and that they tended to have staffs who believed all their students could master basic skills. In their later work, Brookover et al (1982) expand this view of academic expectations (or emphasis) into the concept of an effective school learning climate, which is specifically designed to explain and help increase student achievement. They say that all aspects of the school's belief system, its organization, and the instructional practices, interact to produce the learning climate, and that an effective school is one in which essentially all students acquire basic skills and desired school behaviors. Brookover et al (1982) cite extensive research demonstrating that the beliefs and evaluations about students' abilities to learn, and about the expectations teachers hold for students, are highly related to student achievement. They do emphasize, however, that

simply believing that students can learn and holding high expectations are not enough. The successful school must also have effective instructional programs directed at the learning of specific objectives. Effective instructional, and achievement-oriented leadership are used as descriptors of a concept similar to academic emphasis by Coulson (1977), Kean et al (1979), Phi Delta Kappa (1980), and Shoemaker and Fraser (1981).

Teacher Expectations. Rosenthal et al (1968) created a high level of interest in examining ways in which teachers interact with both low and high achieving students with the now classic study, Pygmalion in the Classroom. They induced higher teacher expectations for randomly selected students and argued that these higher expectations led to the increased student achievement observed for some students. Although the original Pygmalion study has been severely criticized for faulty methodology, several summaries of research have since been completed that report strong, positive correlations between teacher expectations and student achievement (Rist, 1970; Purkey, 1970; Brophy and Good, 1974; Persell, 1977; Crano and Mellon, 1978; and Journalism Research Fellows, 1979). In Purkey's summary of more than 100 studies, he concludes that a continuous interaction exists between the self and academic achievement and that each directly influences the other. That is, not only will

poor achievement adversely affect a child's self-concept, a child's low self-concept will lead to poor achievement.

In Good's (1981:416) summary of over a decade of research on student achievement, he proposes a model that may explain the observed relationships.

1. The teacher expects specific behavior and achievement from particular students.

2. Because of these varied expectations, the teacher behaves differently toward different students.

3. This treatment communicates to the students what behavior and achievement the teacher expects from them and affects their self-concepts, achievement motivation, and levels of aspiration.

4. If this treatment is consistent over time, and if the students do not resist or change it in some way, it will shape their achievement and behavior. High expectation students will be led to achieve at high levels, whereas the achievement of low expectation students will decline.

5. With time, students' achievement and behavior will conform more and more closely to the behavior originally expected of them.

Much of the research completed in the past 10 years has focused on questions concerning ways in which teacher behavior varies toward high and low achieving students. Good (1981:416) lists 12 major areas of teacher behaviors that vary with expectations. These include:

- (1) seating slow students farther away from the teacher or in a group (making it harder to monitor low achieving students or to treat them as individuals);
- (2) paying less attention to lows in academic situations (smiling less often and maintaining less eye contact);
- (3) calling on lows less often to answer classroom questions or make public demonstrations;
- (4) waiting less time for lows to answer questions;
- (5) not staying with lows in failure situations (providing clues, asking follow-up questions, etc.);
- (6) criticizing lows more frequently than highs for incorrect public responses;
- (7) praising lows less frequently than highs after successful public responses;
- (8) praising lows more frequently than highs for marginal or inadequate public responses;
- (9) providing low achieving students with less accurate and less detailed feedback than highs;
- (10) failing to provide lows with feedback about their responses more frequently than highs;
- (11) demanding less work and effort from lows than from highs; and
- (12) interrupting the performance of low achievers more frequently than that of high achievers.

Researcher attempts to explain these differences in teacher behaviors toward students based on expectations held

for these students have led to the identification of two very different types of teachers (Good, 1980). Teachers who criticize lows for incorrect responses appear to have higher levels of intolerances for these students and those who reward incorrect or marginal responses seem to be excessively sympathetic to the low achievers. But whatever the reason, both types of teachers communicate to students that effort is not related to classroom performance.

While every research study that has examined relationships between student achievement and teacher expectations has shown a positive relationship, one should remember that the research provides correlational evidence only (Good and Brophy, 1973, 1978; Martin, 1973; Brophy and Evertson, 1977; Brown, 1976; McDonald and Elias, 1976; Rutter et al, 1979; Cooper, 1979; and Smith, 1980), and that we cannot say that teacher expectations cause student behavior.

Brookover et al (1982) state that teacher expectations are also linked to achievement through student norms, expectations, and attitudes, which come from the students' perceptions of teacher expectations and evaluations. These perceptions of what teachers believe about them and expect from them, if low, contribute to the students' sense of academic futility and student self-concept of academic ability. This Brookover study shows that this sense of academic futility alone accounts for more than half the variation in achievement and that the effects of contact

between a teacher and students may continue for a long time after that contact has ended. Rist (1970), Persell (1977), and Benjamin (1981) also support these statements. In addition, Wilson and Schmits (1978), Goodlad (1982) and others say that the different learning expectations for students result in entirely different educational experiences which lead to vast differences in achievement over time.

Fairness of Discipline. Several studies are relevant to the consideration of fair discipline as a characteristic of effective schools. Ensign and Rasp (1981) report results of analyses of the Washington State sample of the High School and Beyond Study (HS & B) which show significant positive correlations between students' perceptions of fairness of discipline and their achievement scores. In this preliminary report Ensign and Rasp noted that the correlation between the educational expectations of the 1980 seniors and their test battery scores was "...statistically significant and dramatically clear." (p.3), with the strongest correlations existing between level of educational expectations and scores in vocabulary, reading, and math. These achievement test scores also correlated significantly with three important school variables, one of which was fairness of discipline.

Rutter et al (1979) argue that discipline characterized by a positive focus and a lack of harsh negativism contributes

to the positive ethos found in the more successful London schools observed in their study. Austin (1978), Edmonds (1979), Brookover et al (1979, 1982), The Phi Delta Kappa Study (1980), and Shoemaker (1982), among others, list an orderly, safe, and peaceful climate as being an important factor in effective schools.

Discipline in schools is a much studied topic and some of the major reports include the following. The Phi Delta Kappa Commission on Discipline (1982) recently reported results of their three-year project investigating exemplary schools where discipline was not a significant problem. Duke's (1977) Systematic Management Plan for School Discipline (SMPSD), Canter (1976), Glasser (1975), Kohut and Range (1979), and Howard (1978) espouse a philosophy of discipline that identifies the fair treatment of students as prerequisite to the establishment of a positive learning atmosphere within the school.

Research on classroom management and discipline also supports the concept of fairness in discipline as a necessary component in effective instruction. Medley's (1979) review of 280 studies of teacher behavior reports that effective teachers run orderly classrooms. Soar and Soar (1973) found higher achievement gains in classrooms where teachers were not severely critical of their students. McDonald (1974), Brookover (1978), and Goodlad (1979), also support the concept of fair treatment of students as a necessary character-

istic of effective classrooms. From these studies it seems reasonable to expect fairness in discipline to be a component of the school's overall effectiveness.

Student Attendance and Amount of Homework. Analyses of data from the Washington State sample of the HS & B Study shows positive correlations between student attendance and achievement as well as between amount of homework and achievement, Norwood et al (1981), Ensign and Rasp (1981), and Rasp and Ensign (1982).

Kean et al (1979) and Summers and Wolfe (1975), in the Philadelphia School District and Federal Reserve Bank study, What Works in Reading?, report that students who attend school regularly and those who have fewer unexcused absences show higher achievement gains. Stallings and Mohlman (1981), report that schools with clear and consistently enforced student attendance policies and the resultant lower absence rates show increased scores in basic reading skills. Finn (1981) reports that schools that demand regular attendance and assign homework tend to be populated by students who learn more. Both student attendance and the amount of time spent on homework assignments are undoubtedly components of the quantity of schooling variable first studied by Wiley and Harnschfegar (1974) at Northwestern University. They examined relationships between achievement and length of the school year, and between student achievement and

attendance. They report positive correlations between both student attendance and school year length and student achievement. In 1963, Carroll developed a mathematical formula which showed the relationship between time and achievement. Very simply, Carroll's model says that time spent on learning divided by the time needed to learn is equal to the degree of learning, or:

$$\text{Degree of learning} = \frac{\text{Amount of time spent on learning tasks}}{\text{Amount of time needed to learn.}}$$

Carroll added that both perseverance and opportunity to learn influence the amount of time spent on learning, and that aptitude, ability, and quality of instruction affect the amount of time needed to learn.

Carroll's work, along with that of Wiley and Harnschfegar (1974), provided the foundation for the research project completed by Far West Laboratory's research teams, Fisher et al (1978), Berliner et al (1976), and Ward et al (1975), The Beginning Teacher Evaluation Studies (BTES). The BTES spanned six years of efforts, and during that time, researchers examined relationships between allocated time (the amount of time the school schedules for learning) and engaged time (the amount of time the student is engaged in the learning tasks) and student achievement. The BTES researchers found positive correlations

between both allocated and engaged time and student achievement; however, stronger correlations were evident between engaged time and student achievement than were found between allocated time and achievement.

In Phase III of the BTES project, the concept of academic learning time was developed as a result of consideration of the effects of student success rate. They defined academic learning time as the amount of time students were actually engaged in appropriate learning tasks and experiencing success with those tasks. BTES researchers found even higher positive correlations between academic learning time and student achievement.

In addition to the effective schools research projects cited above which support a relationship between time on task and student achievement, this quantity of schooling variable is noted by Rosenbaum (1976), Doss and Hester (1978), Hyman and Cohen (1979), Bloom (1980), and Stallings (1980).

Teacher Interest in Students. The teacher's interest in his/her students appears to be positively related to student achievement at the classroom level. A number of studies support this, including Rosenshine and Furst (1973), McDonald (1976), Brophy (1979), Good (1979), and Medley (1979). Rutter et al (1979) state that the more successful of the London secondary schools have teachers who exhibit positive attitudes toward, and interest in their pupils.

The Washington State sample of the High School and Beyond Study (Rasp and Ensign, 1982) reports positive correlations between the student's perception of the teacher's interest in him/her and the achievement scores on the reading, math and vocabulary tests.

Walberg et al (1979), in their review of more than 2,700 research reports on instruction in elementary, secondary, and post-secondary schools note that teacher behaviors contributing to lower achievement gains include teacher apathy toward students or to the lesson being taught.

Student Drop-out Rate. High drop-out rates are frequently listed as being characteristic of schools with high levels of vandalism. Howard's (1978) report of schools that have been "turned around" because of changes in climate, discipline, or instructional focus, cites decreased levels of student drop-outs as evidence that the schools have become successful.

The Journalism Research Fellows Report (Brundage, 1980) describes a number of schools across six states that have been judged effective. The descriptions of the ineffective schools in this report show high drop-out rates and high absenteeism among the students, as does Benjamin's (1981) report. In addition, Rutter et al (1979) report higher drop-out rates in the less effective schools in their study.

Teacher Absenteeism. The level of teacher absenteeism is related to student achievement and should be related to the overall effectiveness of the school. Research studies indicate that when substitute teachers are in the classroom and the regular teacher absent, the instructional program suffers (Elliott, 1982). In 1974, the New York State Office of Education Performance Review studied the effects of teacher absenteeism on student learning and reported that substitutes were significantly less effective in providing instruction than were student teachers. This loss of instructional time is the most serious of all problems associated with teacher absence; Wiley and Harnschfegar (1974:7-12) report:

In terms of typical gains in achievement over a year's period, we concluded that in schools where students receive 24 percent more schooling, they will increase their average gain in reading comprehension by two-thirds and their gain in math by more than one-third. These tremendous effects indicate that the amount of schooling a child receives is a highly relevant factor in his achievement.

Denham and Lieberman (1980) note that their NIE sponsored research shows that real academic results are related to the time students are effectively engaged in instruction, a situation that rarely occurs when substitutes are in the classroom. Elliott's (1979) study of both student and teacher absenteeism in secondary schools, shows that schools are viewed as being less successful when high levels of student and teacher absenteeism exist. Behling's (1981)

review of effective classroom teachers notes that the more effective teachers are not members of a transient staff, as are substitutes.

From these reports, it seems clear that teacher absence is negatively related to student achievement and likely to impact the overall effectiveness of a school.

### Summary

The review of related studies from the literature focused on three major content areas: (1) organizational effectiveness, (2) motivation, goal-setting, and employee evaluation, and (3) school/classroom effectiveness.

The organization's overall effectiveness is a relatively new concept in education, even though researchers in the social and behavioral sciences have been interested in the topic for more than 50 years. However, little agreement exists as to how to define and measure the concept. Researchers have grouped the ways of viewing organizational effectiveness into three major categories: (1) behavioral/attitudinal, (2) organizational processes, and (3) goal attainment. Educators have examined school effectiveness in a manner more closely resembling the goal attainment model, even though this approach has been criticized in social and behavioral research studies.

An organization's overall effectiveness is dependent in part on the employee's level of task performance, hence

one focus of this review was concerned with topics related to motivation, goal-setting, and employee evaluation. Studies indicate that the employee should be viewed as being both highly complex and highly variable, and that managers need to look more closely at individuals and value systems in designing personnel strategies. Motivation has been defined as the product of expectancy, valence, and instrumentality.

In addition to the employee's individual motivation, several other factors impact an organization's effectiveness. These are internal processes, environmental interactions, organization size, complexity, decentralization, and administration. Other studies indicate that the nature of the task, or degree of structure required by the task, impact motivation and hence the organizations overall effectiveness. Researchers have argued that schools should be viewed differently than economic organizations since the nature of the task is the shaping of complex human beings, and since the organizational structure is a loosely coupled one.

The research on goal theory shows that goal-setting is highly related to task performance. Because of the amount of innovative and spontaneous activity required in loosely structured organizations, it seems reasonable that goal-setting will lead to higher levels of task performance in education, although little research has been completed in

this arena to date. However, research does show that evaluation reports have a major impact on teachers and do influence performance levels.

Since 1970, a number of research projects have focused on identification of both school and classroom variables that appear to be related to student achievement. Most of these researchers have used student achievement as the criterion variable in judging a school's effectiveness. In this study, the measure of school effectiveness is a composite of factors researchers believe to be characteristic of effective schools. The review cites support for these component variables and is organized around them. The component variables are: student achievement, instructional quality, academic emphasis, teacher expectations, fairness of discipline, student attendance, teacher interest in the students, amount of homework, student drop-out rate and teacher absenteeism.

## Chapter III

### RESEARCH DESIGN

This research project has been designed to determine the existing relationships between administrator emphasis on staff evaluation processes and secondary school effectiveness in Washington State. The project design is presented in three parts. The first describes and defines the variables of interest; the second describes the data source used in the study; the final section focuses on the hypotheses tested and the statistical methods of analysis.

#### Variables of Interest

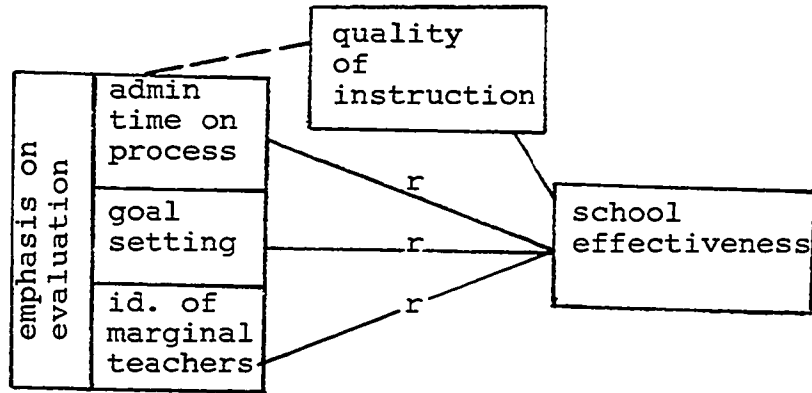
The independent variables of interest that will be discussed are the three component variables of administrative emphasis on staff evaluation. These are: (1) administrative time on the evaluation process; (2) the administrator's setting of personal goals for improvement of evaluation skills; and (3) the administrator's identification of teachers in the marginal category. Other variables of interest include percent of class time spent on instruction, administrator attendance at evaluation inservice programs, percent of staff with advanced degrees, and percent of staff who have taught in the same building for more than 10 years.

The composite dependent variable, the effectiveness score, will be described; the adjusted component (achievement) will be explained; and the weighting factor determination process will also be described in this section of the chapter.

### Independent Variables

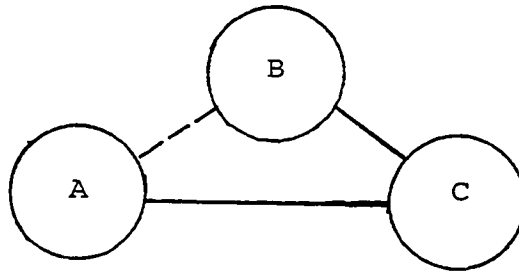
The administrator's emphasis on staff evaluation was identified as a major independent variable of interest in this research project. From the literature review, quality of instruction was identified as a variable strongly related to school effectiveness. It was hypothesized that the quality of the staff evaluation process can affect the quality of instruction, and that this in turn would impact the school's effectiveness. Three component variables (i.e. administrative time on the process, the administrator's setting of personal goals for improvement of evaluation skills, and the administrator's identification of teachers in the marginal category) were selected as indicators of the quality of the evaluation process and defined as the administrative emphasis on staff evaluation. The following model schematically represents this hypothesis.

Figure 1: Model.



Or, in a more generalized format:

Figure 2: Generalized Model.



In this general form, the hypothesis is that A is related to B and B is related to C. Research findings support a relationship between B and C; it was believed that if this project demonstrated a relationship between A and C, then it would be reasonable to conclude that the model was feasible, i.e., that the reason A is related to C, is because A is related to B which is related to C.

The emphasis on staff evaluation was operationally defined as consisting of three components, with each being treated as individual variables. These included: (1) the average amount of administrator time spent on the steps of the staff evaluation process; (2) The administrator's setting of personal goals for evaluation skill improvement; and (3) the administrator's development of improvement plans for "marginal teachers". Component number one, the administrator's average time per teacher spent on steps in the evaluation process was measured by a series of interview questions (see Appendix A-2) which asked the administrator to estimate the average time per teacher he/she spends on (1) pre-observation conferences and goal-setting, (2) observation, (3) planning for post-observation conferences, (4) post-observation conferences and goal-setting, (5) follow-up activities, and (6) writing reports. Six individual scores, plus a total score for each school were acquired. Component number two, the administrator's setting of personal goals for improvement of his/her staff evaluation skills was measured by three questions that asked the administrator if a personal goal was set for improving evaluation skills, if that goal was mutually set by the administrator and his/her supervisor, and whether or not the administrator was evaluated on attainment of such a goal. Each positive response was scored one point for a scale range of zero to three. Component number three, the

administrator's identification of "marginal teachers", was measured by a question which asked the administrator for the number of "marginal teachers" with whom he/she was working to improve instructional skills. The assumption here was that an administrator who identified teachers in a marginal category and developed improvement plans is different from one who does not. Such an administrator is more likely to be one who places greater emphasis on instructional quality. This variable was scored as a dichotomous variable with presence or absence of the characteristic being important and not the specific number of "marginal teachers" identified.

Four additional independent variables were examined in this study. These were: (1) the average percent of class time spent on instructional activities, (2) the administrator's attendance at evaluation inservice programs (a dichotomous variable), (3) the percent of staff with advanced degrees, and (4) the percent of staff who have taught in the same building for more than 10 years.

#### Dependent Variable

The dependent variable, the effectiveness score of the school, was operationally defined as a composite of standard scores for a set of selected component variables. Variables were selected as components of the effectiveness score on the basis of frequency of citation in the

literature and on the basis of whether information about the variable was included in the High School and Beyond data file. Ten component variables were found to meet these criteria and are as follows: (1) student achievement, (2) instructional quality, (3) academic emphasis of the school, (4) teacher expectations, (5) fairness of discipline, (6) student attendance, (7) teacher interest in students, (8) amount of homework, (9) student drop-out rate, and (10) teacher absenteeism.

Weighting the Dependent Variable Components. From even a cursory review of the effective schools literature, it is obvious that not all these component variables contribute equally to a school's overall effectiveness. For that reason, a national fifteen member panel<sup>1</sup> of experts was selected from nominations made by the University of Washington graduate faculty and Washington State officials. Reviewers of the effective schools research literature were nominated for panel inclusion, instead of actual researchers, to eliminate the possibility of researcher bias which might have been precipitated by a vested interest in and/or belief in the researcher's own study findings. Once panel members were selected, a list of the variables was mailed to them along with the request that they assume any other

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<sup>1</sup>See Appendix A-5 for list of panel members.

variables to be unimportant and that they distribute 100 points among the variables listed on the basis of importance of the contribution to each of the variables to the school's overall effectiveness. All 15 members of the panel responded and responses were averaged which resulted in the following weighting factors being assigned:

student achievement	.193
instructional quality	.176
academic emphasis	.120
teacher expectations	.114
fairness of discipline	.091
student attendance	.080
teacher interest in students	.071
amount of homework	.065
student drop-out rate	.052
teacher absenteeism	.039

Achievement Score Component Adjustment. Controversy exists as to the wisdom of using achievement or ability test scores as outcome measures for effective schools (Madaus et al, 1979). Such use is particularly problematic when no longitudinal data are available and when the researcher bases conclusions on only one score. Concern is also expressed about the relationship of socio-economic status (SES) information to achievement. For these reasons, in this study an adjusted score representing student achievement was calculated by measuring the difference between an actual achievement score and a predicted achievement score, which was predicted from the regression line defined by the equation for the correlation between the composite SES index (from the High School and Beyond (HS&B) data file)

and the achievement composite. This procedure for adjusting test scores for comparison of schools or districts was suggested by Dyer (1972) and has been used by the Tacoma Public Schools Office of Research and Evaluation (1977), and by Johnson, Klockars, and Shepard (1980).

Effectiveness Score (Dependent Variable) Calculation. For calculation of the effectiveness scores, the item scores for the component variables selected for use in this study were first aggregated by school and mean scores were calculated. The students' achievement scores (mathematics 1, reading, and vocabulary 1 and 2) were summed to form one total achievement score from which a mean total score was computed as described above. The component variable scores were then converted to standard scores, weighted, and summed for the overall effectiveness score.

#### Data Source for the Study

The data source for this dissertation was the Washington State sample from the 1980 High School and Beyond Longitudinal Study (HS&B) sponsored by the National Center for Education Statistics and conducted by the National Opinion Research Center at the University of Chicago. This survey sampled 58,728 sophomores and seniors across the nation from 1,015 public and private schools. States were given the option of expanding the survey within their own boundaries in order to provide a statistically sound data

base for that state's interested researchers. Washington officials elected to expand the study, therefore 50 additional schools were selected by Coleman's research team and added to the 15 included in the national sample. These 65 schools then became the Washington State sample. 3,645 Washington 10th and 12th grade students completed the student questionnaires and achievement tests. Additionally, a 65-item school questionnaire was completed by the principal (or designee) from each school in the sample. The school questionnaire provided considerable descriptive information about the school and the perceptions of its principal. It was hoped that this information would be useful in school effectiveness research, however a preliminary editing of the data demonstrated that the power of the data was somewhat limited by confusing questions, careless responses and frequent omissions (Rasp, 1982). Two University of Washington doctoral students<sup>1</sup> were particularly interested in the school questionnaire data source and worked with Washington State's Director of Testing and Evaluation<sup>2</sup> to develop and implement a plan to augment and improve this data base. In the spring of 1981, these students and other trained interviewers revisited each sample school and completed a 45-60 minute on-site interview

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<sup>1</sup>Daisy Arredondo and Brian Barker

<sup>2</sup>Alfred Rasp, Jr.

aimed at clarifying approximately 20% of the original interview responses and an addendum of 25 new items of special interest to the interview team. The items from the High School and Beyond School Questionnaire and from the Washington Addendum of special interest in this project are exhibited in Appendices A-1 and A-2. Those questionnaire and addendum items along with selected items from the HS&B Student Questionnaire (see Appendix A-3) and by-school achievement test scores provided the data base for this dissertation.

Independent Variable Questionnaire Items. Washington Addendum item response data collected by interview teams were used in calculation of the independent variable components that make up the administrative emphasis on staff evaluation. Data for component number one, the administrator's average time per teacher on steps in the evaluation process, was obtained from Washington Addendum item number 68, 1-7. Items 72, 73, and 74 provided information for component number two, the administrator's setting of personal goals for improvement of staff evaluation skills. Responses to item 77 provided data for component number three, the administrator's identification of marginal teachers.

Data for the additional independent variables of interest came from both the High School and Beyond (HS&B)

School Questionnaire and from the Washington Addendum as follows. Information regarding the average amount of class time spent on instructional activities was obtained from item 66 of the Washington Addendum and whether or not the administrator attended staff evaluation inservice was measured by item 75 of the addendum. Items 42 and 43 from the HS&B School Questionnaire provided information about the percents of staff with advanced degrees and who had been in the same building for more than 10 years.

Effectiveness Score Component Variable Items. Scores for the component variables included in the overall effectiveness score (dependent variable) were obtained from three documents used in the HS&B Study. These were the Grade 12 Student Questionnaire (STUQUES), the School Questionnaire (SCHQUES), and the Mathematics 1, Reading and Vocabulary 1 and 2 achievement battery tests from the Grade 12 Student Test Booklet (STUTEST). Specific items used were:

- (1) student achievement, STUTEST, mathematics 1, reading, and vocabulary 1 and 2 batteries;
- (2) instructional quality, STUQUES, items 52c and 53c;
- (3) academic emphasis, STUQUES, item 35a;
- (4) teacher expectations, STUQUES, item 50d;
- (5) fairness of discipline, STUQUES, item 53g;
- (6) student attendance, SCHQUES, item 8;
- (7) teacher interest in students, STUQUES, item 53e;

- (8) amount of homework, STUQUES, item 15;
- (9) student drop-out rate, SCHQUES, item 14; and
- (10) teacher absenteeism, SCHQUES, item 44.

Much of the HS & B data is perceptual data. The items from the student questionnaire represent student perceptions; those from the school questionnaire are the principal's perceptions; and the data from the student test batteries are actual achievement scores.

#### Hypotheses Tested and Methods of Analyses

For ease in reading, the research questions presented on pages 9 and 10 of this dissertation are repeated along with the specific hypotheses developed for testing those questions. It was expected that this research would provide answers to the following questions and hypotheses.

Q 1: Is there a positive relationship between administrator emphasis on staff evaluation (through time spent on evaluation processes, personal goal-setting, and development of improvement plans for "marginal teachers") and the effectiveness rating of Washington State High Schools?

H 1a: The amount of reported administrator time spent on the steps in the teacher evaluation process varies directly with the effectiveness rating of Washington State High Schools.

(H 1a:  $r_{1E} > 0.0$ ;  $r_{2E} > 0.0$ ;  $r_{3E} > 0.0$ ;  $r_{4E} > 0.0$ ;  
 $r_{5E} > 0.0$ ;  $r_{6E} > 0.0$ ; and  $r_{TE} > 0.0$ )<sup>1</sup>.

H 1b: The personal goal-setting scores of administrators will vary directly with the effectiveness rating of Washington State High Schools. (H 1b:  $r_{GE} > 0.0$ )<sup>1</sup>.

H 1c: The administrator identification of "marginal teacher" score will vary directly with the effectiveness rating of Washington State High Schools. (H 1c:  $r_{ME} > 0.0$ )<sup>1</sup>.

H 1d: The combination of this set of three variables (administrator's average total time spent per teacher on evaluation processes, the personal goal-setting score, and the identification of "marginal teacher" score) will have a multiple correlation with the effectiveness rating that is greater than zero. (H 1d:  $R_{E,T,G,M} > 0.0$ )<sup>1</sup>.

Q 2: Do Washington State High Schools having administrator's who spend more time on teacher evaluation processes than that required by the Master Contract, have a higher effectiveness rating: (i.e.) is the administrator's extra effort on staff evaluation related to the effectiveness rating of the school?

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<sup>1</sup>E = school effectiveness, 1 = preobservation conference time, 3 = post observation planning time, 4 = post observation conference time, 5 = follow-up activities, 6 = time spent writing evaluation reports, T = total administrator time on evaluation process, G = administrator goal-setting, and M = administrator identification of marginal teachers.

H 2: The amount of administrative time spent on staff evaluation in excess of that amount required by the Master Contract will vary directly with the effectiveness rating of Washington State High Schools. (H 2:  $r_{Et,E} > 0.0$ )<sup>1</sup>.

Q 3: Do Washington State High Schools, administered by principals who attended an inservice program during the previous school year, have a higher effectiveness rating?

H 3: Administrator attendance at evaluation inservice programs will vary directly with the effectiveness rating of Washington State High Schools. (H 3:  $r_{IE} > 0.0$ )<sup>1</sup>.

Q 4: Is there a relationship between administrator time spent on staff evaluation processes and the percent of staff with advanced degrees, and if so, does this relationship vary with the effectiveness rating of the Washington State High School?

H 4: The effectiveness rating of the school varies directly with the percent of staff with advanced degrees and with the simultaneous variation in administrator time on evaluation processes. (H 4:  $r_{AE.T} > 0.0$ )<sup>1</sup>.

Q 5: Is there a relationship between administrative time spent on staff evaluation processes and the percent of staff who have worked in the same building for more than ten years, and if so, does this relationship vary with the

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<sup>1</sup>Et = administrator time on evaluation in excess of amount required by the Master Contract, I = administrator attendance at evaluation inservice, A = advanced degrees; others defined on p. 59.

effectiveness rating of the Washington State High School?

H 5: The effectiveness rating of the school varies directly with the simultaneous variations of increased percents of staff who have worked in the same building for more than 10 years and with decreased amounts of administrator time on staff evaluation processes.

(H 5:  $r_{YE.T} > 0.0$ )<sup>1</sup>.

Q 6: Do Washington State High Schools where administrators report that teachers spend a greater percentage of class time on instructional activities have a higher effectiveness rating?

H 6: The percentage of reported class time spent on instructional activities will vary directly with the effectiveness rating of Washington State High Schools.

(H 6:  $r_{CE} > 0.0$ )<sup>1</sup>.

Analysis of Data. The data were analyzed in two steps. The first was the determination of the effectiveness rating (dependent variable) for each of the 65 sample schools. Each sample school had a score for each of the ten variables defined as important to school effectiveness. These sets of scores were transformed into standard scores, weighted as determined from the "expert panel" weighting

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<sup>1</sup>y = years of experience, C = amount of class time on instruction; other correlation abbreviations are defined on pp. 59-60.

factors, and summed to give a composite score for overall effectiveness.

The second step involved performing correlational analyses of the independent variable components with this effectiveness rating. Single Pearson product moment correlations were calculated for the following hypotheses:

$$H\ 1a: r_{1E} > 0.0$$

$$r_{2E} > 0.0$$

$$r_{3E} > 0.0$$

$$r_{4E} > 0.0$$

$$r_{5E} > 0.0$$

$$r_{6E} > 0.0$$

$$r_{TE} > 0.0$$

$$H\ 1b: r_{GE} > 0.0$$

$$H\ 2: r_{Et,E} > 0.0$$

$$H\ 6: r_{CE} > 0.0.$$

Point biserial correlations were calculated for the following hypotheses:

$$H\ 1c: r_{ME} > 0.0$$

$$H\ 3: r_{IE} > 0.0.$$

Stepwise multiple regression analysis was used for hypothesis 1d.  $H\ 1d: R_{E.TGM} > 0.0$ . Multiple regression was selected for analysis of these data because the single, interval, dependent variable (effectiveness) was to be compared with a composite, interval, independent variable (administrative emphasis on staff evaluation) in a three

component form. The three components of this variable which were to be treated individually, constituted a set of independent variables. Nie et al (1975:321) summarizes the most important uses of multiple regression analysis as being:

...a descriptive tool...(used)...(1) to find the best linear prediction equation and evaluate its prediction accuracy; (2) to control for other confounding factors in order to evaluate the contribution of a specific variable or set of variables; and (3) to find structural relations and provide explanations for seemingly complex multivariate relationships, as is done in path analysis.

For hypotheses 1d, the primary interest was in determining the strength of the relationships between the variables which is consistent with purpose (1) above.

For hypotheses 4 and 5 ( $H_4: r_{AE.T} > 0.0$ ,  $H_5: r_{YE.T} > 0.0$ ), a partial correlation was calculated in order to show a measure of the association describing the relationship between two of the variables while statistically holding the effects of the third constant. The variable held constant was the total administrative time on evaluation processes. This is consistent with uses of partial correlation described by Harris (1975). The F ratio was then calculated to determine the significance of the correlation coefficient. Since the hypotheses were stated in a directional format, one-tailed significance tables were appropriate.

Summary

The focus of Chapter III was on the description of the research design. This design is presented in three parts. The first describes and defines the variables of interest; the second describes the data source for the study; and the third presents the research questions, hypotheses to be tested and the methods of analyses.

The administrator's emphasis on staff evaluation was identified as a major independent variable. This emphasis on staff evaluation consists of three component variables, treated individually. They are administrator time on evaluation processes, the administrator's setting of personal goals for improvement of evaluation skills, and his/her identification of marginal teachers. A model was developed that illustrates the hypothesis that a relationship exists between administrator emphasis on staff evaluation and quality of instruction, which has been shown to impact a school's effectiveness. This administrator emphasis on staff evaluation was operationally defined and methods of measurement described. Four additional independent variables (average amount of time spent on instruction, administrator attendance at evaluation inservices, and classification variables related to teacher education levels and length of service in one building) were identified, defined and methods of measurement described.

The dependent variable, the effectiveness score for the school, was defined as a composite of standard scores on ten component variables (student achievement, instructional quality, academic emphasis, teacher expectations, fairness of discipline, student attendance, teacher interest in students, amount of homework, student drop-out rate, and teacher absenteeism).

These component variables were weighted on the basis of judgments by an expert panel, the achievement component was adjusted for an SES factor, and an effectiveness score calculated for each school. The data source for this research was information contained in (or collected as an addition to) the Washington State sample of the HS & B Study. Items from the School Questionnaire, the Washington Addendum, and the Student Test Booklet used in this research are presented in Appendices A-1 through A-4.

Six research questions were formulated regarding the variables of interest and 9 hypotheses were tested using Pearson correlations, point biserial correlations, partial and multiple regression analyses.

## Chapter IV

### DATA PRESENTATION AND RESULTS

Chapter IV presents data and results of this study in two major sections. The data presentation section is organized in two parts. The first presents response frequency tables for each of the independent variables studied; the second part presents frequency tables for components of the dependent variable (the effectiveness score), the weighting factors used in computation of the effectiveness scores, and finally the effectiveness scores by school identification number. The results section of the chapter presents each hypothesis tested in the study and the results of the statistical tests used, as described in Chapter III of this dissertation.

#### Data Presentation for Independent Variables

The presentation of data for the independent variables includes the components of the construct administrative emphasis on staff evaluation along with the additional independent variables of interest in this study.

#### Emphasis on Staff Evaluation

As described in Chapter III, administrative emphasis on staff evaluation was defined as consisting of three components: (1) average administrator time spent on steps of the staff evaluation process; (2) administrator's setting

of personal goals for evaluation skill improvement; and (3) the administrator's development of improvement plans for "marginal" teachers. Each of these components were treated as separate variables.

Tables I-VI present response frequency distributions for the average amounts of perceived administrative time spent on each of the substeps of the staff evaluation process.

The Minutes column of the frequency distribution tables presents time amounts rounded to whole numbers, whereas the Summary data table (Table VIII, p. 74) shows all numbers specific to three decimal places which was how the data were reported in the actual calculations. Table VII presents the frequency distribution for the average total amounts of perceived administrative time per teacher spent on staff evaluation processes. Table VIII presents the summary statistics for average amounts of perceived administrative time spent per teacher for each of the substeps and totals for the teacher evaluation process.

TABLE I  
 FREQUENCY DISTRIBUTION OF AVERAGE AMOUNTS OF PERCEIVED  
 ADMINISTRATIVE TIME SPENT PER TEACHER ON  
 PREOBSERVATION CONFERENCES

PREOBSCF (Minutes)*	Frequency	Percentage	Cumulative Percentage
0	6	9.2	9.2
1	1	1.5	10.8
5	2	3.1	13.8
10	4	6.2	20.0
13	1	1.5	21.5
15	11	16.9	38.5
18	1	1.5	40.0
20	7	10.8	50.8
23	1	1.5	52.3
25	1	1.5	53.8
30	11	16.9	70.8
40	2	3.1	73.8
45	4	6.2	80.0
50	2	3.1	83.1
60	6	9.2	92.3
75	1	1.5	93.8
90	1	1.5	95.4
120	3	4.6	100.0

\*rounded to whole numbers.

TABLE II  
 FREQUENCY DISTRIBUTION OF AVERAGE AMOUNTS OF PERCEIVED  
 ADMINISTRATIVE TIME SPENT PER TEACHER ON  
 TEACHER OBSERVATIONS

OBSTIME (Minutes)*	Frequency	Percentage	Cumulative Percentage
0	1	1.5	1.5
30	2	3.1	4.6
45	1	1.5	6.2
50	1	1.5	7.7
60	18	27.7	35.4
65	1	1.5	36.9
70	2	3.1	40.0
75	5	7.7	47.7
80	3	4.6	52.3
83	1	1.5	53.8
90	11	16.9	70.8
92	1	1.5	72.3
100	2	3.1	75.4
104	1	1.5	76.9
110	1	1.5	78.5
120	8	12.3	90.8
130	1	1.5	92.3
140	1	1.5	93.8
150	2	3.1	96.9
180	1	1.5	98.5
220	1	1.5	100.0

\*rounded to whole numbers.

TABLE III

FREQUENCY DISTRIBUTION OF AVERAGE AMOUNTS OF PERCEIVED  
ADMINISTRATIVE TIME SPENT PER TEACHER ON  
POST OBSERVATION PLANNING

POSTOBSPL (Minutes) *	Frequency	Percentage	Cumulative Percentage
0	7	10.8	10.8
1	1	1.5	12.3
5	3	4.6	16.9
10	14	21.5	38.5
15	9	13.8	52.3
20	4	6.2	58.5
30	10	15.4	73.8
32	1	1.5	75.4
40	4	6.2	81.5
45	2	3.1	84.6
60	9	13.8	98.5
104	1	1.5	100.0

\*rounded to whole numbers.

TABLE IV  
 FREQUENCY DISTRIBUTION OF AVERAGE AMOUNTS OF PERCEIVED  
 ADMINISTRATIVE TIME SPENT PER TEACHER ON  
 POST OBSERVATION CONFERENCES

POSTOBSCF (Minutes)*	Frequency	Percentage	Cumulative Percentage
0	3	4.6	4.6
5	3	4.6	9.2
10	1	1.5	10.8
13	1	1.5	12.3
15	8	12.3	24.6
20	7	10.8	35.4
25	4	6.2	41.5
30	14	21.5	63.1
32	1	1.5	64.6
40	2	3.1	67.7
45	2	3.1	70.8
50	3	4.6	75.4
52	1	1.5	76.9
53	1	1.5	78.5
60	12	18.5	96.9
120	1	1.5	98.5
250	1	1.5	100.0

\*rounded to whole numbers.

TABLE V  
 FREQUENCY DISTRIBUTION OF AVERAGE AMOUNTS OF PERCEIVED  
 ADMINISTRATIVE TIME SPENT PER TEACHER ON  
 EVALUATION FOLLOWUP ACTIVITIES

FLLWUP (Minutes)*	Frequency	Percentage	Cumulative Percentage
0	16	24.6	24.6
5	4	6.2	30.8
10	9	13.8	44.6
15	13	20.0	64.6
20	3	4.6	69.2
30	10	15.4	84.6
32	1	1.5	86.1
60	6	9.2	95.3
90	1	1.5	96.8
120	1	1.5	98.3
999(missing)	1	1.5	99.9

\*rounded to whole numbers.

TABLE VI  
 FREQUENCY DISTRIBUTION OF AVERAGE AMOUNTS OF PERCEIVED  
 ADMINISTRATIVE TIME SPENT PER TEACHER ON  
 WRITING EVALUATION REPORTS

WRITEVAL (Minutes) *	Frequency	Percentage	Cumulative Percentage
0	3	4.6	4.6
5	1	1.5	6.2
10	2	3.1	9.3
15	4	6.2	15.5
20	8	12.3	27.7
25	1	1.5	29.2
28	1	1.5	30.8
30	15	23.1	53.8
32	1	1.5	55.4
35	2	3.1	58.5
40	2	3.1	61.5
45	4	6.2	67.7
60	9	13.8	81.5
90	4	6.2	87.7
100	1	1.5	89.2
120	4	6.2	95.4
150	3	4.6	100.0

\*rounded to whole numbers.

TABLE VII

FREQUENCY DISTRIBUTION OF AVERAGE AMOUNTS OF PERCEIVED  
ADMINISTRATIVE TIME SPENT PER TEACHER ON  
TOTAL EVALUATION PROCESSES

EVALTOT (Minutes)*	Frequency	Percentage	Cumulative Percentage
30	1	1.5	1.5
45	1	1.5	3.0
47	1	1.5	4.5
90	1	1.5	6.0
105	1	1.5	7.5
120	1	1.5	9.0
130	1	1.5	10.5
144	1	1.5	12.0
145	1	1.5	13.5
150	4	6.2	19.7
160	3	4.6	24.3
165	2	3.1	27.4
168	1	1.5	28.9
170	4	6.2	35.1
175	2	3.1	38.2
185	1	1.5	39.7
195	2	3.1	42.8
200	2	3.1	45.9
215	2	3.1	49.0
217	1	1.5	50.5
220	2	3.1	53.6
225	2	3.1	56.7
240	2	3.1	59.8
250	1	1.5	61.3
255	1	1.5	62.8
270	1	1.5	64.3
273	1	1.5	65.8
285	1	1.5	67.3
288	1	1.5	68.8
295	1	1.5	70.3
300	1	1.5	71.8
305	1	1.5	73.3
315	1	1.5	76.4
330	1	1.5	79.5
338	1	1.5	81.0
340	2	3.1	84.1
360	1	1.5	85.6
370	1	1.5	87.1
380	1	1.5	88.6
390	1	1.5	90.1
393	1	1.5	91.6

TABLE VII (cont.)  
 FREQUENCY DISTRIBUTION OF AVERAGE AMOUNTS OF PERCEIVED  
 ADMINISTRATIVE TIME SPENT PER TEACHER ON  
 TOTAL EVALUATION PROCESSES

EVALTOT (Minutes) *	Frequency	Percentage	Cumulative Percentage
420	1	1.5	93.1
430	1	1.5	94.6
510	1	1.5	96.1
565	1	1.5	97.6
760	1	1.5	99.2

\*rounded to whole numbers.

Figure 3 presents in a decision tree format, the frequency distribution for administrator responses to the three component questions of the goal setting variable. These are: (1) whether or not the administrator has set a personal goal for improving staff evaluation skills; (2) if so, whether he/she mutually developed the goal with his/her supervisor; and (3) finally, if the administrator were evaluated on his/her goal completion.

TABLE VIII

SUMMARY STATISTICS FOR AVERAGE AMOUNTS OF PERCEIVED  
ADMINISTRATOR TIME SPENT PER TEACHER FOR EACH  
OF THE SUBSTEPS AND TOTALS FOR THE STAFF  
EVALUATION PROCESS

Variable	Mean (Minutes)	Minimum	Maximum	SD	Valid Cases
Preobservation Conference (PREOBSCF)	30.923	0.000	120.000	27.935	65
Observation Time (OBSTIME)	85.600	0.000	220.000	35.590	65
Postobservation Planning (POSTOBSPL)	24.569	0.000	104.000	21.489	65
Postobservation Conference (POSTOBSCF)	36.385	0.000	250.000	34.320	65
Followup (FLLWUP)	19.797	0.000	120.000	23.288	64
Writing Evaluations (WRITEVAL)	46.769	0.000	150.000	37.859	65
Evaluation Total (EVALTOT)	244.043	30.000	760.000	125.570	65

Figure 3:

Decision Tree Showing Frequency and Percentages of Administrator Responses to Each of the Goal-setting Variable Items

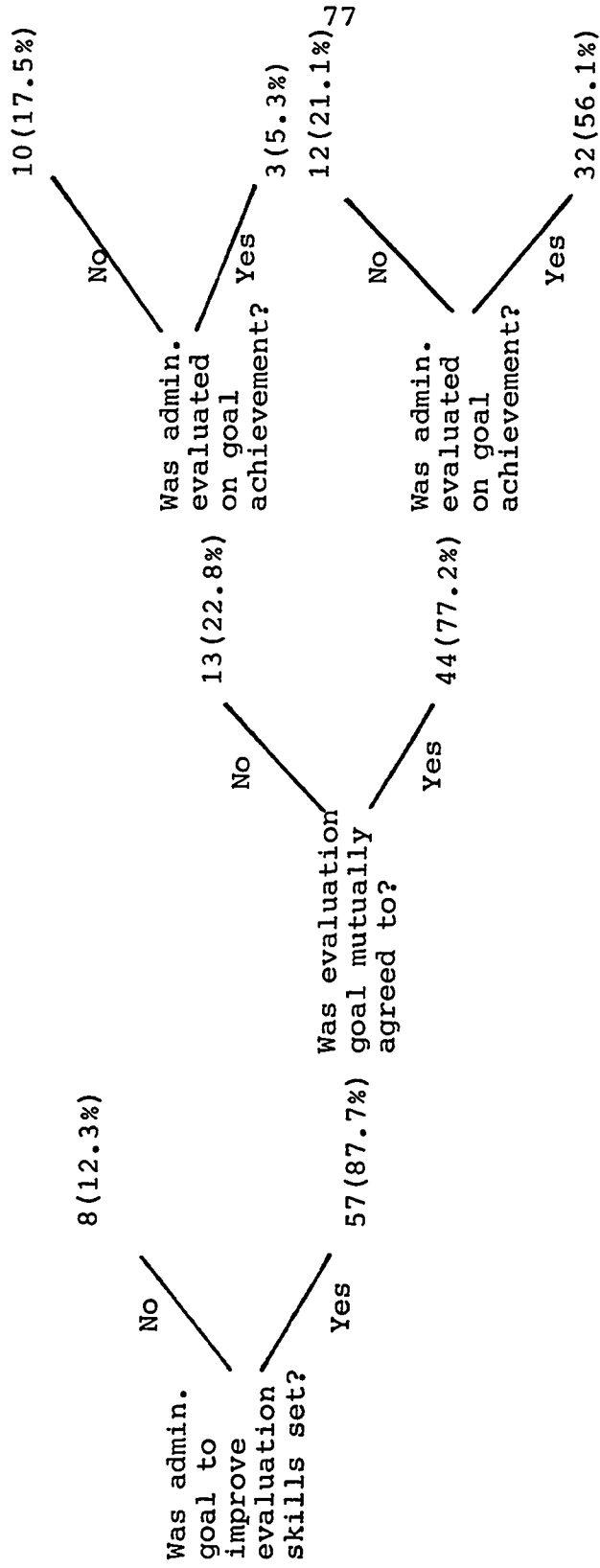


Table IX presents the frequency distribution and summary statistics for numbers of marginal teachers for whom administrators developed improvement plans. The information in Table IX is presented because it was believed that readers would find it of interest. The identification of marginal teachers was treated as a dichotomous variable with presence or absence of the variable used in the correlation calculation.

TABLE IX  
FREQUENCY DISTRIBUTION AND SUMMARY STATISTICS FOR NUMBERS  
OF MARGINAL TEACHERS (MRGTCH) FOR WHOM ADMINISTRATORS  
HAD DEVELOPED IMPROVEMENT PLANS

MRGTCH (numbers) *	Frequency	Percentage	Cumulative Percentage
0	12	18.5	18.5
1	10	15.4	33.8
2	15	23.1	56.9
3	10	15.4	72.3
4	8	12.3	84.6
5	3	4.6	89.2
6	3	4.6	93.8
7	1	1.5	95.4
10	1	1.5	96.9
11	1	1.5	98.5
31	1	1.5	100.0
Mean	2.985	Range	31.000
Minimum	0.000	Valid cases	65
Maximum	31.000	Missing cases	0
Standard Deviation	4.189		

\*rounded to whole numbers.

Additional Independent Variables Studied

Other independent variables of interest included average amount of class time spent on instruction, and administrator attendance at staff evaluation inservice sessions. Tables X and XI present frequency distributions and summary statistics for these two variables.

TABLE X  
FREQUENCY DISTRIBUTION AND SUMMARY STATISTICS FOR  
ADMINISTRATOR PERCEIVED MINUTES PER CLASS  
PERIOD SPENT ON INSTRUCTIONAL ACTIVITIES

INSTME (Minutes) *	Frequency	Percentage	Cumulative Percentage
25	1	1.5	1.5
30	2	3.0	4.5
35	4	6.0	10.5
38	1	1.5	12.0
40	7	10.8	22.8
42	1	1.5	24.3
43	1	1.5	25.8
45	6	9.2	35.0
48	3	4.6	39.6
49	1	1.5	41.1
50	19	29.2	70.3
52	3	4.6	74.9
53	2	3.0	77.9
54	2	3.0	80.9
55	7	10.8	91.7
56	2	3.0	94.7
57	1	1.5	96.2
60	1	1.5	97.7
65	1	1.5	99.2
Mean 47.516**		Range 40.000	
Minimum 25.000		Valid cases 65	
Maximum 65.000		Missing cases 0	
Standard Deviation 7.638			

\*rounded to whole numbers.

\*\*numbers specific to three places as used in calculations.

TABLE XI  
 FREQUENCY DISTRIBUTION FOR  
 ADMINISTRATOR REPORTED ATTENDANCE AT STAFF  
 EVALUATION INSERVICE SESSIONS

ADM. ATTEND. at INSERVICE	Frequency	Percentage	Cumulative Percentage
Yes	19	29.2	29.2
No	44	67.7	96.9
999(missing)	2	3.1	100.0

The final two independent variables identified as being of interest in this study were the percent of staff with advanced degrees (M.A. or Ph.D.) and the percent of staff who had been assigned to the same building for 10 years or more. The frequency distributions and summary statistics for these variables are presented in Tables XII and XIII. The frequency distribution portion of these tables show percentages of staff rounded to whole numbers whereas the summary statistics presents the numbers specific to three decimal places as was used in the actual calculations.

TABLE XII

FREQUENCY DISTRIBUTIONS OF PERCENTAGES OF STAFF WHO HAVE  
EARNED M.A. OR Ph.D. DEGREES (ADVGRE)

Percentage of staff with ADVGRE*	Frequency	Percentage	Cumulative Percentage
0	4	6.3	6.3
4	1	1.5	7.8
8	2	3.1	10.9
13	1	1.5	12.5
14	1	1.5	14.1
15	1	1.5	15.6
18	1	1.5	17.2
20	2	3.1	20.3
23	1	1.5	21.9
24	1	1.5	23.4
25	7	10.8	34.4
26	1	1.5	35.9
30	4	6.2	42.2
33	2	3.1	45.3
34	1	1.5	46.9
35	2	3.1	50.0
39	1	1.5	51.6
40	3	4.6	56.3
44	1	1.5	57.8
45	1	1.5	59.4
50	6	9.2	68.8
51	1	1.5	70.3
55	2	3.1	73.4
60	8	12.3	85.9
64	1	1.5	87.5
65	1	1.5	89.1
70	1	1.5	90.6
75	4	6.2	96.9
90	1	1.5	98.4
93	1	1.5	99.9
Mean 39.516		Median 35.500	
Minimum 0.000		Range 93.000	
Maximum 93.000		Valid cases 65	
Standard Deviation 22.771		Missing cases 0	

\*rounded to whole numbers.

TABLE XIII

FREQUENCY DISTRIBUTIONS OF PERCENTAGES OF STAFF WHO HAVE  
BEEN IN SCHOOL 10 YEARS OR LONGER (GTR10)

Percentage of staff in bldg GTR10 yrs *	Frequency	Percentage	Cumulative Percentage
0	5	7.9	7.9
2	1	1.6	9.5
10	1	1.6	11.1
13	1	1.5	12.7
15	1	1.5	14.3
19	1	1.5	15.9
20	4	6.2	22.2
25	6	9.5	31.7
27	1	1.6	33.3
30	1	1.6	34.9
33	1	1.5	36.5
35	2	3.1	39.7
40	2	3.1	42.9
42	1	1.6	44.4
43	1	1.5	46.0
45	2	3.1	49.2
47	2	3.1	52.4
48	1	1.5	54.0
50	7	10.8	65.1
52	1	1.6	66.7
53	1	1.5	68.3
54	1	1.6	69.8
60	8	12.3	82.5
63	1	1.5	84.1
64	1	1.5	85.7
70	1	1.6	87.3
72	1	1.5	88.9
75	1	1.6	90.5
78	1	1.5	92.1
80	4	6.2	98.4
85	1	1.5	99.9

Mean	42.254	Median	46.750
Minimum	0.000	Range	85.000
Maximum	85.000	Valid cases	63
Standard Deviation	23.381	Missing cases	2

\*rounded to whole numbers.

### Data Presentation for Dependent Variable

This section of Chapter IV presents the data for the components of the effectiveness score (the dependent variable) and related calculations. These calculations include the (SES) socio-economic status adjustment factor calculated for adjusting the standardized achievement score for each sample school, the component weighting factors submitted by the panel of experts, and the final effectiveness scores calculated for the sample schools.

#### Effectiveness Score Component Variables

Frequency distributions and summary statistics are presented in Tables XIV - XXV for the component variables that comprise the effectiveness score, the dependent variable identified for this research.

The achievement component (ACHIEVE) of the effectiveness score is the school mean score calculated from sums of four test scores from the achievement battery, the math 1, vocabulary 1 and 2, and reading tests. The frequency distribution and summary statistics are presented in Table XIV.

The achievement score was adjusted by a factor representing the difference between the actual achievement score and a predicted score. This score was predicted from the regression line defined by the equation for the correlation between the composite SESRAW index from the

TABLE XIV

FREQUENCY DISTRIBUTION AND SUMMARY STATISTICS FOR  
ACHIEVEMENT COMPONENT (ACHIEVE) OF THE  
EFFECTIVENESS SCORE FOR SAMPLE SCHOOLS

ACHIEVE*	Frequency	Percentage	Cumulative Percentage
174	1	1.6	1.6
178	1	1.6	3.2
180	3	4.8	8.0
181	1	1.6	9.5
183	1	1.6	11.1
187	1	1.6	12.7
188	2	3.2	15.9
189	1	1.6	17.5
191	1	1.6	19.0
192	2	3.2	22.2
193	1	1.6	23.8
194	3	4.8	28.6
195	3	4.8	33.3
196	3	4.8	38.1
197	3	4.8	42.9
198	3	4.8	47.6
199	3	4.8	52.4
200	1	1.5	54.0
201	1	1.6	55.6
202	1	1.6	57.1
203	1	1.6	58.7
204	7	11.2	69.8
205	1	1.6	71.4
206	2	3.2	74.6
207	4	6.4	81.0
209	1	1.6	82.5
210	1	1.6	84.1
211	1	1.6	85.7
214	3	4.8	90.5
216	1	1.6	92.1
218	1	1.6	93.7
221	1	1.6	95.2
225	2	3.2	98.4
230	1	1.6	100.0
(missing)	2	3.2	100.0
Mean 199.989		Range 55.961	
Minimum 173.696		Valid cases 63	
Maximum 229.658		Missing cases 2	
Standard Deviation 11.789			

\* Represents the mean sum of the standardized scores in math, vocab 1 and 2, and reading for sample schools, rounded to whole numbers.

High School and Beyond (HS & B) data file (Table XVI) and the achievement composite. The adjusted achievement score is presented in Table XV. The SESRAW index score contained in the High School and Beyond data file is calculated from a composite of the items reflecting socio-economic status from data collected in the Student Questionnaire. This composite consists of five equally-weighted standardized components: father's education, mother's education, family income, father's occupation, and possession of certain household items. Table XVI presents the SESRAW score summary data used in calculation of the adjusted achievement score.

TABLE XV

FREQUENCY DISTRIBUTION AND SUMMARY STATISTICS FOR THE  
ADJUSTED ACHIEVEMENT SCORE

ADJACH* Score	Frequency	Percentage	Cumulative Percentage
-21	1	1.6	1.6
-17	1	1.6	3.2
-15	1	1.6	4.8
-13	1	1.6	6.3
-12	1	1.6	7.9
-11	1	1.6	9.5
-9	1	1.6	11.1
-7	3	4.8	15.9
-6	5	8.0	23.8
-5	2	3.2	27.0
-4	3	4.8	31.7
-3	3	4.8	36.5
-2	1	1.5	38.1
-1	4	6.4	44.9
0	8	12.8	57.1
1	3	4.8	61.9
2	3	4.8	66.7
3	4	6.4	73.0
4	3	4.8	77.8
5	3	4.8	82.5
7	3	4.8	87.3
8	1	1.6	88.9
12	2	3.2	92.1
14	2	3.2	95.2
15	1	1.6	96.8
19	1	1.6	98.4
20	1	1.5	100.0
999(missing)	2	3.2	100.0

Mean	-0.063	Range	40.652
Minimum	-20.610	Valid cases	63
Maximum	20.041	Missing cases	2
Standard Deviation	7.998		

\*ADJACH represents the adjusted achievement score rounded to whole numbers.

TABLE XVI  
SUMMARY STATISTICS FOR SESRAW

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Mean	-0.043	Range	1.783
Minimum	-0.837	Valid cases	65
Maximum	0.946	Missing cases	0
Standard Deviation	0.331		

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In this study mean SESRAW scores were calculated for each school for use in computation of the achievement score adjustment factor.

Table XVII presents the frequency distribution and summary statistics for the instructional quality (INSQTY) component of the effectiveness score. The instructional component along with academic emphasis, teacher expectations and fairness of discipline represent the students' rating of the items for their schools. Students rated the instructional quality (INSQTY) of their school as poor, fair, good or excellent. An average rating was then calculated for each sample school. The frequency distribution part of the table shows the mean school scores rounded to whole numbers, while the summary statistics presents data actually used in the calculation. The reader will note that in a majority of schools (72.3%), students rated the instructional quality as "good".

TABLE XVII  
 FREQUENCY DISTRIBUTION AND SUMMARY STATISTICS  
 FOR STUDENT RATING OF INSTRUCTIONAL  
 QUALITY (INSQTY)

INSQTY Rating*	Frequency	Percentage	Cumulative Percentage
1. Poor	0	0.0	0.0
2. Fair	17	26.2	26.2
3. Good	47	72.3	98.5
4. Excellent	1	1.5	100.0
Mean	2.669	Range	1.730
Minimum	1.952	Valid cases	65
Maximum	3.683	Missing cases	0
Standard Deviation	0.318		

\*rounded to whole numbers.

Table XVIII presents the frequency distribution and summary statistics for the academic emphasis (ACAEMP) component of the effectiveness score.

TABLE XVIII  
 FREQUENCY DISTRIBUTION AND SUMMARY STATISTICS  
 FOR STUDENT RATING OF ACADEMIC EMPHASIS

School should have more ACAEMP*	Frequency	Percentage	Cumulative Percentage
1. Strongly agree	0	0.0	0.0
2. Agree somewhat	60	92.3	92.3
3. Disagree somewhat	5	7.7	100.0
4. Disagree strongly	0	0.0	100.0
Mean	2.165	Range	1.119
Minimum	1.714	Valid cases	65
Maximum	2.833	Missing cases	0
Standard Deviation	0.205		

\*rounded to whole numbers.

Students were asked to indicate whether they agreed or disagreed that their school should have more academic emphasis. They responded with one of the category responses listed in the table. The reader will note that 92.3% "agreed somewhat" with this item, that their school should have more academic emphasis. As was the case above, the frequency distribution shows responses rounded to whole numbers while the summary statistics reflect numbers used in actual calculations.

Table XIX presents the frequency distributions and summary statistics for the teacher expectations (TCHEXP) component of the effectiveness score. Students were asked what their teachers expected them to do after high school graduation, and an average response was then calculated for each of the sample schools. The upper portion of the table reflects these responses rounded to whole numbers, while the lower part of the table shows the numbers used in the actual calculations.

TABLE XIX  
 FREQUENCY DISTRIBUTION AND SUMMARY STATISTICS FOR  
 STUDENT RATING OF TEACHER EXPECTATIONS (TCHEXP)

TCHEXP Rating*	Frequency	Percentage	Cumulative Percentage
1. Doesn't know or doesn't care	0	0.0	0.0
2. Get a job	0	0.0	0.0
3. Military	1	1.54	1.54
4. Trade school	49	75.38	76.92
5. Go to college	15	23.07	100.00
Mean 4.167		Range 1.786	
Minimum 3.214		Valid cases 65	
Maximum 5.000		Missing cases 0	
Standard Deviation 0.382			

\*rounded to whole numbers.

Table XX presents the frequency distribution and summary statistics for the fairness of discipline component (DISCIP) of the effectiveness score. This variable reflects student ratings of the fairness of their school's discipline. Mean ratings were then calculated for each of the sample schools. As was the case above, the frequency distribution reflects ratings as whole numbers whereas the summary statistics show numbers used in actual calculations.

TABLE XX

FREQUENCY DISTRIBUTION AND SUMMARY STATISTICS FOR  
STUDENT RATING OF FAIRNESS OF DISCIPLINE (DISCIPLN)

DISCIPLN (fairness of) *	Frequency	Percentage	Cumulative Percentage
1. Poor	0	0.0	0.0
2. Fair	55	84.6	84.6
3. Good	10	15.4	100.0
4. Excellent	0	0.0	100.0
Mean 2.316		Range 1.731	
Minimum 1.519		Valid cases 65	
Maximum 3.250		Missing cases 0	
Standard Deviation 0.272			

\*rounded to whole numbers.

Table XXI presents the frequency distribution and summary statistics for the student attendance (STUATTEN) component of the effectiveness score. These percentages were obtained from the principals' records of school attendance.

Table XXII presents the frequency distribution and summary statistics for the teacher interest in students (TCHINT) component of the effectiveness score. This component variable also represents student rating of teacher interest levels for their schools, and was handled in the same manner as were the other student ratings.

TABLE XXI

FREQUENCY DISTRIBUTION AND SUMMARY STATISTICS FOR  
STUDENT ATTENDANCE (STUATTEN)

STUATTEN (daily percent attending)*	Frequency	Percentage	Cumulative Percentage
80	1	1.5	1.5
85	1	1.5	3.0
86	1	1.5	4.5
88	1	1.5	6.0
90	9	13.8	19.8
91	4	6.2	26.0
92	12	18.5	44.5
93	10	15.4	59.5
94	11	16.9	76.8
95	7	10.7	87.5
96	6	9.2	96.7
97	1	1.5	98.2
98	1	1.5	99.7
Mean	92.569	Median	92.833
Minimum	80.000	Range	18.000
Maximum	98.000	Valid cases	65
Standard Deviation	2.899	Missing cases	0

\*rounded to whole numbers.

TABLE XXII  
 FREQUENCY DISTRIBUTION AND SUMMARY STATISTICS FOR STUDENT  
 RATING OF TEACHER INTEREST IN STUDENTS (TCHINT)

TCHINT Rating *	Frequency	Percentage	Cumulative Percentage
1. Poor	0	0.0	0.0
2. Fair	20	30.8	30.8
3. Good	43	66.1	96.9
4. Excellent	2	3.1	100.0
Mean 2.627		Range 1.892	
Minimum 1.981		Valid cases 65	
Maximum 3.873		Missing cases 0	
Standard Deviation 0.298			

\*rounded to whole numbers.

Table XXIII presents the frequency distribution and summary statistics for the amount of homework (HMEWRK) component of the effectiveness score. This component represents student reported hours per week on homework.

TABLE XXIII

FREQUENCY DISTRIBUTION AND SUMMARY STATISTICS FOR AMOUNT  
OF HOMEWORK STUDENTS REPORT PER WEEK (HMEWRK)

HMEWRK (amount hrs/wk) *	Frequency	Percentage	Cumulative Percentage
1. None assigned	0	0.0	0.0
2. Don't do any	0	0.0	0.0
3. Less than 1 hr	1	1.5	1.5
4. More than 1 hr, less than 3 hrs	45	69.2	70.7
5. More than 3 hrs, less than 5 hrs	18	27.7	98.4
6. More than 5 hrs, less than 10 hrs	1	1.5	99.9
7. More than 10 hrs	0	0.0	99.9
Mean 4.324		Range 2.697	
Minimum 3.100		Valid cases 65	
Maximum 5.797		Missing cases 0	
Standard Deviation 0.427			

\*rounded to whole numbers.

Table XXIV presents the frequency distribution and summary statistics for the student drop-out rate (DROPOUT) component of the effectiveness score. The percent drop-out rate represents data from the principals' school records.

TABLE XXIV  
 FREQUENCY DISTRIBUTION AND SUMMARY STATISTICS  
 FOR STUDENT DROP-OUT RATE (DROPOUT)

DROPOUT (percent) *	Frequency	Percentage	Cumulative Percentage
30	1	1.5	1.5
25	2	3.1	4.6
20	2	3.1	7.7
17	1	1.5	9.2
16	1	1.5	10.7
15	5	7.6	18.3
12	2	3.1	21.4
11	1	1.5	22.9
10	13	20.1	43.0
9	5	7.6	50.6
8	2	3.1	53.7
7	4	6.0	59.7
6	6	9.2	68.9
5	7	10.8	79.7
4	6	9.2	88.9
3	5	7.6	96.5
1	1	1.5	98.0
1	1	1.5	99.5
Mean 9.123		Median 8.500	
Minimum 0.000		Range 30.000	
Maximum 30.000		Valid cases 65	
Standard Deviation 5.838		Missing cases 0	

\*rounded to whole numbers.

Table XXV presents the frequency distribution and summary statistics for the administration reported percent of teacher absenteeism (TCHABS) component of the effectiveness score.

TABLE XXV  
 FREQUENCY DISTRIBUTION AND SUMMARY STATISTICS  
 FOR TEACHER ABSENTEEISM (TCHABS)

TCHABS (percent) *	Frequency	Percentage	Cumulative Percentage
0	3	4.6	4.6
1	16	24.6	29.2
2	6	9.2	38.4
3	8	12.3	50.7
4	12	18.5	69.2
5	7	10.8	80.0
6	4	6.1	86.1
7	3	4.6	90.7
8	1	1.5	92.2
9	0	0.0	92.2
10	4	6.1	98.3
11	1	1.5	99.8
Mean	3.663	Median	3.250
Minimum	0.000	Range	11.000
Maximum	11.000	Valid cases	65
Standard Deviation	2.793	Missing cases	0

\*rounded to whole numbers.

Table XXVI presents the weighting factors submitted by the 15-member panel of experts and used for the calculation of each school's overall effectiveness score.

As explained in Chapter III<sup>1</sup>, the panel members were asked to assume other variables to be unimportant to the school's overall effectiveness and to distribute 100 points among these ten component variables on the basis of each

<sup>1</sup>Please refer to pages 52-54 for a more detailed description of the weighting factor determination process.

component variable's contribution to the effectiveness of the school. The panel member responses were then averaged to produce the weighting factors for each component presented in Table XXVI.

TABLE XXVI  
WEIGHTING FACTORS FOR EFFECTIVENESS SCORE

Effectiveness Component Variables	Weight Assigned
student achievement	.193
instructional quality	.176
academic emphasis	.120
teacher expectations	.114
fairness of discipline	.091
student attendance	.080
teacher interest in students	.071
amount of homework	.065
student drop out rate	.052
teacher absenteeism	.039

Table XXVII presents the composite effectiveness scores for the 65 schools in the study sample by case and school identification number. The effectiveness score reflects a sum of the standard scores having a mean of zero and an approximate range of -2 to +2.

TABLE XXVII  
EFFECTIVENESS SCORES BY SCHOOL CASE AND ID NUMBERS

Case Number	School Identification Number	Effectiveness Score
1	1343	-.24
2	1369	-1.22
3	1615	-.13
4	1616	.65
5	1802	.27
6	1881	.33
7	1911	-.31
8	1933	-.15
9	2189	-.35
10	2201	-.42
11	2363	.07
12	2782	-.18
13	3043	.27
14	3149	.48
15	3178	.20
16	3215	.07
17	3251	-.67
18	3519	-.38
19	4083	-.51
20	4212	-.28
21	4258	.38
22	4343	-.14
23	4400	.42
24	4680	-.53
25	4837	.00
26	4879	-.56
27	5074	-1.05
28	5149	2.19
29	5183	.16
30	5233	-.17
31	5289	-.31
32	5380	-.05
33	5606	-.37
34	5673	.54
35	5684	.75
36	5779	.07
37	5824	-.18
38	5825	-.32
39	5992	.83
40	6097	.03
41	6125	-.22
42	6173	1.10
43	6431	999(missing)

TABLE XXVIII (cont.)  
EFFECTIVENESS SCORES BY SCHOOL CASE AND ID NUMBERS

Case Number	School Identification Number	Effectiveness Score
44	6491	-.01
45	6723	.27
46	6864	999(missing)
47	7092	-.14
48	7102	-.89
49	7341	.52
50	7689	-.14
51	8054	.41
52	8061	1.24
53	8274	-.40
54	8322	-.11
55	8763	-.32
56	8998	.09
57	9046	.48
58	9624	1.43
59	9644	-.63
60	9670	-.70
61	9683	-.20
62	9724	-.14
63	9809	-.11
64	9934	-.12
65	9957	-.16
Mean	0.007	Range 3.411
Minimum	-1.224	Valid cases 63
Maximum	2.186	Missing cases 2
Standard Deviation	0.574	

### Results

This section of the chapter presents each hypothesis tested in the study and the results of the statistical tests used.

Single Pearson product moment correlations were calculated for hypotheses 1a (school effectiveness with

administrator time on substeps of the teacher evaluation process), 1b (school effectiveness with administrator goal setting to improve evaluation skills), and 6 (school effectiveness with amount of class time spent on instruction). Table XXVIII presents the results of these correlations.

The composite effectiveness score (WEFFECT) was found to be nonsignificantly ( $p > .05$ ) correlated with administrator time on preobservation conferences (PREOBSCF), observation (OBSME), post observation conferences (POSTOBSCF), follow-up activities (FLLWUP), writing evaluation reports (WRITEVAL), and with the total amount of administrator time on the evaluation process (EVALTOT),  $r = -.047$ ,  $p = .356$ ;  $r = .008$ ,  $p = .474$ ;  $r = .118$ ,  $p = .179$ ;  $r = -.039$ ,  $p = .381$ ;  $r = -.123$ ,  $p = .168$ ;  $r = -.105$ ,  $p = .207$ ; and  $r = -.053$ ,  $p = .340$ , respectively. These findings lead to the rejection of hypotheses  $1a_1$ ,  $1a_2$ ,  $1a_3$ ,  $1a_4$ ,  $1a_5$ ,  $1a_6$ , and  $1a_T$ .

The effectiveness rating (WEFFECT) was nonsignificantly correlated ( $p > .05$ ) with the administrator's setting of goals for the improvement of evaluation skills (GOSET), and with the reported amount of the class period spent on instructional activities (INSTIME);  $r = .056$ ,  $p = .330$ ; and  $r = -.033$ ,  $p = .399$ , respectively. These findings lead to the rejection of hypotheses 1b and 6.

Hypothesis 2 (the relationship between the school effectiveness rating and time spent on evaluation in excess

TABLE XXVIII

PEARSON CORRELATION COEFFICIENTS, HYPOTHESES TESTED, AND PROBABILITY LEVELS FOR THE RELATIONSHIPS OF EFFECTIVENESS SCORE (WEFFECT) WITH PREOBSERVATION CONFERENCE (PREOBSCF), OBSERVATION TIME (OBS TIME), POST OBSERVATION PLANNING TIME (POSTOBSPL), POST OBSERVATION CONFERENCE TIME (POSTOBSCT), FOLLOW-UP ACTIVITIES (FLLWUP), WRITING EVALUATION REPORTS (WRITEVAL), TOTAL EVALUATION TIME (EVALTOT), AMOUNT OF CLASS TIME ON INSTRUCTION (INSTIME), AND ADMINISTRATOR GOAL-SETTING TO IMPROVE EVALUATION SKILLS (GOSET)

Variables	Hypotheses	r	Probability*
Preobservation conference time (PREOBSCF)	$r_{1E} > 0.0$	-.047	.356
Observation time (OBS TIME)	$r_{2E} > 0.0$	.008	.474
Post observation planning time (POSTOBSPL)	$r_{3E} > 0.0$	.118	.179
Post observation conference time (POSTOBSCT)	$r_{4E} > 0.0$	-.039	.381
Follow-up activities (FLLWUP)	$r_{5E} > 0.0$	-.123	.168
Writing evaluation reports (WRITEVAL)	$r_{6E} > 0.0$	-.105	.207
Total administrator time on evaluation (EVALTOT)	$r_{TE} > 0.0$	-.053	.340
Amount of class time on instruction (INSTIME)	$r_{CE} > 0.0$	-.033	.399
Administration goal setting to improve evaluation skills (GOSET)	$r_{GE} > 0.0$	.056	.330

\*p < .05 required for significance.

of the master contract requirement) was not tested separately, as had been planned, because of the lack of variability in a certain portion of the data which caused it to represent the same data as the total time spent on evaluation; 78.5% of the sample schools reported a contract requirement consistent with the minimum Washington State requirement of 60 minutes. An additional 10.8% of the sample schools responded in a manner that suggested that had responses been restated they also would have been included with this 78.5% group; for example, "30 minutes each" and "2". This examination of the data resulted in 89.3% of the responses being considered constant. Since mathematical manipulations of  $\underline{r}$  by non-zero constants does not change the value of  $\underline{r}$  (McCall, 1970), it was assumed that hypothesis 2 had been adequately tested by hypothesis 1a<sub>T</sub>.

Point biserial correlations were calculated for hypothesis 1c (school effectiveness rating with marginal teacher improvement plans) and for hypothesis 3 (school effectiveness rating with administrator attendance at evaluation inservice programs). Table XXIX presents the results of these correlations.

TABLE XXIX  
 POINT BISERIAL CORRELATION COEFFICIENTS, HYPOTHESIS  
 TESTED, AND PROBABILITY LEVELS FOR THE RELATIONSHIPS  
 OF SCHOOL EFFECTIVENESS (WEFFECT) WITH MARGINAL  
 TEACHER IDENTIFICATION (MRGTCH) AND ADMINIS-  
 TRATOR INSERVICE ATTENDANCE (ADMINSER)

Variables	Hypotheses	r	Probability
Admin. develop. of improvement plans for marginal tchrs (MRGTCH)	$r_{ME} > 0.0$	-.101	.215
Admin. attend. at eval inservice (ADMINSER)	$r_{IE} > 0.0$	.089	.247

The composite effectiveness rating was found to be nonsignificantly correlated ( $p > .05$ ) with the administrator's development of improvement plans for marginal teachers (MRGTCH) and with the administrator's attendance at evaluation inservice programs (ADMINSER),  $r = -.101$ ,  $p = .215$ ; and  $r = .089$ ,  $p = .247$ , respectively. These findings result in the rejection of both hypothesis 1c and hypothesis 3.

Stepwise multiple regression analysis was used for testing hypothesis 1d (school effectiveness rating with the combined components of administrator emphasis on staff evaluation, total administrator time spent on evaluation, administrator development of improvement plans for marginal teachers, and the administrator's personal goal setting for evaluation skill improvement). Table XXX

TABLE XXX  
 SUMMARY TABLE OF STEPWISE MULTIPLE REGRESSION ANALYSIS  
 DEPENDENT VARIABLE: SCHOOL EFFECTIVENESS

Independent Variable	F-value*	Multiple R	R <sup>2</sup>	R <sup>2</sup> Change	Simple R
Marginal teachers (MRGTCH)	.591	.088	.007	.007	.088
Total administrator time on evaluation (EVALTOT)	.064	.108	.012	.004	-.053
Preobservation conference time (PREOBSCF)	.234	.109	.012	.0004	-.048
Post observation planning time (POSTOBSPL)	1.464	.228	.052	.040	.118
Follow-up activities (FLLWUP)	.273	.237	.056	.004	-.123
Administrative goal setting to improve evaluation skills (GOSET)	.094	.240	.057	.001	.056

\*An F-value of 2.18 or greater is required for a significance level of  $p < .05$ .

presents a summary of this regression analysis with the dependent variable, school effectiveness.

Hypothesis 1d:  $R_{E.T,G,M} > 0.0$  must be rejected because the results of the multiple regression analysis shows low and nonsignificant multiple correlations between school effectiveness (WEFFECT) and development of improvement plans for marginal teachers (MRGTCH), total administrator time on staff evaluation (EVALTOT), and administrator goal setting for improvement of evaluation skill (GOSET),  $R = .088$ ,  $R = .108$ ,  $R = .240$ , respectively, with  $p > .05$  for all correlations. As Table XXX shows the combination of all these variables explains less than 6% of the variance in school effectiveness.

For hypotheses 4 and 5,  $H4: r_{AE.T} > 0.0$ ,  $H5: r_{YE.T} > 0.0$ , (school effectiveness (WEFFECT) with percent of staff having master's or doctor's degrees (ADVGRE) and percent of staff working in the same building for more than 10 years (GTER10)), partial correlations were calculated in order to describe the relationships between two variables while statistically holding constant the effect of the third variable. The variable held constant was total administrative time spent on evaluation processes. Table XXXI presents the results of these two partial correlations.

TABLE XXXI  
 PARTIAL CORRELATION COEFFICIENTS OF WEEFFECT WITH GTER10 AND  
 ADVGRE, CONTROLLING FOR EVALTOT

Independent Variable	r	Probability
GTER10	.054	.339
ADVGRE	.062	.317

It is apparent that during the development of the HS & B Questionnaire items, certain assumptions were made about the characteristics of staffs who have earned master's or doctor's degrees and/or have worked in the same building for more than 10 years. A discussion of the mixed findings from previous research into relationships between teacher educational levels or experience and effectiveness of instruction is presented in Chapter V of this dissertation (pp. 118 - 120). While it is possible to speculate about the nature of these relationships, definitive results will only be forthcoming from studies which focus on continuous scaling of the two variables while controlling for the many factors which could impact such relationships.

Hypotheses 4 and 5,  $H4: r_{AE.T} > 0.0$ ,  $H5: r_{YE.T} > 0.0$ , must be rejected because of the low, nonsignificant ( $p > .05$ ) correlations,  $r = .054$ ,  $p = .339$ ;  $r = .062$ ,  $p = .317$ , respectively.

## Summary

Chapter IV has focused on a presentation of the data used in this study and the results of the statistical treatment of these data. The data sections of the chapter present (1) frequency tables and summary statistics for each of the independent variables studied, (2) frequency tables and summary statistics for components of the dependent variable, (3) the weighting factors used in computation of the dependent variable, and (4) a listing of the effectiveness scores by school, for the sample studied. The results section of the chapter presents the hypotheses tested and the results of the statistical analyses of these hypotheses.

Tables I-XIII present the frequency distributions and/or summary statistics for each of the independent variables examined in this study. Tables XIV-XXV present components of the dependent variable, school effectiveness. Table XXVI presents the weighting factors used for calculation of the effectiveness score, and Table XXVII the effectiveness scores by school case and identification numbers.

The results section, in Tables XXVIII, XXIX, and XXX, presents the hypotheses tested, correlation coefficients and probability levels for the statistical analyses performed in this research project. Hypotheses 1a (school effectiveness and administrator time on the substeps of the teacher evaluation process), 1b (school effectiveness with administrator goal setting for improvement of evaluation

skills), and 6 (school effectiveness with the amount of class time spent on instruction) were tested with single Pearson correlations. All eight of these correlations showed nonsignificant ( $p > .05$ ) relationships. Table XXVIII presents these results.

Hypotheses 1c (school effectiveness with marginal teacher identification) and 3 (school effectiveness with administrator attendance at evaluation inservice) were tested with point biserial correlations. The results, presented in Table XXIX, show low, nonsignificant correlation coefficients.

Multiple regression analysis was used to examine the relationships between school effectiveness and the components of administrative emphasis on staff evaluation (hypothesis 1d). The results are presented in Table XXX and show nonsignificant correlations.

Hypotheses 4 and 5 (school effectiveness with percents of staff having advanced degrees and those who have been in the same building for more than 10 years) were tested with partial correlations (with total administrative time on evaluation process statistically held constant). Results presented in Table XXXI, also show low, nonsignificant correlation coefficients ( $p > .05$ ).

## Chapter V

### DISCUSSION, SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Chapter V consists of four major parts. The first presents a discussion of the study results organized around each of the research questions asked in this project. The second section summarizes the project design, data, analyses, and results. The third identifies and comments on conclusions that may be drawn from this study, and the final section presents recommendations regarding additional research questions that could legitimately be addressed in future studies.

#### Discussion of Results

##### Question 1

The first research question asked if a positive relationship existed between administrator emphasis on staff evaluation and the effectiveness rating of Washington State High Schools. Administrator emphasis on staff evaluation was defined as consisting of time spent on evaluation, personal goal-setting for improvement of evaluation skills, and the development of improvement plans for marginal teachers. The effectiveness rating was defined as consisting of ten weighted components (student achievement, instructional quality, academic emphasis, teacher expectations, fairness of discipline, student attendance, teacher

interest in students, amount of homework, student drop-out rate, and teacher absenteeism).

Pearson correlational analyses of the effectiveness score with administrator time spent on preobservation conference planning, post observation conferencing and goal-setting, follow-up activities, and in writing evaluation reports yielded low, nonsignificant ( $p > .05$ ) correlation coefficients ( $r = -.047, p = .356$ ;  $r = .008, p = .474$ ;  $r = .118, p = .179$ ;  $r = -.039, p = .381$ ;  $r = -.123, p = .168$ ;  $r = -.105, p = .207$ ;  $r = -.053, p = .340$ ; and  $r = -.033, p = .399$ , respectively).

From these results it can be concluded that the existence of a relationship between component number one (time) of the construct, administrator emphasis on staff evaluation, and the school's effectiveness, as defined and measured in this study, does not exist. This project demonstrated the possibility that with regard to staff evaluation processes, the commitment of administrator time and attention did not make a significant difference in the overall effectiveness of a school. It is also possible that present Washington State staff evaluation processes are not a contributing factor toward quality instruction. However, this conclusion should be considered tentative because of some apparent caveats. While it is reasonable that administrator time on evaluation may be one indicator of the quality of staff evaluation, it is also possible that quality

in evaluations may exist without regard to time on the process. As noted in Chapter II of this dissertation, the research on effective instruction does show that time on task is an important and significant variable in student achievement (Spady, 1982; Finn, 1981; Stallings and Mohlman, 1981; Bloom, 1980; Stallings, 1980; Hyman and Cohen, 1979; Doss and Hester, 1978; Berliner et al, 1976; Summers and Wolfe, 1975; Wiley and Harnschfegar, 1974). Because this relationship is so well documented, one is tempted to generalize the relationship to all tasks, including those associated with staff evaluation processes. Obviously, such generalizations of research must be made with caution.

A second caveat worthy of attention is the nature of the data used to answer this question. While interviewers were trained in the data collection process and made every effort to solicit accurate information from the respondents, some inaccuracies may have been introduced because self-report data were collected. For example, the school administrators were asked to estimate the average amount of time they spent on each of the substeps of the staff evaluation process. Error may also have been introduced by interviewing only one administrator in the high schools (usually the principal), because in some schools staff evaluation responsibilities may have been shared with other administrators.

Another consideration should be that perhaps the effectiveness score isn't really a valid score (i.e., isn't measuring school effectiveness). While that possibility does exist, evidence that tangible characteristics of schools are represented by this score was reported in a recent study (Arredondo, Rasp and Macquarrie, 1983) showing positive, significant correlations between a school's effectiveness score and the degree of departmental organization, degree of school organization, student expectations for educational attainment, minimum schooling students would be satisfied with, and with the relative importance of living close to the nuclear family. These variables represent characteristics of the Washington State HS & B sample schools or their student populations that are related to the effectiveness score. Stepwise multiple regression analyses in the Arredondo et al study showed that the combined expected schooling variable, importance of family variable, and the minimum educational satisfaction level variable, explained 47% of the relationship with the effectiveness score. Since it is known from research on the impact of teacher expectations on student achievement (Good, 1981, Persell, 1977, and others) that strong positive relationships exist between expectations and achievement, it seems logical to conclude that the positive relationships between the effectiveness score and the variables identified in the Arredondo et al

(1983) study are evident because the score is measuring school effectiveness. Additional supportive evidence should be forthcoming as research continues using the HS & B data. It should also be noted here that the development of an effectiveness score from characteristics of effective schools identified by researchers in that area, and the use of that score in a project such as this one, even though no significant relationships were identified, while not verifying prior research, certainly did not produce results that are inconsistent with these findings.

The relationship between school effectiveness and component number two (the administrator's goal-setting for improvement of evaluation skills) of the administrative emphasis on staff evaluation construct was tested by a single Pearson correlation and by multiple regression analysis. Results show both the simple  $r$  value (.056) and multiple  $R$  value (.240) to be nonsignificant ( $p = .330$ ). Since research findings supporting strong positive relationships between goal setting and task completion are clear (Locke, 1968; Locke et al, 1970; Shetty and Carlisle, 1974), this nonsignificant relationship between a school's effectiveness and the administrator's setting of personal goals to improve his/her own evaluation skills requires careful consideration. Does this finding provide evidence that invalidates the proposed model, showing that staff evaluation impacts instructional quality, which in turn

partially determines a school's effectiveness? This may well be the case; however, it seems more likely that the variables selected in this study to represent quality in staff evaluation processes were either not accurately representing that quality, or that the principals' self-report of the amount of time he/she remembered spending on the various steps of the staff evaluation process was inaccurate. From insights gained in the examination of these data, and from discussion of interview processes and results with the other interviewers, it is this researcher's opinion that the latter is the more probable explanation.

The relationship between school effectiveness and component number three (the administrator's development of improvement plans for marginal teachers) of the administrative emphasis on staff evaluation construct, was tested by a point biserial correlation. Results of this correlational analysis show a nonsignificant ( $p = .296$ )  $r$  value of  $-.069$ .

Casual observations led to the belief that principals who consistently identified marginal teachers on their staffs and took steps to improve instructional skills, were very different from principals who did not. This observation led to the hypothesis that a positive relationship existed between the administrator's development of improvement plans for such teachers and the overall effectiveness of the school. From this study, it can be concluded that such

a relationship, as defined and measured here, does not exist; however, it does seem likely that the principal's attention to improvement plans for marginal teachers should impact the instructional quality in a school. It may well be that if research projects which include more precise definitions of improvement plans and more accurate measures of the principal's level of development and implementation of such plans are completed, positive relationships will be discovered.

#### Question 2

The second research question asked if Washington State High Schools having administrators who spend more time on teacher evaluation processes than that required by the master contract, have a higher effectiveness rating. As previously explained in Chapter IV of this dissertation, this question was not tested separately due to the lack of variability in a portion of the data regarding the amount of time required for evaluations by the master contracts in the sample school districts. 89.3% of these responded (or were grouped) in the same category of response, that is, 60 minutes per year. This is not surprising because Washington State requires a minimum of 60 minutes per year and apparently a large majority of school districts have adopted the legal language of this requirement. Since subtracting out a constant value from the total amount of administrator time on evaluations will not change the value

of the correlation coefficient, this question can be adequately answered by the Pearson correlation between school effectiveness and total administrator time on evaluation. This analysis resulted in a low, nonsignificant ( $p > .05$ ) correlational coefficient,  $r = -.053$ ,  $p = .330$ . The cautions and considerations discussed above regarding question 1 are similar and equally valid for this question and therefore, have not been repeated here.

### Question 3

The third research question asked if Washington State High Schools, administered by principals who attended an inservice program during the previous school year, have higher effectiveness ratings. A point biserial correlation was calculated to describe the strength of this relationship. The result was a nonsignificant correlation coefficient of .089, with a probability of .247. This finding leads to a conclusion that the hypothesized relationship between the effectiveness of a school and that school administrator's attendance at evaluation inservice sessions during the school year is unlikely.

This hypothesis was developed for study in this project because it was believed that administrators who have demonstrated an interest in learning more about a job task, are more likely to be better at performance of that task than are other administrators. This interest was defined in this study as attendance at evaluation inservice sessions

during the school year. This belief could be challenged on at least five counts.

1. It is possible that evaluation inservice programs were not available to all administrators, or were not scheduled at a time that fit into some administrators' schedules, hence causing nonattendance by some administrators who were interested in this topic and who would otherwise have participated.
2. It is possible that some administrators in the sample had completed training in staff evaluation during the previous year and hence did not feel a need to attend the sessions again.
3. It is possible that inexperienced administrators tended to participate in evaluation inservice more frequently than did experienced administrators.
4. It is also possible that lag time exists between the attendance at an inservice session and actual improvements in evaluation skills and that had the interview questions focused on training sessions completed at an earlier period in the administrator's service, different results would have been obtained.
5. Additionally, as was evident from the administrative responses to this item, 67.7% of the sample group did not attend evaluation inservice. With only 29.9% attending the inservice sessions, it is possible that this percent did not constitute a

sufficient size sample to adequately test the hypothesis.

But for whatever the reasons, this research provided no support for the hypothesized relationship between school effectiveness and administrative attendance at evaluation inservice activities.

#### Question 4

The fourth research question asked whether there was a relationship between the amount of time the administrator spent on staff evaluation and the percent of his/her staff having advanced degrees, and if so, whether that relationship varied with the school's effectiveness rating. Partial correlational analysis was used to answer this question. The effects of total administrative time on evaluation were held statistically constant in this analysis, while a correlation coefficient describing the strength of the relationship between school effectiveness and the percent of staff having master's or doctor's degrees was calculated. The  $r$  value was .062 with a probability of .317 (nonsignificant,  $p > .05$ ). On the basis of this study it should be concluded that a relationship between a school's effectiveness and the percent of staff having advanced degrees is unlikely to exist.

Research studies that have examined this hypothesized relationship between teachers' advanced degrees and school effectiveness provide inconsistent evidence concerning such

a relationship. A number of studies (Madaus et al, 1980; Murnane, 1980; Kean et al, 1979; Coleman et al, 1972; and Getzels and Jackson, 1963) report positive significant relationships between verbal and/or cognitive ability and teacher or school effectiveness, or student achievement. It seems reasonable that verbal and cognitive ability are related to the obtainment of graduate degrees and hence to teacher effectiveness; yet this finding has seldom been supported in a direct manner. While Murnane's (1980) analysis of school effectiveness research found that the quality of the college attended by the teacher made a difference in student achievement, he also concluded that teacher's with master's degrees were no more effective than those with only bachelor's degrees. In addition, Kean et al (1979) reported that the quality of the college attended was significantly related to student reading test scores. Madaus et al (1980) argue that since most school systems pay more money for teaching experience and graduate degrees, we may infer that these are believed to be related to student achievement. However, this may not be the case. Hanushek (1970) in a California study, has shown that verbal facility and "recentness" of the teacher's education are more important than degrees earned or experience. And finally, it is somewhat humbling to note that in their assessment of teacher competence, McNeil and Popham (1973) cite the failure of researchers of teaching effectiveness

to use outcome measures as a criterion, and instead to rely on measures of a teacher's personal attributes such as education and personality. They further argue that studies where process and outcome measures are mixed result in confusing and/or misleading research guidelines. This dissertation research obviously falls victim to that criticism; however, it certainly seems possible that at least an indirect relationship exists between teacher attributes and the ability to become skilled at the instructional processes that obviously lead to high levels of student achievement. Given that belief, it hardly seems reasonable to assume that all research focused on identification of such personal teacher attributes is valueless.

#### Question 5

The fifth research question asked whether there was a relationship between the amount of time the administrator spent on staff evaluation and the percent of his/her staff having worked in the same building for more than 10 years, and if so, whether that relationship varied with the school's effectiveness rating. Partial correlational analysis was used to describe this relationship, with the effects of total administrative time on evaluation statistically held constant. Results show an  $r$  value of .054 and a probability of .317 (nonsignificant,  $p > .05$ ). On the basis of this research, it should be concluded that the existence of such a relationship between percent of staff assigned to the same

building for more than 10 years and school effectiveness or to the administrator time on evaluation is unlikely.

Interest in this hypothesized relationship has been generated both by the increasing proportion of Washington State's secondary teachers who fall into the category of having been in the same building for more than 10 years, and by educational literature attention to the increasing need for retraining and revitalizing this older cadre of teachers. While job enrichment, enlargement, or enhancement has been frequently studied in business and public service (Myers, 1970; Gomersall and Myers, 1966; and Nord, 1969; all described in Golembiewski and Cohen (editors), 1976), the idea that educational workers might need such considerations is relatively new to many educators. Recent media attention to teacher stress and "burnout" also stimulated the formulation of the hypothesis for this project.

School effectiveness literature which has addressed the issue of teacher experience tends to show positive relationships between the experience variable and classroom or school effectiveness. Rutter et al (1979) note that relatively inexperienced teachers in all schools in their study seemed to have difficulty in maintaining contact with the class as a group, as well as in placing too much emphasis on individual disruptions. They speculate that it is these behaviors which lead to the lower levels of student

achievement observed. Austin's (1978) study of Maryland schools showed more inexperienced and transient teachers were found in the low-achieving schools. Similar findings have been reported by Kean et al (1979) and others. On the other hand, Hanushek's (1970) study showed no relationship between teacher experience and student achievement. Due to the inconsistent findings of research on proposed relationships between teacher experience levels and school effectiveness, and in view of the commonly held belief that large numbers of our secondary educators are becoming increasingly ineffective because of "teacher burnout", it seems wise to consider this question worthy of additional attention.

In this study, only the relationship between percent of staff with more than 10 years of experience in the same building and school effectiveness was examined. As is evident from the nonsignificant correlation, a linear relationship does not exist; however, this alone would not rule out the possibility of curvilinearity in that relationship. Therefore, tests for nonlinear relationships may be worthwhile. It would also be of interest to repeat this study with years of teacher experience treated as a continuous variable.

#### Question 6

The final research question asked if Washington State High Schools where administrators reported their teachers

as spending more class time on instructional tasks have higher effectiveness ratings. A Pearson correlation coefficient was calculated between amount of class time spent on instruction and the school's effectiveness rating. This correlation coefficient was  $-.033$  and has a nonsignificant probability level of  $.399$ . On the basis of this finding, it should be concluded that no relationship exists between school effectiveness and the amount of class time (as reported by the sample schools' administrators) spent on instruction.

Since a relationship between school effectiveness and time on instruction is well documented in research summarized in Chapter II of this dissertation, and cited in Chapters I and IV, this finding needs to be examined more closely. It seems likely that enough error was introduced by the principal's estimate of the average amount of time being spent on instruction to result in a nonsignificant correlation. Another possibility, of course, is that the effectiveness score is not sensitive enough to pick up relationships that do in fact exist. As argued in the discussion of question 1, the score has successfully shown positive relationships in a least one other study (Arredondo, Rasp and MacQuarrie, 1983), where positive significant correlations were found between school effectiveness and degrees of departmental and school organization, and between student expectations for educational attainment

levels; therefore, the more reasonable conclusion is that error was introduced in the administrators' responses to this questionnaire item. Additionally, it is possible that the strength of the relationship between time on task and student achievement is less in senior high schools; however, from research on junior high schools, we would not expect this to be the case.

The general purpose of this study was to explore a number of questions regarding the relationships between administrator emphasis on staff evaluation and the overall effectiveness rating of senior high schools in Washington State.

#### Summary of Procedures

A review of the literature on (1) organizational effectiveness, (2) motivation, goal setting, and employee evaluation, and (3) school/classroom effectiveness research provided background information on the variables that might be related to the overall effectiveness of senior high schools. From this theoretical perspective, a model was constructed to illustrate the hypothesized relationship between instructional quality, staff evaluation processes, and school effectiveness. This model is depicted in Figures 1 and 2 on page 49.

Six research questions were then asked about relationships between the independent component variables that

formed the construct, administrator emphasis on staff evaluation and school effectiveness and also about other independent variables believed to be related to school effectiveness.

During the spring of 1980, Washington State participated in the High School and Beyond study sponsored by the National Center for Education Statistics. The study generated a large bank of data about high school student opinions, their family background, education, expectations, plans for the future, their educational achievement levels, and their school characteristics and practices. During the 1981 school year, a follow-up questionnaire (the Washington Addendum) was developed and used to improve the school questionnaire data and to collect additional information regarding staff evaluation practices of interest in this research project. Data from all these sources were used to answer the research questions being asked in this study. Data were analyzed by use of the Statistical Package for the Social Sciences (SPSS) at the University of Washington and at Central Washington University. Statistical methods used were Pearson correlations, partial correlations, point biserial correlations, and multiple regression analyses.

#### Summary of Findings

Nine hypotheses were formulated to test the relationships between administrator emphasis on staff evaluation and the effectiveness ratings of the 65 schools in the

Washington State sample (question 1). Seven of these hypotheses were concerned with the average amount of time the school's administrator spent on each of the substeps of the staff evaluation process and the total amount of time he/she spent on staff evaluation. Two hypotheses were formulated to test the relationships between the administrator's personal goal setting to improve evaluation skills and his/her development of improvement plans for marginal teachers. It was found that:

- (a) the correlation between school effectiveness and preobservation conference time was low and non-significant ( $r = -.047$ ,  $p = .356$ );
- (b) the correlation between school effectiveness and observation time was low and nonsignificant ( $r = .008$ ,  $p = .474$ );
- (c) the correlation between school effectiveness and post observation planning time was low and non-significant ( $r = .118$ ,  $p = .179$ );
- (d) the correlation between school effectiveness and post observation conference time was low and non-significant ( $r = -.039$ ,  $p = .381$ );
- (e) the correlation between school effectiveness and time on follow-up activities was low and non-significant ( $r = -.123$ ,  $p = .168$ );
- (f) the correlation between school effectiveness and evaluation report writing was low and

nonsignificant ( $r = -.105$ ,  $p = .207$ );

- (g) the correlation between school effectiveness and total administrator time on evaluation was low and nonsignificant ( $r = -.053$ ,  $p = .340$ );
- (h) the correlation between school effectiveness and administrator's personal goal setting to improve evaluation skills was low and nonsignificant ( $r = .056$ ,  $p = .330$ ); and
- (i) the correlation between school effectiveness and administrative development of improvement plans for marginal teachers was also low and nonsignificant ( $r = -.101$ ,  $p = .215$ ).

As previously explained, a separate hypothesis was not developed for research question 2, due to the lack of variability in part of the data. The correlations calculated for the above hypotheses provide sufficient information to conclude that reported administrative time on evaluation in excess of the master contract requirements is nonsignificantly correlated with school effectiveness.

Four hypotheses were developed to test possible relationships between school effectiveness and administrator attendance at evaluation inservice, percent of staff with advanced degrees, percent of staff with more than ten years of experience in present assignment, and for the administrator estimated average amounts of class time spent on instructional activities. It was found that:

- (a) the relationship between school effectiveness and administrator attendance at evaluation inservice sessions was low and nonsignificant ( $r = .089$ ,  $p = .247$ );
- (b) the relationship between school effectiveness and percent of staff with more than 10 years of experience in the same building was low and nonsignificant ( $r = .054$ ,  $p = .339$ );
- (c) the relationship between school effectiveness and percent of staff with advanced degrees was low and nonsignificant ( $r = .062$ ,  $p = .317$ ); and
- (d) the relationship between school effectiveness and administrator estimates of average amount of class time spent on instruction was low and nonsignificant ( $r = -.033$ ,  $p = .399$ ).

#### Conclusions

From these results, and with the previously discussed cautions and reservations in mind, some tentative conclusions should be brought to the attention of educational researchers.

1. The hypothesized relationship between administrator time on staff evaluation and school effectiveness, as defined and measured here, did not exist. It is possible that with regard to staff evaluation processes, the commitment of administrator time

and attention does not make a significant difference in overall school effectiveness. It is also possible that staff evaluation processes, as presently practiced in Washington State High Schools are not a contributing factor toward quality instruction.

2. The hypothesized relationship between administrator attendance at evaluation inservice programs and higher levels of skill at staff evaluation, when measured under conditions where the administrator's attendance at evaluation inservice and the skill measure were sampled during the same year, did not exist.
3. The hypothesized relationship between administrative attention to the development of improvement plans for marginal teachers (as defined and measured in this study) and higher levels of skill at staff evaluation did not exist.
4. The hypothesized relationships (as defined and measured in this study) between school effectiveness and percent of staff having master's or doctor's degrees did not exist.
5. The hypothesized relationships (as defined and measured here) between percent of staff with more than 10 years of experience in the same building and school effectiveness, and between amounts of

administrative time on evaluation and percent of staff with more than 10 years of experience in one building did not exist.

6. It seems likely that enough error was introduced in the principal's estimate of the average amount of class time spent on instruction to mask the expected relationships between time on instructional tasks and overall school effectiveness.

#### Recommendations

Throughout the research design and data analysis phases of this study, questions were generated that could not be addressed by this particular research effort. The need for additional research frequently becomes more obvious as one progresses through a project. Therefore, based on insights gained, the following recommendations are offered for researcher consideration.

1. The composite effectiveness score developed in this project should be tested in other research situations. School effectiveness researchers are just beginning to question the almost blind attention that has been given to achievement gains as the sole criterion of a school's effectiveness. It is apparent that efforts to expand the measure of effectiveness to include other factors need to be continued.

2. Because school effectiveness research is sadly lacking at the secondary level, projects designed to identify effective high schools and to describe practices believed to contribute to that effectiveness should be undertaken as soon as possible.
3. The model constructed in this study to illustrate the hypothesized relationships between staff evaluation, quality of instruction, and school effectiveness, should be tested using different and more precise measures of quality in staff evaluation processes. If time spent on staff evaluation is used as an indicator of quality, then observational data or actual time records should be used instead of relying on principal estimates of approximate time amounts after the events have occurred.
4. Research studies that explore relationships between school policies and school effectiveness ratings should be conducted. While some school districts (for example, Seattle), are presently developing policies that mandate increased levels of effectiveness, little research support exists for this practice.

If these projects are undertaken and completed, evidence providing improved direction for educator efforts will be contributed. For that reason, researcher consideration

of these recommendations is encouraged.

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APPENDIX A-1

SCHOOL QUESTIONNAIRE

8. What is the approximate average daily percentage attendance in your high school?  
\_\_\_\_\_ %
14. Please estimate the approximate percentage of students who enter the 10th grade but drop out before graduation. Do not include students who transfer to another school.  
\_\_\_\_\_ %
43. What percentage of full-time high school teachers have Master's or Doctor's degrees?  
\_\_\_\_\_ %
44. What is the approximate average daily percentage of teacher absenteeism in your school?  
\_\_\_\_\_ %
45. About what percentage of your teaching staff has been at your school for ten years or more?  
\_\_\_\_\_ %

APPENDIX A-2

HIGH SCHOOL and BEYOND SCHOOL QUESTIONNAIRE

WASHINGTON ADDENDUM

66. How many minutes are actually spent on instructional activities?  
\_\_\_\_\_minutes.
69. What was the total amount of time per teacher spent in each of the following evaluation activities?
- 1) In pre-observation conferencing and goal setting  
\_\_\_\_\_minutes/teacher.
  - 2) In observation  
\_\_\_\_\_minutes/teacher.
  - 3) In planning post-observation conferences  
\_\_\_\_\_minutes/teacher.
  - 4) In post-observation conferencing and goal-setting  
\_\_\_\_\_minutes/teacher.
  - 5) In follow-up activities  
\_\_\_\_\_minutes/teacher.
  - 6) In writing evaluation reports  
\_\_\_\_\_minutes/teacher.
  - 7) Other (specify)  
\_\_\_\_\_minutes/teacher.
71. How much evaluation time per teacher does the Master Contract require?  
\_\_\_\_\_minutes.

72. Was the improvement of evaluation skills a personal goal during the year?

\_\_\_\_\_ yes

\_\_\_\_\_ no

73. If an evaluation goal was set, was it mutually agreed upon between you and your supervisor?

\_\_\_\_\_ yes

\_\_\_\_\_ no

\_\_\_\_\_ not applicable

74. If an evaluation goal was set, were you evaluated on how well you met this goal?

\_\_\_\_\_ yes

\_\_\_\_\_ no

\_\_\_\_\_ not applicable

77. For how many "marginal teachers" were "improvement" plans established during the year?

\_\_\_\_\_

APPENDIX A-3

HIGH SCHOOL and BEYOND STUDENT QUESTIONNAIRE

15. Approximately what is the average amount of time you spend on homework a week?

No homework is ever assigned\_\_\_\_\_.

I have homework, but I don't do it\_\_\_\_\_.

Less than 1 hour a week\_\_\_\_\_.

Between 1 and 3 hours a week\_\_\_\_\_.

More than 3 hours, less than 5 hours a week\_\_\_\_\_.

Between 5 and 10 hours a week\_\_\_\_\_.

More than 10 hours a week\_\_\_\_\_.

35. How much do you agree with each of the following about your school?

a) School should have placed more emphasis on basic academic subjects (math, science, English, etc.)

Agree strongly\_\_\_\_\_

Agree somewhat\_\_\_\_\_

Disagree somewhat\_\_\_\_\_

Disagree strongly\_\_\_\_\_

Does not apply\_\_\_\_\_

50. What do the following people think you ought to do after high school?

## d) Teachers

Go to college\_\_\_\_\_

Get a full-time job\_\_\_\_\_

Enter a trade school or an apprenticeship\_\_\_\_\_

Enter military service\_\_\_\_\_

They don't care\_\_\_\_\_

I don't care\_\_\_\_\_

Does not apply\_\_\_\_\_

52. How much has each of the following interfered with your education at this school?

## c) Poor teaching

Not at all\_\_\_\_\_

Somewhat\_\_\_\_\_

A great deal\_\_\_\_\_

53. Please rate your school on each of the following aspects.

## c) Quality of academic instruction

Poor\_\_\_\_\_

Fair\_\_\_\_\_

Good\_\_\_\_\_

Excellent\_\_\_\_\_

Don't know\_\_\_\_\_

e) Teacher interest in students

Poor\_\_\_\_\_

Fair\_\_\_\_\_

Good\_\_\_\_\_

Excellent\_\_\_\_\_

Don't know\_\_\_\_\_

g) Fairness of discipline

Poor\_\_\_\_\_

Fair\_\_\_\_\_

Good\_\_\_\_\_

Excellent\_\_\_\_\_

Don't know\_\_\_\_\_

APPENDIX A-4a

HIGH SCHOOL and BEYOND SENIOR TEST BOOKLET

VOCABULARY PART 1

Directions: Each of the questions in this test consists of one word followed by five words or phrases. Select the one word or phrase whose meaning is closest to that of the word in capital letters and blacken the corresponding oval.

Sample Question

Sample Answer

CHILLY:

CHILLY:

(A) lazy

(A) lazy

(B) nice

(B) nice

(C) dry

(C) dry

(D) cold

cold

(E) sunny

(E) sunny

In order to find the correct answer, you look at the word chilly and then look for a word below it that has the same or almost the same meaning. When you do this, you see that cold, choice D, is the answer because cold is closest to the meaning of the word chilly.

Time--5 minutes, 15 questions.

[ETS did not grant permission to reprint the individual test items, however qualified researchers may borrow the items from Educational Testing Service, Princeton, N.J.]

APPENDIX A-4b

HIGH SCHOOL and BEYOND SENIOR TEST BOOKLET

VOCABULARY PART 2

Please refer to page 161 for directions and sample question.

Time--4 minutes, 12 questions.

[Educational Testing Services did not grant permission to reprint the individual test items, however, qualified researchers may borrow the items from ETS, Princeton, N.J..]

APPENDIX A-4c

HIGH SCHOOL and BEYOND SENIOR TEST BOOKLET

READING

Directions: Each passage is followed by questions based on its content. After reading a passage, choose the best answer to each question and blacken the corresponding oval. Answer all questions following a passage on the basis of what is stated or implied in that passage.

Time--15 minutes, 20 questions.

[Educational Testing Services did not grant permission to reprint the individual test items; however, qualified researchers may borrow the items from ETS, Princeton, N.J..]

APPENDIX A-4d

HIGH SCHOOL and BEYOND SENIOR TEST BOOKLET

MATHEMATICS PART 1

Directions: Each problem in this section consists of two quantities, one is placed in Column A and one in Column B. You are to compare the two quantities and mark oval

- A if the quantity in Column A is greater;
- B if the quantity in Column B is greater;
- C if the two quantities are equal; or
- D if the size relationship cannot be determined from the information given.

Sample Questions

<u>Column A</u>	<u>Column B</u>
<u>Example 1:</u> 20 per cent of 10	10 percent of 20

Sample Answer--- (A) (B)  (D)

<u>Example 2:</u> 6 x 6	12 + 12
----------------------------	---------

Sample Answer---  (B) (C) (D)

Answer C is marked in Example 1 since the quantity in column A is equal to the quantity in Column B. Answer A is marked for Example 2 since the quantity in Column A is greater than the quantity in Column B.

[Educational Testing Services did not grant permission for reprinting these items; however, qualified researchers may borrow the items from ETS, Princeton, N.J..]

Test Time--15 minutes, 25 questions.

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UNIVERSITY MICROFILMS INTERNATIONAL

APPENDIX A-5

PANEL MEMBERS SELECTED TO DETERMINE  
WEIGHTING FACTORS FOR EFFECTIVENESS  
SCORE COMPONENT VARIABLES

Joan D. Abrams, Superintendent  
Redbank Public Schools  
Redbank, NJ 07701

Herman E. Behling, Assistant Superintendent  
Department of Education for the State of Maryland  
200 West Baltimore Street  
Baltimore, Maryland 21201

Carolyn Benbow  
The National Institute of Education  
U.S. Department of Education  
Washington D.C. 20208

Dennis Carroll  
Chief of the Longitudinal Studies Branch  
National Center for Education Statistics  
205 Presidential Building  
400 Maryland Ave SW  
Washington D.C. 20202

Vincent Casey, President  
The Alaska State Board of Education  
1024 La Touche  
Anchorage, AK 99501

Gordon Cawelti  
Executive Director of ASCD  
225 North Washington Street  
Alexandria, VA 22314

Robert Gruenwald, Professor  
Educational Administration  
College of Education  
Washington State University  
Pullman, WA 99164

George Hanford, President  
The College Board  
888 7th Avenue  
New York, NY 10106

Edgar A. Kelley, Professor  
Secondary Education and Educational Administration  
The University of Nebraska  
Lincoln, NE 68500

Alex Law, Director of Evaluation  
California State Department of Education  
721 Capitol Mall  
Sacramento, CA 95814

Dean Nafziger  
Northwest Regional Educational Laboratory  
300 SW 6th Avenue  
Portland, OR 97204

Ernest Polley, Director of Testing and Evaluation  
Alaska State Department of Education  
Pouch F, Alaska Office Building  
Juneau, AK 99811

Madelaine Ramey, Effective Schools Project Coordinator  
Seattle Public Schools  
Administrative Services Center  
815 4th Avenue N  
Seattle, WA 98109

Joan Shoemaker, Education Consultant  
Connecticut State Department of Education  
P.O. Box 2219  
Hartford, CT 06115

James Sweeney, Associate Professor  
College of Education  
Iowa State University  
Ames, IA 50010

## VITA

DAISY ELLEN BRAWLEY ARREDONDO  
Administrative Assistant for Curriculum  
Walla School District #140  
364 South Park  
Walla Walla, WA 99362  
(509) 525 6042

Personal: Birth date - 2/13/42  
Birth place - Wilderness, Missouri  
Parents - Albert and Gladys Brawley  
Married - 2/11/60; divorced - October, 1976  
Children - Maria Elena, Ricardo, and Antonio

### Academic Training:

Grades 1 - 8, Wilderness Elementary School  
High School, Van Buren, Missouri and  
High School, Cape Girardeau Catholic High School  
Cape Girardeau, Missouri  
graduated, 1959  
College, Southeast Missouri State College  
Wichita State University  
University of Washington, B.A. 1970  
(biology education major; chemistry  
minor)  
Graduate, University of Washington, M.A.T. 1974  
(biology education, ecology emphasis)  
University of Washington, Secondary  
Principal's Credential, 1976  
University of Washington, Super-  
intendent's Credential, 1981  
University of Washington, Ph.D. 1983  
(educational administration)

### Professional Experience:

Administrative Assistant for Curriculum  
Walla Walla School District  
364 South Park, Walla Walla, WA 99362  
(1982-present)  
Vice Principal  
North Kitsap High School  
251 Hostmark, Poulsbo, WA 98370  
(1978-1982)  
Administrative Assistant to the Principal and  
Attendance Counselor  
Lindbergh High School, 16426 128th Ave S.E.  
Renton, WA 98055  
(1976-1978)

Biology Teacher  
 Hazen High School, Renton, WA (1970-1971)  
 Holy Names Academy, Seattle, WA (1971-1972)  
 Lindbergh High School, Renton, WA (1972-1976)  
 Teaching Assistant  
 University of Washington, Seattle, WA, Zoology,  
 (1970-1970)  
 Cadet Teacher  
 Hazen High School, Renton, WA (1969-1970)  
 Counselor, Crisis Clinic Manager  
 The Berry House, Renton, WA (1970-1972)  
 Manager  
 The Discuss Inn, A weekly issue oriented coffee-  
 house, Bellevue, WA (1970-1971)

Professional Organizations:

National Science Teachers Association (1969-1976)  
 American Biology Teachers Association (1969-1976)  
 National Education Association, Washington  
 Education Association (1970-1978)  
 National Association of Student Activity Advisors,  
 Washington Association of Student Activity  
 Advisors (1978-1980)  
 National Association of Secondary School Principals,  
 Washington Association of Secondary School  
 Principals (1978-1982)  
 Association for Supervision and Curriculum Develop-  
 ment, Washington Association for Supervision  
 and Curriculum Development (1976-present)  
 Phi Delta Kappa (1978-present)  
 The World Future Society (1978-present)  
 Washington Association of School Administrators  
 (1982-present)

Professional Awards, Honors, and Publications:

Nomination for Outstanding Biology Teacher of the  
 Year Award (1971)  
 Nomination for Outstanding Secondary Educator of  
 the Year Award (1972)  
 Certificate for Outstanding Contribution to School  
 Programs at Lindbergh High School (1977)  
 Mini grants for enrichment and interdisciplinary  
 programs (1972-1975)  
 "Teaching for Attitude Changes", The American  
 Biology Teacher, 33:10, October 1971.  
 "Using A-V Aids in Teaching For Attitude Changes",  
Audio Visual And Screen Guide, April 1972.  
 "Turning Your Students on to Biology: An Introduct-  
 ory Exercise to Stimulate Interest in the Biolog-  
 ical Studies", Puget Sound National Science  
 Teachers Journal, Spring, 1972.

"Teaching for Attitude Changes", paper presented at Washington State Science Teachers Association Conference, April 1972, Edmonds, WA.

"Arena or Computer Scheduling", NASSP Bulletin, 64:434, March, 1980.

"Student and Organizational Characteristics that Appear to be Related to Overall Secondary School Effectiveness", paper presented at the Washington State Association for Supervision and Curriculum Development Conference, Seattle, WA, February, 1983.