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A COMPARATIVE STUDY OF THE PERCEIVED JOB
SATISFACTION OF SITE ADMINISTRATORS
IN SAN DIEGO CITY SCHOOLS

by

Roderick Reid Matheson

A dissertation submitted in partial fulfillment
of the requirements for the degree

Doctor of Education

University of San Diego

1991

Dissertation Committee

Edward Kujawa, Ph.D., Director
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ABSTRACT

The purpose of the study was to identify the characteristics of the administrator's job that were the sources of satisfaction and hence motivation and those characteristics of the administrator's job that were the sources of dissatisfaction for the 277 school-site administrators in the San Diego Unified School District. The intent of the research was to identify the wants and needs of the site administrators as they pertained to job satisfaction. One hundred fifty-eight administrators (57%) returned surveys. Of those returned, 144 were used in the study.

A revised version of the Job Characteristics Model developed by Hackman and Oldham in the late 1970s provided the theoretical foundation for the study. School level, gender, age, restructuring, school calendar, administrative position, socioeconomic status of the students, and ethnic diversity were used as the independent variables. Measures of satisfaction on 40 dependent variables were used to identify areas of satisfaction and dissatisfaction. Eight primary hypotheses were tested using one-way ANOVAs and produced 41 significant differences. Fifteen secondary hypotheses were tested using two-way ANOVAs and produced 21 significant interaction effects.

The study found that the administrators expressed relatively low satisfaction on several variables such as task identity, feedback from supervisors or other administrators, communication, role overload, and openness of expression. Analysis of these variables indicated a trend or theme of dissatisfaction with aspects of communication within the district.

In the comparative analyses, each of the eight independent variables produced significant differences. However, significant differences were most abundant for the administrator position variable with principals generally expressing greater satisfaction than vice principals ($\alpha = .05$) on 10 dependent variables. The perceived socioeconomic status of the student population variable was next with seven significant differences.

Restructuring interacted significantly ($\alpha = .05$) with administrative position on eight variables indicating that principals were less satisfied than vice principals in restructuring schools. Similarly, restructuring and school level interacted to indicate that restructuring at the senior high school level was creating some administrator dissatisfaction. However, within all senior high schools, principals expressed greater satisfaction than vice principals on three variables. The significant interaction effects provided evidence that restructuring, administrative position, gender, and school level were creating differences in perceived satisfaction.

As a result of the findings, 13 recommendations were made directly to San Diego Unified School District. An additional 8 recommendations for further study were also made.

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DEDICATION

I would like to dedicate this work to my mother, Genevieve Matheson, and in memory of my father, Alexander Mackenzie (Brud) Matheson. They instilled in me the drive and dedication to strive for excellence in my life.

ACKNOWLEDGEMENTS

I would like to express my sincere appreciation to my family, friends, associates, colleagues, professors, and employers at San Diego City Schools.

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I would like to give special thanks to my colleague, mentor, golf partner, co-author, professor, thesis chair, employer, dissertation committee member, travel companion, and especially my friend--Ray Latta. Your friendship has meant the world to me over the past few years and without your help, support, and faith in my abilities I would never have dreamed this doctorate could be a reality. I owe you so much.

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CHAPTER I

THE PURPOSE

Statement of the Issue

The research literature on effective schools has established strong principal leadership as an essential element of an effective school (Gainer, 1989; Lezotte, 1984). Motivation theory, as described by Herzberg (1968, 1979, 1987a, 1987b), Maslow (1988), Vroom (cited in Lawler, 1982, 1985), Frase (1989), Conley (1988, 1989), Miskel (1982), and others, strongly suggests that productivity and quality of work is related to worker satisfaction and motivation. Herzberg maintains that worker satisfaction is a result of good work and not the cause of good work. If Herzberg's assertions are correct, and they have been validated in several industrial and educational research efforts and replications of his original study, then a school district that could tap into the motivational aspects of their site administrators could conceivably create a work environment that maximizes the productivity of the site administrators. In the school system, maximizing productivity of site administrators can translate into a

more effective school. This translates into increased student academic achievement and success.

If the leaders of a school district can identify and ameliorate some or all of the sources of dissatisfaction while at the same time identifying a number of motivators that have the potential to be improved, then that district would have a mechanism to create a better work environment. That in turn would produce greater work satisfaction. Staff development and governance and collaborative practices within the district could be enhanced to create the needed changes. Herzberg said that if you want workers to do a good job then give them a good job to do (Herzberg, 1968). The statement sounds simplistic, yet, many school district personnel have little or no idea how many policies and procedures are impacting on their schools and the people working in the schools.

This study examines a number of the factors that have been identified by previous research efforts as those that have had significant impact on the quality of the working life of those involved. As a result of the identification of these factors, the district leaders have the potential to change organizational practices to address the perceived wants and needs of the site leaders. This would allow the site leaders to do their jobs more efficiently and effectively due to increased motivation and satisfaction.

Background to the Problem

In the spring of 1986, San Diego City Schools Superintendent, Thomas W. Payzant, in consultation with the Board of Education, established a Schools of the Future Commission. Significant changes in the demographic makeup of the city, vast economic instability across the nation, and a perceived inadequacy in the present education system ignited the demand to reexamine the directions in school organization and governance in San Diego City Schools. The charge to the Commission was to address the question, "What should San Diego public schools be like in the year 2000?" ("Which Way to the Future," 1987). The Schools of the Future Commission was the starting point of the restructuring movement in San Diego City Schools. The Commission did not set out a blueprint for building new schools and a new school system. Rather, the Commission called for a collaboration of school and community people to address the changing needs of the education system in the San Diego area. In response to the recommendations of the Schools of the Future Commission, approximately 25 schools entered the restructuring arena (Payzant, 1989).

Restructuring has become a buzzword and a catchword for a variety of approaches to school improvement. Restructuring has been used to describe site-based governance, decentralization of services from the central office, and teacher empowerment, among other things. It has

been heralded as a means of achieving effective schools (Latta, 1990).

The truth is, restructuring has meant a lot of experimenting, within certain parameters, within the existing structure of the educational system. There have been a number of successes reported in the San Diego City Schools as an increasing number of schools have become involved with the restructuring movement. Linda Vista Elementary has succeeded in ungrading primary classes and O'Farrell Community School has increased community involvement. As of June 1990, 53 of 160 schools in the San Diego Unified School District were officially listed as "restructuring schools."

In the fall of 1990, Superintendent Payzant raised the status of the restructuring movement in the district. He announced that the San Diego Unified School District was officially a restructuring district. The fall of 1990 became the starting date for district-wide discussions and workshops on the change of the educational system to meet the needs of the students and the school personnel (Strother, 1989).

Restructuring has meant examining the way things are done and exploring possible alternatives that might serve the needs of the students and the community in a better way. One such innovation was alternative school calendars to eliminate extended vacation periods and to help alleviate other problems being experienced with the traditional

calendar schedule. Within the traditional school calendar some schools were experiencing increased overcrowding. To alleviate the overcrowding, multitrack scheduling was developed. Multitracking means that the school population is divided into groups and one group of students would be on vacation while the other groups were in attendance at the school. The multitrack methods employed could increase the capacity of a school facility by approximately 25% over a one year period. Another type of school calendar spread the academic year over 12 months rather than the traditional 9.5 to 10 month schedule. One justification for the year-round calendar was that the learning environment was sustained over a longer period of time with little loss and more retention of learned material due to the shorter vacation breaks.

Intertwined throughout all of the restructuring movement has been the effective schools movement spawned by the research of Ronald Edmonds (Lezotte, 1984). Effective schools, according to Edmonds, demonstrated certain characteristics. The list of characteristics identified by Edmonds became the focal point of school improvement efforts throughout the nation. Edmonds (cited in Gainer, 1989) identified strong principal leadership; a pervasive and broadly understood instructional focus; a safe and orderly school climate; high teacher expectations for student achievement; and the use of student achievement data to evaluate program success as the elements most frequently

found in schools that he classified as being effective in the education of students. These five characteristics were incorporated into the definition of the effective schools program as described by the Hawkins-Stafford Amendments of 1988 (P.L. 100-297) (Gainer, 1989).

Time and again the most important characteristic identified by researchers (Cunard, 1990; Larsen, 1989; Lezotte, 1984) in effective schools was strong site leadership. The leadership at the school site was being provided not only by the principal, but also the vice principals and other significant faculty members. Without strong leadership from the principal and others, the schools lacked vision and clarity of their mission. Ineffective schools simply did not produce the kind of academic achievement results that effective schools were able to demonstrate and the key ingredient in the effective schools was strong site leadership.

The fall of 1990 saw the launching of new and expanded restructuring efforts in the schools of San Diego. With the increased emphasis on school improvement came increased demands on site administrators. The literature on effective schools and school improvement programs demonstrated the necessity to have strong site leadership (Empey, 1989; Payzant, 1989; Sergiovanni, 1987). San Diego City Schools already had a number of exceptionally strong site leaders. Other schools had site leaders that could be nurtured and developed into stronger site leaders through forms of staff

development and intervention programs (Frase & Conley, 1989-90; Hackman, Oldham, Janson, & Purdy, 1975; Lezotte, 1989; White, 1989). Many existing district practices and many new demands created by the restructuring movement certainly have tested the administrative and leadership abilities of site leaders. The question that has been raised over the past few years has to do with the impact of the various movements on the motivation and job satisfaction of the current site administrators (Bridges, 1980; Duke, 1988; Lortie, 1986; "Reforms Score Low with Teachers," 1990). The principalship and site administration has become a very complex job with increased demands being created and placed on the shoulders of the site leader (Wentz, 1989). Not only must the site leader be a strong leader, but he or she must now work a longer year, share decision making, take on site-based management, and spend over 50% of the school day supervising instruction. All of this in addition to facing the increased demands of society for drug education, drop-out reduction, increased academic achievement, sex education, feeding hungry kids, and preparation of a workforce capable of sustaining the American way of life into the 21st century.

Delineation of the Research Problem

The demands for better schools through restructuring and school improvement efforts are falling on the site administrator's shoulders (Duke, 1988; Larsen, 1989; Paulu,

1989). Administrators, as with any workers in society, are motivated and satisfied with their work environment based on the satiation of certain intrinsic and extrinsic needs. The theoretical framework on work motivation supplied by Maslow indicated that an individual must first meet certain lower level needs before higher level needs can be addressed. Safety needs must be satisfied before a person can effectively entertain artistic expression needs according to Maslow's theory (Lawler, 1969). Similarly, principals cannot be expected to create an artistic and creative vision of the future of their respective schools or effectively assist faculty and students in their quests for self-actualization when the principal is struggling with very basic needs such as overwork to the point of physical and emotional exhaustion and low self-esteem brought about by a lack of feedback and acknowledgement of work that is well done.

Frederick Herzberg supplied additional and related theory to the analysis of work satisfaction (Frase, 1989; Herzberg, 1968, 1987). According to Herzberg, job satisfaction and job dissatisfaction are due to two different kinds of factors. Satisfaction relies on motivators or factors intrinsic to the job itself while dissatisfaction results from hygiene factors that are extrinsic to the job. Herzberg postulated that increasing the perceived motivators in a worker's job would result in increased work outcomes. Thomas Sergiovanni (1967)

replicated the Herzberg study and discovered that teachers obtain their greatest satisfaction from their ability to influence the lives of students. Sergiovanni also stated that motivation needs should not be addressed at the expense of extrinsic factors to the work that Herzberg termed hygiene factors. Sergiovanni hypothesized that teachers that were overly concerned with unsatisfactory hygiene factors, such as low pay and poor working conditions, would not be influenced greatly by motivators such as recognition for a job well done.

Another group of researchers, Lawler (1969) and Hackman and Oldham (1975, 1976; Hackman et al., 1975) extended and refined the works of Maslow, Herzberg, Sergiovanni, and others into a job characteristics model. The job characteristics model, as hypothesized by Hackman and Oldham, has been used by industry for many years as a tool to assist in the redesign and enrichment of jobs, mainly in the industrial setting. Hackman and Oldham claimed that intrinsic rewards were more directly related to job satisfaction than extrinsic rewards. More importantly, they claimed that satisfaction was the result of good work and not the cause of good work.

The Hackman and Oldham model of job satisfaction has been validated by several research efforts in the education setting. Gorsuch (1976) and Harder (1985) extended the industrial setting work of Hackman and Oldham into the educational work setting. Both researchers agreed that the

job characteristics model developed by Hackman and Oldham had applicability to the educational profession.

Another researcher, Spangler (1985), did a validation study of the job characteristics model. Spangler verified that the model had validity or measured what it was supposed to measure. In his particular study he found that the data that he had modified provided support for the model.

Spangler stated:

The basic Hackman and Oldham job characteristics model has survived the removal of semantic response bias rather better than I thought it would. Indeed, rectified or adjusted data provided more support for the model than raw or unadjusted data. (p. 367)

Since the mid 1980s the model has been refined further to address the specific needs and interests of the education community. Sharon Conley, Samuel Bacharach, and Scott Bauer (Conley, Bacharach, & Bauer, 1989) and Larry Frase (Frase, 1989) added considerable insight and testing of the original Hackman and Oldham model. Frase, a professor at San Diego State University, has been directly involved in four studies utilizing the redesigned Hackman and Oldham model. The studies have involved an elementary school district in southern California, junior college instructors in southern California, a school district in Arizona, and the most recent research has involved a K-12 district in Alberta, Canada (Frase & Heck, 1990).

In the Alberta study, the original Hackman and Oldham job characteristics model and job diagnostic survey were modified, refined, and embellished to reflect the unique nature of the educational setting. Reliability was established for the new instrument through the calculation of a test-retest correlation ($r = .88$). From the administration of the new instrument, 38 variables were identified through a set of formulae related to a variety of constructs appropriate to an educational setting. In the Alberta study, the instrument was first administered in November, 1989. The results of the survey were tabulated and presented to the teachers and administrators in the school district. Intervention strategies and staff development programs were designed and implemented over the spring of 1990. In June of 1990, the instrument that was used in November of 1989 was administered to the educators in the district a second time. The results of the survey were tabulated again according to the 38 areas of interest. The results of the June data were also compared, through statistical analyses, to the November data. Twenty of the 38 areas of interest showed statistically significant improvement in a district-wide analysis. Each school was also analyzed for comparative improvements and the results of the analyses were presented to the faculties of all of the schools in the fall of 1990. The entire research project has been extremely successful according to the superintendent of the Alberta school district (Frase & Heck,

1990). The intervention strategies were based on the findings of the first survey and the staff development and inservicing produced some very exciting improvements that were verified through the second administration of the revised Hackman and Oldham instruments.

Purpose of the Study

The purpose of this study was to identify the characteristics of the administrator's job that were the sources of satisfaction and hence motivation and those characteristics of the administrator's job that were the sources of dissatisfaction or hygiene factors for the site administrators of the San Diego Unified School District. Limited information or research could be found in the literature related to the job satisfaction of an administrator only population in the school systems. Most research and literature on satisfaction and motivation in education lumped teachers and administrators together into one database for study. This study has the potential to enrich greatly the knowledge and understanding of the educational community by examining in-depth a large population of only site administrators. The study was a comparative study of the perceived job satisfaction, as reported on the modified job diagnostic survey characteristics instrument. Comparisons were made between the perceived job satisfaction of administrators at schools where a multitrack or year-round schedule is used and those

administrators at schools that are on a traditional ten-month schedule. Comparisons were also made between genders, age groupings, principals, and vice principals, administrators that have been involved in restructuring for some time and those that have not, school level, and types of schools by ethnic mix and socioeconomic makeup.

Statement of Hypotheses

Based on a review of the literature and personal experience in the San Diego Unified School District organization, the following null hypotheses were generated ($\alpha = 0.5$ was used in all tests of statistical significance):

Hypothesis 1: There is no difference in the perceived job satisfaction of site administrators of (a) schools on a traditional school-year calendar, (b) schools on a single track year-round calendar, and (c) schools on a multitrack year-round calendar on each of the 40 variables identified in the study.

Hypothesis 2: There is no difference in the perceived job satisfaction of site administrators of schools officially involved in restructuring prior to June 1990 and those administrators that were not involved officially in school restructuring prior to June 1990 on each of the 40 variables identified in the study.

Hypothesis 3: There is no difference in the perceived job satisfaction of male site administrators and

female site administrators on each of the 40 variables identified in the study.

Hypothesis 4: There is no difference in the perceived job satisfaction of male site administrators and female site administrators on each of the 40 variables identified in the study.

Hypothesis 5: There is no difference in the perceived job satisfaction of site administrators who administer elementary, middle/junior, or senior secondary schools on each of the 40 variables identified in the study.

Hypothesis 6: There is no difference in the perceived job satisfaction of principals and vice principals on each of the 40 variables identified in the study.

Hypothesis 7: There is no difference in the perceived job satisfaction of site administrators who administer schools that are in the three levels of perceived socioeconomic make-up of the school population on each of the 40 variables identified in the study.

Hypothesis 8: There is no difference in the perceived job satisfaction of site administrators within the three levels of perceived ethnic diversity on each of the 40 variables identified in the study.

The eight primary hypotheses described above were developed to test the main effects between the levels of the independent variables. In addition, specific combinations

of the independent variables were of interest. The following interactions were examined through 15 secondary hypotheses, described in Chapter III, to determine if any interaction effects existed between specific categories of administrators: (1) calendar and gender; (2) calendar and age; (3) calendar and administrative position (i.e., principal or vice principal); (4) restructuring and gender; (5) restructuring and age; (6) restructuring and school level; (7) restructuring and administrative positions; (8) gender and age; (9) gender and school level; (10) gender and administrative position; (11) gender and socioeconomic status of student population; (12) gender and ethnic diversity of student population; (13) age and school level; (14) age and administrative position; (15) school level and administrative position.

Importance of the Study

The study can inform decision makers in the school district as to the strengths and weaknesses of the current organizational relationship between the site administrators and the central office personnel in producing a quality work environment. The research identifies sources of job satisfaction and job dissatisfaction to the site administrators. If current practices and procedures are perceived by the site administrators as limiting their freedom or willingness to undertake comprehensive school reform in a climate of trust and collaboration then many of

the reform efforts will fall well short of their success targets. "Many school administrators intuitively feel that job satisfaction (and particularly job dissatisfaction) can have a strong impact on organizational effectiveness" (Jorde, 1984, p. 1). Jorde also stated that "since we spend so much of our time in work environments, understanding the factors involved in achieving fulfillment can certainly affect our personal well-being" (p. 1). The current research identifies and analyzes many work context and work content factors to determine the extent to which these factors are perceived to be creating satisfaction or dissatisfaction for the site administrators. If district practices and procedures that are the sources of satisfaction can be further enhanced or improved and the factors that are the sources of dissatisfaction can be ameliorated, then the site administrators will have, theoretically, a better job to perform and hence will be more satisfied with their work (Plesma, Richard, Harrington, & Burry, 1987). Greater satisfaction with work comes from doing a better job. Doing a better job in education means more effective schools and more student success. Therefore, the study is important as increased student achievement and success in restructuring schools can be promoted through more effective and efficient relationships and practices within the San Diego Unified School District.

There are a number of factors affecting the work environment in San Diego City Schools. The growing

multicultural aspects of the schools create a number of challenges for administrators. The San Diego City School District has a heterogeneous mix of students based on socioeconomic factors. San Diego City Schools have so much diversity that the socioeconomic and ethnicity factors could play a part in administrator job satisfaction or dissatisfaction.

Gender equity issues and equal rights legislation have contributed to the rising number of females in administrative positions in the school system in the past several years. Female administrators may have very different insights into what they expect from their careers and jobs when compared to their male counterparts. The research would not be complete if all interest groups were not acknowledged and specific issues of importance to each group were not identified.

Definition of Terms

Effective schools movement. Several prominent educational researchers, Edmonds, Brookover, and Lezotte to name a few, analyzed the characteristics of schools and determined a set of correlates that appeared to have a direct relationship to school effectiveness. As a result of their research, many schools and districts have adopted an effective schools approach to school improvement. The approach has meant trying to increase school effectiveness by concentrating on several of the correlates identified in

the effective schools research. The five most frequently quoted characteristics or correlates of effective schools are: strong principal leadership, clear instructional focus, frequent monitoring of student progress, high expectations for student achievement, and a safe and orderly school environment. These five effective schools characteristics were subsequently written into the Hawkins-Stafford Amendments of 1988 in P.L. 100-297. San Diego City Schools was a participant in the effective schools program, according to the government literature.

Job Characteristics Model. The Job Characteristics Model (JCM) was initially developed by Hackman and Lawler and Hackman and Oldham in the early seventies. Frase (1989) refined the instrument. The instrument used in this study measured 40 job-related characteristics that were important to worker motivation and satisfaction in educational settings.

Multitrack year-round school. A school that operates four tracks or groups of students such that three groups are in session while the fourth group is on vacation is termed a multitrack year-round school. Each track is in session for 45 days and then has a 15-day vacation period. The school operates on a year-round basis.

Restructuring. Restructuring is a widely used term to describe the current reform efforts in education.

Restructuring means challenging the basic assumptions that have guided educational settings for the past century and recreating or restructuring the educational system to reflect and address the needs of today's students, faculties, parents, community, and business stakeholders.

Single-track year-round school. The single-track school operates on a year-round basis. The school that has one group of students attend classes for 45 days followed by a 15-day vacation period.

Site administrator. Any person officially designated by the San Diego Unified School District as a school principal, vice principal I, or vice principal II.

Site administrator of an official restructuring school. As of June 1990, 53 schools had been identified as restructuring schools in the San Diego Unified School District. After September 1990, the superintendent declared that all schools in the district were restructuring schools. For the purposes of this investigation, site administrators involved in restructuring prior to June 1990 will be identified as one category of administrators. The remainder of site administrators that joined the restructuring movement after September 1990, will form a second category of administrators.

Traditional calendar school. A school that follows the traditional September to June school timetable. These

schools close briefly for the winter, spring, and summer vacations.

Definition of the Variables and Terms
Used in the Modified Job
Characteristics Model

Critical psychological states. Hackman and Oldham hypothesized that in the presence of the five job core characteristics workers should be able to experience three psychological states described as: the experience of the meaningfulness of work, the experience of the responsibility of outcomes of the work, and the experience of the knowledge of actual results of the work. Hackman and Oldham maintained that these three psychological states are critical to the development of the personal and work outcomes of their model.

Job core characteristics. Hackman and Oldham identified skill variety, task identity, task significance, autonomy, feedback from the administrative job, and feedback from a supervisor or other administrator as factors in determining a motivating potential score (see definition below) for a particular job. The five job core characteristics, when present, are necessary to produce the desired psychological states and provide a stimulating and challenging work environment that is capable of maintaining or increasing worker motivation.

Motivating potential score (MPS). According to the Hackman and Oldham model, the motivating potential score of a job results from applying their mathematical formula in a calculation based on measures of the job core characteristics. The formula is as follows:

$$\text{MPS} = (\text{Skill Variety} + \text{Task Identity} + \text{Task Significance}) / 3 \times \text{Autonomy} \times \text{Feedback}$$

A job with a high MPS has the potential to produce the desired critical psychological states that will lead to the desired personal and work outcomes. Hackman and Oldham and subsequent researchers, such as Frase, suggest that the MPS is a good indicator of the motivating potential of a job but that it is contingent upon the presence of the five job core characteristics, sufficient growth need strength (see definition below) in the job incumbent, as well as sufficient satiation of certain job context factors.

Moderators. Moderators are the factors of the job that can and do have an impact on a person's ability to experience the critical psychological states as well as to experience the personal and work outcomes of the work as ascribed by the Hackman and Oldham model. The original moderators suggested by Hackman and Oldham were knowledge and skill, growth need strength, and work context satisfiers. Conley et al. (1989) determined that other work context factors played an important role in job satisfaction

and motivation in educational settings. Frase incorporated the Hackman and Oldham model and the Conley et al. context factors into a modified job characteristics model that is used in the current study.

Personal and work outcomes. According to Hackman and Oldham, in the presence of the job core characteristics, individuals can experience the critical psychological states and these psychological experiences will promote the desired personal and work outcomes of high satisfaction, high internal motivation, positive career intentions, high quality performance, and high growth satisfaction. The model stipulates that contextual factors of the work will moderate the extent to which each of these personal and work outcomes is actually realized.

Context satisfaction. Conley et al. (1989) developed a list of moderators that impacts on the educational work environment. They added pay, co-workers, supervisor support, competence of supervisor, school size, student learning problems, student behavior problems, holidays, parental support, repairs and maintenance, communication, and administrative assignment. Frase extended the list of moderators in the original Hackman and Oldham model to include the context factors identified in the research of Conley et al.

Bureaucracy. Conley et al. (1989) also found routinization, role ambiguity, role overload, and involvement in decision making to be bureaucratic variables that were sources of satisfaction and dissatisfaction in the educational work setting. Frase included these variables as moderators in the modified job characteristics model.

Interactive work context. Conley et al. found openness of expression, encouragement of experimentation, superintendent facilitation of administrator interaction, and career expectations to be sources of satisfaction or dissatisfaction in the interactive nature of work with others in education. Frase added these variables to the list of moderators.

Present and would-like conditions and growth need strength. Hackman and Oldham determined that an individual had to have a need to grow in order to experience motivation in a particular job. To assess an individual's capacity or desire to grow in a particular setting, Hackman and Oldham examined how people perceived their present position and what they perceived they would like to see in that job in the future. Based on the difference between what people liked about their job in the present and what they would like from their job in the future, the researchers were able to determine a measure of the strength of an individual's need to grow in the job setting. In the absence of a need to grow in the particular job setting there was little

chance that any form of motivational tactic would produce increases in performance or productivity. Growth need strength became a critical moderator for determining whether or not a job or worker had the potential to respond to enrichment or enlargement as a motivational tool that could lead to improved personal and work outcomes.

School effectiveness. An effective school, according to the Hawkins-Stafford Amendments of 1988 in P.L. 100-297, was based on many of the key correlates of effective schools research. Administrators in the San Diego Unified School District were asked to rate their own school's effectiveness based on the perceived attainment of each of five key correlates identified in the Hawkins-Stafford Amendment (see the relevant questions in the survey in Appendix B).

Assumptions of the Study

Several assumptions were made during the research effort.

1. The researcher assumed that all respondents to the survey questionnaire answered with integrity, without bias, and to the best of their ability yielding a true indication of the perceived job satisfaction of the site administrators.

2. The researcher assumed that the subjects embraced the essence and intent of the study as a meaningful effort to improve the quality of their working lives and that the

subjects approached the questionnaire assignment with integrity and enthusiasm yielding a high rate of return.

3. The researcher assumed that the validity and reliability of the job characteristics survey instrument, that was established by prior research, had not been effected by the minor alterations and adjustments necessary to reflect the area of involvement in education of the target subject population.

4. The researcher assumed that the underlying motivational theories of Herzberg, Maslow, and Vroom and the subsequent model developed by Hackman and Oldham had validity with educational administrators.

5. The researcher assumed that prior research, conducted by a number of educational researchers, was valid and that the previous research had been integrated into the current research effort in such a way that the integration of the materials has not altered or detracted from the intent and meaning of the original research.

Limitations of the Study

There were several limitations of the study that were identified.

1. The generalizability of the study would be limited to the administrator population in San Diego City schools.

2. The study would be limited to a one-time application of the instrument. Therefore, the study would not determine the extent of improvement or regression that

may accompany any intervention strategies initiated by the district as a result of the current research findings.

3. The study would be limited to the quantitative evaluation of current perceived job satisfaction levels of current site administrators. The richness and depth of response afforded by a more qualitative research effort was not possible. Therefore, the possibility exists that some meaningful aspects of the perceived job satisfaction of the site administrator population may not be identified.

4. The study would be limited to the 40 variables listed.

5. Triangulation of perceived job satisfaction ratings, effective schools ratings, and other rating scales would be limited to the self-report data obtained through the use of the survey instrument.

6. The study would be further limited as the data collected would be based on the self-report of perceptions by the site administrators. People create their own realities based on their perceptions of the world around them. Each person filters information and stimuli based on their created reality. Self-report had been used in many research efforts as an accurate way of determining how individuals perceive the world. As the current study investigated the administrator's perceptions of their roles and attitudes toward the content and context of the work environment, the reliance on self-report was appropriate for the study. The self-report format did, however, limit the

generalizability of the study, since administrators in school systems other than San Diego Unified School District were not subjected to the same environmental stimuli that helped to create the San Diego administrator's perceptions of reality.

7. The timing of the study coincided with major budget cutbacks and organizational restructuring which had put additional stress on the system. The administrators, in particular, were very concerned about the direction of educational reform and the financial implications of these budget cutbacks because these issues directly related to their administrative roles and responsibilities. The motivational and supportive climate among administrators was at a very low level.

Outline of the Dissertation

Chapter I has presented an overview of the research problem and related background to the issues to be investigated in the study. It has presented eight null hypotheses. The assumptions under which the study was conducted and the limitations encountered in the research project have also been delineated in Chapter I.

Chapter II will present a review of the related literature and research findings that are pertinent to the understanding of the theoretical and historical development of the current study. The chapter will introduce key concepts involved in the understanding of leadership as a

relationship and process between the leader and the follower. The importance of leadership in the school setting will be developed as well as the environmental factors identified in the literature as having an impact on the site administrator's worklife. The literature review will include a discussion of the related motivational theory that was incorporated into the Modified Job Characteristics Model in the educational setting. The chapter will conclude with a discussion of the need for research in educational administration in San Diego City Schools, as well as the impact that the research may have in terms of organizational change within the school system.

Chapter III will outline the methodological framework of the study in terms of the research design, subject population, instrumentation, survey protocol, data collection and analyses, methodological assumptions, and limitations of the methodology. Chapter IV will present the data analysis and the findings of the research. The chapter will feature a discussion of the results as well as a presentation of representative tables, charts, and graphs to help illustrate the findings of the research.

Chapter V will present a summary of the research project. The implications for the various stakeholders in the San Diego Unified School District administrators roles and attitudes study will be identified and presented. Conclusions that can be drawn from the research will be

discussed and the dissertation will conclude with
recommendations for future research and study.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

Much has been written on the subjects of school governance, effective schools, job satisfaction and motivation, organizational change, and leadership. However, very little research literature could be found that integrated the concepts listed into a single study related to the work life of the school-site administrator. Furthermore, leaders in the San Diego Unified School District had gone on record as supporting restructuring and research to guide change in the school system. The district leaders had also set goals for the district that reflected excellence in restructuring in governance and collaboration, and the district leaders were committed to developing a strategic plan to accomplish these goals.

Many researchers have jumped on the effective schools bandwagon and produced reports and studies outlining the various virtues of the effective schools research. Motivation and work satisfaction issues had become increasingly important to industry and business as vehicles to promote increased productivity and organizational

effectiveness as North American society had been challenged economically in the markets of the world. Finally, a great number of influential writers had stressed the importance of leadership in the attainment of organizational goals and objectives.

The purpose of this review is to delineate the various strands of research and discourse described above into an integrated summary of the factors that have impacted on the site administrator and will continue to influence the roles and responsibilities of the site administrators in the performance of their duties in producing effective and efficient schools.

The first section will review the literature surrounding the leadership phenomena as well as the dialectic interaction of leaders and followers in addressing each other's wants and needs in the leadership process. The second section will examine effective schools literature and will focus on the roles of the site leaders in producing effective schools. The third section will examine the research on the factors that are impacting on the site administrator's job that are the sources of satisfaction, dissatisfaction, motivation, and frustration. The fourth section will develop the historical background of the theories and research related to the study of motivation and job satisfaction in industry and in education. The fifth section will review the development and validation of the Hackman and Oldham Job Characteristics Model. The sixth

section will present selected research that has occurred more recently in the development and refinement of the instrumentation and methodology used in the assessment of educator job satisfaction that has led to the current research study. The seventh section will deal with the impact that the leader can have in effecting intended organizational change. The eighth section will address the current need for research in educational leadership in San Diego City Schools. The review of the literature will conclude with a summary that integrates the various concepts discussed and reviewed in the previous sections of the literature review into a philosophical rationalization for the research project.

Leadership: Addressing the Wants and Needs of Followers

Several major authors on the subject of leadership identified the wants and needs of the followers as sources or origins of discourse between the leader and the follower and that the ultimate goal of leadership was to transform the wants and needs of the followers such that the human condition was improved (Bennis & Nanus, 1985; Burns, 1978; Chemers, 1984; Foster, 1986a, 1986b; Kellerman, 1984). The following quotes will help to illustrate the type of discourse that has surrounded the discussion of wants and needs in the leader and follower relationship. Bennis and Nanus (1985) stated:

Leadership is "causative," meaning that leadership can invent and create institutions then can empower employees to satisfy their needs. Leadership is morally purposeful and elevating, which means, if nothing else, that leaders can, through deploying their talents, choose purposes and visions that are based on the key values of the work force and create the social architecture that supports them. Finally, leadership can move followers to higher degrees of consciousness, such as liberty, freedom, justice, and self-actualization. (p. 218)

James MacGregor Burns (1978) expressed similar sentiments when he stated:

The transforming leader recognizes and exploits an existing need or demand of a potential follower. But, beyond that, the transforming leader looks for potential motives in followers, seeks to satisfy higher needs, and engages the full person of the follower. The result of transforming leadership is a relationship of mutual stimulation and elevation that converts followers into leaders and may convert leaders into moral agents. (p. 4)

Foster (1986a) directed his comments toward the role of leadership in change when he stated:

This is the essence of leadership: the desire and attempt to change the human condition. It is a political and courageous act to attempt to empower

followers. As we have tried to show, leadership does not reside in systems of management, in grids or formulas. Leadership is conscious of conditions and conscious of change. Its twin concerns of empowerment and transformation focus on the same goal as the spirit underlying critical theory--to release us from our prisons of ideology and to give vision. (p. 187)

Foster also said that leadership was contextual and the test of a theory was in its ability to improve the human condition. Foster introduced the concept of praxis, that is, the integration of theory and practice in our lives. Foster (1986b) stated:

Any consideration given to leadership as a construct must incorporate an analysis of context, which in this case is equivalent to an analysis of the economic, political and cultural relations of modern societies. Another way of saying this is that praxis can become a unifying concept for leadership studies. Praxis is the recognition that theory must eventually be located in "sensuous human activity." The test of theory is its eventual relevance to improving the human condition. (p. 18)

Barbara Kellerman (1984) presented leadership as "the process by which one individual consistently exerts more impact than others on the nature and direction of group activity. Or, more simply, the leader is the one 'who makes things happen that would not happen otherwise'" (p. 70).

Kellerman discussed transactional and transformational leadership as popularized by Burns (1978). "The transactional leader gives his followers things they want in exchange for something that he wants. Put another way, the transactional leader satisfies his followers' private needs by engaging them in a relationship of mutual dependence in which the contribution of both sides is acknowledged and rewarded" (Kellerman, 1984, p. 80). Kellerman went on to say:

The transforming leader satisfies needs that are, sometimes, less consciously articulated than those that are met by transactional leaders. Burns states that it is the transforming leader's special mission, and skill, to tap into those individual needs that are at the upper end of the hierarchy. Burns implies that transforming leadership has less to do with providing followers in such a way that "leaders and followers raise one another to higher levels of motivation and mortality" Transforming leadership ultimately becomes moral in that it raises the level of human conduct and ethical aspiration of both leader and led, and thus it has a transforming effect on both. (p. 80)

The authors and researchers on the subject of leadership expressed similar opinions concerning the nature and responsibilities of leaders in the leadership dialectic. The leader was involved in an interaction based on the identification of mutual wants and needs. Burns (1978)

stated "one talent all leaders must possess--the capacity to perceive needs of followers in relationship to their own, to help followers move toward fuller self-realization and self-actualization along with the leaders themselves" (p. 116).

Bennis and Nanus (1985) stated "a leader must often broker the needs of constituencies both within and outside the organization. The brokering function requires sensitivity to the needs of many stakeholders and a clear sense of the organization's position" (p. 186). The authors discussed above identified elements of the leader-follower relationship. Leaders must be responsive to the wants of the followers. Leaders must be able to identify these wants, to help the followers mold the wants into needs, and finally to assist the followers in achieving satisfaction of the needs through change in the human condition. The essence of the leadership phenomena resided in the dialectical relationship between the leader and follower both deliberating over the satisfaction of mutual wants and needs. In the leadership phenomena, the leader was the change agent or facilitator of the quest for the attainment of the satisfaction of the needs. According to Burns (1978), leadership involved the satiating of needs as identified through the hierarchical needs of man as theorized by Abraham Maslow.

According to Maslow and others, needs are arrayed on a hierarchical basis, ranging from physiological needs to safety needs (including the desire for freedom from

fear and insecurity and harm), to the need for affection and belongingness (including the sense of being involved and accepted in a group), to the need for esteem, and to other needs higher in the pyramid or ladder. (Burns, 1978, p. 66)

Once a leader had identified these needs a political interaction ensued whereby the leader attempted to tap into the needs of the followers and assisted the followers in their quest for satisfaction of these needs. For a leader to be effective, the intervention or interaction with the followers could be unguided. According to Burns (1978), to note that effective planning must consider motives and values is to return to our central emphasis on a general theory of political leadership. Planning leaders, more than other leaders, must respond not simply to popular attitudes and beliefs but to fundamental wants and needs, aspirations and expectations, values and goals of their existing and potential followers" (p. 420).

Effective planning was essential if a leader was to proactively engage the change process and guide or direct change in such a way so as to fulfill the leader's vision or goal of a desirable future.

The authors identified above were unified in their assertion that leaders were inextricably linked to followers through a dialectical relationship that focused on the attainment or satiation of needs that had been transformed

from wants and that had been acted upon through intervention by the leader. In the San Diego Unified School District there were two critical levels of involvement in the leadership process that were impacted heavily by the leadership phenomena. The first critical interaction involved the superintendent and the site administrators. The superintendent, as a leader, had to identify the wants and needs of the followers. The superintendent had to identify the wants and needs of the administrators in the district as the administrators were the first line or level of follower in the school system. The second level of leadership that was critical in the discussion involved the site administrator as the leader at the school site. The site administrator had to be cognizant of his or her own wants and needs and had to be motivated toward attainment of these wants and needs. If Maslow's theory was to be accepted as having valid foundation, then individuals satisfied the lower level needs before they were capable of moving on to higher level aspirations and needs. If the theory was indeed true, then satisfaction of the lower level needs was critical for site administrators if they were to move toward self-esteem and self-actualization. Burns (1978) stated:

Self-actualization ultimately means the ability to lead by being led. It is this kind of self-actualization that enable leaders to comprehend the needs of potential followers, to enter into their perspectives,

and to act on popular needs such as those for material help and for security and esteem. Because leaders themselves are continually going through self-actualization processes, they are able to rise with their followers, usually one step ahead of them, to respond to their transformed needs and thus to help followers move into self-actualization processes.

. . . leaders help transform followers' needs into positive hopes and aspirations. Hopes emerge from needs but are closely influenced by leaders who arouse or dampen them. (p. 117)

Burns (1984) in the forward to the Kellerman book, Leadership: Multidisciplinary Perspectives, acknowledged the educative component of leadership when he said:

I believe, that leadership is interpersonal, that leaders cannot be seen in isolation from followers, that the linkage between the two embraces the dynamics of wants and needs and other motivations, that leadership is largely a teaching process beginning with the parental nurturing of children, that creative leadership is closely related to conflict and crisis or at least to debate and dialogue, and that--above all--transforming leadership carries grave but not always recognized moral implications. (p. vii)

Burns (1978) also presented leaders as people with a moral obligation to advance the moral understanding of followers:

Distinctions emerge between leader and follower, for leaders must comprehend many roles and followers fewer; leaders must accommodate followers' wants and needs without sacrificing basic principles (otherwise they would not be leaders); they must mediate group conflict without becoming mere referees or conciliators without purpose of their own; they must be "with" their followers but also "above" them. But the leader's main strength is the ability to operate close enough to the followers to draw them up to the leader's level of moral development. (p. 78)

According to Burns, the leader was at a higher level of moral development to allow the leader to raise the followers to higher moral development. In the case of the site administrator, if he or she was struggling with lower level wants and needs such as security and physical safety then he or she was certainly not going to be in any position to lead from "above" in the moral hierarchy ascribed by Burns. In the school system the problem of a would-be leader that was unable to interact with followers from a higher moral level would manifest itself in ineffective leadership and poor or low quality leadership at the school site could be devastating in terms of the effectiveness of the entire school (Deluga, 1989). The importance of strong site leadership is the focus of discussion in the next section of this review.

The Importance of School-Site Leadership:
Effective Schools

The effective schools movement has been one of the premier school improvement efforts in the last two decades. Lezotte (1989) pointed out that the effective schools movement began in the mid seventies with Wilbur Brookover, Ron Edmonds and himself looking at factors that produced effective schools.

Edmonds defined an effective school as one in which equal percentages of students from varying socioeconomic backgrounds achieve a minimum level of mastery in basic skills. He selected five characteristics identified by school effectiveness research and popularized their use as a model for school improvement. (Gainer, 1989, p. 12)

The General Accounting Office produced, in 1989, a report on effective schools programs in the United States. In the report, five characteristics were identified via Public Law 100-927 that schools or districts involved in the effective schools program sought to attain. The five characteristics identified were:

(1) strong and effective administrative and instructional leadership, (2) emphasis on the acquisition of basic and higher-order skills, (3) a safe and orderly school environment, (4) a climate of expectations that virtually all children can learn under appropriate conditions, and (5) continuous

assessment of students and programs to evaluate the effects of instruction. (Gainer, 1989, p. 1)

According to the information in the document, three criteria were used to judge the extent that effective schools programs were being institutionalized within a given district. The criteria were (a) school improvement programs were based on findings of effective schools research, (b) there were school teams and the schools use written improvement plans, and (c) the district evaluated its effective schools programs by disaggregating achievement data by student socioeconomic status or ethnicity. San Diego was listed as a district that was involved in the effective schools programs.

The effective schools movement had spawned a tremendous amount of interest and research (Batsis, 1987; Bossert, 1984; Conley & Bachrach, 1987; DeRoche, 1987; Herman & Stephens, 1989; Huddle, 1984; McCurdy, 1983; National Association of Secondary School Principals, 1991; Rhode Island Educational Leadership Academy, 1986; Sergiovanni, 1984; Stedman, 1987; Weber, 1987). In one study, Larsen (1989) took 29 instructional leadership behaviors that were identified by national experts to promote school effectiveness and reduced them to six leadership functions: "goal setting, coordination, supervision and evaluation, school climate, staff development, and school-community relations" (p. 35). Larsen pointed out that all six functions were found to be characteristics of principals in

effective schools significantly more often than principals in noneffective schools. The original study was replicated state-wide, and according to teacher reports, principals in high achieving schools did perform the six duties significantly more often than their counterparts in lower performing schools. Larsen concluded that instructional leadership behavior was an important influence on student achievement. Larsen (1989) pointed out the essential characteristics of the effective school and concluded: "one consistent finding is the importance of the school principal as key to an effective school" (p. 35).

Many other researchers and educational theorists had drawn similar conclusions based on a myriad of research studies and personal observations. The researchers and theorists listed numerous attributes, skills, strategies, roles, attitudes, support linkages, cultural and psychological factors, and resources that were believed to be necessary to produce effective schools. Herman and Stephens (1989) stated emphatically "effective schools research clearly established the importance of the principal's instructional leadership role" (p. 55). Effective schools and effective principals displayed most of the characteristics espoused in the effective schools literature. Less effective schools displayed a host of organizational woes (National Association of Secondary School Principals, 1991). Nottingham (1985) suggested that the effective educational leader required a number of

technical skills: command of the language, knowledge of teaching and learning theory, knowledge of curriculum design, development, and implementation, and the ability to act as a liaison between the various interest groups in the educational community. Nottingham also suggested a number of human skills required of the educational leader: negotiator-trouble shooter, catalyst for change, empathy, high expectations, loyalty, maturity, and humor. The author listed several conceptual skills that were required: vision, goals, knowledge of organizational systems, judgment, knowledge and awareness of power structures within a school and district. Sergiovanni (1982, 1984) added tactical and strategic leadership skills and cultural understanding to the list.

Sergiovanni (1984) offered an interesting metaphor to explain the impact of the educational leader on the school. He introduced the physical concept of force as

the strength or energy brought to bear on a situation to start or stop motion or change. Leadership forces can be thought of as the means available to administrators, supervisors, and teachers to bring about or preserve changes needed to improve schooling.

(p. 6)

He identified the forces as technical, human, educational, symbolic, and cultural. Sergiovanni extended the physical science metaphor of forces and change by saying that all five forces must be present in the leader at the school to

reach the critical mass necessary to generate an effective school. To be an excellent school, however, the leader must incorporate symbolic and cultural aspects of leadership into his or her behavioral style. Sergiovanni (1984) referred to the work of Robert J. Starratt and stated:

Leaders seek to identify the roots of meaning and the flow and ebb of daily life in schools so that they might provide students, teachers, and members of the community with a sense of importance, vision, and purpose about the seemingly ordinary and mundane.

(p. 8)

Sergiovanni (1984) went on to say that "culture building and practicing the art of purposing are the essentials of symbolic and cultural leadership forces" (p. 9).

Sergiovanni made an interesting tie to ethnographic research elements by stating that the cultural life in schools was a constructed reality and that leaders could influence or develop the reality that they wanted in their schools through the use of symbols, rituals, values, beliefs, shared meanings, customs, and traditions that would produce the understandings, habits, norms, and expectations for the school community. He said that all schools had a culture. However, successful schools had a strong and functional culture capable of providing the unifying forces necessary to guide behavior and produce unity and cohesiveness of purpose for the students, staff, and community members. Sergiovanni believed that leadership density or the most

effective combination of the five essential elements of leadership was necessary to promote effective, successful, and excellent schools. Leadership density, as a concept, should replace principal leadership as a concept for promoting successful schools, according to Sergiovanni. Above all else, Sergiovanni said, the leader must be moral and ethical in that he or she treated the people in the schools as an end and never as a means only for personal gratification or self-expression.

As can be seen, the list of criteria for successful leadership was extensive. Anderson and Lavid (1986) pointed out that whatever a principal elected to do he or she must recognize his or her own limitations and provide for or empower others to assume roles that supplemented or complimented the principal's strengths and weaknesses. The message appeared clear: improving schools required effort, team work, and individuals with the requisite skills to carry out the mission.

Lezotte (1989) went so far as to suggest that any school that was not improving was going downhill. He further stated that the best source of improvement was the people within. "In the past, we've thought improving schools involved bringing in a new curriculum, a new approach to classroom organization, or whatever. But we've come to realize that the people inside an organization are in the best position to improve that organization" (p. 18). Lezotte pointed to the paradox the two assumptions create.

If schools were not improving and the people in them were the best source for improvement then what was the problem. He suggested that the planning efforts to date had been mainly top-down centralized attempts at school reform rather than allowing the individual schools to tackle many of their own problems. He suggested 11 features necessary for good school based management and planning: knowledge of the school system demographics, mission statement, communication within the system, communication within the community, curriculum, linking testing to the curriculum, monitoring systems, staff development, planning process, evaluation, and the school system team.

Traditionally, training programs have concentrated on turning out school administrators who are scientific managers, all too often stripping them of their passion, vision, and leadership potential in the process. But effective-schools research shows that people in schools need to have powerful visions of what schools are about. (Lezotte, 1989, p. 20)

Lezotte, as a major researcher and proponent of effective schools, stressed the importance of strong site leadership.

The role of the central office was identified as a factor that facilitated or hindered leadership efforts (Herman & Stephens, 1989; McPherson, Crowson, & Brieschke, 1986; U.S. Department of Labor, 1991). Weber (1987) suggested that the leader or site administrator must test the limits of the constraints placed upon him or her by the

organization. McPherson et al. (1986) proposed creative insubordination as a way to circumvent bureaucratic constraints. The U.S. Department of Labor (1991) said that systemic support was needed to reduce bureaucratic impediments to assist school personnel in restructuring efforts. Researcher Nancy Paulu (1989), examined 16 school programs that were reported to be successful interpretations of the effective schools programs. Paulu suggested that "principals most effective at bringing about change within the buildings generally have good relationships with the central administration" (p. 75). She suggested that a good relationship based on communication and trust helped principals gain support for their educational goals. Murphy (1989) suggested, as well, that central office liaisons were extremely important and that the decentralization of central office functions should complement rather than obstruct site development. Murphy (1989) stated:

Through a combination of technical assistance, staff development, extra resources, and released time for teachers and principals, the center can play a significant role in improving the quality of local programs, in encouraging school staffs to rethink their roles and responsibilities, and in developing local leadership. (p. 811)

The central office must be aware of the needs of the site administrators in order to even contemplate assisting in any way.

Wentz (1989) stressed the importance of the principal as the key to the success of a district.

Principals hold the key to open the door to district success--not just by running effective schools, but by being a part of the district administrative team.

Unless the principals are a committed part of the team, a district cannot be successful. (p. 43)

Strong site leadership had been identified as an essential element in the effective schools research. The site leaders had been compared to a choreographer who coordinated the multitude of complex activities within the school to produce a polished performance and product. Many factors could have an impact on the site leader's ability to perform at an optimal level of competency.

The interaction with the central office was identified as one of the many environmental and contextual elements that the site administrator contended with in his or her daily role. Educational researchers have identified a plethora of factors presumed to create satisfaction or dissatisfaction for administrators in educational settings. A number of these factors are discussed in the following section.

Factors Impacting on School-Site Leaders

The role of the school-site administrator had changed significantly in the past several decades (Conley & Bacharach, 1990; Cunard, 1990; Donaldson, 1990; Empey, 1989;

Lortie, 1986; Stimson & Applebaum, 1988; Wentz, 1989; Wirth, 1989). Cunard (1990) described the modern principal as follows:

The principal is a leader of an organization that may employ 150 full-time staff members. The organization will consume a budget of several million dollars annually as it provides specialized services to upward of 2,000 or more unique clients. The organization is charged with the single most important demand placed on any institution in this society: to develop the human capital necessary to compete with the rest of the world economy in the post-industrial society. Additionally, the institution is expected to provide a variety of health care and other social service that will meet the needs of the clients. (p. 31)

Wentz (1989) explained the transition in the role of the site leader that has transpired over the years. He suggested that the school was a reflection of society and as society became more complex so did the school and so did the role of the principal. During the sixties and seventies society was living in very turbulent times. Schools, out of necessity, were concerned with keeping pupils safe and in class. Little time was devoted to worrying about instructional improvement. The 1980s brought relative peace to society and attention was turned toward achievement and accountability of the school system to produce graduates capable of competing in world markets. A number of control

and safety issues still faced the modern principal with added problems of drug and alcohol abuse and gang violence. The rapidly changing faces of technology and changes in the curriculum necessary to support the changing information society had become the principal's focal point of school improvement efforts in recent years. Wentz said "demand for accountability is at an all-time high, and the heat is definitely on the principal to be the hero" (p. 41).

Kirst, McLaughlin, and Mitchell (1991) suggested an even heavier burden be placed on the schools as a result of society's growing complexity. The authors contended that the schools should take on the responsibility for a wide range of social services. They said there were 160 programs residing in 35 agencies that were responsible for children and youth. Because schools provided the organizational context for the longest sustained contact with children outside of the home then the schools were the logical setting for such program coordination. Kirst et al. said that the role of the principal must be rethought. Time management for supervision of instruction and preparation of programs would have to be changed to allow the time necessary to address the vast array of services and problems that a chief administrator in the new school system had to address. The authors called for a partnership approach to school between the many agencies and the school system on behalf of children in society today.

Phillip (1987) boldly emphasized the roles and responsibilities and changes that were necessary for an improved educational system. Phillip claimed "of all the roles within the public system, the role of the principal will be under the greatest pressure to grow and change of the next decade" (p. 38). According to Phillip, educators and principals in particular became the prime conveyors of quality in the educational system:

Every person who seeks or assumes the role of a leader in this changing society should not rely on statutory authority in a hierarchy but should realize that expertise is supreme. Leaders in today's constantly changing world know and accept willingly that crises are normal, crises give opportunities, tensions can be exhilarating and complexity is mental fun. Paranoia and self-pity are reserved for those who don't want to be leaders, whether they are principals or supervisory officers. The world will never stop changing. (p. 41)

Numerous articles, books, and papers have been written on the changing role of the principal and site leadership and governance (Bamberger, 1986; Barth, 1988; Conley & Bacharach, 1990; Conley, Schmidle, & Shedd, 1988; Eisenhart, Cuthbert, Schrum, & Harding, 1988; Kirst et al., 1991; Lessinger, 1985; Levine, 1989; Lieberman, 1988; Lortie, 1986, 1988; Maeroff, 1988; Murphy, 1988; "A Nation at Risk," 1983; Phillip, 1987; Rallis, 1988; Spillane, 1989; Tucker & Mandel, 1986; Valentine & Bowman, 1988; Van der Vegt & Knip,

1988; Weller, 1982). The major emphasis of the changes occurring in the site leader's role centered on changes in governance or as one author said, turf issues have created new tensions. A Nation Prepared: Teachers for the 21st Century (1986) called for the professionalism of the teaching profession. The professionalism of teaching meant more site autonomy and shared decision making on the part of the teaching faculty. Professionalism meant more real control of the work environment. Control, or at least perception of personal control of one's work environment, could lead to increased satisfaction and performance (Greenberger, Strasser, Cummings, & Dunham, 1988). However, if the worker was misled to believe that they had control that they really did not have then workers had their expectations raised and not fulfilled and the unfilled expectations could create more dissatisfaction.

Lawler (1982) stated that because the educational levels of employees were on the rise that many management techniques were no longer acceptable to these educated people. Future management styles had to become much more participatory, high involvement work systems. He stated that even if increased productivity or efficiency of the organization could not be proven to be created by increased participatory work systems that more employee participation was still necessary because participatory systems best suited the situation today. Older theories of organizational structure suggested that power should rest

at the top of the organizational structure. Top-down structures meant that lower level jobs had little discretionary power, had low skill demands, and had carefully delineated jobs and roles. The structure was satisfactory when only a few people were highly educated enough to manage the organization. Today's workforce was different in many instances. As worker educational levels have risen so have the demands for more autonomy and control of the workplace. Lawler (1985) said that individual motivation, individual performance capability, and organizational communication/coordination all directly affected the operating effectiveness of an organization. He stressed that intrinsic rewards such as feedback were necessary for people to understand how their work affected organizational performance. Lawler emphasized that extrinsic rewards produced increased organizational performance only if the employee was aware of the linkage of performance to reward. He stressed high involvement work systems allowed maximum employee input. And high levels of commitment from management made the workplace meaningful to the employees. Lawler concluded that management style, type of work, and organizational effectiveness were interrelated on a societal level and that education played an important part in job satisfaction and organizational productivity. Lawler (1985) suggested "as the educational level rises, intrinsic motivation can become an increasingly significant contributor to productivity" (p. 13). He suggested movement

toward more participative styles of management to reflect knowledge and skill levels of the teaching workforce and community. Lawler recommended administrators be well prepared in interpersonal skills, economic and technical skills as well as to be able to perform their new roles.

Conley et al. (1988) suggested that effectiveness of the school was linked to participatory involvement in decision making. Teachers had to be offered wider ranges of involvement if reform was to be successful. Strategic (concerning overall goals and ends) versus operational (concerning specific tasks or means) decisions must be delineated so that all shared a common understanding of who was to make what decision when. When more people were involved in decision making the decision was better and implementation was better as well because the people involved in the decision had assumed ownership of the decision and generally would not try to undermine its implementation. The authors implied that there was a blurring of responsibility in the decision making surrounding strategic and operational decisions in the schools. Teachers could greatly influence strategic decisions by way of implementation. Nevertheless, shared decision making was important for better decisions. Conley et al. stated: "One of the greatest strengths of participation as a managerial strategy is that it tends to build consensus on goals and agreement on priorities, allowing the relaxation of controls over the means that

individuals will use to serve those ends" (p. 265). The authors sought to include teachers in a broader range of shared decision-making responsibilities than just curriculum and instruction as other participatory researchers had suggested. They felt the narrow focus of involvement was too limiting to accomplish the complex task of system management and that the more teachers were brought into strategic decision-making roles the more likely the district or system would be to realize its potential.

Conley and Bacharach (1990) expressed similar sentiments concerning site autonomy and shared decision-making authority. They suggested four strategic questions that must be resolved to facilitate site-based decision making: (a) which decisions would teachers become involved; (b) who would make what decisions in school-based management; (c) what were the respective tasks of administrators and teachers in decentralized decision making; (d) what was the role of teacher unions in school-site management.

If districts implement school-site management but site administrators adhere to a bureaucratic mode of management, schools will not develop into flexible and innovative organizations for which the reform reports clearly call. Only through the participation of all professional colleagues in the school can this type of management truly be successful. (Conley & Bacharach, 1990, p. 542)

They called for collaboration at sites in governance of schools. The authors pointed to the need for administrative training to develop expertise in strategic planning and decision making.

Maeroff (1988) said empowerment of teachers was essential if schools were to improve. "As long as teachers are not adequately valued by themselves and by others, they are not apt to perform with the necessary assurance and authority to do the job as well as they can" (p. 473). Maeroff suggested building collegiality, and a process of shared decision making. He said teachers "yearn for dignity. They want their needs and opinions reflected in the policies and opinions of the school and of the district; they want influence" (p. 475). "Administrators must learn that empowering teachers is in administrators best interest --and, more important, in the best interest of students" (p. 477). Maeroff concluded that these innovations required the need for better training of school principals to deal more effectively with changes in governance and leadership expectations.

Another issue raised in the literature was the need for the site administrators to be cognizant of adult development theory and practical implications as society and the school system experienced increased aging problems within the work force. DiegmueLLer (1990), Levine (1989), and Weller (1982) suggested administrators must be aware of many different subjects to be effective. The authors pointed to the

revolving door nature of teaching, the increased age of staff members, and the needs of individuals as factors of concern to administrators. Administrators must be aware of adult learning and behavior theory to be able to manage and lead a staff of mature individuals. Most teachers said they would be staying in education, therefore administrators must be concerned with increasingly older staffs and the issues that surrounded adult development. Lortie (1986) and Lawler (1982) pointed out that teachers today were better educated than they were 20 years ago. They were also older and more mature. The bureaucratic, top-down management techniques of the past were no longer acceptable to the teachers in today's schools. Teachers indicated that they were in teaching to help students and that many reward structures and organizational practices had to reflect and address teachers' motivations in order to increase teacher satisfaction. Lortie said that increased dissatisfaction with teaching was a result of what he called structural strain that was brought about by the lack of professionalism via decision making, governance, and ability to make firm decisions in matters related directly to their classrooms. "If the organization of school districts contributes to declines in teacher satisfaction, efforts should also be made to deal with this problem, which affects the many who are already at work in the field" (Lortie, 1986, p. 572). He called for more decentralization and involvement in decision making.

Barth (1988), Lieberman (1988), Murphy (1988), and Rallis (1988) called for more site autonomy and differentiated roles for principals and faculty as all moved toward more collaborative approaches and interactions in school governance. The authors depicted the principal as a nurturer of young leaders who took on added responsibility to develop and make possible the development of leadership potential in the ranks of the faculty at the school site. The development of others meant a different kind of leadership style by the principal. No longer should the principal be seen via the lion mentality of leadership but rather the lamb, quietly and efficiently doing his or her job while developing others as well. However, Donaldson (1990) cautioned that the changes in leadership style and authority structures created conflict within the leader. The author suggested that the paradoxes that were created between clear goals and flexibility, high standards and high morale and satisfaction, and accountability of the principal for instructional programs and shared decision making had led to "the ambiguity of mixed expectations" (p. 24). Donaldson urged superintendents and boards of education to offer training, guidance, and support for emerging instructional leaders and that both must negotiate their respective realms and areas of responsibility in the new order. Meadows (1990) voiced similar concerns over the definition and delineation of authority and decision-making responsibility and suggested that leaders at school sites

should establish, in writing, just what the decision-making process would be in the school or district, who had what authority and decisions to make, and who would share responsibility for the outcomes. Unfortunately, the leader/principal still took the heat for outcomes that were less than favorable. Meadows emphasized that shared decision making had its risks for the leader but should not be avoided as better decisions did result and implementation was more readily accepted when people took ownership for the decisions reached.

The changing roles and authority structures in the schools may have been the beginning of a much greater reform movement. Lortie (1988) felt our educational system was based on conservatism and maintaining the status quo. Change was often frowned upon as a cultural no-no. Inbreeding produced clones of administrators that did not really favor innovation and boat-rocking. Site-based autonomy may have marked the beginning of change in power and change structures within the school system. As principals and school-site leaders took on more autonomy, accountability also followed to the sites. As well, teachers and others closer to the action had more impact on the decision making as more of the decision making took place at more local sites. Spillane (1989) suggested that the restructuring of the educational system could not occur without a restructuring of the principalship and site-based leadership roles. He said reform was hitting teachers'

roles and educational structures as we knew them.

Principals' roles and responsibilities had to change as well to reflect new arrangements in power and influence.

"We cannot professionalize teaching without the leadership of strong principals; we cannot redefine teaching without redefining the principalship" (Spillane, 1989, p. 19).

Spillane introduced the idea that many reform measures did not necessarily reflect a swing of a pendulum rather an additional number of roles and responsibilities that were being added to the principals' plates. "I haven't heard anyone telling today's principals to forget about good management" (p. 19). In other words, many new roles were being created to supplement some old practices and to replace others. However, management of the educational system was still a prime responsibility of the principal and that prime responsibility had not changed.

The effective schools research stressed the role of the principal and site administrators as being critical to achieving effective schools and toward that end many districts invested considerable time, energy, and other valuable resources in the pursuit and development of future administrators. The tragedy, as a result of these efforts, according to Duke (1988), resulted from the fact that:

Because school leadership has emerged from recent research as one of the keys to school improvement, considerable attention is now being paid to improving the training, recruitment, and professional development

of principals. Reformers argue that money spent to attract and prepare high-caliber leaders for schools is a wise investment in educational excellence. But the wisdom of such efforts depends on retaining these talented individuals in their administrative positions. (p. 308)

Saleh and Kashmeeri (1987) hypothesized that distress on the job could create job dissatisfaction as a result of tension, frustration, conflict, and feelings of failure. They said that "job satisfaction of school administrators has not been studied frequently" (p. 95). Saleh and Kashmeeri said much stress today for administrators was caused by role conflict, increased administrative responsibility, interpersonal conflict with parents, teachers, and students, and inadequate compensation. Administrative policies, amount of work, lack of resources, attitudes of society, and lack of physical facilities were also identified as causes of stress in some administrators. Their research probed into role overload and ambiguity issues, responsibility issues, parent support, student conflicts, supervisor support, personal skills, and progress on the job. The respondents in their research identified working conditions, professional interactions, occupational status, the work itself, and personal projection as factors that had created the most job dissatisfaction.

Seidman and Zager (1987) reached similar conclusions concerning burnout and stress in the educational setting.

The authors pointed to stress as a reason to leave the profession, to experience low job satisfaction, and mental and physical problems may have been created by stress. Role conflict and role ambiguity were identified as stress and burnout agents. Job dissatisfaction and burnout were cited as causes of absenteeism and turnover. Career satisfaction, perceived administrative support, coping with job-related stress, and attitudes towards students were the four main factors identified with stress and burnout by the researchers.

There was a need to unearth and validate the causes of site administrator satisfaction and dissatisfaction not only to work to make the administrative positions attractive to future administrators but to retain the administrators already in the system. Lortie (1986) echoed the same sentiments and said that concentrating all of our efforts on recruiting new teachers and administrators with a disregard for the needs of older educators was an injustice.

When Duke (1988) analyzed principals' dissatisfaction he found 19 different areas of concern. "The sources of dissatisfaction that were mentioned at least once were: policy and administration, lack of achievement, sacrifices in personal life, lack of growth opportunities, lack of recognition and too little responsibility, and relations with subordinates" (p. 309). The principals did not complain about salaries, relationships with peers, or job

security as issues of concern. The principals identified a variety of problems they encountered with the job itself:

The challenge of doing all the things that principals are expected to do, the mundane or boring nature of much of the work, the withering array of personal interactions, the politics of dealing with various constituencies, and the tendency for managerial concerns to supersede leadership functions. (Duke, 1988, p. 309)

The administrators also mentioned frustrations in dealing with superiors who had unsupportive and unrealistic expectations of the principals. Duke concluded that his research did not fully support Herzberg's findings. Duke felt that many factors of the principal's job created both satisfaction and dissatisfaction. He gave as an example the variety of tasks that principals are asked to perform. Duke suggested that down-time or short-term reassignment or sabbaticals could be used to revitalize administrators. Duke stated that a great deal of effort has gone into efforts to take care of the needs of students and teachers but if we were to continue to attract the brightest, best, and most creative of our young educators to become administrators that we had better see that the position remained attractive.

As can be seen from the extensive array of roles and responsibilities heaped on the shoulders of the modern site administrator, there can be little doubt that a number

of these factors could conceivably have a negative impact on the administrator's perception of his or her job satisfaction. Add to the list of responsibilities any one of a plethora of reform or restructuring strategies or urban district idiosyncrasies and one can easily see the potential for burnout and other stress related enigmas that have been associated with role overload and high demand job situations.

School-site administrators have been able to cope, and cope well, with most of their current job demands. Individual job and career satisfaction and the motivation to perform well have provided the impetus to carry the site administrator forward through the vast array of reform efforts and educational crises over the past several decades. Several theories and much research has gone into work or job satisfaction and motivation. The following section explores several of the more prominent and relevant theories of satisfaction and motivation in both the general work environment and in the educational setting.

Theories of Motivation and Satisfaction in Work

After the turn of the century, Taylor's theories of work affected management style in determining the one best way to do things to maximize worker output (Gorsuch, 1976). Workers that were put in routine nonstimulating jobs were difficult to manage. They were dissatisfied with their work, had high absenteeism, and the jobs had high turnover.

Subsequently, motivational theories hypothesized by Maslow, Herzberg, and Vroom (Cunningham & Eberle, 1990; Frase, 1989; Frase & Piland, 1989; Fuller, Wood, Rapoport, & Dornbusch, 1982; Herzberg, 1987b; Holdaway, 1978; Maslow, 1988; Pellicer, 1984; Schmidt, 1980; Shreeve et al., 1987; Silver, 1982) have provided the foundation for a great deal of research in the areas of job satisfaction and worker motivation.

Maslow introduced the concept of needs being arranged in a hierarchical manner. According to Maslow, the lowest order needs, starting with physical requirements followed by security and social needs, were required to be fulfilled before higher order needs such as self-esteem and self-actualization could be seriously addressed (Lawler, 1969). Herzberg developed a theory of motivation based on similar concepts to those of Maslow. Herzberg hypothesized that there were different sets of factors that produced satisfaction in the workplace (Frase, 1989; Frase & Conley, 1989-90; Herzberg, 1968; Herzberg, 1987b). He termed the satisfaction producing factors motivators. He theorized a second set of factors were responsible for dissatisfaction in the workplace. The dissatisfiers he termed hygiene factors. Herzberg's theory has been referred to as the two-factor theory or the motivation-hygiene theory of motivation. Herzberg (1987b) validated his theory in several different countries, involving many different

cultural settings, and involving workers from a wide range of vocational settings.

From a theoretical standpoint, Vroom supplied critical insight into the motivation of work with his expectancy theory (Lawler, 1969; Miskel, 1982; Miskel, DeFrain, & Wilcox, 1980). Essentially, Vroom speculated that motivation to work was based on the individual's expectancy of reward for effort. The structure hinged upon the assumption that effort produced performance and performance would be rewarded.

According to Lawler (1969), a related factor that impacted on workers was their perception of reward. Rewards were valued because they satisfied one or more needs and these needs, according to Lawler, were based on Maslow's hierarchy of security, social, esteem, and self-actualization. Lawler differentiated between lower order needs as being extrinsic to the work and higher order needs as being intrinsic to the work. Lawler pointed to three characteristics of a job that must be present such that people who performed them expected intrinsic rewards based upon their performance: the individual must have received adequate feedback; the job must have been perceived by the worker to be making use of his or her skills and abilities; and the individual must have felt that he or she had control or autonomy in setting his or her own goals. When all three of these conditions were met then the person could experience psychological success (Lawler, 1969). He

concluded that to be an effective motivator, job redesign must have included both vertical (enrichment) and horizontal (enlargement) job dimensions. A moderating factor, according to Lawler, was that the employee must possess higher order needs that needed to be addressed that created a motivating effect and employees must have been challenged by a job that tested the abilities that they themselves valued. Lawler summarized "when a job is structured in a way that makes intrinsic rewards appear to result from good performance, then the job itself can be a very effective motivator" (p. 434).

Fuller et al. (1982) introduced two types of efficacy associated with satisfaction and motivation in work: organizational efficacy or the ability to influence individuals within the organization toward accomplishment of the organization's goals; and performance efficacy which was an individual's perception of his or her own ability. The authors contended that people would seek ways or places that allowed them to be efficacious. They stated that people attempting to preserve or increase efficacy may have hampered organizational change.

Where individual and organizational goals converge, higher levels of individual efficacy are associated with improved individual and organizational performance. . . . Where the interests of two organizational actors diverge, the pursuit of efficacy

by each may lead to organizational instability.

(Fuller et al., 1982, p. 13)

People had to see that work produced rewards and that the rewards offered were valued to make the rewards effective. Fuller et al. suggested that the individual was motivated by clear concise tasks. Socialization of the individual to the organization's beliefs, tasks, and reward structures produced the stability and efficacy an individual presumably strived to attain. The authors suggested that "routine and predictable tasks will be devalued, lowering efficacy and motivation" (p. 13). They also suggested that individual efficacy was based on feelings of competence. Change initiatives often pushed people beyond their competency so that efficacy and motivation fell due to movement from a comfortable zone of competency. The rational-bureaucratic model of organizations held that the upper echelon of the organization was the sanctuary of creativity while the lower levels of the organization were the implementers. Power was believed to be a divisible pie. Fuller et al. urged departure from this framework and proposed the humanistic model. The approach was based on need satisfaction relationships stemming from Maslow, Herzberg, Argyris, and Hackman and Oldham. The authors stressed, however, that we still governed schools based on scientific management techniques. The scientific management approach to the governance of schools left students, teachers, and administrators feeling powerless.

Shreeve et al. (1987) suggested a major concern for the educational community involved an impending teacher shortage and that job satisfaction would become an important issue for the educational system as teacher retention and attraction of good teachers became more and more of an issue for school districts. The author stated that job satisfaction shifted and changed with the times and satisfaction, or the aspects of satisfaction, were job or profession specific. Toward that end, teachers wanted to be seen and treated as professionals that were responsible for their own working lives. The authors contended that if the teaching job did not live up to the expectations of the teacher then burnout and increased stress and other stress associated symptoms and problems were created. The researchers said that it was important to have the dissatisfiers or extrinsic factors addressed as they could lead to decreased performance. The authors made the point that although the extrinsic factors must be addressed to create an atmosphere that allowed the teacher to do the job well, the intrinsic factors held the most promise for creating a school climate conducive to job satisfaction. They said recognition, rewards, autonomy, and self-direction added to the experience of job satisfaction and the experience of professionalism on the job. Equally important, however, was a clear understanding of the roles and responsibilities of the teachers as many traditional job descriptions were rearranged. Ambiguity about how or what

the individual's role was could be very unsettling and the source of anxiety and hence dissatisfaction with the system. They said the "literature supports the contention that a strong and supportive principal, secure enough to foster participatory management with teachers without losing personal leadership capabilities, will create the greatest job satisfaction among his/her staff" (p. 21). The professionalization of teaching was tied to Maslow's hierarchy concept of self-actualization. The authors called for changes in school governance and procedures within the school system to allow teachers to grow and become self-directed, self-motivated, and accountable professionals that were capable of performing their jobs without direct supervision or direction from top-down bureaucrats and dictators.

Spuck (1974) examined the nature of rewards in education and concluded that intrinsic rewards were more important than extrinsic rewards in creating satisfaction and motivation. The author hypothesized that rewards as motivators were related to the individual's needs and that the key was to identify those needs that most closely aligned with organizational goals. Because of the flat organizational structure in education, extrinsic rewards were not effective after entry. Intrinsic rewards became increasingly important as a person matured in the profession. Spuck stated that rewards most related to individual performance were intrinsic in nature. The author

maintained that extrinsic rewards may be important to attracting and retaining teachers in education but they had little effect on performance. According to Spuck, Porter and Lawler concluded from their studies as well that intrinsic rewards were more important than extrinsic rewards related to performance. Spuck reiterated that because of the flat financial structure of the organization educators gained motivation and satisfaction from intrinsic rewards simply because of the lack of extrinsic rewards.

A number of authors suggested techniques that have proven successful in business and in industry should be applied to education to promote motivation and satisfaction in the workplace. Reyes (1981) and Goddard (1987) suggested that praise and positive feedback be used as motivators to increase performance and job satisfaction. Other psychologists and educational researchers (Gibson & Dembo, 1984; Trentham, Silvern, & Brogdon, 1985) have suggested that the study of efficacy and other affective domain elements had an impact on satisfaction and motivation. Still other researchers believed that administrative position (Gorton & Kattman, 1985), general life satisfaction (Lester, 1986; Liou, Sylvia, & Brunk, 1990), bureaucracy (Pellicer, 1984), burnout (Riggart, Godley, & Hafer, 1984), increased job demands (Miskel, Glasnapp, & Hatley, 1975), and context of the administrative position or role (Dwyer, 1984) should be studied in depth as well as the other

seemingly established indicators of satisfaction and motivation in work.

During the late seventies, Hackman, Oldham, Lawler, and Porter began to develop a model of interaction based on core elements of a job, critical psychological states necessary to provide cognitive and affective reactions to work, and personal and work outcomes that would result from the job. The job characteristics model was developed through the integration of theories of work motivation and satisfaction research that had been conducted by Maslow, Herzberg, Vroom, Hackman, Oldham, Lawler, Porter, and others. The development of the Job Characteristics Model, developed by Hackman and Oldham (1980) is discussed in the following section.

The Job Characteristics Model: Development and Validation

"The dominant job design theory during the past two decades has been the job characteristics model which combines Maslow's need-fulfillment theory of motivation, Herzberg's motivation-hygiene theory, and Vroom's expectancy theory" (Frase, 1989, p. 53). Cunningham and Eberle (1990) suggested, based on Herzberg's theory, that

growth and motivational factors include achievement, recognition, the work itself, responsibility, and advancement. Hygiene factors, in contrast, are associated with the work context or environment. The

most important hygiene factor is company policy and administration. The second most important factor is technical supervision. (p. 57)

The authors described the job characteristics model as a vehicle through which

it is possible to alter a job's character to increase motivation, satisfaction, and performance. . . . The job-characteristics model seeks to structure work so that it can be performed effectively and is personally rewarding and satisfying. According to the model, matching people with their jobs will reduce the need to urge them to perform well. Instead, workers will try to do well because it is rewarding and satisfying to do so. (p. 57)

The authors pointed out that jobs should be redesigned to meet the needs of both the organization and the individual.

Gorsuch (1976) related the job characteristics model to the development of higher order needs and acknowledged Maslow as the originator of the hierarchy concept. "When employees have a high desire for higher order need satisfaction, a job which produces high levels of the three psychological states should be motivating. Thus the personal and work outcomes specified in the model should be optimum" (Gorsuch, 1976, p. 10).

Herzberg's motivation-hygiene theory supplied additional foundation for the model. Motivators were so called because they were believed to be the factors that

would be effective in motivating employees to superior effort and performance. Herzberg's theory also stipulated that increases in the hygiene factors, while very important to keep levels of dissatisfaction low, would not, by themselves, motivate employees to higher levels of performance and productivity. Hackman and Lawler developed some of the initial job characteristics work from the work of Turner and Lawrence during the sixties (Hackman & Oldham, 1976). Hackman and Lawler hypothesized that workers that had high growth desires should be stimulated and motivated by jobs that were high on core job dimensions. In essence the Hackman and Oldham model, based on the previous work of Hackman and Lawler, stated that the potential of a job to motivate an employee with some desire for growth would be maximized when the job involved high levels of skill variety, task significance, task identity, autonomy, and feedback. The results of Hackman and Oldham's (1976) research "provide generally strong support for the validity of the job characteristics model" (p. 271). Hackman and Oldham pointed to the utility of the model and their job diagnostic survey as a diagnostic instrument to determine factors of the job that could be changed to produce greater positive motivational incentives for the job incumbent. They also stated "the model focuses exclusively on the relationship between individuals and their work" (p. 277).

Hackman and Oldham (1975) pointed to the need to use employee self-report for the redesign of work because it was

the employees' perceptions of their work environment that were important in creating their impressions of the work and their subsequent motivation and satisfaction perceptions. They cautioned that at time the employees' perceptions may not be congruent with reality and some sort of triangulation should be carried out to come to a consensus as to the real nature of the job.

Figure 1. The Original Job Characteristics Model as hypothesized by Hackman and Oldham (Gorsuch, 1976).

According to Hackman et al. (1975), three psychological states were "critical in determining a person's motivation and satisfaction on the job" (p. 58). The person must have experienced meaningfulness of the work, responsibility for outcomes of the work, and knowledge of the actual results of

the work activities. Accordingly, if any one of the three psychological states was missing or low then motivation dropped considerably. Further research by Hackman and Oldham determined that five job characteristics had tremendous impact on the psychological states. If jobs contained a variety of skills, if a complete job could be performed, and if the job had significance then the person experienced meaningfulness of the work. If the person had autonomy in the way in which the work was done then the person could experience responsibility for the outcome of the work. Finally, if the person could get feedback from supervisors or others or from the job or product itself on the quality of the work performed then the person could experience knowledge of the actual outcomes of the work activity. Hackman and Oldham hypothesized that moderators affected the degree to which all people internalized each of these work experiences. People displayed or felt different growth needs that played an integral part in their motivation. Hackman et al. (1975) suggested that if a person had high growth needs, then, in the presence of the core job characteristics, the person could experience high internal motivation, high growth satisfaction, high quality performance, and low absenteeism and turnover. If an employee did not have high growth needs then giving the employee too much task variety or feedback or autonomy might stretch the individual beyond a critical comfort level in the workplace and actually create confusion or

dissatisfaction with the job or work. Hackman and Oldham further hypothesized that the correct combination of factors in the workplace could determine a potential for high levels of personal and work outcomes. If a job was rich in all five job characteristics, these characteristics would lead to desirable psychological states that would lead to the desired personal and work outcomes. The job design might be significantly improved through intervention strategies that generated the desired outcomes from the worker. In order to determine the present condition of the job or workers' perceptions of the job, Hackman and Oldham (1975) developed the Job Diagnostic Survey (JDS). Hackman et al. (1975) pointed out that their approach had four main characteristics: (a) the approach was grounded in basic psychological theory; (b) the approach emphasized that planning for job changes should be done on the basis of evidence and data collected relevant to the job; (c) the approach provided an implementation guide to assist in job enrichment and redesign; and (d) the theory was supported by their own research.

Frase, Piland, and Ankeny (in press) clarified the role of three elements in moderating people's reactions to high and low motivating potential scores (MPS) that were derived by formulae from responses to the job diagnostic survey. The moderators were:

1. Knowledge and skill. People with adequate knowledge and skill knew how and could perform jobs well.

People without knowledge and skill lacked the competence to do jobs well and as a result often experienced frustration and unhappiness.

2. Growth need strength: similar to self-actualization as described by Maslow. People had to want or desire to grow in their jobs or the capabilities in their jobs. If people lacked a desire to grow then changes in the actual job or work would have little impact on them.

3. Context satisfaction: job setting variables such as pay, fringe benefits, supervision, working conditions, administration and organizational policies, and interpersonal relationships. All context factors were related to Herzberg's hygiene factors that had been related to Maslow's lower end needs.

Several researchers validated the Hackman and Oldham Job Characteristics Model in both industry and in the educational setting (Arnold & House, 1980; Fox & Feldman, 1988; Gorsuch, 1976; Harder, 1985; Spangler, 1985). Shortly after the introduction of the Hackman and Oldham model Gorsuch investigated the relationships between the core job dimensions, psychological states, and personal and work outcomes in the educational field. The study was designed to determine the interaction of the Job Characteristics Model (JCM) in the teaching profession. Ninety full-time teachers were used as the subjects in the study. Gorsuch suggested that growth need strength (GNS), a moderator hypothesized by Hackman and Oldham, was ineffective as a

moderator for teachers, therefore, alternative moderators should be investigated. The GNS moderator was hypothesized to be different for all individuals. Essentially, a person with a high GNS reacted differently to the job characteristics and psychological states than a person with a low GNS. "Employees who desire higher order need satisfaction from their jobs react differently to a high level of these core dimensions than those who do not" (Gorsuch, 1976, p. 11). Therefore, each employee had to be viewed individually in terms of job redesign or job enrichment as no two people were the same in their experiences of the psychological states described by Hackman and Oldham.

Scores from the job diagnostic survey for many of the dimensions of the model were similar to those found in business. Gorsuch (1976) suggested that the absentee dimension be eliminated from the teacher model as there was little incentive to avoid being absent from work and that a new model specific to teaching be developed.

Gorsuch (1976) stated five propositions that addressed employee motivation and satisfaction. The five propositions were:

1. workers will do things they perceive as helpful in obtaining outcomes they value;
2. outcomes are valued by workers to the extent they are perceived as enabling them to meet physiological and psychological needs;
3. if work is arranged so that workers who are

effective meet their needs, then organizational goals will be met; 4. except in unusual circumstances, only higher order needs are motivating. Satisfaction of higher order needs does not diminish these needs, and in fact may even serve to increase them. However, not all employees will respond to opportunities for higher order need satisfaction; 5. individuals capable of higher order need satisfaction will obtain satisfaction when the job (a) allows workers to feel responsible for an identifiable and meaningful portion of work, (b) provides outcomes which are intrinsically meaningful or experienced as worthwhile, and (c) provides feedback about performance effectiveness. (p. 23)

The Hackman and Oldham and Lawler work was not new theory on motivation. Their work was a consolidation of prior theory integrated into their version or model of interaction of the various factors and variables. In reference to various job characteristics and psychological states, Gorsuch (1976) noted that "how an employee perceives these dimensions will determine his affective and behavioral responses to the job rather than their objective state. Data on employee perceptions was therefore used in the rest of the analysis" (p. 27). The major findings of Gorsuch's paper were:

Characteristics of a job create psychological states within employees and that these states account for

levels of personal and work outcomes received general support in this study. The core job dimensions were found to be positively related to the psychological states with seven correlations reaching significance at the .05 level. The psychological states as a combined measure were related highly to work satisfaction and moderately with internal motivation. . . . The combined psychological states did serve as a predictor of work satisfaction and internal motivation. (p. 100)

Two other researchers, Arnold and House (1980) looked into the complexities of the Hackman and Oldham model. Their results "indicate that the job characteristics and the psychological states are significantly related to various personal and work outcomes. What is at issue is not whether such relationships exist, but rather what form these relationships take" (p.180). The authors found mixed support for all elements of the models as it stood.

In 1985, two different dissertation students tested the validity of the JCM. Harder provided validation for the JCM in education and Spangler provided general validation for the model. Harder added to the model pay, supervision, security, and peer/co-worker interactions as moderator variables. Harder quoted the work of Hackman and Oldham at arriving at internal validity and reliability for their work.

Hackman and Oldham (1974) concluded that both the internal consistency reliability of the scales and the

discriminant validity of the items were satisfactory. Furthermore, they concluded that, since the intent was to develop scales composed of items with rather heterogeneous content to maximize the substantive richness of each measure, some loss of internal consistency reliability was to be expected. However, this reliability was considered satisfactory when the instrument was used to obtain mean scores for a group. (Harder, 1985, p. 80).

Harder reported:

Results tended to confirm the validity and objectivity of many of the JDS dimensions. In the latter study, the JDS's ability to distinguish between perceived job characteristics for large and small work groups, for large and small organizations, and for high and low status jobs was explored. The JDS score distinguished between groups, and the construct validity of the instrument was supported. (p. 82)

In Harder's study, 292 male and female teachers in a middle income suburban school district were administered an addended version of the original instrument. Data were subjected to multiple correlations, multiple regressions, and MANOVA procedures. The results showed that teachers generally were more satisfied with their work than their private sectors counterparts. Feedback and security were issues for the teachers that did not appear to be a problem for private sector employees. Teacher growth need strength

was higher than private sector people but less than a sample of college-educated subjects from a presumably previous study or comparison. A step-wise regression did not fully support the relationships between the job characteristics and specific psychological states within his sample. Although the model seemed to fit in general, certain specific interactions between variables was not always supported. Due to the complex nature of human behavior and motivational aspects of human development, this type of result is typical. Harder did add in the extrinsic context factors of pay, supervision and peer/co-workers relationships as being particularly important when trying to explain the job satisfaction of the teacher sample.

Spangler (1985) provided a more general validation of the model:

Critics of the Hackman and Oldham model have consistently argued that within-method response bias may actually provide spurious support for the model. That is, the model is less valid than is apparent from typical JDS-based statistical results, and the removal of response bias from the data should reduce the number of apparent confirmations of the model. The results reported herein suggest just the opposite. The model is more valid than is apparent from the usual statistical data. (p. 363)

He found that there was a fair amount of validity in self-report. He also found that the JCM was supported even better when any response bias could be removed.

Fox and Feldman (1988) provided strong support for the JCM as well as adding international adaptability of the model and theory of work motivation that complimented the study of multicultural work motivation by Herzberg. The authors contended that the JCM "remains the most prominent recent attempt to systematize the relationship between job design, job satisfaction, and performance" (p. 229).

As can be seen from the above discussion, the job characteristics model withstood the scrutiny of several research efforts. The validity of the model was confirmed in the educational setting and several new moderator variables were added by Harder to the original model. Further revision, refinement, and amendment to the original work of Hackman, Lawler, and Oldham was carried out in the mid to late eighties by such researchers as Frase, Conley, and Bacharach. The following section delves into the refinement and expansion of the Job Characteristics Model and its Job Diagnostic Survey to meet the unique requirements of the educational setting.

Refinement of the JCM in Education

A number of educator/researchers have examined the complexities of the educational work environment and the researchers have validated, through their respective

research studies, a number of variables that have impacted on the worklife of the educator (Bacharach & Mitchell, 1983b; Conley et al., 1989; Frase, 1989; Frase & Piland, 1989; Rottier, Kelly, & Tomhave, 1983). The studies have identified both intrinsic and extrinsic factors that have been the sources of motivation, satisfaction, frustration, and dissatisfaction for many educators.

Generally, teachers have entered education to help others learn and other altruistic motives (Frase & Piland, 1989). Frase and Piland stated that teachers themselves said that these altruistic rewards were "the most powerful motivators and job factor in their professional life" (p. 25). The authors suggested that the synthesis of research findings pointed to the fact that of the ten or so most valued rewards to teachers, nine of these were intrinsic to nature. Frase and Piland claimed that when we wanted more productivity or performance from educators we developed career ladders and incentive pay schemes that only addressed peripheral issues of concern to educators in terms of motivation. "No studies exist to support claims that these programs have attracted better teachers, caused good teachers to stay in teaching, or motivated teachers to improve their instructional practices" (Frase & Piland, 1989, p. 26). Frase and Piland rephrased the basic premise of the Herzberg theory by stating "intrinsic rewards serve as motivators and should lead to improved performance, thus bringing about job satisfaction" (p. 27). Instead of

focusing on intrinsic rewards, current reform efforts "regarding effective schools and excellent colleges focuses on the organizational climate and creating satisfaction. . . . If faculty are satisfied with their work, they will be motivated to perform at higher levels" (Frase & Piland, 1989, p. 27). The authors concluded that "teachers strongly desire intrinsic rewards and that motivational rewards lead to greater satisfaction and more effective job performance" (p. 31).

The list of moderators, intrinsic and extrinsic factors of the work environment, as proposed in the original Hackman and Oldham Job Characteristics Model, was found to be lacking when applied to the educational setting. Several researchers began to explore a variety of factors that appeared to relate to satisfaction and motivation and dissatisfaction within the teaching profession. Many of these factors were later added to the modified job characteristics model and a newly designed job diagnostic survey by Frase.

Bacharach and Mitchell (1983a) examined bureaucracy, supervision, and decision making in relation to job satisfaction of administrators. Job satisfaction in the past was viewed as a means to increase productivity of lower level workers. The assumption that performance was tied to satisfaction made the linkage to motivation. However, the authors stated that "research suggests that higher productivity results in higher satisfaction" (p. 12).

Therefore, the authors suggested "structures which enhance task performance lead to satisfaction, structures which hinder task performance lead to dissatisfaction" (p. 13). The authors defended the use of the perceptions of the individuals: "the important point is to recognize the linkage between perceptions and behavior, and to include an assessment of perceptions in any quality of work life intervention" (p. 13). Bacharach and Mitchell concluded that communication, supervision, role conflict and ambiguity, role overload, inter-group relations, physical work environment, participation, compensation, and promotion and career development were important factors in the analysis of job satisfaction and motivation. They also stated "it is critical that the quality of work life be seen as a multi-dimensional construct which involves all of these issues and consequences" (p. 15). The authors concluded that quality of work life programs were but one way to improve the working conditions within a school, if and only if, we were willing to reconceptualize the school organization and adopt a multi-dimensional view of what constitutes quality of life in the workplace.

Bacharach and Mitchell also identified socioeconomic status (SES) as a variable that impacted on administrator satisfaction. The researchers noted that the higher the percentage of lower income families the greater the dissatisfaction for the superintendents in those areas. Diversity of the community was used as a variable. Age as a

variable was also used because with age comes experience and with experience comes different perspectives. "If experience is indeed the best teacher then one would expect measures of experience to have significant impact on the actor's perceptions of his or her role" (Bacharach & Mitchell, 1983b, p. 105). Rottier et al. (1983) examined poor resources, poor organization of the school, excessive paperwork, interpersonal relationships with family and co-workers, high personal expectations for the job, skill, and expertise to do a job well and decided that these factors impacted on satisfaction and motivation across both genders and ages of their respondents.

According to Bacharach and Mitchell, needs satiation theories of motivation fell short of describing adequately the relationship to motivation. However, Bacharach and Mitchell (1983b) stated:

In contrast, conceptual developments drawn from information-processing theory have been applied to the study of job satisfaction and utilize an image of the individual as an active participant, one constructing his or her own social reality. Such an approach places primary emphasis on the individual but in a different way than the need satisfaction theories. The individual becomes an active agent working within the confines of a given social context. Perceptions become a critical factor, and utilizing this approach, one would expect differences across departments and levels

of the hierarchy in the determinants of job satisfaction. (p. 104)

The authors discovered that

since no evidence has been put forth to substantiate the assumed satisfaction-performance linkage, the authors have argued for a reconceptualization of the role of satisfaction in work. The approach presented assumes that performance precedes satisfaction and that the sources of satisfaction are those factors that enhance task completion. (p. 106)

Bacharach and Mitchell hypothesized that:

By isolating those factors that predict dissatisfaction in a given role, one can proceed to redesign the work processes associated with that role in such a manner as to enhance performance and alleviate dissatisfaction. Further, this form of redesign is independent of many of the assumptions of personality and individual needs that have burdened numerous earlier efforts at job redesign. Thus the practical implications lie not in telling administrators how to do their jobs, but in being able to specify the conditions under which it will be possible to do their jobs most effectively. (p. 124)

Conley et al. (1989) and numerous other researchers looked at a number of factors that have impacted on teacher job satisfaction or dissatisfaction (Bacharach, Bamberger, & Mitchell, 1990; Brooke, Russel, & Price, 1988; Lester,

1987). "If schools recruit talented people but fail to provide the work environment in which they can become successful, teachers will surely become disillusioned with their careers no matter how qualified they are" (Conley et al., 1989, p. 59). To the list of moderator variables, the researchers added such context factors as role ambiguity, routinization, involvement in decision-making, feedback from supervisors and others, career expectations, classroom size, student learning problems, student behavior problems, and bureaucracy (Bacharach et al., 1990; Conley et al., 1989). Conley et al. (1989), in one study, sampled 87 school districts in New York using a stratified random sample according to geographic location, size, wealth and district expenditures. Career dissatisfaction questions were developed to tease out teachers' perceptions related to the new variables. Questions related to routinization, role ambiguity, and class size, and absence of student learning and behavior problems were later adapted and included in a new version of the JCM and JDS used by Frase (Frase & Heck, 1990; Frase et al., in press).

Butler (1990) stated that the way a job was designed was one of the most important variables in understanding job satisfaction. She said that job satisfaction was more strongly associated with managerial and supervisory practices than the individual characteristics of the worker. She used the Hackman and Oldham model to describe how high levels of the five core job characteristics in the presence

of high growth need produced workers that were more satisfied with their work. She pointed to age as a consistent variable that influenced satisfaction, with older workers being more satisfied than younger ones. She concluded that eliminating unnecessary bureaucracy, improving communication, obtaining feedback, and teaching ways to reduce stress would all help in reducing the intensity of feelings people had about their jobs. She also said that support from co-workers was beneficial but that people needed to know that their work was valued by their supervisors as well.

Several researchers have found that career dissatisfaction was different at elementary and secondary levels suggesting that career dissatisfaction was a function of different elements in the two organizational environments. Further, role ambiguity appeared to be an important factor in career dissatisfaction at both levels. Conley et al. (1989) argued that dissatisfaction was not necessarily a function of individual oddities but rather organizational phenomena created a great deal of dissatisfaction.

A critical component of improving schools is to assure that the school work environment and the management techniques used in schools, will enhance the satisfaction of teachers with their careers. This paper has suggested that certain characteristics of the school work environment can be empirically identified

as strongly associated with career dissatisfaction. Furthermore, the paper suggests that when addressing the issues of teacher career dissatisfaction, we must empirically delineate specific variables within such broad thematic categories as bureaucratization, power, supervision, communication, career development, and classroom environment. (Conley et al., 1989, p. 75)

Gunn and Holdaway (1986) used administrator perceptions of power and influence to arrive at the conclusion that job satisfaction for administrators was based in part on one's perception of the work environment. The authors stated that principals must establish and exercise influence if they were to be strong instructional leaders. The authors, in reference to the work of Locke, suggested that:

Job satisfaction results from "the perception of one's job." His theory clearly is cognitive in that cognitive processes operate to determine how individuals' perceptions of their job situations affect their levels of job satisfaction. Locke believed, as did Lawler, that overall job satisfaction is an affective reaction to the total work role which is determined by satisfaction with all facets of the job, and that some facets should be weighted more than others. (Gunn & Holdaway, 1986, p. 46)

Gunn and Holdaway went on to state:

The attention of improving the quality of schooling for students through increasing the effectiveness of the

leadership of principals should be coupled with an understanding of the needs, motives, and values of the individuals who are or who seek to be effective principals. (p. 61)

DeCotiis and Summers (1987) stated that high commitment to the organization allowed the organization to withstand some violations of member expectations. They pointed to role conflict, role ambiguity, and role confusion as factors influencing commitment. They also suggested, via the Hackman and Oldham model, that close supervision reduced commitment. Decision making and communication processes, challenge and responsibility in the job, however, increased commitment. The authors suggested a link to organizational effectiveness by saying that if the organization was more effective then the people within the organization would have higher morale and the higher morale would promote higher commitment. The study examined role conflict, role ambiguity, decision making, communication, pay, autonomy, support, innovation, work itself, opportunity, and co-workers. The authors concluded that there was no single type of committed worker rather

individuals come to an organization with certain needs, desires, skills, and so forth, and expect to find a work environment where they can utilize their abilities and satisfy their basic needs. When the organization provides such a vehicle . . . the likelihood of

increasing commitment is . . . enhanced. (DeCotiis & Summers, 1987, p. 466).

DeCotiis and Summers concluded that "when an organization commits to meeting the needs and expectations of its members, its members commit to the service of the organization in terms of its goals and values" (p. 467).

Sharon Conley (1988) suggested an expanded role for the Job Characteristics Model in education.

Implicit in the Hackman and Oldham model are both dimensions of constrained decision making. Autonomy, skill variety, and task identity allow the professional to cope with uncertainty and process knowledge to facilitate decision making, while task significance and feedback imply constraint mechanisms assuring that the professional operates within the broad normative framework of the organization. (Conley, 1988, p. 398)

She went on to say:

My description of Hackman and Oldham's (1980) model illustrates how job design may be used to avoid metaphorical extremes of teachers as paper pushers or as free agents. The problem faced by the past reform movement was that our logic was limited by our metaphor. In proposing the metaphor of teachers as constrained decision makers, and in illustrating the implications of this metaphor for job design, evaluation, and participation, I have tried to define a realistic middle ground for which the next wave of

reform should strive. Unless we begin to strike a middle ground based on management's recognition of teachers as professional decision makers and teachers' recognition that they are accountable to the organizations in which they work, many of our reforms will come to naught. (p. 403)

Frase had conducted several research projects over the past three to four years that utilized the Hackman and Oldham model and Frase refined the Hackman and Oldham model to reflect the important variables identified by Sharon Conley and Samuel Bacharach, and Scott Bauer (Conley et al., 1989; Frase & Heck, 1990; Frase et al., in press).

In a research project conducted by Frase, the revised Job Diagnostic Survey (JDS) was used to measure the facets of teacher job satisfaction in the Fort McMurray Catholic School District, Alberta (Frase & Heck, 1990). The Alberta educational system has both a public and a Catholic system that are funded by the provincial government. The two systems operate independently in many communities and students have a choice of which system to attend. The system is not unlike the elementary union school district and high school union district designation in California. Both systems operate simultaneously in any given district. The point is that the Catholic school system in Alberta is every bit as big and as vital as the public system and should not be confused with the independent schools that exist in other parts of the United States and Canada.

Figure 2. Frase's Revised Job Characteristics Model with many additions of moderators derived from the work of Bacharach, Conley, and others (Frase, Piland, & Ankeny, in press).

Based on the analyses of the JDS measures in the Fort McMurray Catholic School District, subsequent job enrichment and job redesign efforts were initiated by the district leaders. Several months later the educators' job satisfaction perceptions were reevaluated. Statistically significant improvement on 20 of the 38 variables investigated, as reported by the educators on the revised JDS, was discovered as a result of the statistical analyses of the data.

The trustees and superintendent of the district were aware that many educational improvement efforts were faddish and often lacked substance. Restructuring was the current fad and the district wanted to make sure that any efforts they put into restructuring were research-based and followed several other major guidelines: they wanted to think bold and avoid incremental change and go for the ideal; they wanted to avoid faddism and base their project on scientifically and formally diagnosed needs; they wanted to make sure that their efforts had an evaluation component; and they wanted to make sure that the unit of change and involvement was the school site. The group settled on Herzberg's motivation-hygiene theory and Frase's work with Hackman and Oldham's studies and theories.

A basic tenet of the theory (Herzberg's) is that job context factors must be adequate before content (motivation) factors can have a positive impact. In other terms, the theory stresses the importance of job

content and claims that motivational power lies in the content of the job. Replication of Herzberg's research methodology in education and other research on teacher motivation have strongly supported Herzberg's theory.

(Frase & Heck, 1990, p. 3)

Frase stated "a good place to work is a place where teachers and administrators can achieve their mission of educating young people and that job satisfaction is the result of good work (accomplishing the mission), but is not the cause of it" (Frase & Heck, 1990, p. 4). Frase continued:

It demonstrates the power and importance of "work" in the creation of satisfaction. It carries the conviction stated in the Trustees' motion--it is the organization's responsibility to work together with teachers to create a place where teachers can succeed in accomplishing the schools' mission--to educate young people. (p. 4)

Furthermore, Frase stated:

The JCM looks beyond context factors to job content and analyzes teachers' interaction with their work and others. This was the depth and the new arena of variables we believed must be addressed in order to gain a comprehensive diagnosis of the schools' work environment. (p. 4)

Frase and Heck, after a thorough review of the literature, added career intentions, co-workers, bureaucracy, involvement in decision making, and freedom of expression,

role overload, and role ambiguity to the list of variables that had an impact or moderating effect on the psychological states and the outcomes of the work. "Questionnaire items validated through the original research on these topics were added to the JDS" (p. 5).

Inspired by the success of the intervention strategies in the 1990 study, Frase and other researchers proposed that the revised JCM and JDS could provide empirical data to drive school restructuring efforts (Frase et al., in press). The authors contended that current restructuring efforts had been based on assumptions and political interests rather than on a strong theoretical and empirical base. The authors stressed that while education dealt with human nature and sociological functions the profession also had a strong scientific element of theories and knowledge that could add support as well as credibility to current restructuring efforts. Frase et al. (in press) reiterated Herzberg's 1959 hypotheses that proposed job enrichment efforts as managerial strategies for maximizing productivity. Frase et al. stated "the JCM offers the much-needed guidelines, theory, and structure for carrying out a successful restructuring program" (in press).

Although the JCM and its theoretical foundations have been validated for use in education, application of the JCM in public schools has been greatly strengthened by the addition of variables which affect teachers' interaction with their work and others. For example,

powerlessness, influence deprivation, and absences of authority directly assess teachers' perceptions about their scope of involvement in the decision-making process; bureaucracy and routinization are potential organization problems; efficacy assesses teachers' perceived power and ability to help students learn, and supervisor competence assesses teachers' perceptions of their supervisors's ability to offer constructive criticism and advice. (Frase et al., in press)

The authors stressed that through a diagnosis of the work setting of teachers certain remedial or ameliorating activities could be conducted to improve weaknesses or expand on perceived strengths of the system to produce a better work environment.

The research on intrinsic motivation suggests that teachers can indeed be the key to success in this endeavor, and that there is a way to begin to focus toward such change. The Job Characteristics Model provides a much needed research base and the theoretical framework for restructuring faculty roles. (Frase et al., in press).

The authors contended that:

The JCM and the process discussed herein offers a diagnostic and prescriptive device that educators can use to avoid the pitfalls of directionless and unwarranted attempts to change. The process described here looks beyond "bandwagon offerings" to the core of

teaching: that is, teachers' interaction with their work and others in the workplace. The process focuses on teachers' number one goal--to help young people learn and the potential of the workplace to allow them to accomplish that goal. (Frase et al., in press)

Researchers in education had identified numerous variables, factors, and context and content facets of the teaching profession that were empirically tested and analyzed to produce a revised model that related to educator job satisfaction and dissatisfaction. In a climate of organizational change, many traditional roles and responsibilities of the incumbent are often disrupted. The restructuring efforts in the San Diego Unified School District were no exception and the district had not been spared from a variety of organizational dilemmas that faced large public bureaucracies in times of change. The school-site administrator has been identified and promoted as vital to school improvement efforts. The need for research into the impact of the restructuring efforts on the school-site administrators of the district is the subject of the next segment of the literature review.

The Need for Research in Educational Leadership in San Diego City Schools

C. T. Cross (1990), the Assistant Secretary for Educational Research and Improvement with the U.S. Department of Education, said that as a result of very

important research efforts in recent years, educational research has gained a great deal of respect in the research community. The recent national educational goals by the President and the Governors should be guided by research in assessment, motivation, collaboration, and dissemination. "The restructuring of American education will fall flat if its architects and carpenters continue doing business as usual" (Cross, 1990, p. 22). Cross also stated that "because motivation is a multi-faceted issue touching many dimensions of education, we want each center to address it. We also want more scholars--both inside and outside the federal educational research system--to explore it (p. 22).

Thomas Sergiovanni researched and wrote extensively on the subject of administration in education. Sergiovanni (1987) stated:

The scientific base for educational policy development and for professional practice within the principalship is not as strong as that existing for many other professions such as medicine and engineering. Yet, in the area of motivation to work, extensive research literature is available for informing the policy process and for guiding professional practice.

(p. 235)

Sergiovanni also stated that "despite what is known about how to improve teacher motivation and commitment and the links between such improvement and effective schooling, this knowledge base typically does not inform policy development

and administrative practice" (p. 235). Sergiovanni went on to say that policy makers actually initiated policies that were contradictory to what was known about teacher motivation and commitment. "Though well intended, these policy initiatives can actually inhibit, even lower, teacher motivation and commitment with predictable effects on effective schooling" (Sergiovanni, 1987, p. 236).

Typically, many school policies were initiated or promoted by political interests and often as a result of crisis management. Practice informed by research and investigation was often a luxury that was not afforded many educational settings. The result of such short-sightedness was often hasty decisions that were ill informed and as Sergiovanni stated, decisions reached were often contrary to what was known about how people learned or how people were motivated to work. Frase (1989) stated:

Officials who spend all district funds and focus legislation on hygiene factors may err concerning teacher recruitment, retention, and performance improvement. Although improvement in hygiene factors often is needed or desirable, legislation must provide for flexibility at the local level and ensure that both motivational factors and hygiene concerns are considered. (p. 56)

Sergiovanni (1987) distinguished between the different aspects of satisfaction, motivation, and quality in the work life of the individual.

Let us begin our discussion by distinguishing between job satisfaction, motivation to work, and quality of work life. This last term is holistic and refers to the potential of jobs to enrich the physical, social, intellectual, and psychological lives of people at work. Linked to a general concern for quality of life in society, enriched work life is not justified on the basis of performance gains of schools but is considered to be an end in itself, linked ultimately to a higher world concept and better definition of the human species. Job satisfaction refers more specifically to the psychological contentedness one experiences for having received desirable outcomes from work. Job satisfaction is an end state resulting from some series of work happenings and circumstances. Motivation to work, on the other hand, refers to the desire and willingness of a person to take some action, to make some decision, to exert some psychological, social, or physical energy in pursuit of some goal or end state that she or he perceives as desirable. (Sergiovanni, 1987, p. 243)

Research could play an integral part in the discovery process of each element of a person's work life.

Sergiovanni suggested that the investigation of these elements was worthy of consideration so that proper planning for the future of the organization could take place.

Superintendent of San Diego City Schools, Dr. Thomas Payzant, recognized that little was known about the school system and the impact that movements such as restructuring were having on the system. "The restructuring movement is only beginning to evolve. And in these early days, no one has conclusive answers to these questions--just general ideas and assumptions" (Payzant, 1989, p. 19). A lot more could be done than just speculating about certain aspects of restructuring. Expectations and directions of change could be based on the findings of research and more sophisticated methods of inquiry. No longer was there a need to rely on general ideas and assumptions to guide organizational change. However, as Guthrie (1991) noted, educational research must be brought up to a visible level and the research must be supported both politically and financially. To date, educational research efforts have been undertaken by too few researchers with too few resources and with watered-down agenda to attempt to keep everyone happy. Far too often, to get funded and to get approved by the various stakeholders, educational researchers have compromised their studies so that they would not ruffle too many feathers.

Dr. Payzant recognized that change was needed and that organizational change required special considerations and special people. Payzant (1989) recognized the importance of strong site leadership and site autonomy when he stated:

Evidence already exists that fundamental shifts in school authority and responsibility result in more

effective schools. The task now is to give educators at the school level the flexibility to determine how things should be done--and, in turn, their responsibility for student outcomes. (p. 19)

We knew already that autonomy at the school-site level would have an impact on school effectiveness. The time had come to determine through empirical research whether or not, and to what extent autonomy was perceived to be a reality at the school sites and to what extent site administrators were receiving the kind of feedback they required to make informed decisions with regard to future planning for their respective schools. Payzant spoke of the new contract reached between the teachers and the school district that embraced school reform. The new contract dissolved years of conflict and head-to-head adversarial bargaining and instead promoted a collaborative approach to school reform. "It recognizes that restructuring might call for changes in traditional roles and responsibilities--including more teacher involvement in decision making at the school level and altered schedules and learning activities" (p. 20). Dr. Payzant also recognized the possibility of considerable changes in the roles and job characteristics that have been traditional for years. "Obviously, many obstacles and nagging questions remain. We naturally cherish what we know and fear the unintended and unexpected consequences of change" (Payzant, 1989, p. 20). Change did not have to be unintended and unguided. Real intended change could be a

reality given sufficient information and courage to proactively embrace areas of need or dissatisfaction and actively pursue a course of action that would lead to greater satisfaction in the workplace.

The school restructuring movement is still in its infancy--but it's giving us an opportunity we must not miss. We must take time to do what is right and not submit to pressure to act quickly. We must expect ambiguity along the way, but it is a path we must follow. (Payzant, 1989, p. 20)

Olson and Tetrick (1988) cautioned that restructuring an organization or changing the predictable nature of a stable organizational setting could lead to increased perceptions or dissatisfaction with jobs or work. The dissatisfaction was caused by increased expectations of feedback and role clarification by leaders during the time of change. Restructuring caused more ambiguity of the incumbent's role as well as role overload. Because of the increased ambiguity and role overload the incumbent wanted more immediate feedback from which to gauge his or her performance.

Regardless of constraints, implicit or explicit, the district leadership could not miss the opportunity to do what could be done during a climate of experimentation and restructuring. Guided by research findings district leaders no longer needed to act in the presence of ambiguity and uncertainty. The district leaders had the capability and

the resources to determine a desirable future and actively pursue a course of change that would lead them toward that future.

The assistant superintendent of schools for San Diego Unified School District, Ruben Carriedo, was responsible for the Planning, Research, and Evaluation Division of the district organization. In an interview for an article in 1989, Carriedo (cited in Strother, 1989) stated:

We have found that, when we provide a lot of data, both positive and negative, we are more likely to reach a decision that everybody can live with because everybody has access to the same information. Nothing is withheld, and the final decision is driven by the data. We've looked at a number of issues in this way, and the process has worked well for us. (p. 482)

San Diego City Schools had experienced a lot of success in policy analysis and decision-making endeavors by providing everyone with hard research data with which to use to make informed decisions. Carriedo (cited in Strother, 1989) went on to suggest that

the superintendent also let us know that he wanted us to force ourselves to think beyond two or three years--to allow ourselves the luxury of doing some long-range planning. Long-range planning can either be a way of allowing the future to happen to us or a way of creating our desired future. We use data, including projections and forecasts, to ask how we want to shape

our schools to meet the challenges of our rapidly-changing society. (p. 482)

The district leaders could approach the future proactively by assessing what was and by deciding what they wanted and pursuing their vision of a desirable future or they could have allowed the future to simply happen to them through unguided and unintended change. Research and data accumulation could assist greatly in the planning process to direct the change they wanted to occur. In response to a question by the interviewer about how the schools would go about restructuring, Carriedo (cited in Strother, 1989) said "we want to improve working conditions for teachers to allow them more time for planning and professional development" (p. 482). More time for administrators often meant more time from bureaucratic chores to spend in the classrooms and to act truly as an instructional leader and supporters of teaching. If the bureaucracy and roles of the administrators were overloaded then little could be expected beyond crisis management and survival on the job. The more altruistic and self-actualizing pursuits of administrators would not be realized as lower end needs would be addressed first.

Sergiovanni stressed the need to inform policy decisions by research. Payzant stated that little was actually known or confirmed in our knowledge of the impact of the restructuring movement to date. Carriedo emphasized the role that research had historically played in the

development of the policy and the decision-making process in the San Diego School District. Based on the directions suggested by these educators, there appeared to be little doubt that research into the existing impact of restructuring and other reform movements on the educators in the San Diego City Schools would indeed be timely. Philosophically as well, a very strong argument could be generated to defend the proposal to research the reform phenomena discussed above. The following section is a summary and philosophical discussion of the impact that leadership, motivation, and educational research can and should have on San Diego City Schools.

Organizational Change and the School System

Kegan and Lahey (1984) discussed adult development theory and expressed their belief that we as individuals were responsible for creating our own realities. Everyone see the world or perceives the world based upon his or her life experiences; therefore, when we wanted to initiate change in an organization we made certain that all concerned shared at least a core set of beliefs and belief structures upon which to base our shared reality.

All leadership is expressive of a morality, and some moralities are more inclusive, fairer, more impartial, and more protective than others. The crudest way for a leader to make use of developmental theory is to insure that he or she appeals to the needs and yearnings of

each of the different realities as they are represented in his or her constituency; in other words, becoming better able to co-opt people to his or her own purposes. But people do not grow by having their realities only confirmed. They grow by having them challenged, as well, and being supported to listen to, rather than defend against, that challenge. We defined leadership as the exercise of authority. But a person whose way of being in the world--in a family, at work, or as a citizen--amounts to the exercise of authority on behalf of facilitating the development of those around him or her, is the person who can truly be called a leader. (Kegan & Lahey, 1984, p. 226)

Kegan and Lahey presented very powerful advice for the leaders of a school district. The leaders should not only be concerned about how their employees felt about their wants and needs so that the employees would buy into the district's version reality--but a real issue was to determine how the people were constructing their realities and to assist in the development of those people by facilitating organizational change that brought the shared reality more in line with the reality perceived by the followers. In other words, many administrators probably did not see the issues of empowerment and site-based management and decision making the same way as the superintendent and cabinet of the school district. By analyzing the belief systems of the administrators the superintendent could make

more appropriate decisions regarding how many of the district policies and programs were really being interpreted at the site level as well as the true impact that these policies and procedures were having on the site personnel. The superintendent's perception of reality and the administrators' perceptions of reality may well have been two different things.

Foster presented a number of very powerful philosophical ideals in his book Paradigms and Promises. One of Foster's premier assertions was that practice and theory are intricately interwoven in the form of praxis. Foster (1986a) stated:

Thus, theory is important: in our usage it provides a way of seeing. More importantly, administrators who have more ways of seeing--more theories--accessible to them also have more available options and choices for practical action. By providing alternative theories we provide alternative perspectives and ways of seeing. In doing this, we provide the possibility of a more reflective practice, one that combines theoretical insights with practical action. (p. 12)

From multiple perspectives came multiple options for change. Foster alluded to a crisis in legitimation of capitalist society. People had been led to believe that through hard work they would be rewarded for their endeavors in society. However, we found that many times we were just another number in a large bureaucratic system. The rewards for

quality in our working life were disregarded in exchange for so-called efficiency and bureaucracy in our organizations. The best were not always acknowledged as such. Political and cultural factors led to imbalances in our claims to our just rewards. These imbalances led to dissatisfaction with the system and the job itself (Kazemek, 1990).

Another concept introduced by Foster dealt with Lewin and Schein's view on unfreezing, changing, and refreezing as a metaphor for change in organizations.

Unfreezing, Schein says (1969), assumes that significant behavior, beliefs, attitudes, and so on, are organized by one's self image. . . . Unfreezing may occur when the self-image is "disconfirmed" by any of a number of processes: for example, when it becomes clear that how you think about yourself radically differs from how others perceive you, or when your "reality" is not everyone else's reality. (Foster, 1986a, p. 153)

In an organization, everyone may have a different perception of reality in the organization. By closely examining the perceived realities of all concerned we could hopefully identify enough common elements around which to build successful organizational realities. First we had to unfreeze our beliefs, open up our thoughts, and critically evaluate the way things were. As San Diego City Schools superintendent Tom Payzant said many times, more of the same was not necessarily the best way or good enough. We had to

establish what was worthy of continuance and what had to be deleted from our repertoire of behaviors to allow the organization to function at a higher level. Once we had established priorities for a new organization we could move through the change process toward our identified goals. Through perseverance, the new order would refreeze in the minds of the people within the organization leading to a new reality of the way things were done. The unfreezing of reality meant critically establishing that the existing order was no longer acceptable.

The critical examination could take on many forms and a thorough self-evaluation and organizational evaluation was a starting point in defining what the perceived realities of the organization were at that time. Based on a knowledge of what the perceived realities were in the organization, informed decisions about future policies and procedures could be made that reflected the perceived reality of the stakeholders in the organization. In San Diego City schools, the administrators of the district, as stakeholders, could be asked their perceptions of the quality of the working life in the district. Based on the information gained and through staff development exercises, the administrators and central office leaders would unfreeze their perceptions of the old reality, work toward change in the direction of the consensus of a desired future, and eventually institutionalize or refreeze the new reality into the working lives of the administrators of the district.

Bennis and Nanus and Foster pointed to the communicative aspects of leadership. "One aspect of leadership is communicating to others that the particular situation, the particular organizational form, is made by us and can be changed by us" (Foster, 1986a, p. 184). People did not have to accept the way things were. A leader such as Payzant should have been able to share with the administrators that they did not have to accept the way the organization was at that time. Reform, tinkering, reformation, vast structural changes, and the fundamental purposes of education had to be revised (Bacharach, 1988a, 1988b). Payzant and the school board members had to define societal goals in education and reflect the educational goals of society in the purpose of education in San Diego City Schools. The first wave of reform was standardizing everything--tight bureaucratic structures. The second wave was movement toward autonomy and decentralized decision-making, empowerment, and professionalism. Too often excellence and equity were seen as mutually exclusive. However, reformation meant challenging the fundamental purposes of education and developing a system based on the new assumptions (Bacharach, 1988a, 1988b).

Foster suggested that we had to demystify education and processes involved in organizational structures.

Demystification is simply that. Because we take for granted the way things are, they indeed become "mystic" in the sense that they are beyond normal discourse and

reason; they become essences that are not subject to any kind of human action. However, organizations and other human constructs are indeed of our own making; leadership can show us how we can change them.

(Foster, 1986a, p. 184)

The superintendent, in the true spirit of restructuring, had given everyone in the district license to examine the way things were and to come up with other solutions. In his attempt to supply the leadership necessary to effect change in the organization, Payzant was saying to the people in the district: critically examine the way we do things and try to figure out if there is indeed a better way. The better way of governance and collaboration may have meant a better organizational structure or better communication or better holidays or better ways of doing a number of routines and established practices within the district. Many of these practices were outdated, obsolete, redundant, unnecessary, demeaning, belittling, and incongruent with an effective and modern organization. Many of the practices and beliefs within the educational organization were based on turn of the century organizational beliefs. Times had changed and so had the people within the organization. Their core beliefs were considerably different than their parents' and grandparents' beliefs. Yet the organization structure and core operating beliefs of education had changed little over time. The people in the organization or in the district today were operating their lives based on entirely different

sets of premises or paradigms. The organizational nature of education was one of stability. The stability had not allowed the organizational structure and delivery system to change to meet the different needs of today's administrators. The training alone for many older administrators stressed authority and a top-down style of management of schools.

More recently administrators were faced with shared decision-making, site-based management, parental advisory councils, and a host of other interagency functions with which to deal with during the normal operation of the school. The schools themselves were now multimillion dollar enterprises and many administrators had trouble balancing a personal check book let alone a million dollar organization. The problem was not that they are incapable of such work, the problem stemmed from the fact that they were not trained or educated in such a wide range of endeavors. Yet society and the school system placed an extremely heavy role load on the site administrator.

Summary of the Literature Review

Fay (1987) said that the leader's role was to be educative. To be educative meant helping followers to see that their beliefs and actions were incongruent. The leader enlightened the followers so that they could come to see their human condition in a different light and hopefully see a realistic goal and a new and better future state worthy of

pursuit. The educative aspect of leadership was the consciousness raising form of leadership that many had spoken of in their respective writings. Burns (1978), Foster (1986a, 1986b), Fay (1987), Sullivan (1986), and others believed that the raising of the consciousness and moral enlightenment of the followers was the essence of leadership. The ability to improve the human condition through education and enlightenment was the leader's responsibility and mission. From enlightenment came the emancipation of the human enterprise to a future condition better than the present. The emancipation could not take place without the followers seeing for themselves that their current condition was not fulfilling their needs and wants. Leadership as described here was truly transformational in that the actions of the leaders changed the condition of the human endeavor from subordination to the organization to domination of the conditions of life that added meaning and worthiness to our daily lives. Transformational leadership of this nature in education was indeed educative, enlightening, and emancipative. And, if the human spirit was willing and able, the condition of life in the workplace could be improved.

If Payzant was successful in his restructuring efforts then empowerment could and would work for the administrators in the district as well. Participatory management could mean making sure that the wants and needs of the stakeholders were acknowledged in the new organizational

scheme brought about through the restructuring.

Restructuring need not only mean changing a classroom.

Firestone, Furhman, and Kirst (1990) suggested that restructuring must also include reform at the state and federal levels. They stated that many state level policies were still very top-down and therefore contradictory to current trends and as such difficult to implement. The result was more role confusion because of the mixed messages being sent by local and state authorities. The authors pointed out that where successful restructuring practices were occurring there was substantial cooperation between teachers, administrators, and central office. Firestone concluded that there must be a coherence between the different elements that impact on the educational setting.

Restructuring has meant changes in the roles, responsibilities, and patterns of communication within the leadership circles of the district and many educators were already experiencing a great deal of discomfort with the evolving organizational structures (Parish & Krueger, 1987). A first step, however, was to identify the concerns of the administrator stakeholders, to acknowledge that their perceptions of reality had value and meaning to the district. Foster (1986a) stated: "Leadership's goal is reaching a standard of rational discourse in which all arguments can be heard without regard to the class or status of the respondent" (p. 186). The leaders in San Diego City Schools had to acknowledge the concerns of their people and

open and promote channels of communication and expression so that all arguments were heard.

Central office personnel were to the administrators at the site as site administrators were to teachers. They had historically been given certain responsibilities and expectations for their roles in the school system. Many of these roles and expectations had changed dramatically over the years yet our system of governance and structure of the organization had changed little to reflect these changes.

As was historically true, teaching becomes a skill performed according to the demands of an external agency such as administration. Administration becomes a skill designed to standardize the role of teachers. This self-defeating behavior isolates teaching and administration from their educative purpose. They become enmeshed in playing out roles, as certainly scripted for them as for any actor on a stage.

Escaping from this confining situation indeed requires a new form of organization. (Foster, 1986a, p. 198)

Rost (1991) made a distinction between leaders and followers and managers and subordinates. As Rost stated, we must move from our industrial age paradigm of managers and subordinates. We must seek a new and better system of governance and collaboration to effectively and efficiently oversee the operation and conduct of our schools. The new paradigm must reflect leaders and followers and the new

paradigm must reflect the wants and needs of the administrators at the school sites.

The situation could no longer be tolerated where the structure and governance models of the turn of the century 90 years ago were still the model being adhered to. We had to make use of existing theory and research and to model our system in accordance with the best of our understanding of our needs, wants, and understandings of reality as they existed today, not 100 years ago.

Bacharach and Conley (1986) stated:

School districts must begin to identify specific problems empirically, as many organizations in the private sector have already done. Then each district must create a strategic plan, outlining the steps that will be necessary in order to implement desired changes or to solve specific problems. (p. 645)

The message for the San Diego School District came from two of the authors' closing statements.

If school leaders encourage clear agreement on goals, more teacher involvement in decision making, and open communication among staff members at all levels, they will be able to abandon the notion that coordination of school activities can only be achieved through greater bureaucratic control. . . . Only when we refocused our efforts on management philosophies and organizational processes did our efforts begin to yield positive

outcomes. The time has come to do the same in education. (Bacharach & Conley, 1986, p. 645)

Praxis, as Foster pointed out, is the utilization of theory to inform practice. We should be making use of the best available theory and bringing our practice into alignment with what we know about human behavior and human motivation to build a better place to work and thus lead to a better system of education for the children of our future.

The preceding review of the literature has presented an integration of leadership theory, the importance of leadership to effective schools, work and motivational theory, the development of one of the most influential models of work and motivation--the Job Characteristics Model, an integration of recent research in the educational setting utilizing components and refinements of the JCM, the need for research in the San Diego City Schools, and a philosophical discussion of organizational change in the school system. The review of the literature has helped to create a common frame of reference and understanding of the theoretical and practical research elements that have preceded the current research study. Chapter III will delineate the methodological considerations utilized in the current study.

CHAPTER III

RESEARCH DESIGN AND METHODOLOGY

Introduction

In this chapter, the research methodology employed in the study and the research design is explained. The operational definitions of the categorical, dependent, and independent variables are presented. The 8 primary null hypotheses introduced in Chapter I and 15 secondary null hypotheses are stated. A description of the subject population is discussed followed by a description of the survey methodology and protocol, including discussion of the pilot study that preceded the current research effort. The statistical treatment of the data is outlined and the chapter concludes with a delineation of methodological assumptions and limitations identified in the research project.

The Research Design

The research design is referred to as casual-comparative research which is "ex post facto" in nature (Issac & Michael, 1971). The data were collected after the events under consideration had taken place. School administrators had already been exposed to multitrack

scheduling, traditional school calendars, and year-round schools. Administrators may or may not have been exposed to school restructuring in their particular school level or setting. The administrators also brought with them the experience of age and the possible biases they had developed with regard to gender, administrative position, socioeconomic mix, and ethnic diversity of the student population. The ex-post-facto research differs from true experimental research designs in that there is no control or experimental groups with which to manipulate independent variables. According to Issac and Michael (1971), casual-comparative research methods are useful when: (a) control over independent variables is not possible; (2) useful when control over independent variables was impractical or unrealistic, and (3) the method could yield useful information about the nature of the phenomena under investigation. Several weaknesses of causal comparative research were also identified: (a) the primary weakness is the lack of control over the variables under investigation; (2) no one factor may be the true causative agent in a particular situation. Several factors may impact on any one outcome; (c) comparative studies are sometimes difficult because there is often no control over subject selection into various treatments or categories. In the current study, however, subjects were categorized according to various exposures to the scheduling alternatives and to restructuring experiences in the schools.

Gorsuch conducted a similar study in an educational setting. Gorsuch (1976) described his study as ex post facto. The ex post facto research design allows the researcher to establish a baseline measure of a particular phenomena. Subsequent organizational interventions and reevaluations may later be compared against the established baseline data and analyses.

Research Design--Independent Variables, Dependent Variables, and Categorical Variables

Forty dependent variables were identified for study in the research project (Figure 3). Thirty-eight of the variables were similar to the variables used in the research conducted within the Fort McMurray Catholic School District by Frase (Frase & Heck, 1990). Two variables were added to the current study. The first new variable, a Growth Need Strength (GNS) value, was developed out of the formula initially used by Hackman and Oldham in their original Job Characteristics Model. The GNS score had been an oversight in the previous research efforts by Frase. The addition of the GNS is more consistent with the original work of Hackman and Oldham as the GNS score was a premier indicator of moderator of the effectiveness of the Job Characteristics Model.

The second variable, a composite score for the administrators' perceived effectiveness of the school on each of the five major effective schools correlates

Figure 3. The Revised Job Characteristics Model for the current study. The moderator list has been expanded to include a number of variables that have been validated by Frase, Conley, Bacharach, and others.

identified in the Stafford-Hawkins amendment (Gainer, 1989), was added to the study to bring the total of dependent variables to 40 (Figure 4).

Several categorical variables used were based on the previous research conducted by Frase (Frase & Heck, 1990) and Frase and Piland (1989). Gender, age, and school level were used to provide data consistent with the previous studies so that future analyses and model building activities would not be jeopardized by incomplete data sets. In addition to the three categorical variables listed, five additional categorical variables were added to the study to identify populations of specific interest as indicated in the null hypotheses first presented in Chapter I. The site administrators were asked to identify themselves in each of the following categories: (a) What type of school calendar the school used: a traditional 10-month calendar, a multitrack year-round calendar, or a single-track year-round calendar; (b) if their school was officially designated a restructuring school prior to June 1990; (c) if they were currently a principal or a vice principal?; (d) if they perceived their school to have high, moderate, or low ethnic diversity, and (e) how they rated the socioeconomic status of the families of the majority of the students in your school: high, moderate, or low.

The Alberta study by Frase and Heck (1990) uncovered an interaction effect between age and gender differences in the job satisfaction analyses. The same differences may have

CRITICAL PSYCHOLOGICAL STATES	SCALE RANGE	FORMULAE
1. Experience Meaningfulness of Work	1 - 7	$(1.2R+1.4)/2$
2. Experience Responsibility of Outcomes of the Work	1 - 7	$(1.1R+1.5+1.7+1.8)/4$
3. Experience Knowledge of Actual Results of the Work	1 - 7	$(1.3+1.6R)/2$
JOB CORE CHARACTERISTICS		
4. Skill Variety	1 - 7	$(2.1+2.4R)/2$
5. Task Identity	1 - 7	$(2.2R+2.9)/2$
6. Task Significance	1 - 7	$(2.6+2.12R)/2$
7. Autonomy	1 - 7	$(2.7R+2.11)/2$
8. Feedback From Administrative Job	1 - 7	$(2.3+2.10R)/2$
9. Feedback From Supervisor or Others Administrators	1 - 7	$(2.5R+2.8)/2$
10. Motivating Potential Score (MPS)	125 - 250	$(SV+TI+TS)/3 \cdot A^*$ $(FDT+FDO)/2$
PERSONAL WORK OUTCOMES		
11. High Satisfaction	1 - 7	$(9.2+9.4R+9.6)/3$
12. High Internal Motivation	1 - 7	$(9.1+9.3+9.5+9.7R)/4$
13. Career Intentions	1 - 4*	(4.1)
14. High Quality Performance	1 - 7	(5.1)
15. High Growth Satisfaction	1 - 7	$(3.1+3.2)/2$
16. Efficacy	1 - 4*	$(4.2R+4.3+4.4R)/3$
CONTEXT SATISFACTION		
17. Pay	1 - 7	$(7.1+7.2)/2$
18. Co-Workers	1 - 7	$(7.3+7.4+7.5)/3$
19. Supervisor Support	1 - 7	$(7.6+7.7)/2$
20. Competence of Supervisor	1 - 7	$(7.8+7.9)/2$
21. School Size	1 - 4	(6.1)
22. Student Learning Problems	1 - 4*	$(6.2+6.3+6.5R+6.6R)/4$
23. Student Behavior Problems	1 - 4	$(6.8+6.9+6.10+6.11)/4$
24. Holidays	1 - 4*	(6.7)
25. Parental Support	1 - 4*	(6.4)
26. Repairs and Maintenance	1 - 4*	(6.12)
27. Communication	1 - 7	(7.11)
28. Administrative Assignment	1 - 7	(7.10)
BUREAUCRACY		
29. Routinization	1 - 4*	$(8.1+8.2+8.3+8.4)/4$
30. Role Ambiguity	1 - 4*	$(11.1+11.2)/2$
31. Role Overload	1 - 5*	(10.1)
32. Involvement in Decision Making	1 - 5	$(10.2R+10.3+10.4)/3$
INTERACTIVE WORK CONTEXT		
33. Openness of Expression	1 - 5	$(12.1+12.2)/2$
34. Encouragement of Experimentation	1 - 5	$(12.3+12.4)/2$
35. Superintendent Facilitates Administrator Interaction	1 - 5	$(12.5+12.6)/2$
36. Career Expectations	1 - 4*	$(13.1+13.2+13.3+13.4)/4$
37/38. Present/Would like summary	1 - 7	$(14 \text{ AVG PRES AND WL})$
OTHER		
39. Effectiveness of the School (Section 4 of Survey)	1 - 7	$(1.1+1.2+1.3+1.4+1.5)/5$
40. Growth Need Strength	1 - 7	$(14.2+3+.6+.8+.9+.10WL)/6-$ $(14.2+3+.6+.8+.9+.10CP)/6$
ORIGIN OF CONSTRUCT/VARIABLES		
1 - 20, 37, 38, 40: Hackman & Oldham, 1975, 1976.		
21 - 36: Conley, Bacharach, & Bauer, 1989.		

* Indicates a lower score is desirable for the construct

Figure 4. The variables, scale ranges, and formulae for the revised Job Characteristics Model developed for the current study.

been reflected in the perceptions of the San Diego administrators and were therefore included for further investigation. Socioeconomic and cultural make-up of the student population were identified by Weber (1989) as being related to administrative leadership style and strategy. Weber suggested that administrators must work within the context of their particular settings in dealing with their staff, students, and communities. "Principals' behaviors are not solely controlled by their temperaments. . . . they are also influenced by the surrounding community and by the school itself" (Weber, 1987, p. 8).

Dependent Variable

The dependent variable for the study was the perceived job satisfaction as indicated by response to Likert scaled questions that were analyzed according to the established formulae for each of the 40 variables. The question items, Likert scale values, wording, and formulae for aggregating the data were based on the work of Hackman and Oldham (1980), Conley et al. (1989), and Frase and Heck (1990) (see list of variables and formulae in Figure 4).

Categorical Variables

1. School Calendar: San Diego Unified School District had three types or forms of school calendar that schools utilized. The calendar variations produced three levels of the school calendar variable: traditional, multitrack year-round, and single-track year-round. The majority of schools

operated on a traditional 10-month schedule that went from September to June. The traditional holiday breaks of winter, spring, and summer were observed and the schools were closed during these periods as staff and administrators had vacation periods along with the students.

The district had 15 schools that operated on a multitrack schedule. The schools had four tracks or groups of students. At any one time three tracks were in attendance while the fourth track was on vacation. The schools operated on a 45-day attendance period followed by a 15-day vacation period cycle for each track. The cycle for each track was staggered such that one track was always on vacation at any given time. Some teachers went off-track with the students while others remained at the school to teach in one of the three remaining tracks. Because the schools were open and running the year round, the administrators of these schools were expected to schedule their holiday time much like regular business employees must do in the private sector.

The third calendar variation used in the district was a year-round single-track schedule. The district had 18 schools using the single-track schedule during the 1990-91 school year. Under the single-track system the students attended school year-round but had vacation periods staggered throughout the year rather than having a major school vacation during the summer months. The entire student population acted as a single group for attendance

and vacation periods much like a traditional school. When the school was closed for vacation periods, the staff and administrators had a vacation period as well.

2. Restructuring: As of June 1990, 53 out of 160 district schools in the San Diego Unified School District were officially recognized as being involved in school restructuring. There were 32 elementary schools, 12 middle or junior high schools, 7 senior high schools, and 2 atypical or special function schools identified by the school district as official restructuring schools. At the September 1990 Leadership Team meeting to begin the new school year, Superintendent Tom Payzant declared that the San Diego Unified School District was now a restructuring district and that all schools within the district were expected to participate in restructuring efforts. To operationalize the restructuring variable, administrators that were involved in restructuring prior to June 1990 were asked to identify themselves as one category. Two groups or levels of the restructuring variable were thus identified, those experienced in restructuring and those that were new to restructuring.

3. Gender: The administrators were asked to identify themselves as male or female producing two levels of the gender variable.

4. Age: The administrators were asked to place themselves in one of five age categories: 20-29, 30-39,

40-49, 50-59, and 60 or over. The age variable categories produced five groups or levels of the variable.

5. School Level: The schools within San Diego City Schools were classified according to grade levels. The district had 108 elementary schools, 4 atypical or special function elementary schools, 21 middle or junior high schools, 15 senior high schools, and 7 atypical or special function schools within multiple grade levels. For the purposes of the study, the administrators were asked to indicate which of three levels of school they were assigned to administer thereby creating three levels of the school level variable: elementary, middle or junior high school, and senior high school.

6. Principal or Vice Principal: As of September 1990, the San Diego Unified School District had 108 elementary principals, 4 atypical school principals at the elementary level, 49 elementary vice principals, 21 middle or junior high school principals, 38 middle or junior high school vice principals, 15 senior high school principals, 32 senior high school vice principals, 7 atypical school principals, and 6 atypical school vice principals. The administrator population for the district consisted of 155 principals and 125 vice principals for a total of 280 school-site administrators, according to the district's School Operations Division personnel. The administrators were asked to identify themselves as either a principal or vice

principal thereby creating two levels of the administrative position variable.

7. Socioeconomic Status (SES) of Students: The administrators were asked to rate their perception of the socioeconomic status of the majority of the students in their respective schools. As pointed out earlier, the perceptions of the administrator were important to the understanding of the factors impacting on the job satisfaction of the administrators. Arbitrary SES designations based on actual dollar values for income within the student's home would have had little meaning if the administrators perceived their schools to be outside of a particular arbitrary range. To operationalize the variable, the administrators were asked to rate their perceptions of the SES of the student population in their respective schools as high, moderate, or low thereby creating three levels of the socioeconomic status variable.

8. Ethnic Diversity of Students: Ethnic diversity of the students in a school was based on the administrator's perceptions of the school's student population for similar reasons as expressed for the SES variable. The administrators handled numerous reports and databases during the school year detailing the school's ethnic mix. However, the important issue for the research project was how the administrators perceived the ethnic mix. The variable was operationalized by having the administrators indicate their perceived rating of the ethnic diversity of the students as

high diversity, moderate diversity, or low diversity thereby creating three levels of the student ethnic diversity variable.

The Dependent Variables

Forty variables were included for study and analyses in the current research project. A variety of formulae were used to calculate values for each variable.

The list of formulae associated with each variable can be found in Figure 4. The 40 variables were grouped according to the revised Job Characteristics Model found in Figure 3. The 40 variables were classified as either critical psychological states, job core characteristics, personal and work outcomes, context satisfaction, bureaucracy, and interactive work context variables. The following definitions for each variable will clarify how each variable has been operationalized for the purposes of this study.

Critical Psychological States: Hackman and Oldham (1980) hypothesized that if a worker could perform a job that had sufficient core job characteristics as an integral part of the work then the worker could experience three very different psychological states. The worker could experience meaningfulness of the work, responsibility of the outcomes of the work, and knowledge of the actual outcomes of the work.

1. Meaningfulness of the Work: If a worker could do a job that required a variety of skills, tasks that could be defined, and the tasks that were significant to the organization, then the worker could reach a psychological state produced by experiencing meaningfulness of the work he or she was performing.

2. Responsibility of the Outcomes of the Work: If a worker had sufficient autonomy on the job then the worker could reach a psychological state produced by experiencing knowledge of the results of his or her efforts.

3. Knowledge of the Actual Results of the Work: If a worker had sufficient feedback on a job, then he or she could reach a psychological state produced by experiencing knowledge of the results of his or her efforts.

Job Core Characteristics: Hackman and Oldham (1980) hypothesized that several core aspects of a job were required to give the job sufficient scope and depth to provide motivation for the worker to do the job well. The core job characteristics were integrated into the three psychological states discussed above. Each job core characteristic contributed to the overall feeling or experience of satisfaction with the work. The job core characteristics were the basic elements of the model that could be addressed through enrichment or enlargement of the job to provide a more rewarding work experience for the incumbent.

4. Skill Variety: Each job must contain a variety of skill demands such that the worker is challenged to use a number of different skills to perform the job. Jobs that were routine or required very little skill to perform were not considered to be sources of motivation for the worker.

5. Task Identity: Each job must have its own identity or requirements to be performed well. The job must have definition or a description that the worker understands.

6. Task Significance: Each job must have meaning to the overall project or product of the work. The worker must feel that his or her efforts have significance in the larger scheme of the organization or product of the work.

7. Autonomy: Each job must contain sufficient autonomy for the worker to be able to formulate answers and make decisions within his or her realm of responsibility. Autonomy on the job would theoretically lead to a feeling of responsibility for the outcomes of the work.

8. Feedback from Administrative Job: Doing a job or performing work often gives the incumbent feedback from the work or job itself. In administration, many times the job itself will give the administrator feedback about how well or how poorly the job is being done.

9. Feedback from Supervisor or Other Administrators: In most organizations there are formal evaluation processes in which the supervisor will conduct a formal evaluation of the incumbent's performance on the job. At other times the supervisor may give feedback in a less formal manner. Other

administrators may supply necessary feedback on how the job is being performed. The administrator may receive feedback from any or all of the sources listed. The feedback helps formulate and produce the knowledge of the results of the work or job being performed.

10. Motivating Potential Score (MPS): Hackman and Oldham derived a mathematical formula for a motivating potential score for the worker. The motivating potential score was based on the job core characteristics. To receive a relatively high motivating potential score, the job must be rich in all job core characteristics. Hackman and Oldham determined the MPS for a variety of job classifications. Subsequent researchers compared scores in educational settings to those in industry and found little difference between the two (Gorsuch, 1976; Harder, 1985). If a job was determined to be low in its motivating potential score, then individual aspects of the core characteristics could be addressed to improve the job. The underlying theory of the motivating potential score was to provide the worker with a good job to do and presumably the worker would do a good job when better motivated. The MPS was unique to each job and each individual. Because the score was based on the incumbent's perception of the job core characteristics, individuals involved in identical jobs could have different motivating potential scores. The critical element that then came into play was the amount of growth that the individual wished to experience. Without a need to grow in a job there

was little motivational potential in changing any of the job core characteristics. However, where the individual wished to experience growth in the job, then job enrichment or job enlargement strategies could be beneficial.

Personal Work Outcomes: Hackman and Oldham hypothesized that if the job core characteristics were perceived to be of sufficient quality and quantity then they would produce desirable levels of experience in the critical psychological states. If workers could experience sufficiently high levels of satisfaction within the critical psychological states, then the workers could produce and experience several desirable work outcomes.

11. High Satisfaction: The worker could experience high personal satisfaction with work being performed regardless of the quality or quantity of the actual product of the work. The internal feeling or experience of high personal satisfaction from the job could be based on a variety of job context or job content variables. However, as the Hackman and Oldham model was based in theory on Herzberg's motivation-hygiene theory, Hackman and Oldham hypothesized that satisfaction could be increased through greater intrinsic rewards derived from doing a better or more rewarding job. The hygiene or context factors could not be ignored but, theoretically, the extrinsic factors did not create the satisfaction.

12. High Internal Motivation: Based upon both the quality and quantity of the job core characteristics and the critical psychological states, the individual could experience varying levels of internal motivation to perform or produce on the job.

13. Career Intentions: The worker may make a number of career decisions based on his or her perceived satisfaction with the job. Presumably, satisfaction with a particular job would not create a need to change jobs or look elsewhere for satisfaction in the workplace.

14. High Quality Performance: Each individual has a perception of how well or how poorly he or she is performing on the job. The variable is a measure of the perception each individual has for his or her performance on the job.

15. High Growth Satisfaction: Each individual must be satisfied with the amount of growth he or she experiences on the job. If the individual has a high need to grow and that need is not addressed then presumably the individual will not be satisfied with his or her growth. The lack of satisfaction could eventually lead to poor performance or other career alternatives.

16. Efficacy: Efficacy is the experience of meaningfulness in a job. The individual feels that he or she is doing a job and having an impact on the job or product. The educational administrator must feel that he or she is making a difference in the school. Presumably,

individuals will seek opportunities in which they can be efficacious (Fuller et al., 1982).

Context Satisfaction: According to Herzberg's theory, work context factors do not create satisfaction. Work context factors or hygiene factors are the sources of dissatisfaction. However, the work context factors must be addressed sufficiently to allow motivational factors to be effective. If the context factors are not addressed and they produce excessive amounts of dissatisfaction with the job or workplace, then the motivational aspects of the job will have little impact. Herzberg hypothesized that context factors were those factors that were extrinsic to the job. He suggested that motivational factors were those intrinsic factors that the individual experienced and internalized. The following factors are elements or variables of the job that are externally imposed upon the worker. Although they theoretically do not create satisfaction and thus motivation, according to Herzberg, they do need to be addressed to reduce dissatisfaction levels. The original list of context variables hypothesized by Hackman and Oldham (1980) had been extended through the research of Conley et al. (1989) and Frase (1990; Frase & Heck, 1990).

17. Pay: The administrators were asked to what degree they felt that their fiscal compensation for their services was sufficient.

18. Coworkers: The administrators were asked to what degree they were satisfied with their interpersonal relationships with teachers and other school personnel within their jobs.

19. Supervisor Support: The administrators were asked to what degree they were satisfied with the support and encouragement they received from their supervisors.

20. Competence of Supervisor: The administrators were asked to what degree they were satisfied that their supervisor or supervisors had the competence to do his or her job properly.

21. School Size: The administrators were asked to what degree they were satisfied with size of the school population to which they were assigned.

22. Student Learning Problems: The administrators were asked to what degree they were satisfied or concerned with problems experienced by students that could be classified as learning problems or disorders that affected the child's learning capability.

23. Student Behavior Problems: The administrators were asked to what degree they were satisfied that student behavior did not affect or have an impact on the teaching and learning environment within their schools.

24. Holidays: The administrators were asked to what degree they were satisfied with the amount of time they were able to take to get away from their jobs in the form of vacation or holiday time.

25. Parental Support: The administrators were asked to what degree they were satisfied with amount of support they received from the parents of the children in their respective schools.

26. Repairs and Maintenance: The administrators were asked to what degree they were satisfied with the timeliness and adequacy of the repairs and maintenance procedures and requests within their school or within the district.

27. Communication: The administrators were asked to what degree they were satisfied with the avenues or channels of communication within the district.

28. Administrative Assignment: The administrators were asked to what degree they were satisfied with their particular administrative assignment.

Bureaucracy: Bureaucracy, as a context factor, was identified by Herzberg as one of the major sources of dissatisfaction in the workplace. The following are elements of the bureaucratic structure that had been identified as sources of dissatisfaction with the bureaucracy of the organization (Conley et al., 1989).

29. Routinization: The administrators were asked to what degree they were satisfied that there was sufficient variety in their jobs and that the jobs were not so routine that they were not challenged in their respective positions.

30. Role Ambiguity: The administrators were asked to what degree they were satisfied that their specific job or

role was well delineated and that they were fully aware of the expectations and responsibilities of their positions.

31. Role Overload. The administrators were asked to what degree they were concerned that too many demands were being placed on their time and energies and that they were feeling overloaded with work and responsibilities.

32. Involvement in Decision Making: The administrators were asked to what degree they were satisfied that they were being asked to participate in the decision-making process at the district level in decisions that most affected them or their schools.

Interactive Work Context: The administrators were asked to what degree they were satisfied with the interaction between the superintendent or their supervisor and themselves. The administrators were asked if they felt free to express themselves or to experiment freely within their respective areas of responsibility and whether they felt that the superintendent supported administrators working together to plan and discuss their work.

33. Openness of Expression: The administrators were asked to what degree they were satisfied that the district was interested in hearing what they had to say without fear of professional censorship or without fear that their very jobs may be jeopardized by expressing their honest and open opinions.

34. Encouragement of Experimentation: The administrators were asked to what degree they were satisfied that their supervisors and superintendent supported the kinds of risk taking and experimentation that were being asked of the site administrators.

35. Superintendent Facilitates Administrative Interaction: The administrators were asked to what degree they were satisfied that reasonable efforts were being made and sufficient channels of communication were being utilized such that administrators could share successes and near successes in a collaborative atmosphere.

36. Career Expectations: The administrators were asked to what degree they were satisfied that they were experiencing in their work everything they thought they would when they entered school-site administration and that the job was meeting their career expectations.

37. Present Conditions: The administrators were asked a variety of questions to determine to what degree they were satisfied with their current working conditions.

38. Would-Like Conditions: The administrators were asked to what degree they felt the conditions that they were presently experiencing in their work should be improved to reflect their interpretation of what they would like the condition to be like in their respective schools at some time in the future.

39. Effectiveness of the School: The administrators were asked to what degree they were satisfied with their

respective school's progress or attainment of the five effective schools correlates that were identified in the Hawkins-Stafford Amendment (Gainer, 1989).

40. Growth Need Strength: Growth need strength was identified by Hackman and Oldham as a critical moderator in their Job Characteristics Model. An individual had to have sufficient need to grow in a job or work situation to allow the job core characteristics to be modified to increase the motivation of the employee. Without sufficient growth need in the individual worker, very little motivational capacity could be found in job enlargement or job enrichment efforts. Hackman and Oldham speculated that in the absence of sufficient growth need strength, certain individuals could actually experience dissatisfaction with job enlargement or job enrichment efforts.

The Null Hypotheses

The following null hypotheses were introduced in Chapter I. A confidence level of $\alpha = .05$ was used in all tests for statistical significance:

Hypothesis 1: There is no significant difference in the perceived job satisfaction of site administrators of

- (a) schools on a traditional school-year calendar,
- (b) schools on a single-track year-round calendar,
- and (c) schools on a multitrack year-round calendar

on each of the 40 variables identified in the study.

Hypothesis 2: There is no significant difference in the perceived job satisfaction of site administrators of schools officially involved in restructuring prior to June 1990 and those administrators that were not involved officially in school restructuring prior to June 1990 on each of the 40 variables identified in the study.

Hypothesis 3: There is no significant difference in the perceived job satisfaction of male site administrators and female site administrators on each of the 40 variables identified in the study.

Hypothesis 4: There is no significant difference in the perceived job satisfaction of site administrators within the five age groupings on each of the 40 variables identified in the study.

Hypothesis 5: There is no significant difference in the perceived job satisfaction of site administrators who administer elementary, middle/junior, or senior secondary schools on each of the 40 variables identified in the study.

Hypothesis 6: There is no significant difference in the perceived job satisfaction of principals and vice principals on each of the 40 variables identified in the study.

Hypothesis 7: There is no significant difference in the perceived job satisfaction of site administrators who administer schools that are in the three levels

of perceived socioeconomic make-up of the school population on each of the 40 variables identified in the study.

Hypothesis 8: There is no significant difference in the perceived job satisfaction of site administrators within the three levels of perceived ethnic diversity on each of the 40 variables identified in the study.

In addition to the eight primary null hypotheses to be tested via one-way ANOVAs, 15 secondary null hypotheses were written to test for the existence of statistically significant interaction effects via two-way ANOVAs between combinations of the categorical variables:

Hypothesis 1: There is no significant interaction effect in the perceived job satisfaction of site administrators between the categories of calendar and the categories of gender on each of the 40 variables identified in the study.

Hypothesis 2: There is no significant interaction effect in the perceived job satisfaction of site administrators between the categories of calendar and the categories of age on each of the 40 variables identified in the study.

Hypothesis 3: There is no significant interaction effect in the perceived job satisfaction of site administrators between the categories of calendar

and the categories of administrative position on each of the 40 variables identified in the study.

Hypothesis 4: There is no significant interaction effect in the perceived job satisfaction of site administrators between the categories of restructuring school administrators and the categories of gender on each of the 40 variables identified in the study.

Hypothesis 5: There is no significant interaction effect in the perceived job satisfaction of site administrators between the categories of restructuring school administrators and the categories of age on each of the 40 variables identified in the study.

Hypothesis 6: There is no significant interaction effect in the perceived job satisfaction of site administrators between the categories of restructuring school administrators and the categories of school level on each of the 40 variables identified in the study.

Hypothesis 7: There is no significant interaction effect in the perceived job satisfaction of site administrators between the categories of restructuring school administrators and the categories of administrative position on each of the 40 variables identified in the study.

Hypothesis 8: There is no significant interaction effect in the perceived job satisfaction of site administrators between the categories of gender and the categories of age on each of the 40 variables identified in the study.

Hypothesis 9: There is no significant interaction effect in the perceived job satisfaction of site administrators between the categories of gender and the categories of school level on each of the 40 variables identified in the study.

Hypothesis 10: There is no significant interaction effect in the perceived job satisfaction of site administrators between the categories of gender and the categories of administrative position on each of the 40 variables identified in the study.

Hypothesis 11: There is no significant interaction effect in the perceived job satisfaction of site administrators between the categories of gender and the categories of socioeconomic status of the student population on each of the 40 variables identified in the study.

Hypothesis 12: There is no significant interaction effect in the perceived job satisfaction of site administrators between the categories of gender and the categories of ethnic diversity of the student population on each of the 40 variables identified in the study.

Hypothesis 13: There is no significant interaction effect in the perceived job satisfaction of site administrators between the categories of age and the categories of school level on each of the 40 variables identified in the study.

Hypothesis 14: There is no significant interaction effect in the perceived job satisfaction of site administrators between the categories of age and the categories of administrative position on each of the 40 variables identified in the study.

Hypothesis 15: There is no significant interaction effect in the perceived job satisfaction of site administrators between the categories of school level and the categories of administrative position on each of the 40 variables identified in the study.

Subject Population

The population of site administrators of the San Diego Unified School District were the subjects of the research. The subject population was composed of 108 elementary principals, 49 elementary vice principals, and 4 atypical school principals; 21 middle or junior high school principals, and 38 middle or junior high school vice principals; 15 senior high school principals and 32 senior high vice principals; and 7 additional atypical school principals and 6 atypical school vice principals. There were 155 principals in the district and there were 125 vice

principals surveyed producing a total subject population of 280. The administrators ranged in age from 30 to over 60 years of age. As of June, 1990, 53 schools were officially designated as restructuring schools. During the 1990-91 school year, 18 schools operated as single track year-round schools, 15 operated as multitrack year-round schools and the remainder of the district's schools were operating on a traditional September to June calendar.

The entire population of site administrators were included in the study. Due to the nature of the statistical treatment, sufficient numbers of subjects in each defined category were desired as the San Diego Unified Research Review Committee specified that in order to protect the confidentiality of the administrators that analyses could not be discussed if the number of subjects in any one subgroup fell below eight individuals (see Appendix A and E). Therefore, the research included the entire administrator population to maximize the numbers of subjects for the subsequent analyses.

Instrumentation

Pilot study. A major study conducted with the Fort McMurray Catholic School District in Alberta, Canada, served as the pilot study for the current research. The instrument used in the Fort McMurray study was analyzed by way of a test-retest correlation to determine the reliability of the instrument. As a result of the analysis, a reliability

coefficient of $r = .88$ was established for the instrument. The instrument, protocol, and wording of the revised job diagnostic survey instrument instructions and question items were not changed appreciably from the instrument used in the Alberta study (Frase & Heck, 1990). The wording of the instrument was, however, modified to reflect the San Diego Unified site administrators' areas of involvement in the school system (see Appendix B). As noted earlier, two additional dependent variables (Growth Need Strength and a measure of the perceived effectiveness of the school) and several categorical variables (school calendar, administrative position, restructuring school involvement, ethnic diversity of the student population, and the socioeconomic status of the students) were added to the current research. The statistical analyses and methodologies had been refined as a result of the Fort McMurray study and the current research project benefitted greatly from having had a pilot study of such magnitude and involvement upon which to base improvements in procedures, methodologies, analyses, and instrumentation.

The current research intentionally paralleled the previous studies (Frase & Heck, 1990) to allow comparisons and model building utilizing combined data sets to be carried out at a later date. However, previous studies had involved mainly classroom teachers with only a few administrators participating in the studies. The current research is perhaps the first study of its magnitude to

investigate the impact of job characteristic variables on the working life of administrators in educational settings.

Survey Methodology

The research methodology involved a one-time administration of the modified job diagnostic survey instrument (see Appendix B). The instruments were delivered to each administrator via the San Diego Unified School District mail system and both the completed human subjects consent form (see Appendix C) and completed questionnaire or blank forms (indicating a decision not to participate in the study) were returned via the district mail system. The entire administrator population was asked to participate in the study (see the covering letter in Appendix D). The subgroup analyses proposed via the hypotheses and research questions would severely limit the size of the groups in certain circumstances and due to the fact that a 100% return rate on the questionnaires was unlikely, the decision was made by the researcher to survey the entire population of site administrators.

Surveys, instructions, covering letter, and human subjects forms were distributed to the 277 active site administrators in the San Diego Unified School District on February 19, 1991 (see Appendices A, B, C, and D). A memo was sent as a courtesy to the Deputy Superintendent and the Assistant Superintendents to inform them of the study involving the administrators in their schools (see Appendix

F). The administrators were given two weeks to complete the questionnaire and return the instrument and consent form to the researcher at the San Diego Unified Education Center. Follow-up procedures on questionnaires began on February 27, 1991, with a thank-you note to all participants along with a reminder that the questionnaires were to be returned by March 1, 1991. On March 8, 1991 a follow-up letter was sent to those participants that had not returned a questionnaire or had not indicated that they did not wish to participate in the study (see Appendix G). By April 9, 1991, 158 responses had been recorded. The return rate was determined to be 57%. The data were entered into the Statview SE + Graphics microcomputer statistics program and the various formulae were applied to the individual question items to generate the numerical values for the 40 dependent variables identified in the study (see list of variables and formulae in Figure 4).

Statistical Analyses of Data

The data entered into the Statview SE + Graphics computer software program were analyzed and the many formulae used to generate a value for each dependent variable were applied to the data to produce descriptive statistical summaries for the 40 dependent variables and the 8 categorical variables used in the study. A confidence level of .05 was used in all tests for statistical significance. Alpha levels or confidence levels of .05 and

.01 are commonly used in social science research. As the focus of the research was to determine whether certain aspects of the administrator's roles and attitudes were having an impact on his or her job satisfaction, an $\alpha = .05$ was determined to be liberal enough to permit consideration of results that may be important and was conservative enough to eliminate factors that were not creating a significant impact.

Analyses of variance (ANOVAs) were used to test for statistically significant differences between perceived job satisfaction levels of the categorical groupings of administrators for the 40 dependent variables under investigation. Two-way ANOVAs were also calculated to determine if any statistically significant interactions between the categories of administrators listed could be identified.

As mentioned earlier, the San Diego City Schools' Research Review Committee approved the research project in the district with the condition that in the event that a limited number of subjects (i.e., less than eight subjects) were found to exist in any one category for sub-group analyses then generalizations to the population of administrators or other discussion would not be carried out. Identification of the individuals may have been possible due to the small sample size and the confidentiality of the subjects may have been jeopardized.

Scheffé post-hoc comparisons were used to identify the specific level, group, or groups within each categorical variable that were significantly different from the others in the statistically significant ANOVA findings. The Scheffé post-hoc technique was the most conservative post-hoc technique of the other post-hoc methods available through the Statview SE + Graphics computer program. Because the Scheffé is one of the most conservative post-hoc techniques that is used in statistical analyses, Scheffé post-hoc comparisons that were statistically significant could be interpreted as being a result of meaningful differences in perceptions between the groups being compared and that the differences were not a result of chance occurrences.

Methodological Assumptions of the Study

Several methodological assumptions were made during the research effort.

1. The researcher assumed that all respondents to the survey questionnaire would answer to the best of their ability, with integrity, and without bias thus yielding a true indication of the perceived job satisfaction of the site administrators on each of the variables identified in the study.

2. The researcher assumed that the subjects would embrace the essence and intent of the study as a meaningful effort to improve the quality of their working lives and

that the subjects would approach the questionnaire assignment with integrity and enthusiasm yielding an excellent data base with which to complete the study.

3. The researcher assumed that the validity and reliability of the job diagnostic survey instrument, that was established by prior research, had not been effected by the minor alterations and adjustments necessary to reflect the area of involvement in education of the target subject population.

4. The researcher assumed that the underlying motivational theories of Herzberg, Maslow, and Vroom and the subsequent model and diagnostic instrument, developed by Hackman, Lawler, and Oldham and refined by Frase, provided a valid measure of the educational administration subjects' perceptions.

5. The researcher assumed that prior research, conducted by a number of educational researchers (Conley et al., 1989; Frase, 1989; Frase & Heck, 1990), was valid and that the previous research had been integrated into the current research effort in such a way that the integration of the materials had not altered or detracted from the original intent, meaning, reliability, and validity of the original research.

Limitations of the Methodology

In addition to the limitations to the research study identified in Chapter I, several methodological limitations were identified.

1. Due to the climate of suspicion and the very heavy work loads of the site administrators of the San Diego Unified School District, a 100% return rate on the survey instruments was not a realistic expectation. According to San Diego Unified researchers, however, a return rate of over 50% from the site administrators should be considered good as the group of administrators was notorious for not returning survey materials. Nevertheless, a return rate of 57% would not yield sufficient number of respondents in the various sub-groups to allow the complete statistical analyses to be conducted as per the agreement with the San Diego Unified Research Review Committee agreement discussed earlier.

According to Fowler (1984), there were three reasons why subjects did not complete questionnaires or participate in survey research: they did not receive the survey for some reason; they did not wish to participate in the study, or they did not understand what was being asked of them, so they did not respond or otherwise participate. The San Diego Unified School District administrators all received the survey instruments through the district mail system. The administrators were well educated and capable of

understanding the instructions and the questionnaire items. The only reason left, according to Fowler, for the subjects not returning the survey was because they did not wish to participate in the study. The administrators may have had many varied reasons for not wishing to participate in the study. They may have felt that their time could be used more profitably in other pursuits, they may not have liked to participate in research studies for personal reasons, or they may have felt threatened or uneasy about responding to the survey for a variety of reasons. The bias inherent in non-respondent populations has been documented by Fowler (1984). The San Diego Unified School District research subjects that did respond were not satisfied with several elements of their working environment. One can only speculate as to how much more severe or how many other variables may have been identified as problem areas if there had been a 100% return rate for the survey.

2. Forty dependent variables were identified for inclusion in the current research study. Other factors may have had an impact on the perceptions of satisfaction and dissatisfaction as reported by the site administrators. However, only the 40 variables indicated were investigated in the current study.

3. The study was very quantitative in nature. Therefore, the richness and in-depth responses that were possible through a more qualitative approach were not possible. There were open response sections on the

questionnaire and many administrators took advantage of the opportunity to respond at some length in more open-ended response.

4. Sub-analyses procedures between categories of variables to determine interaction effect would produce some very small subject counts in specific categories. In accordance with the agreement reached with the San Diego Unified Research Review Committee, discussion of results of such small sub-group analyses would not be included in the study.

5. The study did not include a follow-up on non-respondents for their interpretations of their job satisfaction or reasons for not participating in the study. A follow-up on non-respondents would have added richness and validity to the data collected but such a follow-up would also infringe upon the valuable time of the site administrators at a time and in a climate of organizational turmoil that such a follow-up would not have been well received.

Summary

Chapter III has presented discussion of the research design, subject populations, the variables used in the study, the instrument and protocol for the survey, the pilot study, the statistical treatment of the data, methodological assumptions of the study, and methodological limitations of the study. The results of the statistical analyses and

discussion and interpretation of the findings of the research follow in Chapter IV.

CHAPTER IV
PRESENTATION, DISCUSSION, AND INTERPRETATION
OF THE FINDINGS

Introduction

The data analyses and discussion of the findings of the research are presented in five sections in Chapter IV. The first section of the chapter presents the demographic data accumulated through the administrators' responses. The categorical variables used in the analyses and description of the subject population were also used to disaggregate the various levels of each categorical variable to understand better the make-up, range, and numbers of respondents in each of the groups of interest. The second section presents a descriptive statistical summary and a discussion of the statistics for the 40 dependent variables under study for the 144 administrators that responded with completed questionnaires. The third section presents the data and discusses the statistical analyses of the data for each of the eight major hypotheses delineated in Chapter III. The fourth section presents the data and discusses the statistical analyses of the 15 secondary hypotheses presented in Chapter III as well. The fifth section summarizes the qualitative responses of the administrators.

The chapter concludes with a summary of the major themes and findings presented in the study.

The statistical analyses of the data involved 320 one-way ANOVAs to test each of the eight primary hypotheses discussed in Chapter III and 600 two-way ANOVAs to test each of the 15 secondary hypotheses also presented in Chapter III. The statistical analyses performed on the data collected in the study produced a total of 920 ANOVA tables and subsequent post hoc analyses tables. Because of the excessive volume of printed material resulting from the statistical analyses, only the statistically significant findings will be presented and discussed. As noted in Chapter III, an $\alpha = .05$ was used in all tests of statistical significance.

Section 1: The Demographics of the Subject Population

Survey instruments and consent forms were delivered to 277 active district site administrators. A total of 158 instruments were returned for a return rate of 57%. Of the 158 instruments returned 144 were accompanied with permission to be included in the study. Fourteen respondents wanted to be excluded from the research project. A major concern in survey research centers on the question of whether the respondents represent a proportional representation of the subject population or whether the distribution of respondents is skewed for some reason. Of

the 277 administrators surveyed, 41% were male and 59% were female. The total administrator population represented three school levels with 57% of the population in elementary schools, 22% in middle or junior high schools, and 21% in senior high schools. To provide an indices for comparison between the demographic responses for the total subject population and the respondent group, the 144 respondents were also disaggregated according to gender and school level to determine whether or not the proportions of the respondent group were significantly different from the total subject population proportions. The respondent group was 44.4% male and 55.6% female. A calculation of the test statistic for proportions indicated that there was no statistically significant difference at $\alpha = .05$ between the proportions of the respondent group and the proportions of the total administrator subject population for gender. In a similar procedure for the school level variable, the respondent group was 55.6% elementary school administrators, 24.7% middle or junior high school administrators, and 19.7% senior high school administrators. Again, a calculation of the test statistic for proportions indicated that there was no statistically significant difference at $\alpha = .05$ between the proportions of the respondent group and the proportions of the total administrator subject population for the school level variable. Although these tests do not provide conclusive evidence that the respondent group was truly a representative sample of the entire administrator

population, they do suggest that the respondent group was representative of a cross-section of the entire administrator population.

Frequency distributions based on the 144 useable subjects' responses to the demographic questions yielded the following disaggregation of data for each of the eight categorical variables used in the study.

Table 1

Frequency Distribution for the Gender Variable

Bar:	Element:	Count:	Percent:
1	MALE	64	44.44%
2	FEMALE	80	55.56%

-Mode

There were 64 males and 80 females that returned completed survey instruments for 44.4% male and 55.6% female return percentages. As noted above, the respondent proportions were not significantly different from the proportions of the entire administrator population for the gender variable.

Table 2

Frequency Distribution for the Age Variable

Bar:	Element:	Count:	Percent:
1	YEARS 20-29	0	0%
2	YEARS 30-39	18	12.59%
3	YEARS 40-49	66	46.15%
4	YEARS 50-59	51	35.66%
5	YEARS 60 AND OVER	8	5.59%

-Mode

There were no administrators in the first age category of 20 to 29, therefore, the graphs and discussion surrounding the age variable will eliminate the first level of the variable. The mode for age or 46.2% of the administrators in the district were in the 40 to 49 age group, the next largest category was the 50 to 59 age group that contained 35.6% of the respondents. The youngest and oldest categories had the fewest respondents with 12.6% indicating the age group of 30 to 39 and 5.6% indicating an age of over 60 years.

Table 3

Frequency Distribution for the School Calendar Variable

Bar:	Element:	Count:	Percent:	
1	TRADITIONAL	113	78.47%	-Mode
2	MULTITRACK	11	7.64%	
3	SINGLE-TRACK	20	13.89%	

By the school calendar variable, 78.5% of the administrators indicated that they worked with a traditional school calendar. The results were to be expected as the district had relatively few schools on alternate calendars during the 90-91 school year. The multitrack schedule had 7.6% of the respondents and the single-track calendar schedule had 13.9% of the respondents indicate these calendar variations respectively.

Table 4

Frequency Distribution for the School Level Variable

Bar:	Element:	Count:	Percent:	
1	ELEMENTARY	79	55.63%	-Mode
2	MIDDLE/JUNIOR	35	24.65%	
3	SENIOR HIGH	28	19.72%	

The school level variable had 55.6% of the respondents indicate that they worked at the elementary level, 24.7% indicated that they worked at the middle or junior high school level, and 19.7% of the respondents indicated the senior high school level. The entire district population of site administrators consisted of 57% of the elementary level; 22% at the middle or junior high level; and 21% at the senior high level. As with the gender variable, the proportions of the administrator distribution for school level were not significantly different from the proportions of the total district population distribution of site administrators for school level.

Table 5

Frequency Distribution for the Restructuring Variable

Bar:	Element:	Count:	Percent:	
1	YES	54	38.03%	-Mode
2	NO	88	61.97%	

Table 5 shows that 38% of the respondents had been involved in officially recognized restructuring activities prior to June of 1990. The remaining 62% of the

administrator population indicated that they had not been involved officially in restructuring at their schools until after September of the 1990-91 school year when the superintendent declared the district to be a restructuring district. As a restructuring district, every school would be expected to participate to some degree in school restructuring efforts.

Table 6

Frequency Distribution for the Administrative Position

Variable

Bar:	Element:	Count:	Percent:	
1	PRINCIPAL	82	56.94%	-Mode
2	VICE PRINCIPAL	62	43.06%	

As Table 6 shows, 56.9% of the respondents were principals and 43.1% of the respondents were vice principals.

Table 7

Frequency Distribution for the Ethnic Diversity Variable

Bar:	Element:	Count:	Percent:	
1	HIGH	93	65.03%	-Mode
2	MODERATE	44	30.77%	
3	LOW	6	4.2%	

The data in Table 7 show that 65% of the administrators felt that their particular school had high ethnic diversity while 30.8% of the administrators felt that their schools had moderate ethnic diversity. Furthermore, only 6

administrators indicated a perception of low ethnic diversity in his or her particular school. The San Diego Unified Research Review Committee stipulated that if a group of respondents fell below eight individuals in any variable level then analyses and discussion of the results surrounding that variable level was not to be included to protect the confidentiality of the administrators in the district. To honor that commitment, no further discussion of the low ethnic diversity variable level will be included within this analysis.

Table 8

Frequency Distribution for the Socioeconomic Status Variable

Bar:	Element:	Count:	Percent:	
1	HIGH	11	7.8%	
2	MODERATE	77	54.61%	-Mode
3	LOW	53	37.59%	

The majority of administrators in the district perceived their respective student populations to be from moderately well-off homes with 54.6% of the administrators designating the moderate category of the SES variable. The low socioeconomic status category received 37.6% of the responses while only 7.8% of the administrators felt that their students were from high socioeconomic backgrounds.

The frequency distributions for all of the categorical variables appeared to accurately reflect the composition of the total site administrator population as well as to

reflect the nature of the district's programs, ethnic diversity, and socioeconomic mix. There were no anomalies in the frequency distributions of the respondent group.

Section 2: Descriptive Statistical Summaries,
Interpretation, and Discussion of the
Results for the 40 Variables

Through the application of the formulae associated with each variable as presented in Figure 3 in Chapter III, a value for each dependent variable was derived for each of the respondents. Note that three different Likert scales were used to solicit responses from the subjects (see Table 9). One scale had a range of 1 to 7, a second scale had a range of 1 to 5, and the third scale had a range of 1 to 4. As well, several variables used a score of 1 to indicate a more positive response while others used the maximum value of 4, 5, or 7 to indicate a more positive response. As a result, the mean value for each of the 40 variables may or may not be comparable to other variable means. Therefore, each variable should be interpreted within its own context and definition. The presentation and discussion of the descriptive summaries of the 40 dependent variables will follow the independent variable category headings:

(a) critical psychological states; (b) job core characteristics; (c) personal and work outcomes; (d) context satisfaction; (e) bureaucracy; and (f) interactive work context. Table 9 presents the 40 variables, the mean for each variable for all respondents, the standard deviation

Table 9

Means, Standard Deviations, and Scale Ranges for the Forty Variables

Variable	Mean	S.D.	Range
Critical Psychological States			
1. Meaningfulness of Work	6.25	.72	1-7
2. Responsibility of Outcomes of Work	6.21	.67	1-7
3. Knowledge of Actual Results of Work	5.66	1.00	1-7
Job Core Characteristics			
4. Skill Variety	6.43	.84	1-7
5. Task Identity	4.24	1.70	1-7
6. Task Significance	6.32	.86	1-7
7. Autonomy	5.67	1.11	1-7
8. Feedback from Administrative Job	5.21	1.22	1-7
9. Feedback from Supervisor and Others	4.88	1.5	1-7
10. Motivating Potential Score	151.33	53.19	40-285
Personal and Work Outcomes			
11. High Satisfaction	5.95	.81	1-7
12. High Internal Motivation	5.96	.76	1-7
13. Career Intentions	*1.53	.92	1-4
14. High Quality Performance	5.73	1.18	1-7
15. High Growth Satisfaction	5.74	1.08	1-7
16. Efficacy	*2.21	.77	1-4

Table 9

Continued

Variable	Mean	S.D.	Range
Context Satisfaction			
17. Pay	5.00	1.48	1-7
18. Co-workers	5.76	.88	1-7
19. Supervisor Support	5.66	1.44	1-7
20. Competence of Supervisor	5.6	1.45	1-7
21. School Size	2.91	1.21	1-4
22. Student Learning Problems	*2.32	.53	1-4
23. Student Behavior Problems	3.32	.57	1-4
24. Holidays	*1.84	1.09	1-4
25. Parental Support	*1.82	.71	1-4
26. Repairs and Maintenance	*2.59	.98	1-4
27. Communication	4.38	1.73	1-7
28. Administrative Assignment	5.89	1.27	1-7
Bureaucracy			
29. Routinization	*1.23	.38	1-4
30. Role Ambiguity	*1.47	.51	1-4
31. Role Overload	*4.45	.92	1-5
32. Involvement in Decision Making	3.14	.89	1-5
Interactive Work Context			
33. Openness of Expression	2.82	1.07	1-5
34. Encouragement of Experimentation	3.69	.80	1-5

Table 9

Continued

Variable	Mean	S.D.	Range
35. Superintendent Facilitates Interaction	3.64	1.02	1-5
36. Career Expectations	*1.77	.65	1-4
37. Present Conditions	5.19	1.02	1-7
38. Would Like Conditions	6.45	.57	1-7
39. Effectiveness of the School	5.00	1.23	1-7
40. Growth Need Strength	.73	1.65	-6.7- 4.5

*Indicates that the variable score is reversed and a lower score is a more positive response.

for each variable, and the range of the Likert scale used for each variable. The variables, indicated by an asterisk, were worded negatively so that a lower score reflected a more positive response to the construct.

The site administrators expressed relatively high satisfaction within the critical psychological states dimension with means of 6.25 and 6.21 for the first two variables. The third variable, Experience Knowledge of the Actual Results of the Work, was lowest of the three at 5.66. The administrators appeared to be able to experience meaningfulness and responsibility feelings in their work but were having a little more difficulty experiencing the knowledge of the results. The theme of difficulty in experiencing knowledge of the results is reflected in other variables to be discussed in the next section.

On job core characteristics, the site administrators reported relatively high satisfaction with the variety of skills needed to perform their jobs and the significance they felt their jobs had in the education of students. The administrators indicated that their perceptions of satisfaction with autonomy and feedback from the administrative job itself were lower than the first two variables of the job core characteristics dimension, but not by a large amount. However, the administrators also reported that they had difficulty in determining the task identity and in obtaining feedback from supervisors and other administrators with means for the two variables of

4.24 and 4.88, respectively. The relatively low mean scores for these last two variables is consistent with the theme of lack of knowledge of the results identified above. The administrators indicated that they were having trouble identifying the task they were to be performing as well as having trouble in receiving adequate feedback from their supervisors or from other administrators. A broader theme of difficulty with information and feedback appeared to be emerging.

The mean of the motivating potential score for the administrators was 151.33. The mean for the administrators was consistent with the scores determined for other educators by researchers such as Frase and Heck (1990), Gorsuch (1976), Harder (1985), and Spangler (1985). The utility of the MPS could be realized if the San Diego School District leaders decided to use the revised Job Diagnostic Survey (JDS) as a diagnostic tool and work toward job enrichment or job enlargement activities as suggested by the original Hackman and Oldham studies (1980) and later by Frase's Fort McMurray Catholic School District studies (1989). The district leaders could identify those individuals that had perceptions of low job core characteristics and work with those individuals to improve the areas that the respondents perceived to be creating low satisfaction. A target could be to have those individuals currently indicating an MPS below the district mean to work toward the district mean as a target or goal. As the

administrators with MPS scores below the district mean improved through intervention strategies the newly recalibrated district mean would presumably rise as well, presenting a new target or goal for those that were still below the new district mean. A similar strategy could be utilized for the majority of the variables identified in the study if the district leaders felt there was sufficient utility in the type of staff development activity suggested.

The San Diego Unified district site administrators had a mean MPS of 151.33. Perhaps a similar improvement could be realized as that which occurred in the Frase and Heck study in Fort McMurray Catholic School District, Alberta. In the Frase and Heck study (1990), the Fort McMurray educators had a mean MPS score of 145.19 on the November 1989 analysis of the JDS. Following several months of job enrichment, staff development, and dialogue surrounding the issues uncovered in the November survey the educators were again surveyed. The new MPS was 183.61 which was significant at .0001 when compared to the November analysis. Furthermore, six of the nine school district groups that were analyzed in the study improved their respective MPS scores significantly ($\alpha = .05$) over the November analysis. If San Diego Unified district leaders were to approach the utilization of a diagnostic instrument, such as the revised Job Diagnostic Survey, as a means of guiding policy and decision making within the district, then perhaps similar

improvements to those reported by Frase and Heck could be experienced.

In the third group or dimension of personal and work outcomes, the administrators indicated consistently high satisfaction with most of the variables in the section. The administrators were satisfied with their general job, internal motivation, quality of personal performance, and growth in their job. The career intentions variable was based on the responses to the statement, "I presently have no plans for leaving administration" with a score of 1 indicating a definitely true response to the statement. The mean for the variable was 1.5 which fell half way between the response choices "definitely true" and "partially true" for the statement on career intentions. The last variable in the section, efficacy, had a mean of 2.21, with a lower score closer to 1 being a more positive response. The administrators appeared to be expressing slight dissatisfaction with their ability to reach all of the students in their schools and to have a real educational impact on the academic performance of the students in their schools.

The fourth section dealt with context satisfaction variables. The administrators generally reported moderate to high satisfaction with most variables in the section with two notable exceptions. The administrators indicated dissatisfaction with repairs and maintenance with a mean score of 2.59. The mean score for the variable suggested

that the administrators were leaning toward a response of "partially false" to the statement "repairs and maintenance requests are handled in a timely manner." The second variable that indicated administrator dissatisfaction dealt with communication. The variable had a mean of 4.38 which indicated that the administrators were very close to a neutral position between satisfied and dissatisfied with the avenues of communication within the district. The communication variable reflected the theme of lack of satisfaction with feedback and information flow identified in earlier sections of the discussion. Communication within the district, whether from supervisors or other administrators, was not being perceived as satisfactory by the site administrators.

With respect to bureaucracy, the site administrators were satisfied that their jobs were not routine or mundane and that they knew what their roles and responsibilities were as indicated by the routinization and role ambiguity variables. The site administrators strongly agreed that there was more to accomplish in their job than they had time to accomplish the work with a mean of 4.45 on a scale of 1 to 5 for the role overload variable. The administrators had a mean of 3.14 for the variable involvement in decision making. The mean of 3.14 represented a response slightly toward agreement with concept that the site administrators were involved in decisions that affected their schools and the district. The perception held by the site

administrators that they were not involved to a great extent in the decision-making process was consistent with the information and communication theme that was emerging. Involvement in decision making requires communication and information sharing and those variables, as already noted, did not portray high levels of administrator satisfaction.

The final group of variables, the interactive work context dimension, produced moderate satisfaction results on most variables. Encouragement of experimentation and superintendent facilitates administrator interaction were supported. The administrators perceived their present conditions to rate 5.19 on a 1 to 7 scale and their interpretation of the conditions they would like to see in the district at 6.45 indicating that the administrators were somewhat satisfied with the way the district conditions were at the time but could see opportunities or desired improvement in a number of areas. The administrators reported being slightly more than somewhat satisfied with their career expectations with a mean score of 1.77 on a 4-point scale with a lower score representing a more positive response to the instrument items related to career expectations. The administrators indicated a growth need strength of .73 which meant that the majority of administrators felt growth in their jobs was important to them. A score of 0 for growth need strength would indicate that there was no growth need expressed while a negative growth need score would indicate that respondents perceived

their work situation to have more demands than they wished to experience. The administrators were asked to rate their satisfaction with their progress toward or attainment on five of the major effective schools correlates. The effectiveness of the school variable had a mean of 5.00 on a 7-point scale indicating that most of the administrators felt there was still room for improvement. The mean for the district administrators on the openness of expression variable was 2.82 on a 5-point scale. The 2.82 score suggested a response on the disagree side of neutral with the concept that the administrators were free from fear of consequences for expressing themselves openly or that the administrators felt that they could engage in open and frank discussions of issues. The administrators' perceptions as indicated by the openness of expression variable was consistent with the communication, sharing of knowledge, involved in decision making theme that has been developing through the analyses and interpretation of the data. The administrators, by their responses to the instrument statements on openness of expression, were saying that they did not feel that they could openly and honestly express themselves without fear of consequences.

The district leaders should consider addressing the perceived communication problems identified by the site administrators and through revised procedures, considerations, programs, and staff development activities ameliorate the perceived dissatisfaction levels. The

restructuring movement within San Diego Unified School District had created a great deal of uncertainty and changes in traditional communication channels and expectations of and for the governance personnel both within the schools and at the central office. Improved feedback, information sharing, communication channels, openness of expression, and the development of a clear and precise task identity could assist greatly the site administrators in doing their respective jobs more efficiently and effectively as well as promoting greater satisfaction in their work.

In summary, the district site administrators expressed moderately high satisfaction with many aspects of their jobs as determined by the 40 variables used in the study. The administrators, however, expressed less satisfaction with the variables task identity, feedback from supervisors or other administrators, repairs and maintenance, communication, role overload, and openness of expression. From the variables listed a theme of dissatisfaction with communication aspects of the district organization emerged. The district leaders could use the information to great advantage in promoting better communication channels within the district to facilitate the needs and concerns of the site administrators, thus leading to higher levels of satisfaction or the lessening of dissatisfaction with the current structures.

Section 3: Comparative Statistical Analyses of the Data, Interpretation, and Discussion of the Results for the 40 Variables

The statistical analyses based on the primary hypotheses yielded 41 statistically significant findings of the 320 one-way ANOVAs calculated to determine if there were significant differences between the levels of the categorical variables. The statistical analyses based on the secondary hypotheses yielded 37 statistically significant findings of the 600 two-way ANOVA as calculated to determine if there were significant interaction effects between combinations of the categorical variables used in the study. Therefore, the presentation and discussion of the findings of the study will focus on the 78 statistically significant differences and interaction effects identified as a result of the data analyses.

Analyses and Discussion of the Eight Primary Hypotheses

Eight primary null hypotheses were presented in Chapter III to facilitate and operationalize the categorical variables for the statistical analyses that were to be performed. The statistical analyses involved one-way ANOVAs calculated for the eight categorical variables identified in the study. The eight independent variables were school calendar, restructuring, gender, age, school level, administrative position, socioeconomic status, and ethnic diversity. The null hypotheses stated that there would be

no statistically significant difference between the levels of the categorical variables ($\alpha = .05$). Table 10 presents the 40 variables, the primary hypothesis categories, and the body of the table shows the probability statements generated through the statistical analyses of the data. An asterisk beside the probability statement in Table 10 indicates a statistically significant difference existed between the levels of the independent variable in question for the hypothesis category indicated across the top of the table at $\alpha < .05$.

The probability statements indicated with an asterisk mean that the null hypothesis is rejected for that particular combination of independent and dependent variables. This means that a statistically significant difference at $\alpha = .05$ was found to exist between the levels of the independent variable for the dependent variable described in the left-hand column of Table 10.

Figures 5 through 20 display the results of the statistical analyses. Each of the eight hypotheses is represented by two pages of figures showing the results of the comparisons across the levels of the variable. Figures 5 and 6 relate to hypothesis one and indicate differences between the levels of the school calendar variable. Figures 7 and 8 relate to the restructuring variable; Figures 9 and 10 relate to the gender variable; Figures 11 and 12 relate to the age variable; Figures 13 and 14 relate to the school level variable; Figures 15 and 16 relate to

Table 10

Probability Statements Derived from ANOVAs to Test the Eight Primary Hypotheses

Dependent Variables	Categorical Variables Used to Define Groups for Analyses							
	School Cal.	Restructure	Gender	Age	Sch. Level	Admin. Pos.	SES	Ethnic Div.
1. Exp. Meaningfulness of Work	0.3516	0.1973	0.5219	0.8772	0.2108	0.1798	0.5456	0.1937
2. Exp. Responsibility of Outcomes of the Work	0.9745	0.2397	0.7154	0.9001	0.4372	0.4104	0.155	0.4537
3. Exp. Knowledge of Actual Results of the Work	0.4123	0.5068	0.334	0.1811	0.8955	0.007*	0.478	0.9259
4. Skill Variety	0.8882	0.3301	0.2254	0.6627	0.5091	0.5218	0.5867	0.1475
5. Task Identity	0.4542	0.0485*	0.112	0.6856	0.2959	0.2726	0.6261	0.263
6. Task Significance	0.4424	0.7366	0.5841	0.4018	0.1082	0.0971	0.6759	0.3258
7. Autonomy	0.9945	0.9696	0.5357	0.8101	0.1392	0.5917	0.0478*	0.7408
8. Feedback From Administrative Job	0.1732	0.0311*	0.2465	0.8534	0.2656	0.4385	0.1265	0.9932
9. Feedback From Supervisors or Others	0.8375	0.2377	0.8437	0.8771	0.6556	0.2664	0.2228	0.3184
10. Motivating Potential Score (MPS)	0.2319	0.634	0.1034	0.9663	0.3788	0.8536	0.0153*	0.6553
11. High Satisfaction	0.1058	0.7156	0.3087	0.2478	0.244	0.9909	0.1784	0.3642
12. High Internal Motivation	0.3423	0.4232	0.1897	0.8292	0.0109*	0.4668	0.6283	0.0628
13. Career Intentions	0.549	0.3589	0.0394*	0.0001*	0.7126	0.0035*	0.3434	0.2314
14. High Quality Performance	0.9269	0.1708	0.6052	0.5303	0.1716	0.9109	0.8547	0.8314
15. High Growth Satisfaction	0.6668	0.4609	0.7323	0.2036	0.383	0.4625	0.0564	0.9121
16. Efficacy	0.009*	0.7399	0.5377	0.403	0.2833	0.1732	0.8063	0.2042
17. Pay	0.236	0.025*	0.5559	0.1374	0.7442	0.2963	0.2909	0.9527
18. Co-Workers	0.6404	0.3497	0.3288	0.21	0.5506	0.0319*	0.2121	0.5228
19. Supervisor Support	0.9121	0.1686	0.8417	0.1182	0.199	0.991	0.0728	0.2047
20. Competence of Supervisor	0.811	0.1055	0.7978	0.0975	0.1698	0.3869	0.0754	0.3707
21. School Size	0.064	0.0805	0.5102	0.0769	0.5924	0.0002*	0.0001*	0.0069*
22. Student Learning Problems	0.027*	0.8762	0.2973	0.6722	0.1337	0.0839	0.0001*	0.046*
23. Student Behavior Problems	0.0089*	0.2142	0.2357	0.0617	0.0001*	0.0001*	0.0001*	0.1577
24. Holidays	0.0119*	0.187	0.0486*	0.1613	0.7195	0.6336	0.3981	0.9582
25. Parental Support	0.1617	0.0742	0.1199	0.8838	0.0036*	0.0001*	0.0001*	0.0001*
26. Repairs and Maintenance	0.0486*	0.1449	0.6356	0.0106*	0.0146*	0.0324*	0.5	0.863
27. Communication	0.6343	0.3186	0.16	0.3426	0.2228	0.8711	0.4465	0.1818
28. Administrative Assignment	0.0506	0.5275	0.3008	0.1661	0.6309	0.0621	0.3273	0.1672
29. Routinization	0.5183	0.5669	0.1825	0.8484	0.5168	0.076	0.6362	0.9493
30. Role Ambiguity	0.8952	0.4701	0.6919	0.5056	0.8866	0.0415*	0.1091	0.4135
31. Role Overload	0.9679	0.5829	0.8407	0.3267	0.7255	0.5876	0.5692	0.4301
32. Involvement in Decision Making	0.2321	0.9372	0.4203	0.0462*	0.1803	0.2955	0.4195	0.9919
33. Openness of Expression	0.1665	0.9463	0.0594	0.1249	0.1896	0.5526	0.2758	0.7169
34. Encouragement of Experimentation	0.2464	0.5731	0.1867	0.5758	0.1526	0.1807	0.2632	0.1743
35. Superintendent Facilitates Administrator Interaction	0.3138	0.7758	0.042*	0.0979	0.0166*	0.7035	0.4582	0.6801
36. Career Expectations	0.5067	0.8954	0.797	0.1437	0.5243	0.0002*	0.5508	0.6144
37. Present Conditions	0.5143	0.3107	0.7421	0.155	0.2256	0.089	0.595	0.7572
38. Would Like Conditions	0.0775	0.2918	0.0163*	0.2782	0.5215	0.8208	0.9796	0.1635
39. Effectiveness of the School	0.2966	0.8644	0.6177	0.0152*	0.1183	0.0015*	0.0006*	0.1707
40. Growth Need Strength	0.3789	0.9238	0.4546	0.2056	0.6363	0.6657	0.564	0.7581

Note: * alpha < .05

the administrative position variable; Figures 17 and 18 relate to the socioeconomic status variable; and Figures 19 and 20 relate to the ethnic diversity variable.

The legend at the bottom of the page of graphs shows the dependent variables associated with each number along the horizontal axis of the graph. The scales for some of the variables are reversed as noted by the pound sign (#) associated with certain variables. The scales also vary depending on the variable. Not all scales have a maximum of 7. Reference should be made to Table 9 to determine the appropriate scale for each variable. As noted earlier, the independent variable ethnic diversity only had six subjects indicate that their particular school had low ethnic diversity. Therefore, the respective data, graphs, and discussion surrounding the low ethnic diversity variable level will be eliminated as per the agreement reached with the San Diego Unified Research Review Committee.

Appendix H contains figures or graphs for each of the 40 dependent variable and the figures show how each dependent variable was affected by each independent variable. These graphs present a different perspective of the information. The overall perceived satisfaction or dissatisfaction with the factor can be determined by examining the district mean.

Discussion and Interpretation Based on the Analyses
Derived from the Eight Primary Hypotheses

The discussion of the findings for the eight primary hypotheses will be presented one hypothesis at a time to focus attention on the dependent variables that produced the statistically significant differences between the levels of the independent variable. Scheffé post hoc analyses techniques were used, following statistically significant ANOVAs, to determine which levels of the categorical variables were responsible for the significant differences indicated by the ANOVAs.

Hypothesis 1

The first null hypothesis stated that there would be no significant difference between the three levels of school calendar for the 40 variables ($\alpha = .05$). The first column of probability statements in Table 10 shows five dependent variables produced significant differences. Scheffé post hoc analyses were then performed on the efficacy, student learning problems, student behavior problems, holidays, and repairs and maintenance variables to determine which of the school calendar levels were responsible for the significant difference indicated by the ANOVA (see also Figures 5 and 6). The mean score for the traditional calendar level of the efficacy variable was 2.3 and the mean for the multitrack level was 1.7 and the difference between the two was sufficient to create the statistically significant

Figure 5. Hypothesis 1: Comparisons by school calendar for variables 1 to 20.

Figure 6. Hypothesis 1: Comparisons by school calendar for variables 21 to 40.

difference. A lower score for the efficacy variable indicated a more positive response. The results suggested that administrators in multitrack schools felt that they had more of an impact on student learning and student outcomes than did administrators in the traditional calendar schools.

The student learning problems and student behavior problems variables produced similar results. Multitrack administrators indicated a significantly lower perception of student learning problems than did administrators in traditional calendar schools. Although a significant ANOVA resulted for the student behavior problems variable, the post hoc Scheffé did not produce statistically significant differences between the levels of the variable. However, the means for the three levels suggest that multitrack administrators experienced or perceived fewer student behavior problems than did traditional school calendar administrators.

The holiday variable was of particular interest from the school calendar perspective as many administrators that were in multitrack schools were required to book holiday time much like private sector employees. Some administrators were able to book their holidays appropriately while others had great difficulty getting away from their jobs for vacation breaks. The significant ANOVA and post hoc analyses indicated that single-track administrators were most satisfied with their holiday time, followed by the traditional calendar administrators. The

multitrack administrators were most dissatisfied of the three groups and the Scheffé post hoc analysis produced a significant difference between the multitrack and single-track levels of the holiday variable.

The final variable that produced a statistically significant difference between the school calendar levels was the repairs and maintenance variable. Multitrack administrators were significantly more satisfied with repairs and maintenance procedures than were their counterparts in the traditional calendar schools.

Hypothesis 2

The second null hypothesis stated that there would be no difference between the administrators in the schools that had been involved in restructuring prior to June 1990, and the rest of the administrator population ($\alpha = .05$). The second column of probability statements shows task identity, feedback from the administrative job, and pay as having achieved significance through the ANOVA analyses (see also Figures 7 and 8). In all three cases the administrators in the schools that had participated in restructuring activities prior to June 1990 reported less perceived satisfaction in the three variables, task identity, feedback from administrative job, and pay, than their counterparts that had not been involved in school restructuring. The results indicated that the administrators were having difficulty perceiving what their task really was and the

Figure 7. Hypothesis 2: Comparisons by restructuring for variables 1 to 20.

Figure 8. Hypothesis 2: Comparisons by restructuring for variables 21 to 40.

reason could have been that they were unable to get sufficient feedback from the job they were doing to make the judgment for themselves. The administrators that had been involved in restructuring also indicated that they perceived less satisfaction with their pay than the group of administrators that had not been involved in restructuring. Restructuring appeared to have created demands on the administrators that had created the perception that compensation for the extra effort had not been satisfactory. The administrators involved in restructuring were also saying that they were having difficulty identifying their roles or tasks. They indicated that they were not receiving enough feedback through the work that they did in the schools to be able to determine whether or not their restructuring efforts were successful or having a positive impact on the school system.

Hypothesis 3

The third null hypothesis stated that there would be no difference between the genders of the administrator population ($\alpha = .05$). According to the probability statements in Table 10, career intentions, holidays, superintendent facilitates administrator interaction, and would like conditions in the school produced significant differences (see also Figures 9 and 10). Female administrators indicated less interest in leaving administration than their male counterparts. However,

Variables:

1. Experience Meaningfulness of Work
2. Experience Responsibility of Outcomes of the Work
3. Experience Knowledge of Actual Results of the Work
4. Skill Variety
5. Task Identity
6. Task Significance
7. Autonomy
8. Feedback From Administrative Job
9. Feedback From Supervisor or Others Administrators
10. Motivating Potential Score (MPS)

11. High Satisfaction
12. High Internal Motivation
13. Career Intentions
14. High Quality Performance
15. High Growth Satisfaction
16. Efficacy
17. Pay
18. Co-Workers
19. Supervisor Support
20. Competence of Supervisor

Figure 9. Hypothesis 3: Comparisons by gender for variables 1 to 20.

Variables:

21. School Size
22. Student Learning Problems
23. Student Behavior Problems
24. Holidays
25. Parental Support
26. Repairs and Maintenance
27. Communication
28. Administrative Assignment
29. Routinization
30. Role Ambiguity

31. Role Overload
32. Involvement in Decision Making
33. Openness of Expression
34. Encouragement of Experimentation
35. Superintendent Facilitates Administrator Interaction
36. Career Expectations
37. Present Conditions
38. Would Like Conditions
39. Effectiveness of the School
40. Growth Need Strength

Figure 10. Hypothesis 3: Comparisons by gender for variables 21 to 40.

the female administrators expressed less satisfaction with their holidays than the male administrators. The female subjects also expressed less satisfaction with the perceived support from the superintendent in facilitating interaction between the administrators. The final variable to achieve a significant difference was the administrators' perception of what they would like the school system or their schools to be like in the future. The female subjects reported a significantly higher rating of the criteria for desirable conditions within the schools.

Hypothesis 4

The fourth null hypothesis stated that there would be no difference between the levels of administrators segregated by age ($\alpha = .05$). As there were no administrators under the age of 30, the lowest category was eliminated from the analyses. Career intentions, repairs and maintenance, involvement in decision making, and effectiveness of the school produced statistically significant differences between the age levels (see also Figures 11 and 12). The administrators over the age of 60 had significantly more interest in leaving administration, presumably through retirement, than any of the other three groups. For the repairs and maintenance variable, although a statistically significant difference between the levels was indicated by the probability statement from the ANOVA, the conservative Scheffé post hoc analysis failed to produce

Figure 11. Hypothesis 4: Comparisons by age for variables 1 to 20.

Figure 12. Hypothesis 4: Comparisons by age for variables 21 to 40.

a significant finding through the paired contrasts. The mean scores for each of the four levels indicated that the older administrators were more satisfied with the repairs and maintenance procedures and timeliness than were the younger administrators. A similar statistical situation occurred in the involvement in decision-making variable. Although a significant ANOVA resulted from the data analysis, the post hoc contrasts failed to produce a significant pairing of levels. The means for the four age groups did show a definite trend. From youngest to oldest the group means were 3.65, 3.09, 2.98, and 3.29. The 50 to 59 age group were the least satisfied with their involvement in the decision-making process while the youngest group, 30 to 39 were the most satisfied with their involvement in the decision-making process. However, the youngest group represented only 18 of the 144 respondents while the 40 to 49 and 50 to 59 age groups represented 117 of the 144 respondents. Clearly a large number of administrators were experiencing some dissatisfaction with their involvement in decision making in the school district. The final variable of the section to achieve significance was the perceptions of school effectiveness. The mean scores for the variable were progressively more positive with the age of the administrator. The Scheffé post hoc analysis determined that the oldest group was significantly different from the youngest group of administrators in their perception of the effectiveness of their respective schools. A key point to

be made here is that the administrators' perceptions of school effectiveness were significantly different. The determination of the true effectiveness of the schools was not the intent of the study. The current research indicated that the older the administrator, the more their perceptions of their schools' effectiveness increased.

Hypothesis 5

The fifth null hypothesis stated that there would be no difference between the perceptions of the administrators in elementary, middle or junior high, and senior high school levels ($\alpha = .05$). From Table 10, under the school level heading, there were five variables that achieved significance: high internal motivation, student behavior problems, parental support, repairs and maintenance, and superintendent facilitates administrator interaction (see also Figures 13 and 14). The internal motivation variable means decreased from elementary to middle/junior high to senior high school levels. The Scheffé post hoc analysis indicated a significant difference between the two extremes of elementary and senior high school levels with the senior high school administrators perceiving the least amount of internal motivation. The middle and senior high school administrators both perceived significantly fewer student behavior problems than their elementary counterparts while the trend was reversed for parental support with the elementary administrators expressing more perceived parental

Variables:

1. Experience Meaningfulness of Work
2. Experience Responsibility of Outcomes of the Work
3. Experience Knowledge of Actual Results of the Work
4. Skill Variety
5. Task Identity
6. Task Significance
7. Autonomy
8. Feedback From Administrative Job
9. Feedback From Supervisor or Others Administrators
10. Motivating Potential Score (MPS)

11. High Satisfaction
12. High Internal Motivation
13. Career Intentions
14. High Quality Performance
15. High Growth Satisfaction
16. Efficacy
17. Pay
18. Co-Workers
19. Supervisor Support
20. Competence of Supervisor

Figure 13. Hypothesis 5: Comparisons by school level for variables 1 to 20.

Figure 14. Hypothesis 5: Comparisons by school level for variables 21 to 40.

support than the other two school level groups. The senior high administrators were significantly less satisfied with repairs and maintenance than both the elementary and middle/junior high administrators. In their perceptions of the superintendent facilitating administrator interactions, the middle/junior high school administrators indicated more satisfaction than the elementary administrators and significantly more satisfaction than the senior high school administrators according to the post-hoc analysis.

Hypothesis 6

The sixth null hypothesis stated that there would be no difference between the principal and vice principals' perceptions of satisfaction with the elements of their jobs ($\alpha = .05$). The sixth hypothesis produced the highest number of significant results of any of the eight primary hypotheses. The two groups of administrators varied on their perceptions of experiencing knowledge of the actual results of the work, career intentions, co-workers, school size, student behavior problems, parental support, repairs and maintenance, role ambiguity, career expectations, and effectiveness of the school (see also Figures 15 and 16). A number of the findings were consistent with the role expectations and work performed by the two different levels of administrator in the public schools. The vice principal was responsible for working with school faculty on a variety of procedural and disciplinary issues, student behavior

Variables:

1. Experience Meaningfulness of Work
2. Experience Responsibility of Outcomes of the Work
3. Experience Knowledge of Actual Results of the Work
4. Skill Variety
5. Task Identity
6. Task Significance
7. Autonomy
8. Feedback From Administrative Job
9. Feedback From Supervisor or Others Administrators
10. Motivating Potential Score (MPS)

11. High Satisfaction
12. High Internal Motivation
13. Career Intentions
14. High Quality Performance
15. High Growth Satisfaction
16. Efficacy
17. Pay
18. Co-Workers
19. Supervisor Support
20. Competence of Supervisor

Figure 15. Hypothesis 6: Comparisons by administrative position for variables 1 to 20.

Variables:

21. School Size	31. Role Overload
22. Student Learning Problems	32. Involvement in Decision Making
23. Student Behavior Problems	33. Openness of Expression
24. Holidays	34. Encouragement of Experimentation
25. Parental Support	35. Superintendent Facilitates Administrator Interaction
26. Repairs and Maintenance	36. Career Expectations
27. Communication	37. Present Conditions
28. Administrative Assignment	38. Would Like Conditions
29. Routinization	39. Effectiveness of the School
30. Role Ambiguity	40. Growth Need Strength

Figure 16. Hypothesis 6: Comparisons by administrative position for variables 21 to 40.

problems which required parental support at times, and repairs and maintenance of the school site. The vice principal group in the study expressed less satisfaction with the above elements of their job than did the principals. The vice principals indicated less of a desire to leave administration than did the principal population. The school size variable produced less satisfaction for the vice principals as well. The larger the school the more difficult and more demanding the time and resources of the vice principal to oversee scheduling, maintenance, discipline, and other assignments at the school site. Two variables, experience knowledge of the actual outcomes of the work and role ambiguity, were perceived to be less satisfying by the vice principals in the study. The vice principals indicated that they were not sure of what their exact role was in the school and that they did not know what the results of their efforts really were. The findings were consistent with the literature on the vice principalship that pointed to the position as a position that was ill-defined and carried many duties that did not seem to be related to student achievement or the success of the school (Gorton & Kattman, 1985). The vice principals expressed less satisfaction with their expectations for the administrative job than did the principals. The final variable in the section, effectiveness of the school, indicated that the principals felt that their schools were

significantly more effective than the vice principals' perceptions of school effectiveness.

Hypothesis 7

Null hypothesis 7 stated that there would be no difference in the administrators' perceived satisfaction based on perceived levels of SES of the student population ($\alpha = .05$). The administrators were asked to rate their respective schools as either high, moderate, or low in terms of the SES of the majority of the schools' students. As can be seen from Table 10, under the SES heading, autonomy, motivating potential score, school size, student learning problems, student behavior problems, parental support, and effectiveness of the school had probability levels below the $\alpha = .05$ (see also Figures 17 and 18). The first two variables appeared to be anomalies to the rest of the variables identified as having achieved significant differences. The post hoc analysis of the autonomy variable indicated that there was no statistically significant difference between the two extreme means. The mean score for the high SES was 5.05, for the moderate SES 5.83, and for the low SES 5.52. The administrators in the high SES schools felt they had less autonomy than the administrators in the moderate or low SES schools. Similarly the motivating potential score for the high SES group was lowest of the three levels for the variable. The moderate group showed the highest MPS score. The Scheffé post hoc analysis

Figure 17. Hypothesis 7: Comparisons by socioeconomic status for variables 1 to 20.

Figure 18. Hypothesis 7: Comparisons by socioeconomic status for variables 21 to 40.

indicated that the moderate and low SES group varied significantly from one another on the MPS variable. The remaining five variables suggested that a variety of problems existed or were created by the low SES of the student population based on the perceptions of the site administrators. The low SES schools were perceived to be too large significantly more so than for both the moderate and high SES administrator groups. Student learning problems and student behavior problems were perceived to occur more often in low SES schools than in the moderate or high SES schools and parental support was perceived to be lowest at the low SES schools as well. The effectiveness of the school was perceived to be the highest at the high SES schools and lowest at the low SES schools. The above findings suggested that a great deal more effort and resources must go into the lower SES schools to ameliorate the perceived differences. The study has demonstrated, at least through statistical analyses, that the problems faced by site administrators in certain school situations were not isolated or restricted to one or two individual administrators that had trouble coping with a difficult work environment. The analyses supported the contention that low SES schools had special problems and required special attention and resources. A significant number of administrators were saying that there were problems to be addressed in the low SES schools. To treat all schools the same was not acknowledging that certain schools were

different and required equity of opportunity to succeed not just equity in rhetoric alone.

Hypothesis 8

The last primary null hypothesis stated that there would be no difference in the perceived satisfaction of the site administrators based on the perceived ethnic diversity of the student population ($\alpha = .05$). The administrators were asked to rate their respective schools as either high, moderate, or low in ethnic diversity. Only six respondents indicated low ethnic diversity in their respective schools. Therefore, the level of the variable was eliminated from analyses and discussion as per the agreement reached with San Diego Unified Research Review Committee to protect the confidentiality of the respondents. However, there were still three variables that achieved significance in the ANOVA analyses. School size, student learning problems, and parental support reported statistically significant ANOVA results (see also Figures 19 and 20). The administrators of schools with a moderate ethnic mix varied significantly from their counterparts in the schools with a high ethnic mix in perceptions of school size. The administrators in the schools with moderate ethnic diversity felt their schools were too large significantly more so than administrators in schools with a high ethnic mix. The student learning problems did not indicate a significant difference at $\alpha = .05$ in the post hoc analyses. The means for the moderate

Figure 19. Hypothesis 8: Comparisons by ethnic diversity for variables 1 to 20.

Figure 20. Hypothesis 8: Comparisons by ethnic diversity for variables 21 to 40.

and high levels only suggested that the high ethnic diversity schools had more perceived student learning problems than did the moderate ethnic mix schools. However, the administrators in schools with a perceived moderate ethnic mix indicated significantly more support from parents than the support reported by the administrators in schools with high ethnic diversity.

Section 4: Analyses and Discussion of the Fifteen Secondary Hypotheses

The 15 secondary hypotheses were used to investigate the interaction effects between the levels of the independent or categorical variables. As stated in the introduction to the chapter, 37 statistically significant interactions were identified as a result of the 600 two-way ANOVAs calculated using the StatView SE + Graphics microcomputer statistical software program. Of the 37 significant interactions identified only 21 of the interactions had sufficient numbers of subjects in each subgroup or level of the independent variables used in the two-way ANOVAs to permit discussion of the results in the formal report on the research project. Sixteen of the 37 significant interactions had cell counts that fell below the minimum number of eight subjects per group, as established by the San Diego Unified Research Review Committee, to protect the confidentiality of the administrators. Unfortunately, the loss of the 16 significant interactions

resulted in the elimination of discussion surrounding several of the hypotheses. Secondary hypotheses two and nine did not produce any significant interactions. As a result of the agreement with the Research Review Committee, discussion surrounding secondary hypotheses one, three, five, eight, eleven, twelve, thirteen, and fourteen was eliminated. As can be seen in Tables 11 and 12 the probability statements for these specific hypotheses have been removed from the tables. The remaining hypotheses represented more than half of the statistically significant findings of the interaction effects and provided a great deal of information and insight into the areas of the district organization that were creating satisfaction and dissatisfaction among the site administrators. Therefore, the presentation of data and discussion of results will focus on secondary hypotheses 4, 6, 7, 10, and 15.

The following figures illustrate the significant interaction effects determined through the calculation of the two-way ANOVAs. The ANOVA tables and incidence tables for the significant interactions can be found in Appendix J.

Hypothesis 4

The fourth secondary null hypothesis stated that there would be no significant interaction effect between the levels of the gender and the restructuring variables ($\alpha = .05$). The two-way ANOVAs indicated two significant interactions out of the 40 variables examined in the study.

Table 11

Probability Statements of the Interaction Effects Derived from the Two-Way ANOVAs to Test Secondary Hypotheses 1 to 8

Dependent Variables	Hypotheses							
	Hypothesis 1	Hypothesis 2	Hypothesis 3	Hypothesis 4	Hypothesis 5	Hypothesis 6	Hypothesis 7	Hypothesis 8
1. Exp. Meaningfulness of Work	0.8029		0.7809		0.0718	0.3619		
2. Exp. Responsibility of Outcomes of the Work	0.5212		0.5505		0.3776	0.4689		
3. Exp. Knowledge of Actual Results of the Work	0.8588		0.0325*		0.7958	0.9696		
4. Skill Variety	0.8443		0.8765		0.8691	0.2202		
5. Task Identity	0.0615		0.2257		0.5565	0.0085*		
6. Task Significance	0.2864		0.536		0.9687	0.3068		
7. Autonomy	0.9688		0.3371		0.5553	0.036*		
8. Feedback From Administrative Job	0.9711		0.9308		0.509	0.8677		
9. Feedback From Supervisors or Others	0.7142		0.0614		0.9002	0.1428		
10. Motivating Potential Score (MPS)	0.9455		0.8072		0.9332	0.0139*		
11. High Satisfaction	0.8388		0.577		0.0509	0.478		
12. High Internal Motivation	0.8771		0.6574		0.0252*	0.5149		
13. Career Intentions	0.1956		0.0168*		0.9102	0.5913		
14. High Quality Performance	0.8604		0.8684		0.3399	0.8157		
15. High Growth Satisfaction	0.8473		0.8504		0.2466	0.2816		
16. Efficacy	0.9263		0.9009		0.0664	0.1976		
17. Pay	0.8937		0.3876		0.1852	0.0375*		
18. Co-Workers	0.7571		0.8584		0.0014*	0.737		
19. Supervisor Support	0.8215		0.7151		0.9086	0.0557		
20. Competence of Supervisor	0.8084		0.8812		0.7337	0.0303*		
21. School Size	0.9158		0.448		0.1223	0.0552		
22. Student Learning Problems	0.9964		0.5568		0.0412*	0.046*		
23. Student Behavior Problems	0.9373		0.8753		0.0444*	0.4462		
24. Holidays	0.7371		0.373		0.1299	0.9135		
25. Parental Support	0.9137		0.6752		0.7711	0.0596		
26. Repairs and Maintenance	0.5658		0.8224		0.1751	0.7912		
27. Communication	0.9603		0.6245		0.8651	0.1275		
28. Administrative Assignment	0.846		0.7969		0.9599	0.8422		
29. Routinization	0.8596		0.4049		0.0754	0.7861		
30. Role Ambiguity	0.187		0.1054		0.877	0.0981		
31. Role Overload	0.522		0.863		0.0705	0.2607		
32. Involvement in Decision Making	0.7079		0.3562		0.942	0.036*		
33. Openness of Expression	0.8633		0.9351		0.4032	0.8851		
34. Encouragement of Experimentation	0.0631		0.9311		0.7451	0.39		
35. Superintendent Facilitates Administrator Interaction	0.5634		0.1735		0.0428*	0.3676		
36. Career Expectations	0.8394		0.5912		0.9011	0.3375		
37. Present Conditions	0.5217		0.8408		0.0679	0.0336*		
38. Would Like Conditions	0.9508		0.8384		0.5237	0.2272		
39. Effectiveness of the School	0.7364		0.2803		0.041*	0.2816		
40. Growth Need Strength	0.1576		0.6949		0.3676	0.8219		

Note: * alpha < .05

The probability statements in columns 1, 3, 5, and 8 were deleted as a result of the San Diego Unified Research Review Committee agreement.

Table 12

Probability Statements of the Interaction Effects Derived from the Two-Way ANOVAs to Test Secondary Hypotheses 9 to 15

Dependent Variables	Hypotheses				
	Hypothesis 9	Hypothesis 10	Hypothesis 11	Hypothesis 12	Hypothesis 13
1. Exp. Meaningfulness of Work	0.6182	0.9751			0.8969
2. Exp. Responsibility of Outcomes of the Work	0.7239	0.6175			0.1578
3. Exp. Knowledge of Actual Results of the Work	0.7885	0.3253			0.5302
4. Skill Variety	0.104	0.3138			0.241
5. Task Identity	0.2857	0.3186			0.3996
6. Task Significance	0.4432	0.5473			0.6058
7. Autonomy	0.1626	0.0484*			0.0847
8. Feedback From Administrative Job	0.5127	0.6794			0.2177
9. Feedback From Supervisors or Others	0.5293	0.2851			0.3706
10. Motivating Potential Score (MPS)	0.3727	0.305			0.1036
11. High Satisfaction	0.8915	0.1968			0.0329*
12. High Internal Motivation	0.5645	0.7795			0.1317
13. Career Intentions	0.5527	0.415			0.5473
14. High Quality Performance	0.7871	0.6484			0.8756
15. High Growth Satisfaction	0.8658	0.2675			0.7715
16. Efficacy	0.6051	0.6128			0.4346
17. Pay	0.9711	0.2029			0.0034*
18. Co-Workers	0.0838	0.1566			0.7197
19. Supervisor Support	0.4157	0.9066			0.5982
20. Competence of Supervisor	0.3403	0.8165			0.5563
21. School Size	0.3207	0.9288			0.504
22. Student Learning Problems	0.419	0.5046			0.4558
23. Student Behavior Problems	0.8263	0.6005			0.6824
24. Holidays	0.9841	0.0454*			0.2128
25. Parental Support	0.8038	0.8237			0.7059
26. Repairs and Maintenance	0.2142	0.9131			0.6724
27. Communication	0.9664	0.542			0.2939
28. Administrative Assignment	0.3769	0.3863			0.009*
29. Routinization	0.4094	0.2756			0.613
30. Role Ambiguity	0.1256	0.1788			0.1552
31. Role Overload	0.919	0.1869			0.4338
32. Involvement in Decision Making	0.5843	0.7748			0.7418
33. Openness of Expression	0.2315	0.3018			0.5878
34. Encouragement of Experimentation	0.8787	0.8974			0.0894
35. Superintendent Facilitates Administrator Interaction	0.501	0.7588			0.9661
36. Career Expectations	0.8642	0.5098			0.0975
37. Present Conditions	0.2978	0.4529			0.2421
38. Would Like Conditions	0.6699	0.813			0.849
39. Effectiveness of the School	0.9058	0.6621			0.7136
40. Growth Need Strength	0.5047	0.7667			0.8499

Note: * indicates a probability of less than .05

The probability statements in columns 11, 12, 13, and 14 were deleted as a result of the San Diego Unified Research Review Committee agreement.

Knowledge of the actual results of the work and career intentions produced significant interactions.

The male administrators indicated that they perceived more knowledge of the results of the work when they were not involved in restructuring while the female administrators indicated that they experienced more knowledge of the results of their work when they were involved in restructuring efforts than when they were not. The implications for the district leaders would be to ensure that the administrators involved in restructuring efforts are given sufficient feedback to allow them to assess the results of their work. The female administrators not involved in restructuring indicated that they did not experience the knowledge of the results of their work to the same extent as their male counterparts that were not involved in restructuring efforts. The district leaders should be aware of the discrepancy and ensure that the female administrator population in particular are kept informed of their progress.

Figure 21. Hypothesis 4: Interaction effect of gender on restructuring for variable 3: Experience knowledge of actual results of the work.

The male administrators involved in restructuring suggested that they thought less about leaving administration than their male counterparts that were not involved in restructuring efforts. The female administrator population indicated just the reverse perception. The female administrators indicated that they thought more about leaving administration when they were exposed to restructuring than they did when they were not faced with restructuring situations.

Figure 22. Hypothesis 4: Interaction effect of gender on restructuring for variable 13: Career intentions.

The data suggested that male administrators experienced less satisfaction with knowledge of the results of the work as a result of restructuring than did the female administrators. However, the restructuring movement produced a significant interaction on career intentions with male administrators involved in restructuring indicating less desire to leave administration than the female

administrators or the male administrators in nonstructuring administrative assignments.

Hypothesis 6

The sixth secondary hypothesis stated that there would be no significant interaction effect between the restructuring variable and the school level variable ($\alpha = .05$). However, the two-way ANOVAs indicated six significant interactions. The following graphs highlight the significant interactions for the variables high internal motivation, co-workers, student learning problems, student behavior problems, superintendent facilitates administrator interaction, and effectiveness of the school.

Figure 23 shows the strong interaction between the restructuring variable and the school level variable for high internal motivation. Those administrators that had been involved in restructuring indicated a higher satisfaction level at the middle and junior high school level than either of the other two school levels. The satisfaction reported by the administrators was higher at the elementary level than the senior high school level for both administrators involved in restructuring and those that were not involved in restructuring. The implications for the district leaders would be to determine why restructuring at the middle and junior high school levels increased the perceptions of internal motivation for those administrators that were involved in restructuring efforts. If reasons

could be found for the higher motivational perceptions of the restructuring administrators at the middle or junior level, then the findings could be applied to the elementary and senior levels.

Figure 23. Hypothesis 6: Interaction effect of restructuring on school level for variable 12: High internal motivation.

As can be seen from Figure 24, restructuring appeared to increase perceived satisfaction with other co-workers in both the elementary and middle and junior high schools. A very strong interaction between restructuring involvement and the senior high school administrators is shown in the graph. The administrators at the senior level dropped considerably in their perceived satisfaction of their co-workers as a possible result of the restructuring efforts. The administrators in the nonrestructuring schools indicated a slight increase in satisfaction with their co-workers at the senior level. The implications are for the district leaders to be wary of restructuring at the

senior high school levels without careful staff development efforts. These staff development efforts could lead to more positive interactions between the other members of the school faculty and staff and the administrators.

Figure 24. Hypothesis 6: Interaction effect of restructuring on school level for variable 18: Co-workers.

Student learning problems was one of several variables that had a lower score indicate a more positive response. As can be seen in Figure 25, the senior high school level shows a very strong interaction. The data suggest that the administrators at the senior high school level experienced more student learning problems in schools that were involved in restructuring whereas schools that had not been involved in restructuring reported relatively high levels of satisfaction with student learning. The implications for the district leaders would be to ensure as few disruptions as possible to the learning environment at the senior level if restructuring efforts are to be undertaken. Student learning problems should be identified and should become the

focal point of the restructuring effort. Triangulation of data to support the perceptions of the site administrators of the restructuring schools would assist greatly in determining the extent of learning problems within the restructuring schools. The learning problems may be the perceived or imagined consequence of increased sensitivity to problems within the school as a result of actively pursuing restructuring strategies to ameliorate real or imagined problem areas.

Figure 25. Hypothesis 6: Interaction effect of restructuring on school level for variable 22: Student learning problems.

In a similar interaction to that described for student learning problems, the senior high school level created a higher perceived problem with student behavior in the restructuring schools than there was reported by the administrators of the nonrestructuring schools. Perhaps the uncertainty created in a change situation or change

environment was more unsettling to older students than the change efforts were to students at lower grade levels and restructuring efforts were therefore better suited for the younger students in the school system. Triangulation of data to support the findings with some further investigations would add greatly to the district leaders' understanding of the impact restructuring efforts have on student behavior.

Figure 26. Hypothesis 6: Interaction effect of restructuring on school level for variable 23: Student behavior problems.

The senior high school administrators involved in restructuring were saying quite strongly that the superintendent supported interaction among the administrators in the district while the administrators at the senior high school level not involved in restructuring were less than satisfied with the interaction promoted by the superintendent. District leaders should be aware of the discrepancy between the two groups of administrators and should strive to facilitate participatory interactions of

all administrators and particularly the administrators in schools not actively involved in restructuring efforts.

Figure 27. Hypothesis 6: Interaction effect of restructuring on school level for variable 35: Superintendent facilitates administrator interaction.

Figure 28 shows very dramatically the impact the restructuring movement has had on the administrators' perceptions of the effectiveness of their respective schools. Restructuring appeared to have increased the perceived effectiveness of the schools at the middle and junior high school level while at the senior high school level the restructuring movement has severely lowered the perceived effectiveness of the schools involved in restructuring. The district leaders should work to establish measures of true effectiveness of all schools and in particular the senior high schools so that more objective evidence can be gathered to corroborate the perceptions of the site administrators. The district leaders could also assist senior high schools to establish restructuring programs and efforts that were more consistent with the

effective schools correlates outlined in the district literature. Perhaps more feedback on the successes of the senior high school restructuring efforts would promote the perception of higher or better effectiveness at the senior high school level. The elementary and middle/junior high schools appeared to respond quite well to the restructuring efforts.

Figure 28. Hypothesis 6: Interaction effect of restructuring on school level for variable 39: Effectiveness of the school.

Hypothesis 6 examined the interaction effect of restructuring on school level. In five out of the six significant interactions, there were strong interactions at the senior high school level suggesting that restructuring was having a definite impact on a variety of aspects of the administrator's life in the senior high school. Restructuring at the senior level impacted negatively on co-worker relationships, student learning and behavior problems, and the overall effectiveness of the school. However, the administrators at the senior high level also indicated that they perceived far more support from the

superintendent in facilitating interaction among administrators and restructuring appeared to create more internal motivation for the administrators at the middle and junior high school level than for the administrators at the other two levels.

Hypothesis 7

The seventh secondary null hypothesis stated that there would be no significant interaction effect between administrative position and involvement in restructuring ($\alpha = .05$). The two-way ANOVAs on the 40 variables produced 8 significant interactions. The following graphs and discussion highlight the significant findings for the variables task identity, autonomy, motivating potential score, pay, competence of supervisor, student learning problems, involvement in decision making, and career expectations.

Restructuring affected the administrators' perceptions of the identity of the task the vice principal or principal was to perform. The principals that had not been exposed to restructuring efforts in their schools reported far higher understanding of their task than did the principals in schools that had officially been involved in restructuring. The converse was true for the vice principals. The vice principals that had been involved in restructuring reported considerably higher understanding of their tasks than did their counterparts in schools that had not experienced

restructuring efforts. The message appears quite clear to district leaders. The leaders should outline very carefully the tasks that are to be performed in the restructuring movement so that site principals are clear as to the tasks they are to perform. The data suggest that through the restructuring efforts the vice principals are gaining a better understanding of their tasks in the schools while the principals are having more difficulty understanding their specific roles. When both the site administrators and the central office leaders reach a common understanding of the roles and expectations for the schools in the restructuring movement then the administrators at the sites will experience greater satisfaction with meaningfulness of their work.

Figure 29. Hypothesis 7: Interaction effect of administrative position on restructuring for variable 5: Task identity.

The principals appeared to be having more difficulty with perceived autonomy in the schools that were actively involved in restructuring than the schools that were not

involved in restructuring. At the same time, the vice principals felt they had more autonomy in the restructuring schools than did their counterparts in schools not involved in restructuring. The message to the central office leaders should be that the principals do not perceive increased autonomy as a result of restructuring efforts. The district leaders should define what autonomy is and what the expectations of an autonomous unit are with respect to accountability and control over district resources. Within the schools, the vice principals indicated greater autonomy as a result of the restructuring efforts, yet the school principals felt that there was a decline in the autonomy. The autonomy perceptions of the central office leaders and the site personnel are at odds and some very clear understandings should be reached if the school site leaders are to effectively run their schools in a climate of mutual respect and understanding that can be brought about through the autonomous relationship espoused in the district's restructuring literature.

Figure 30. Hypothesis 7: Interaction effect of administrative position on restructuring for variable 7: Autonomy.

The MPS is a mathematical derivative of several job core characteristics. If any one or two of the job core characteristics score low then the MPS will be low as well. The principals indicated that autonomy was a big issue within their group between the administrators of restructuring schools and the administrators of nonrestructuring schools. The autonomy difference was reflected in the MPS score as the same trends for both the principals and vice principals were indicated for the MPS. The lower MPS scores for the principals in restructuring schools indicated that the district leaders could work on the job core characteristics through enrichment or enlargement of the job core characteristics to promote a higher motivating potential score. The fact that the score for the principals involved in restructuring was lower than the score of principals not involved in restructuring indicated that some elements of the job were different and were not creating the motivational potential that was possible within the principalship. Serious attention should be paid to increasing the principals' motivating potential score as the principals, along with the other site leaders, are responsible for creating an effective learning environment for the students. If the principals and other site leaders are not working to their fullest potentials, then valuable resources are being wasted or abused. The mandate for improvement of the school system has been made by the superintendent. The necessary support for the

improvement must come from the central office. The site administrators, particularly the principals, were saying that restructuring was having an impact on their perceptions of a number of job core characteristics that included feedback, autonomy, and task and skill identity. The district leaders should work hard at improving those areas of the MPS that can be improved through more attention to sharing of information and resources to allow the site administrators to work more autonomously and with sufficient knowledge and support from the central office to create the kinds of schools that are being asked for by the superintendent.

Figure 31. Hypothesis 7: Interaction effect of administrative position on restructuring for variable 10: Motivating potential score.

Figure 32 shows that the vice principals' perception of their pay was very similar in both restructuring schools and nonrestructuring schools. However, the principals involved in restructuring were saying that their pay was not as satisfactory as the administrators in nonrestructuring

schools perceive their pay to be. The central office leaders should be aware that the principals do not feel that their monetary compensation for their restructuring is satisfactory. Restructuring efforts were causing administrators to perceive that their salaries were less satisfactory than if the administrators were not involved in restructuring. Perhaps other incentives should be created to increase the satisfaction levels of the site administrators involved in restructuring. Even in times of severe budget limitations creative incentives should be developed to motivate and reward site administrators. Money alone may not solve the administrators perceived need for greater compensation. The district should definitely examine the compensation issue to ensure that the perceived needs of the administrators are recognized and solved.

Figure 32. Hypothesis 7: Interaction effect of administrative position on restructuring for variable 17: Pay.

A definite trend was developing around the principals' reactions to restructuring. The vice principals appeared to

be responding to the restructuring efforts quite well by not showing drops in their perceived satisfaction levels in the variables discussed so far. The principals, on the other hand, consistently reacted negatively to the restructuring efforts. In Figure 33, the principals were far more critical of the competence of their supervisor in schools that were restructuring as compared to schools that were not restructuring. Perhaps because so little was known about restructuring schools the principals felt that their supervisors knew little more than the principals about restructuring. The district leaders should be aware that the principals did not perceive their supervisors to have exceptional competence when the issue was restructuring schools. The district leaders could either bring in experts in the field of restructuring to assist principals in restructuring or the district could insist that the supervisors in the district reassess their own behavior and the supervisors could take great care to keep themselves up to date and on the cutting edge of change and innovation in the school systems around the county and around the world to add credibility to their work with the site administrators.

Figure 33. Hypothesis 7: Interaction effect of administrative position on restructuring for variable 20: Competence of supervisor.

The same trend as identified above was prevailing in the student learning problems variable. The principals received more student learning problems as a result of restructuring than they did in nonrestructuring schools. The vice principals, on the other hand, again expressed less concern with student learning problems as a result of the restructuring efforts. The district leaders could assist the site administrators in working together to determine the extent and scope of student learning problems. The vice principals perceived a better environment than did the principals in the restructuring schools. Perhaps the vice principals have a great deal of information or valuable insights to share with the principals of the district or vice versa. The fact remains that two different groups of professional educators had very different perceptions of the student learning problems in the schools and the interplay of the restructuring movement on the learning problems. Through a collaborative approach, central office leaders,

principals, and vice principals should be able to identify and map out strategies to deal with the perceived student learning problems in the restructuring schools.

* a lower score is more positive for the variable

Figure 34. Hypothesis 7: Interaction effect of administrative position on restructuring for variable 22: Student learning problems.

The principals of restructuring schools perceived their involvement in district decision-making practices to be less than those principals of nonrestructuring schools. The vice principals showed considerably more perceived involvement in decision making as a result of restructuring efforts. Perhaps the different levels of involvement in the educational system were creating the different perceptions found between the principals and vice principals in the interactions being detected through secondary hypothesis 7. Restructuring efforts have given vice principals more input at the school and district levels than they had previously been used to contributing. The principals on the other hand may have perceived that district leaders were not including them quite as readily as they should in the restructuring

plans for the district. In either case the district leaders and the site administrators must work out an understanding of decision making, authority, roles, and responsibilities for all players and stakeholders in the district system. The principals demonstrated a perception of decreased involvement in decision making as a result of restructuring efforts. The district leaders should take the findings under consideration when formulating future directions for the district and ensure adequate representation of principals in future decision-making processes concerning the restructuring movement.

Figure 35. Hypothesis 7: Interaction effect of administrative position on restructuring for variable 32: Involvement in decision making.

In a turnabout from the previous figures of interaction, the principals in the career expectations variable indicated that they were more satisfied when they were involved in restructuring than did the principals in nonrestructuring schools. Conversely, the vice principals reported that their career expectations were not being met

nearly as well in the restructuring schools as their career expectations were being met in the nonrestructuring schools. Perhaps all principals should be given the opportunity to administer a restructuring school to experience increased satisfaction with their career expectations. The vice principals still have one more advancement to make in site administration to be able to realize their career expectations for administration. Perhaps the vice principals too will come to perceive greater satisfaction with their career expectations after they have received a principalship and have piloted a school in restructuring.

Figure 36. Hypothesis 7: Interaction effect of administrative position on restructuring for variable 36: Career expectations.

Hypothesis 7 examined the effects of restructuring on administrative position in the perceptions of satisfaction of the site administrators. Across most of the 8 significant interactions the principals experienced more dissatisfaction with their jobs as a result of restructuring efforts than they did if they had been assigned to

nonrestructuring schools. The vice principals, on the other hand, expressed more satisfaction with their work as a result of restructuring efforts. The exceptions were in the perception of student learning problems and career expectations. The principals perceived fewer learning problems in the schools that had experienced restructuring while the vice principals indicated that they perceived there to be more learning problems as a result of the restructuring efforts.

Hypothesis 10

The tenth secondary null hypothesis stated that there would not be a significant interaction between the male and female administrators and the principal and vice principal positions ($\alpha = .05$). However, 2 of the 40 variables, autonomy and holidays, produced a significant interaction effect.

Figure 37 shows that female principals perceived greater autonomy than their male counterparts, while at the same time the female vice principals perceived less autonomy in their jobs than did the male vice principals. The district leaders could make use of these findings by ensuring that more autonomy is granted to principals and the male principals in particular. Within the schools the female vice principals could be nurtured more productively if they were allowed more autonomy in their positions. The graph suggests that as the male administrator moves from the

vice principalship to the principalship the perceived autonomy in the school system declines whereas the female administrator perceives greater autonomy is derived during the move from the vice principalship to the principalship. The district leaders should be cognizant of the perceived differences between the genders and promote policies and procedures that address individual perceptions rather than policies and practices that are uniform or apply equally to all administrators.

Figure 37. Hypothesis 10: Interaction effect of gender on administrative position for variable 7: Autonomy.

At the vice principal level, there was very little gender difference in the perception of satisfaction with the holidays derived from education. However, the male principals in the study indicated a very strong opinion about holiday time compared to the female administrators. The holiday variable was reversed in scoring such that a lower score represented a more positive or satisfactory perception of the variable. The male principals indicated satisfaction with their holidays while the female principals felt that their holiday time was not satisfactory. Gender

was introduced as a variable in the study to examine equity issues. During the past several years, many more females have been promoted to administrative positions. One concern expressed by a number of experts in educational leadership (Latta, 1990) is that female administrators work extremely hard, often to the exclusion of their personal lives. San Diego Unified School District has multitrack and single-track year-round schools that create extra demands on the time of administrators on a year-round basis. The district leaders should ensure that adequate breaks are taken by the administrators to ensure a balanced approach to work.

Figure 38. Hypothesis 10: Interaction effect of gender on administrative position for variable 24: Holidays.

Hypothesis 10 examined the interaction effects of gender on administrative position. The male principals perceived more autonomy and more satisfaction with holidays than did the female principals. The opposite was true for the vice principals. The male vice principals felt they had greater autonomy than the female vice principals yet they

felt their holidays were slightly less satisfying than the female vice principals' perceptions of holiday time.

Hypothesis 15

The final secondary hypothesis included in the presentation and discussion of the results of the study was hypothesis 15. The null hypothesis stated that there would be no significant interaction effect between the levels of administrative position and school level ($\alpha = .05$). Three dependent variables, high satisfaction, pay, and administrative assignment, displayed significant interaction effects based on administrative position and school level.

Figure 39 shows that vice principals had a very different appreciation of their jobs depending on the level of school. The vice principals found the greatest satisfaction at the middle or junior high school and there was a sharp decline in satisfaction at the senior high school level. The principals, in contrast, felt that administration at the elementary and middle or junior high schools produced similar satisfaction levels while the principals at the senior high school expressed more satisfaction with their work environment. A number of factors could explain the discrepancy between the principals' and vice principals' perceptions of satisfaction at the senior high school level. The principals are generally well paid and perform different roles and

responsibilities than the vice principals. The principal is often involved as an ambassador for the school. As such he or she tries to represent the school as a good place to work and learn. The principal is the instructional leader of the school and often takes on the role of mentor or advisor in educational matters. The vice principals are responsible for the internal organization, discipline, and repairs and maintenance of the school. Two very different roles for two very different positions. Gorton and Kattman (1985) stated that vice principals were no longer satisfied with their roles in the schools and that the vice principals wanted more involvement in decision making and instructional leadership and not just the mundane operational aspects of the school. The district leaders in San Diego Unified could examine the roles and responsibilities currently assigned to both levels of administration and work with the administrators' association to develop a new set of roles and responsibilities for each level of administration. Gorton and Kattman pointed out that for many vice principals their current position may be the top of the career ladder for them. Many vice principals will spend many years in that position and the job should be sufficiently challenging that the incumbents can see and feel that their jobs are important and exciting career goals.

Figure 39. Hypothesis 15: Interaction effect of administrative position on school level for variable 11: High satisfaction.

The vice principals displayed a similar pattern of dissatisfaction with the pay they received as they did with their assessment of their general satisfaction presented above. The vice principals were relatively satisfied with their pay at the elementary level but that satisfaction was diminished at the middle and junior high school level and the pay satisfaction plummeted at the senior high level. In contrast, the principals were less satisfied with their pay than the vice principals at both the elementary and middle and junior high levels but extremely satisfied with their pay at the senior high school level. The district leaders could examine pay and incentive programs to ensure that district reward, pay, and recognition programs are meeting the needs of all of the site administrators. According to Herzberg (1968, 1979), employees need to have the basic extrinsic or hygiene factors addressed to allow the pursuit of the higher order needs or factors referred to as motivational factors. Extrinsic factors such as pay can

create dissatisfaction but rarely cause motivation. Pay is one factor that research has indicated is not a motivator to educators and pay is not the primary reason for individuals to be in education (Frase & Conley, 1989-90; Frase & Piland, 1989). However, compensation must be at sufficient levels to alleviate dissatisfaction with the financial rewards of the job. The district leaders must be concerned with maintaining motivation of the employees through the elimination of the dissatisfiers. The district leaders should be able to establish the causes of the dissatisfaction with the pay structure at the vice principal level and try to negotiate a package of compensation that meets the needs of the vice principals. Monetary rewards may not be the only rewards that could work. In the spirit of restructuring, perhaps several innovative reward structures could be introduced to provide the needed satiation of needs and provide additional motivational aspects to the administrators' job.

Figure 40. Hypothesis 15: Interaction effect of administrative position on school level for variable 17: Pay.

The final interaction effect continued the trend of satisfaction of the principals at the senior high level and the dissatisfaction of the vice principals at the senior high level. The figure shows that the principals were more satisfied with their assignments at the middle and junior high school levels. The vice principals, however, showed declining satisfaction at the middle and junior high school levels. The significant interaction between administrative position and school level indicated a discrepancy in the perceptions of job satisfaction based on the two variables. The best interests of the district should be served if both groups of administrators were satisfied with their work environment. The goal for the district should be a win-win situation for both groups of administrators rather than having winners that are satisfied and losers that are dissatisfied.

Figure 41. Hypothesis 15: Interaction effect of administrative position on school level for variable 28: Administrative assignment.

Hypothesis 15 examined the interaction effects of administrative position on school level. In all three significant interactions there was more satisfaction by the principals at the senior high school level than there was satisfaction expressed by the vice principals at the senior high level. The satisfaction in the administrative assignment produced the strongest interaction between elementary levels and middle and junior high school levels. The elementary principals were less satisfied with their assignments than were the vice principals. Yet, at the middle or junior high level the trend was reversed with the principals indicating far greater satisfaction with the administrative assignment than their vice principal counterparts. Some facets of the job context or content were having a tremendous impact on the perceptions of satisfaction in the administrative positions at the various school levels.

Section 5: Summary of Open-Ended Remarks Sections

The survey instrument contained several areas in which respondents could write in their own remarks about anything that came to mind as the subjects were working their way through the instrument. Many respondents took the opportunity to write in some short comments. A few others made many comments on many of the questionnaire items. Several people took the time to write short paragraphs and

editorial comments about their life and work as an administrator. The remarks were analyzed and synthesized into four general themes. One theme involved statements indicating that the people in the central office had views about the amount of support, interaction, communication, and mandates that were inconsistent with the views of the site administrators. For example, one administrator remarked:

I would like a supervisor to be able to do my job well. I would like to feel that those evaluating me could run a large, urban, comprehensive high school well. . . . The tools we need to improve are too often not in the hands of the site. As we are held responsible. Despite all this I like the assignment and the kids. The task could be made a lot easier--and we could see results sooner--with some tools.

Another theme centered on the lack of resources or limited resources available to do the work that was being asked of the site administrators. One administrator commented, "recent budget problems plus 'close the gap,' shared decision making, restructuring, etc.--makes us all frustrated with being asked to do more with declining resources." Another site administrator stated, "My school is in a high ethnic, highly dysfunctional area with gangs and drugs. We do receive a lot of federal and state money. Community services are improving, but more are needed to help the school help parents and students succeed."

A third theme developed around the concern for the demands placed on the site administrator. Many respondents felt that there were more demands than there were time or resources available with which to cope with the demands.

One administrator noted:

My job is an impossible one given current available resources. We still heap more on without removing the excess and unnecessary. I have no regrets for my choice of careers and assignments. I sincerely hope those coming up can have the resources required to support them in their exciting but demanding roles.

The final theme identified in the open remarks sections was intentionally put at the end of the discussion of the remarks as the comments surrounding the theme offered hope and inspiration in a time when many administrators were expressing concerns. Frase (1989) stated that teachers entered teaching for more altruistic motives than simply monetary rewards. The intent of the current research was to uncover the sources of satisfaction and dissatisfaction as perceived by the site administrators. For many site administrators, the daily struggle for resources and the struggle to implement mandates from above were some of the dissatisfiers of the job. The bureaucracy at work can create many perceptions of dissatisfaction. However, the motivators, according to Herzberg (1968), are those intrinsic rewards that people get when they realize that their work and effort have meaning. The following are a few

exclamations made by the administrators that offered hope and inspiration. One administrator said:

You caught me at a great time. My current position may jaundice my opinion but I really have been able to be independent yet held accountable for projects under my supervision. My supervisor has given me the green light this year and my satisfaction rate has gone up. Thank you. I enjoyed answering your survey far more than I thought I would.

Another administrator simply stated, "I love it!"

And another said,

Fortunately, I love what I do and I am good at it. I plan to become the best at what I do; for my kids.

. . . I see high potential for my school to move towards the "extremely effective" side of the scale. The ground work is being laid and the seeds are being planted. Good luck!

The final comment selected for inclusion stated very succinctly what many educators really feel about their work: "I love my job. It is meaningful, exciting, challenging, and exhausting. I know I make a difference in this world--a difference for the good of our society."

Summary

The site administrators of San Diego Unified School District indicated less satisfaction with several aspects of their work environment. The administrators perceived the

variables task identity, feedback from supervisor or other administrators, repairs and maintenance, communication, role overload, and openness of expression to produce lower satisfaction levels than the perceptions of satisfaction as reported in the other 40 dependent variables.

These six variables produced only one significant differences in the primary hypotheses and one significant difference in the secondary hypotheses. This could be interpreted to mean that the administrators had a very uniform perception of low satisfaction with these elements of their work environment.

In a comparison of groups according to the levels of the independent variables based on the eight primary hypotheses generated to guide the study, 41 significant differences were identified through the ANOVAs. The post hoc Scheffé comparisons identified the subgroup or levels of the variable that were responsible for the significant difference in the ANOVA for each of the 40 variables. Significant difference between the levels of the independent variables covered a wide range of constructs as identified by the 40 dependent variables. Several of the dependent variables were identified in more than one instance as creating the significant ANOVA results while others contributed to a major theme that emerged as the analyses and interpretation of the results progressed. A concern with regard to communication, feedback, involvement in decision making, information sharing, and supervisor support

emerged as a recurrent theme in several of the dependent variables. From a more pragmatic standpoint, perceptions of satisfaction with career intentions, school size, student learning and behavior problems, parental support, repairs and maintenance, and the effectiveness of the school created a number of significant differences between the levels of the independent variables.

In terms of the independent variables used in the study, the administrative position variable created the most significant differences with ten, followed by the perceived socioeconomic status of the student population with seven. The school calendar and school level variables each produced five significant differences, gender and age each produced four significant differences, and restructuring and ethnic diversity each produced three significant differences.

From the analyses of the 15 secondary hypotheses 37 significant interactions were identified. Because of the agreement with the San Diego Unified Research Review Committee, only 21 of the significant interactions were analyzed and discussed in the presentation of the results of the study. The interaction effects portion of the study suggested that perceptions of restructuring were influenced by school level and administrative position. Sixteen of the 21 significant interactions were based on the interaction of the restructuring variable with the school level, administrative position, and gender variables. Administrative position interacted significantly with both

gender and school level to produce the remainder of the significant interactions discussed. A note of caution is in order in that the interactions described as centering around restructuring and administrative position were the only interactions discussed in the study as a result of the agreement with the San Diego Unified Research Review Committee. Sixteen other significant interactions were detected but were eliminated from the discussion and presentation of data to honor the agreement to protect the confidentiality of the subjects.

Chapter IV presented the major findings surrounding the 8 primary and 15 secondary hypotheses tested in the study. The data suggest some very significant areas of dissatisfaction as well as many areas that were perceived by the site administrators to be providing much satisfaction in the school work environment. Chapter V will present a summary of the research project and introduce the conclusions drawn from the data presented in Chapter IV. Chapter V concludes with recommendations for further study.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

The first section of Chapter V presents a summary of the purpose, the theoretical background and literature related to the outcomes of the study, the methodology, and the findings of the study. The second section delineates the conclusions drawn from the findings. The final section provides recommendations for the San Diego Unified School District, urban school districts, and further study based on the findings of the research.

Summary

Overview of the Study

The purpose of the study was to explore the intrinsic and extrinsic work factors that affected the perceived job satisfaction of the school-site administrators in the San Diego Unified School District. If the sources of dissatisfaction in an administrator's job can be reduced then, according to theory (Hackman & Oldham, 1976; Herzberg, 1968), the administrator should experience greater satisfaction and motivation. This study sought to identify a number of factors that had been identified by previous

research as factors that have had a significant impact on the quality of the working life of individuals in educational settings.

Within the past few years the San Diego Unified School District had instituted a number of practices and procedures, as well as demands, that have had an impact on the working lives of the site leaders. For example, the district utilized three different types of school calendars throughout the year. They had a traditional 9-month calendar, a single-track year-round calendar, and a multitrack year-round calendar. The district also operated elementary, middle and junior high schools, and senior high schools. The district had both male and female administrators whose ages ranged from 30 to over 60. San Diego Unified School District had students from a wide range of socioeconomic backgrounds and the students represented many ethnic and cultural origins. The district had principals at all schools and vice principals at most schools. As of June 1990, 53 of the district's 160 schools were officially involved in the restructuring movement. As a result of the above mentioned conditions, eight primary hypotheses were developed to investigate the impact of the conditions on district administrators' satisfaction with their work.

Through the review of the relevant literature, leadership theory was examined as it related to the role of the leader in the leadership relationship. The intent of

the research was to identify the wants and needs of the site administrators. Many of the authors reviewed, such as Burns (1978), Bennis and Nanus (1985), Foster (1986a), and others stressed that addressing the wants and needs of the followers was a core concern of the leader. In the case of the San Diego Unified School District, district leaders should be aware of the wants and needs of their followers, the employees of the district. Bennis and Nanus (1985) provided the most succinct definition of leadership as it relates to the current study when they stated

leadership is "causative," meaning that leadership can invent and create institutions then can empower employees to satisfy their needs. Leadership is morally purposeful and elevating, which means, if nothing else, that leaders can, through deploying their talents, choose purposes and visions that are based on the key values of the work force and create the social architecture that supports them. (p. 218)

The present research identified a number of needs of people in the district work force. The leaders in the district can provide the social architecture to support these employees by addressing these needs. The rationale, presented for addressing the wants and needs of the administrators, in the case of this study, was to produce more satisfaction and motivation in the administrators' work. Many authors, such as Foster (1986a), feel that leadership must be moral in that leadership attempts to

improve the human condition. The present research has identified a number of wants and needs of the site administrators that, when addressed, should improve the work environment of these individuals. The improvement of the work conditions through leadership relations should raise the followers to higher levels of motivation and aspiration. Raising followers to higher levels of motivation and aspiration is the essence of transformational leadership, according to Burns (1978). The extent to which leadership relationships address the wants and needs of the site administrators, identified in this study, remains to be seen.

The review of the literature identified many organizational, societal, and educational factors that have impacted on the site leaders. School based autonomy, shared decision making, restructuring, working with a more educated employee group, changes in governance roles within the schools, and a host of other factors were described as factors that were impacting on the work of the traditional site leaders. Lawler (1985), Conley (1988), and Conley and Bacharach (1990) suggested that as employee education levels rose so did the need for more participatory management styles. The variables that measured perceived participation in decision making and autonomy identified problems within the San Diego Unified School District. Lortie (1982) and Lawler (1982) believed that the bureaucratic top-down management techniques of the past were no longer acceptable

to educators today because of the increased education levels of the employees. The administrators in this study seemed to agree that top-down management techniques were the sources of dissatisfaction.

Out of the initial theories of Maslow, Herzberg, Lawler, and Porter, Hackman and Oldham developed a model of worker satisfaction and motivation called the Job Characteristics Model (JCM). The JCM was validated in many industrial settings and was the most prominent theory of work and motivation during the early 1980s.

Several researchers looked at the JCM and validated the model in the educational setting (Gorsuch, 1976; Harder, 1985). Many researchers, such as Conley et al. (1989), Bacharach and Mitchell (1983b), Frase (1989), Piland (Frase & Piland, 1989), and Rottier et al. (1983), identified many additional factors that were having an impact on the working lives of educators. The JCM and its companion Job Diagnostic Survey (JDS) were modified by Frase (1989; Frase & Heck, 1990), who integrated a number of the more recently identified variables that were validated in the educational setting, and produced a revised JCM and JDS. Frase then used the revised JDS in a three-year research project in the Fort McMurray Catholic School District in Alberta, Canada.

The JCM and JDS provided a very good model of interaction of work factors for the current study. The moderator variables that had been added to the original model provided valuable insights into factors that were

creating different perceptions of satisfaction amongst the site administrators. The original Hackman and Oldham model had been strengthened by the work of Conley, Bacharach, and Bauer, Frase, and others and the revised JDS instrument was sensitive enough to identify many areas of concern to the administrators in the current study.

Sergiovanni (1987), Cross (1990), and others pointed to the need for more extensive research in the field of educational administration and motivation in education to guide changes to the system. San Diego Unified Superintendent Payzant (Payzant, 1989) and Assistant Superintendent Carriedo (Strother, 1989) also stressed that the school district leaders had a history of basing their decision on sound research and investigation and that this policy had allowed the district to be very successful in many of its long-range planning endeavors.

Educational systems, by their very nature, are organizations based on stability. If successful changes are to occur, then mutual needs and wants of all participants would have to be uncovered and new organizational goals and objectives delineated. This kind of change initiative would take very strong leadership to pull all of the stakeholders together to work toward a common or mutually agreed upon future. The identification of the wants and needs of the stakeholders in the system through formal research and investigative techniques would be the starting point for the

district leaders in the quest for a better future and work place for the employees of the district.

Fay (1977) and Burns (1978) had similar understandings of change. Fay called for enlightenment of the current situation, empowerment of those in a position to direct change, and emancipation of the human condition through the change process. Burns proposed in his notion of change that needs became wants, and wants became aspirations that eventually became political demands on the organization. The test of Burns' leadership was the transformation of the human condition as well. Time will tell the extent to which transformational leadership relationships develop in San Diego City Schools.

To examine and quantify the wants and needs of the administrators, the JDS and JCM were further adapted by this researcher for the current study. Forty dependent variables were identified and measured via the revised JDS and the levels of the eight independent variables also selected provided the means to compare the relative satisfaction of specific administrator groups. The revised JDS was sent to each site administrator in February of 1990. One hundred fifty-eight surveys were returned (57% return rate), and of those returned, 144 were used in the study.

The eight independent variables that were identified as possible factors affecting satisfaction within the site leaders' work environment were school calendar, restructuring, gender, age, school level, administrative

position, socioeconomic status of the student population of the school, and the degree of ethnic diversity within the school. Eight primary hypotheses were developed to statistically test for differences between the levels of the independent variables. In addition, 15 secondary hypotheses were developed to test for significant interaction effects between the independent variables. One-way and two-way ANOVAs were used to test the primary and secondary hypotheses respectively. An $\alpha = .05$ was used in all tests of significance. Following a significant finding, a Scheffé post hoc analysis was calculated to determine which of the levels of the independent variable was significantly different from the other levels. The ANOVA source tables, post hoc analyses, and incidence tables from the two-way ANOVAs for the significant findings only can be found in Appendices I and J.

Findings of the Study

The descriptive statistical summary of the results pointed to several of the dependent variables as being sources of dissatisfaction. The administrators identified the variables task identity, feedback from supervisor or other administrators, repairs and maintenance, communication, role overload, and openness of expression as the factors in their work that produced low perceived satisfaction. A central theme of dissatisfaction with communication within the district emerged from the analyses

of the task identity, feedback, communication, and openness of expression variables. The role overload variable indicated that the administrators perceived that they had more tasks to do than there was time to accomplish the tasks. The administrators also indicated dissatisfaction with the repairs and maintenance capabilities of the organization.

The focal point of the theoretical foundation for the study has been the Hackman and Oldham Job Characteristics Model. Central to Hackman and Oldham's theory is the value or utility of the Motivating Potential Score (MPS). As described in Chapter II, the MPS is derived from a formula based on the measures for the variables skill variety, task identity, task significance, autonomy, and feedback from the administrative job and the supervisor and other administrators. The MPS for the San Diego Unified District administrators was 151.33 on a scale of 1 to 343. This MPS can be interpreted to mean that there is room for redesign of the administrators' work and interaction with others that will produce greater satisfaction with the work role.

The comparative statistical analyses of the data resulted in 41 significant differences out of the 320 ANOVAs that were calculated for the 40 dependent variables. Each primary hypothesis produced one or more significant findings based on the 40 dependent variables analyzed. Each hypothesis is reviewed and discussed below.

Hypothesis 1 examined the affects of school calendars on the job satisfaction of the administrators. The variables efficacy, student learning problems, student behavior problems, holidays, and repairs and maintenance produced significant findings ($\alpha = .05$). The post hoc analyses identified the multitrack administrators as significantly different from the other administrators. The multitrack administrators were significantly more satisfied with efficacy, student learning problems, and repairs and maintenance. However, they were significantly less satisfied with their holidays.

Hypothesis 2 looked at the affects of restructuring on the administrator population. Task significance, feedback from administrative job, and pay produced significant findings differences ($\alpha = .05$). Those administrators that had been involved in restructuring schools prior to June 1990 expressed significantly less satisfaction on the variables listed than those administrators that had not been involved in restructuring until the fall of 1990.

Hypothesis 3 investigated the affects of gender on satisfaction. Career intentions, holidays, superintendent facilitates administrator interaction, and would like conditions produced significant findings for gender ($\alpha = .05$). The female administrators were significantly more satisfied with career intentions and had higher expectations on the would like conditions variable while the male administrators were more satisfied with the holidays and

superintendent facilitates administrator interaction variable.

Hypothesis 4 examined the affects of age on administrator job satisfaction. Career intentions, repairs and maintenance, involvement in decision making, and effectiveness of the school were the variables that produced significant differences. The older administrators had significantly less desire to remain in administration, as would be expected. Younger administrators expressed more satisfaction with involvement in decision making than did the older administrators. Conversely, the older administrators were much more satisfied with repairs and maintenance and the effectiveness of the school.

Hypothesis 5 looked at the administrator's school level. High internal motivation, student behavior problems, parental support, repairs and maintenance, and superintendent facilitates administrator interaction were the variables that produced significant findings for the school level variable ($\alpha = .05$). Working at the senior high school produced significantly less satisfaction with all five variables identified.

Hypothesis 6 involved the administrative position of the administrator as a possible variable in the satisfaction with work. Experience knowledge of the actual results of the work, career intentions, co-workers, school size, student behavior problems, parental support, repairs and maintenance, role ambiguity, career expectations, and

effectiveness of the school produced significant findings ($\alpha = .05$). The administrator position variable produced the most significant findings of the eight independent variables used in the study. The vice principals were less satisfied with all of the variables listed except career intentions. The vice principals indicated that they planned to stay in administration significantly longer than the principals, as one might expect.

Hypothesis 7 looked into the effects of the socioeconomic status of the student population on the perceived job satisfaction of the administrators. Autonomy, motivating potential score, school size, student learning problems, student behavior problems, parental support, and effectiveness of the school produced significant findings ($\alpha = .50$). The findings supported the often voiced perception that students from low socioeconomic backgrounds have more difficulty in educational settings than the more affluent students. The administrators expressed significantly less satisfaction with student learning problems, student behavior problems, parental support, and the effectiveness of the school. Administrators in schools with a high perceived socioeconomic student population were perceived as less satisfying for the variables autonomy and MPS.

Hypothesis 8 looked at the ethnic diversity of the student population as a possible source of satisfaction for the administrators. Three variables, student learning

problems, student behavior problems, and parental support produced significant differences ($\alpha = .05$). Administrators in schools with low ethnic diversity expressed greater satisfaction with student learning problems and parental support. The administrators were most satisfied with school size in the schools that had moderate ethnic diversity.

Fifteen secondary hypotheses were developed to examine specific interactions between the independent variables. Of the 600 two-way ANOVAs calculated, 37 significant interactions were identified ($\alpha = .05$). Of the 37 significant findings only 21 were used in the presentation and discussion of the findings due to small sample sizes in some of the subgroups. Sixteen of the 21 remaining significant interactions involved the restructuring variable. The other 5 significant interactions involved the administrator position variable. Secondary hypotheses 1, 2, 3, 5, 8, 9, 11, 12, 13, and 15 (see Section 4, Chapter IV) were eliminated from the discussion due to the small sample sizes or because they failed to produce any significant interactions. The remaining five hypotheses 4, 6, 7, 10, and 15 produced the 21 significant interactions ($\alpha = .05$) that are summarized as follows:

Hypothesis 4, which examined the interaction of the restructuring variable with the gender variable, showed that males did not experience as much knowledge of the results of their work in restructuring schools as did females. However, the males involved in restructuring expressed less

desire to leave administration than did their female counterparts.

Hypothesis 6 produced significant interaction effects between the restructuring variable and the school level variable on six dependent variables. Generally, administrators at the senior high school level expressed less satisfaction with the facets of their job than did the administrators at the elementary and middle or junior high school levels.

Hypothesis 7 examined the interaction of the restructuring variable with the administrative position variable and produced significant findings on eight dependent variables. Basically, principals experienced less satisfaction with many aspects of their job in restructuring schools with the exception of perceptions of student learning problems. In this case, principals in restructuring schools believed that the students were having fewer learning problems.

Hypothesis 10 looked at interaction of the administrative position variable with gender and produced two significant interactions. Female principals believed they were not receiving enough holidays while their male counterparts were more satisfied with holiday time. At the vice principal position the opposite was true. The female vice principals felt more satisfied with holidays than the male vice principals. Female principals were also more satisfied with perceptions of autonomy than were the male

principals while female vice principals felt less satisfied with their autonomy.

Hypothesis 15 tested the interaction between the administrative position variable and the school level variable and produced three significant interactions. Generally, senior high school principals were more satisfied than their elementary and junior high school colleagues. The vice principals, on the other hand experienced less satisfaction at the senior high school. The administrative assignment variable created the strongest interaction effect with senior high principals much more satisfied with their assignments than the vice principals or other elementary or junior high school administrators.

If the results of this research effort have identified the wants and needs of the administrators of San Diego Unified School District and the district leaders can utilize these results to ameliorate deficiencies in the district's policies, procedures, communications, and interpersonal involvements, then the study will have been worthwhile. If leadership involves addressing the wants and needs of followers then it is important that the decision makers in the district, who would like to think of themselves as leaders, should make use of these findings to promote greater satisfaction and motivation within the administrators of the district. If these district leaders can provide a good job for the administrators of the district, then the administrators will respond by doing a

good job. After all, satisfaction is not the cause of good work rather, satisfaction is the result of it.

Practical Significance of the Study

From the leadership perspective presented in Chapter II, the wants and needs of the followers were of paramount importance to this study, for it is through the identification and pursuit of the mutual purposes of the leader and follower that the leadership relationship is realized. The level of leadership relationship that was visualized in this study was the relationship between the superintendent and the other district officials, and the site administrators. From a second perspective, however, strong leadership at the school was presented as an essential component in developing effective schools in the district. A variety of factors impact on the day-to-day work life of educators. The review of literature delineated a number of such factors that have had an impact on the quality of the work life of administrators at the school sites. As a result, a number of potential wants and needs of the site administrators were explored. The major thesis of the study was that district leaders must identify the specific wants and needs and strive to address them.

Presumably, the San Diego Unified Board of School Trustees and superintendent want to have administrators at the schools that are performing at optimal levels of effectiveness and efficiency for these individuals can

provide the impetus for more effective schools. The study sought to identify the areas of concern to the site administrators with the hope that once specific factors of concern were identified both the administrators and the district officials could work toward improvement of the quality of the administrators' work environment. If the administrators could do a better job and produce a more effective school, then improved achievement by the students could be realized.

From a practical standpoint, the results of this study pointed to several areas of immediate concern to the San Diego School District. The administrators indicated a lack of satisfaction with elements of communication within the district. The district has been heavily involved in restructuring activities and these reform efforts have been met with a variety of concerns. The administrators have indicated that they are unsure of their tasks and this could be attributed to a lack of feedback from their supervisors. The administrators also expressed a lack of satisfaction with their ability to communicate and to communicate openly within the district. The district leaders must provide more opportunity for open and frank discussions surrounding the district initiatives. Through the sharing of information, discussion, collaboration, and shared decision making the district leaders could embrace the essence of restructuring and lead the district by example.

The study of policy making has indicated that implementation of policy can be sabotaged at many stages. Restructuring initiatives could certainly be sabotaged by administrators that feel that they have not been included in the decision-making process. For this reason alone, the district leaders should strive to include site administrators in more of the decision-making process.

Several of the significant findings from the eight primary hypotheses indicated a need for change in district policies and procedures. Multitrack administrators expressed significant dissatisfaction with holidays. These administrators cannot get away from their schools for vacations or rests. The constraints are self-imposed as they are allowed holiday time in their contracts. However, being conscientious educators, they often feel that the school would not function without them. The district leaders must open discussions with the multitrack administrators and collaboratively address this problem.

Restructuring initiatives have produced uncertainty for administrators. Their tasks have lost significance and they cannot get the needed feedback from their work to see if they are headed in the right direction. This concept gets back to the issue that more open and complete communication within the district is needed. People have to know that their work is important and that their work is being effective. The San Diego administrators were not getting this information from their jobs and the district must

provide the support to the administrators. The subjects that voiced these concerns were the administrators that had been involved in the restructuring movement prior to June 1990. After that date, all schools in the district were expected to participate in restructuring efforts.

Presumably, many more administrators will be experiencing more frustration with feedback and task significance if the district leaders do not respond to this identified concern.

The age of the administrators had an impact on their perceptions of the quality of their work environment. Adult development theory suggests that with increased age comes increased experience and wisdom. With age and transitions through life's stages, people develop different perspectives and needs. The older administrators were much more satisfied with the effectiveness of their schools. Perhaps this phenomenon was due to complacency, but perhaps it was due to the wisdom and understanding that they were doing the best that could be done with the resources available. Many younger administrators have ideas to test and plans to develop. Some will be successful and others will not. People must learn that there are things that they can change and things they cannot and wisdom is knowing the difference. The district leaders must continue to support freedom of thought, expression, and experimentation by the site administrators to promote this acquisition of wisdom and experience.

Senior high school administrators expressed significant dissatisfaction on five variables. The district leaders must be aware that each level of the school district organization has many unique problems and strengths. For this reason collaboration and shared decision-making exercises should be dealt with by school level when appropriate. Policy implementation theory indicates that those closest to the implementation should be involved in the decision making. Therefore, it makes little sense to have elementary administrators involved in decisions that ultimately impact only on the senior high school administrators and vice versa.

For similar reasons just described for the school level, principals and vice principals viewed their work in significantly different ways. Therefore, each group should be treated individually when appropriate so that more meaningful decision making can take place for each specific interest group.

The site administrators identified several areas of concern based on their perceptions of socioeconomic status and ethnicity within their schools. Whether real differences existed or simply the perceptions of differences existed is not at issue. The fact that these administrators perceived differences indicates a need for strategies, policies, and procedures to deal more effectively with the educational situations in some of these heavily impacted schools. Student behavior and learning problems, parental

support, and the effectiveness of the school were perceived problems based on socioeconomic and ethnic factors. These schools require additional support from the district leaders to meet the needs of the students, teachers, and administrators. Equity and equality of educational opportunity are issues that commonly are presented in the arguments surrounding quality education. Equal funding for schools of equal size does not necessarily translate into equity of educational opportunity. Some schools that are heavily impacted by high ethnic diversity and students from low socioeconomic backgrounds require additional support to meet the needs of their students. The district leaders must provide the resources required to meet these special needs.

The interaction effects of the study also identified some issues of practical significance. Restructuring at the senior high school level created dissatisfaction for the administrators. The senior high school administrators are faced with different issues and concerns than their elementary and junior high school counterparts. The district leaders must formulate specific support strategies for the senior high school administrators to promote the restructuring initiatives. All administrators cannot be lumped together with the hopes that all needs will be addressed. The senior high school people have expressed significantly different perceptions of restructuring and these must be acknowledged by the district leaders.

Restructuring has had a detrimental impact on the perception of satisfaction of the principals of the district. The vice principals on the other hand, have thrived on the restructuring movement. Research has indicated that the roles of principals and vice principals are very different. Restructuring has given the vice principals job enrichment opportunities and they have responded with increased satisfaction with their work. The principals, by contrast, have had a number of their traditional roles and responsibilities undermined by the restructuring movement and they have indicated less satisfaction with their work. The district leaders must strive to reconcile the differences between these two groups of key school personnel.

School calendar, restructuring, age, school level, administrative position, gender, socioeconomic status, and ethnic diversity created different perceptions of satisfaction amongst the administrators in the San Diego Unified School District. The district leaders must be wary of these perceptions as they proceed with new policies and procedures. The district leaders must also be aware that many of their existing practices are having adverse affects on the work life of the administrators within the organization. Corrective action should be undertaken to provide a better place to work for the administrators of the district. Hopefully, once freed from the burden of unsatisfactory work factors, the administrators will be able

to perform at optimal levels of effectiveness and efficiency that will produce more effective schools for the San Diego Unified School District.

Conclusions

The study has examined the perceived job satisfaction of school-site administrators in the San Diego Unified School District. Many statistically significant differences were identified and many significant interactions between independent variables were found to exist. Based on the findings of the research, eight conclusions have been delineated:

1. Many variables were perceived to create significantly different degrees of satisfaction between administrators. Significant findings resulted from the comparison of the levels on each of the eight independent variables for at least one dependent variable. From this standpoint the revised Job Diagnostic Survey was sensitive to differences between the groups specified by the independent variables. Therefore, the instrument was judged to be a valuable tool in the assessment of administrator job satisfaction.

2. Many variables were perceived to create the same degree of satisfaction for all administrators in the district. The revised Job Diagnostic Survey identified several dependent variables that failed to produce any

significant differences or significant interaction effects. These variables are important as well as they point out the similarity of perceptions of job satisfaction that exist between groups of administrators.

3. A focal point of the Job Characteristics Model, the Motivating Potential Score (MPS), indicated that the administrators in the San Diego Unified School District perceived relatively low satisfaction on some or all of the factors that contributed to the MPS. The findings indicated that there is potential for improved job interaction and design to produce a more motivating work environment for the district administrators.

4. A number of factors, termed motivators by Herzberg, received relatively low perceived satisfaction scores by the administrators. Identification of tasks, autonomy, general communication within the district, involvement in decision making, encouragement of experimentation, and feedback from the supervisor received low satisfaction scores. The future motivation of the administrators resides in the school district leaders' abilities to improve the work environment in the identified areas.

5. A number of variables, identified as hygiene factors by Herzberg, received low perceived satisfaction scores as well. Pay, repairs and maintenance, holidays, school size, parental support, student behavior and learning problems created feelings of dissatisfaction. The hygiene

factors, according to Herzberg, must be adequately addressed to allow the motivators to have a positive impact.

6. Significant interaction effects resulted from the restructuring and administrative position variables and to a lesser extent significant interactions were identified with the gender and school variables. More specifically, principals at restructuring schools expressed less satisfaction than vice principals and male administrators experienced less satisfaction in restructuring schools than female administrators on specific dependent variables. At the school level, senior high school administrators expressed less satisfaction in restructuring schools than senior high school administrators that were not involved in restructuring.

7. Each level of each independent variable, or subgroup of administrators, produced unique insights into the perception of job satisfaction related to specific dependent variables. Specifically, (a) multitrack administrators were less satisfied with holidays than other administrators; (b) administrators in restructuring schools were not receiving enough perceived feedback or pay; (c) females experienced less satisfaction with holidays and interaction between administrators facilitated by the superintendent; (d) older administrators were experiencing more satisfaction with repairs and maintenance and also believed their schools were more effective than younger administrators' schools and administrators in the 50 to 59

age group expressed the least amount of satisfaction with involvement in decision making; (e) middle, junior, and senior high school administrators perceived fewer student behavior problems while elementary administrators expressed greater satisfaction with parental support than did the middle, junior, and senior high school administrators; (f) vice principals perceived less satisfaction with co-workers, school size, student behavior problems, parental support, repairs and maintenance, and effectiveness of the school compared to the principals; (g) low SES school administrators perceived less satisfaction with school size, student learning problems, student behavior problems, parental support, and effectiveness of the school; and (h) administrators in schools with high ethnic diversity expressed less satisfaction with school size, student learning problems, and parental support.

8. The San Diego Unified School District administrators expressed dissatisfaction with a number of factors related to their work. According to the theories delineated in this study, the administrators will not work at optimal levels of motivation and productivity while these factors are perceived as sources of dissatisfaction.

The study has examined a number of factors that had been identified by previous research as factors having a significant impact on the job satisfaction of those involved. If administrators could be given a job that was better designed, that met their identified needs, then they

would do a better job, and experience, as a result, greater satisfaction and motivation. The following delineate a number of recommendations for San Diego Unified School District, future research, study, and investigation based on the outcomes of this study.

Recommendations

Many recommendations for action and future research have been both stated and implied throughout the discussion of the results of the study. Two categories of recommendations have been formally prepared to focus attention on areas of concern and interest that have resulted from this investigation. The first section deals with recommendations to the district leaders of the San Diego Unified School District. These recommendations could apply also to most urban school districts that are interested in promoting a better working environment for the administrators of their respective districts. The second section of recommendations delineates a number of areas of investigation and further research that have been identified as a result of this study.

Recommendations to San Diego Unified School District and Other Urban School Districts

School district leaders and managers in both San Diego Unified School District and other school districts in North America must be aware that differences in perceptions of job

satisfaction are created with each new policy and procedure introduced into the district. District leaders must also be aware that many existing practices are having adverse affects on the quality of work life of the administrators within the organization. Within San Diego Unified School District, corrective action should be undertaken to provide a better work environment for the administrators of the district. Theoretically, once freed from the burden of some unsatisfactory work variables, the administrators will be able to perform at higher levels of aspiration and motivation that will produce more effective schools for the San Diego Unified School District. Although this study did not set out to examine the restructuring movement specifically, a number of the issues and concerns raised throughout the study were directly related to the restructuring variable. As the school district is committed to the restructuring movement, a number of the administrator's concerns become very relevant to the success of the restructuring initiatives. The following recommendations address some of the wants and needs of the site administrators identified in the study. The researcher recommends that:

1. District leaders and managers address the perceived communication problems identified by the site administrators and through revised procedures, considerations, programs, and staff development activities ameliorate the perceived dissatisfaction levels. The restructuring movement within

San Diego Unified School District had created a great deal of uncertainty and changes in traditional communication channels and expectations of and for the governance personnel both within the schools and at the central office. Improved feedback, information sharing, communication channels, openness of expression, and the development of a clear and precise task identity could assist greatly the site administrators in doing their respective jobs more efficiently and effectively as well as promoting greater satisfaction in their work.

2. Serious attention be paid to increasing the principals motivating potential score (MPS) as the principals, along with the other site leaders, are responsible for creating the effective learning environment for the students. If the principals and other site leaders are not working to their fullest potential, then valuable resources are being wasted or abused. The mandate for improvement of the school system has been made by the superintendent. In reference to the instructional delivery of the past, more of the same is not good enough according to Superintendent Payzant. More of the same type of work environment for the administrators of the district is not good enough either. The necessary support for the improvement must come from the central office. The site administrators, particularly the principals, were saying that restructuring was having an impact on their perceptions of a number of job core characteristics that included

feedback, autonomy, and task and skill identity. The district leaders should work hard at improving those areas of the MPS that can be improved through more attention to sharing of information and resources to allow the site administrators to work more autonomously and with sufficient knowledge and support from the central office to create the kinds of schools that are being asked for by the superintendent.

3. District leaders and managers be made aware that the principals did not perceive their supervisors to have exceptional competence when the issue was restructuring schools. The district leaders could insist that the supervisors in the district reassess their own behavior and that the supervisors take great care to keep themselves up to date and on the cutting edge of change and innovation in the school systems around the country and around the world to add credibility to their work with the site administrators.

4. District leaders and managers be more cognizant of the perceived differences on a number of variables between males and females and that policies and procedures that are sensitive to both groups' needs be developed.

5. District leaders and managers provide more opportunities for open and frank discussions surrounding the district initiatives. Through the sharing of information, discussion, collaboration, and shared decision making the

district leaders could embrace the essence of restructuring and lead the district by example.

6. District leaders and managers openly support and encourage freedom of thought, expression, and experimentation by the site administrators to promote the acquisition of wisdom and experience. Restructuring is supposed to be an organizational change movement driven by thoughtful experimentation. Site administrators must be encouraged to experiment within well defined parameters and safeguards.

7. District leaders and managers be made aware that each level of the school district organization, elementary, middle and junior high, and senior high school, has many unique weaknesses and strengths. It is further recommended that collaboration and shared decision-making exercises be dealt with by school level when appropriate. Policy implementation theory indicates that those closest to the implementation should be involved in the decision-making process. This being the case, it makes little sense to have elementary administrators involved in decisions that ultimately impact only on the senior high school administrators and vice versa.

8. District leaders and managers provide the resources required to meet the special needs of schools that are heavily impacted by high ethnic diversity and students from low socioeconomic backgrounds. Student behavior and learning problems, parental support, and the effectiveness

of the school were perceived problems based on socioeconomic and ethnic factors. These schools require additional support from the district leaders to meet the needs of the students, teachers, and administrators. Equity and equality of educational opportunity are issues that commonly are presented in the arguments surrounding quality education. Equal funding for schools of equal size does not necessarily translate into equity of educational opportunity.

9. District leaders and managers formulate specific support strategies for the senior high school administrators to promote the restructuring initiatives. All administrators cannot be lumped together with the hopes that all needs will be addressed. Senior high school administrators, in this study, expressed significantly different perceptions of restructuring than their colleagues and these differences must be acknowledged by the district leaders. For example, the district leaders should promote restructuring at the senior high school levels supported by carefully planned staff development efforts. These staff development efforts could lead to more positive interactions between the members of the school faculty and staff and the administrators.

10. District leaders and site administrators delineate the tasks that are to be performed in the restructuring of the district's schools so that site principals are clear as to the tasks they are to perform. The perceptions of autonomy by the central office leaders and the site

personnel are at odds and some very clear understandings should be reached if the school site leaders are to effectively run their schools in a climate of mutual respect and understanding. When both the site administrators and the central office leaders reach a common understanding of the roles and responsibilities for each in the restructuring movement, and the administrators are given the autonomy to act on these areas of responsibility, then the administrators at the sites should experience greater satisfaction with their work.

11. District leaders in San Diego Unified examine the roles and responsibilities currently assigned to both principals and vice principals and work with the administrators' association to develop a new set of roles and responsibilities for each level of administration. Gorton and Kattman (1985) pointed out that for many vice principals their current position may be the top of the career ladder for them. Many vice principals will spend many years in that position and the job should be sufficiently challenging that the incumbents can see and feel their jobs are important and exciting career goals.

Restructuring efforts have given vice principals more opportunities for input at the school and district levels than they had previously been used to contributing. The principals, on the other hand, may have perceived that district leaders were not including them quite as readily as they should be in the restructuring plans for the district.

In either case the district leaders and the site administrators must work out an understanding of decision making, authority, roles, and responsibilities for all players and stakeholders in the district system.

In addition, restructuring also has given the vice principals job enrichment opportunities and they have responded with increased satisfaction with their work. The principals, by contrast, have had a number of their traditional roles and responsibilities undermined by the restructuring movement and they have indicated less satisfaction with their work. The district leaders must strive to reconcile the differences between these two groups of key school personnel. The best interests of the district would be served if both groups of administrators were satisfied with their work environment. The goal for the district should be a win-win situation for both groups of administrators rather than having winners that are satisfied and losers that are dissatisfied.

12. District leaders and managers examine pay and incentive programs to ensure that district reward, pay, and recognition programs are meeting the needs of all of the site administrators. According to Herzberg (1968, 1979), employees need to have the basic extrinsic or hygiene factors addressed to allow the pursuit of the higher order needs or factors referred to as motivational factors. Extrinsic factors such as pay can create dissatisfaction but rarely cause motivation. Pay is one factor that research

has indicated is not a motivator to educators and pay is not the primary reason for individuals to be in education (Frase & Conley, 1989-90; Frase & Piland, 1989). However, compensation must be at sufficient levels to alleviate dissatisfaction with the financial rewards of the job. The district leaders must be concerned with maintaining motivation of the employees through the elimination of dissatisfiers. The district leaders should be able to establish the causes of the dissatisfaction with the pay structure. Monetary rewards may not be the only rewards that could work. In the spirit of restructuring, perhaps several innovative reward structures could be introduced to provide the needed satisfaction of needs and provide additional motivational aspects to the administrators' job.

13. District leaders and managers ensure adequate vacation breaks are taken by the administrators to promote a balanced approach to work. The problem is most severe in the multitrack schools where the administrators, being conscientious educators, often feel that the school will not function without them. The district leaders must open discussions with the multitrack administrators and collaboratively address this problem.

Recommendations for Further Research

Several recommendations for further study evolved from the current research project. To extend the scope and areas

of inclusion of this research beyond its current level, the researcher recommends that:

1. A future study of job satisfaction in the district be carried out to include all site administrators so that the clearest possible picture of the job satisfaction can be ascertained. Slightly over half of the San Diego Unified School District site administrators responded to the mail survey. Over 130 site administrators did not express their opinions and perspectives. The perceptions of the administrators not included in this study could provide additional clarity to the interpretations of job satisfaction within the district.

2. A study of the job satisfaction of site administrators be carried out to examine the quality of work life from a qualitative perspective. The current study was a quantitative design and did not include a qualitative component other than the open response sections on the instrument. Both ethnographic and phenomenological research would add a tremendous richness to the understanding of work and job satisfaction of the site administrators in San Diego. The qualitative research could be used to triangulate the results of the current study.

3. Future research examine the similarities and differences between populations of administrators and populations of teachers for each of the 40 variables used in this study. Teaching and administration involve two different sets of roles and responsibilities within the

educational system. The revised JDS has been used with both teachers and administrators and future investigation should try to determine variables and interactions that are role or job specific. Perhaps two different models of variable interaction could be developed. One model for administrators and one model for teachers.

4. Future research be undertaken to examine the similarities and differences between educators and administrators across international boundaries for each of the 40 variables used in this study. The revised JDS has been used with both Canadian and American educators. Perhaps models of variable interaction could be developed that are specific to each country or one model may be developed to satisfy both educational settings.

5a. A future study should be undertaken that examines the structure and validity of the Hackman and Oldham model based on the findings of the research with administrators. Through the use of path analysis and multiple regression techniques, the original Hackman and Oldham model may be validated or modified to reflect the unique nature of the administrator population used in this study. Individuals in educational administration preparatory programs and those individuals in district leadership roles could use the knowledge of a model of job satisfaction, specifically validated for school-site administrators, to add valuable insight into the job design and motivation of administrators. Programs and staff development activities

could be developed around researched and validated issues of concern. School restructuring efforts could take on new meaning as the people within the organization could have their roles and responsibilities enlarged, enriched, or redefined to create more satisfaction and presumably more productivity in their work lives.

5b. The revised Job Diagnostic Survey instrument be further refined to remove extraneous variables. Several of the 40 variables used in the study did not seem to generate relevant information. Further development of the instrument should also lead to the establishment of reliability and validity measures for the instrument along with sets of norms for different educational job classifications for the different variables.

6. Future research be undertaken to determine why restructuring at the middle and junior high school levels in San Diego Unified School District increased the perceptions of internal motivation for those administrators that were involved in restructuring efforts. If reasons could be found for the higher motivational perceptions of the restructuring administrators at the middle or junior level, then the findings could be applied to the elementary and senior levels.

7. Future research be undertaken to investigate why the principals and vice principals in the study had very different perceptions of the student learning problems in the schools as a result of the restructuring movement.

Through a collaborative approach, central office leaders, principals, and vice principals should be able to identify and map out strategies to deal with the perceived student learning problems in the restructured schools.

Triangulation of additional research data on the perceptions of the site administrators of the restructuring schools would assist greatly in determining the extent of learning problems within the restructuring schools. The learning problems may be the perceived or imagined consequence of increased sensitivity to problems within the school as a result of actively pursuing restructuring strategies to ameliorate real or imagined problem areas.

8. Future research be carried out to establish measures of true effectiveness of all schools and in particular the senior high schools so that more objective evidence can be gathered to corroborate the perceptions of the site administrators. The district leaders could assist senior high schools to establish restructuring programs and efforts that were more consistent with the effective schools correlates outlined in the district literature.

BIBLIOGRAPHY

BIBLIOGRAPHY

- Anderson, L. W., & Pigford, A. B. (1987). Removing administrative impediments to instructional improvement efforts. Theory Into Practice, 28(1), 67-71.
- Anderson, R. E., & Lavid, J. S. (1986). The effective principal: Leader or manager? National Association of Secondary School Principals Bulletin, 70(489), 82-84.
- Arnold, H. J., & House, R. J. (1980). Methodological and substantive extensions to the job characteristics model of motivation. Organizational Behavior and Human Performance, 25, 161-183.
- Asher, H. B. (1983). Causal modeling. Newbury Park, CA: Sage.
- Bacharach, S. B. (1988a). Education reform: Change and rhetoric. Educational Administration Quarterly, 24(3), 238-240.
- Bacharach, S. B. (1988b). Four themes of reform: An editorial essay. Educational Administration Quarterly, 24(4), 484-496.
- Bacharach, S. B., Bamberger, P., & Mitchell, S. (1990). Work design, role conflict, and role ambiguity: The case of elementary and secondary schools. Educational Evaluation and Policy Analysis, 12(4), 415-432.
- Bacharach, S. B., & Conley, S. C. (1986). Education reform: A managerial agenda. Phi Delta Kappan, 67(9), 641-645.
- Bacharach, S. B., & Mitchell, S. M. (1983a). Old wine and new bottles: The quality of work life in schools and school districts. Ithaca, NY: Cornell University, School of Industrial and Labor Relations. In: Consensus and Power in School Organizations: Final Report (EA 016 651). (ERIC Document Reproduction Service No. ED 243 178)
- Bacharach, S. B., & Mitchell, S. M. (1983b). The sources of dissatisfaction in educational administration. A role-specific analysis. Educational Administration Quarterly, 19(1), 101-128.

- Bacharach, S. B., Shedd, J. B., & Conley, S. C. (1989). School management and teacher unions: The capacity for cooperation in an age of reform. Teachers College Record, 91(1), 97-105.
- Background on the problem of attracting, retaining, and motivating teachers. Arizona Senate Legislative Staff. Unpublished manuscript.
- Ballinger, C., Kirschenbaum, N., & Pormbeau, R. P. (1987). The year-round school: When learning never stops. Bloomington: Phi Delta Kappan Foundation.
- Bamberger, R. (1986). Greater capital regions principals' center. Catalyst for Change, 16(1), 18-21.
- Barnett, B., & Long, C. (1986). Peer-assisted leadership: Principals learning from each other. Phi Delta Kappan, 67(9), 672-675.
- Barth, R. S. (1988). Principals, teachers, and school leadership. Phi Delta Kappan, 69(9), 639-642.
- Batsis, T. M. (1987, April). Characteristics of excellent principals. Paper presented at the National Catholic Educational Association, New Orleans, LA. (ERIC Document Reproduction Service No. ED 285 265)
- Bell, R. C., & Weaver, J. R. (1987). The dimensionality and scaling of job satisfaction: An internal validation of the Worker Opinion Survey. Journal of Occupational Psychology, 60, 147-156.
- Bennis, W., & Nanus, B. (1985). Leaders: The strategies for taking charge. San Francisco, CA: Harper & Row.
- Blase, J. J. (1990). Some negative effects of principals' control-oriented and protective political behavior. American Educational Research Journal, 27(4), 727-753.
- Bolin, F. S. (1989). Empowering leadership. Teachers College Record, 91(1), 81-96.
- Bossert, S. (1984, June). Issues for school improvement. In Making our schools more effective: Proceedings of three state conferences. (ERIC Document Reproduction Service No. ED 249 581)
- Bradley, A. (1990, September 5). Poll finds drop in teacher satisfaction with degree of control over their jobs. Education Week.

- Bridges, E. M. (1980). Job satisfaction and teacher absenteeism. Educational Administration Quarterly, 16(2), 41-56.
- Britton, L. (1988, February 2). Mission statement: Districtwide common calendar task force advisory committee. LAUSD.
- Brooke, P. P., Jr., Russel, D. W., & Price, J. L. (1988). Discriminant validation of measures of job satisfaction, job involvement, and organizational commitment. Journal of Applied Psychology, 73(2), 139-146.
- Brown, E. D. (1985, January). Moving toward excellence: The principal. Paper presented at the Annual Meeting of the National Association of Secondary School Principals, New Orleans, LA. (ERIC Document Reproduction Service No. 254 944)
- Brown, T. (1987). Inside management: The worst-best kept secret of business. Industry Week, 232, 13.
- Bruno, J. E., & Nottingham, M. A. (1974). Linking financial incentives to teacher accountability in school districts. Educational Administration Quarterly, 10(3), 46-62.
- Burns, J. M. (1978). Leadership. San Francisco, CA: Harper Torchbooks.
- Burns, J. M. (1984). Foreword. In B. Kellerman (Ed.), Leadership: Multidisciplinary perspectives (pp. vii-viii). Englewood Cliffs, NJ: Prentice-Hall.
- Butler, B. B. (1990). Job satisfaction: Management's continuing challenge. Social Work, 35(2), 112-117.
- Calabrese, R. L., & Adams, C. F. (1987). A comparative analysis of alienation among secondary school administrators. Planning and Changing, 18(2), 90-97.
- Chapman, D. W. (1983). A model of the influences of teacher retention. Journal of Teacher Education, 34(5), 43-49.
- Chemers, M. M. (1984). The social, organizational, and cultural context of effective leadership. In B. Kellerman (Ed.), Leadership: Multidisciplinary perspectives (pp. 91-112). Englewood Cliffs, NJ: Prentice-Hall.

- Chenhall, R. H., & Brownell, P. (1988). The effect of participative budgeting on job satisfaction and performance: Role ambiguity as an intervening variable. Accounting, Organizations and Society, 13(3), 225-233.
- Chubb, J. E. (1987, July). The dilemma of public school improvement. Paper presented as part of the Dartmouth College Spoor Dialogues on Leadership, Hanover, NH. (ERIC Document Reproduction Service No. ED 286 269)
- Conley, S. (1989). "Who's on first?" School reform, teacher participation, and the decision-making process. Education and Urban Society, 21(4), 266-279.
- Conley, S. C. (1988). Reforming paper pushers and avoiding free agents: The teacher as a constrained decision maker. Educational Administration Quarterly, 24(4), 393-404.
- Conley, S. C., & Bacharach, S. B. (1987). The Holmes group report: Standards, hierarchies, and management. Teachers College Record, 88(3), 340-347.
- Conley, S. C., & Bacharach, S.B. (1990). From school-site management to participatory school-site management. Phi Delta Kappan, 71(7), 539-544.
- Conley, S. C., Bacharach, S. B., & Bauer, S. (1989). The school work environment and teacher career dissatisfaction. Educational Administration Quarterly, 25(1), 58-81.
- Conley, S. C., Schmidle, T., & Shedd, J. B. (1988). Teacher participation in management of school systems. Teachers College Record, 90(2), 259-280.
- Conway, J. A. (1984). The myth, mystery, and mastery of participative decision making in education. Educational Administration Quarterly, 20(3), 11-40.
- Cooper, J. F. (1977). The relationship of morale and productivity: An historical overview. Saranac Lake, NY: North County Community College, Division of Business, Recreation, and Social Science. (ERIC Document Reproduction Service No. ED 147 795)
- Couger, J. D. (1988). Motivators vs. demotivators in IS environment. Journal of Systems Management, 39(6), 36-42.
- Cross, C. T. (1990). National goals: Four priorities for educational researchers. Educational Researcher, 19(8), 21-24.

- Cuban, L. (1988). A fundamental puzzle of school reform. Phi Delta Kappan, 69(5), 341-344.
- Cunard, R. F. (1990). Sharing instructional leadership--a view to strengthening the principal's position. NASSP Bulletin, 74(525), 30-34.
- Cunningham, J. B., & Eberle, T. (1990). A guide to job enrichment and redesign. Personnel, 67(2), 56-61.
- Davidson, J. P. (1987). A great place to work: Seven strategies for keeping employees committed to your company. Management World, 16(4), 24-26.
- DeCotiis, T. A., & Summers, T. P. (1987). A path analysis of a model of the antecedents and consequences of organizational commitment. Human Relations, 40(7), 445-470.
- Deluga, R. J. (1989). Relationship of transformational and transactional leadership with employee influencing strategies. Group & Organization Studies, 14(4), 456-467.
- DeRoche, E. F. (1987). An administrator's guide for evaluating programs and personnel (2nd ed.). Newton, MA: Allyn and Bacon.
- DiegmueLLer, D. (1990, September 5). Nearly half of newly hired teachers returned to profession, survey finds. Education Week.
- Donaldson, G. A., Jr. (1990, April). Principals in transition: Dilemmas in moving from manager to instructional leader. Presented to the American Education Research Association, Boston, MA.
- Dufour, R. P. (1986, February). Effective business practices can be applied to schools. Paper presented at the Annual Meeting of the National Association of Secondary School Principals, Orlando, FL. (ERIC Document Reproduction Service No. 269 837)
- Duke, D. (1988). Why principals consider quitting. Phi Delta Kappan, 70(4), 308-312.
- Dwyer, D. C. (1984). Forging successful schools: Realistic expectations for principals. Educational Horizons, 63(1), 3-8.
- Eisenhart, M. A., Cuthbert, A. M. Shrum, J. L., & Harding, J. R. (1988). Teacher beliefs about their work activities: Policy implications. Theory into Practice, 27(2), 137-144.

- Empey, D. (1989). The school principal--an endangered species? Thrust, 19(1), 16-17.
- Fay, B. (1987). Critical social change. Ithaca, NY: Cornell University Press.
- Feistritzer, C. E. (1986). Education vital signs: Teachers. American School Board Journal, 173(10), A12-A16.
- Firestone, W. A., Fuhrman, S. H., & Kirst, M. W. (1990). Implementation, effects of state education reform in the '80s. NASSP Bulletin, 74(523), 75-84.
- Foster, W. (1986a). Paradigms and promises. Buffalo, NY: Prometheus.
- Foster, W. (1986b). The reconstruction of leadership. Victoria: Deakin University.
- Foster, W. (1991, April). Moral theory, transformation, and leadership in school settings. Paper presented at the Annual Meeting of the American Research Association, Chicago.
- Fowler, F. J. (1984). Survey research methods. Newbury Park, CA: Sage.
- Fox, S., & Feldman, G. (1988). Attention state and critical psychological states as mediators between job dimensions and job outcomes. Human Relations, 41(3), 229-245.
- Fox, W. M. (1986, November). Teacher motivation. Paper presented at the Annual Conference of the National Council of States on Inservice Education, Nashville, TN. (ERIC Document Reproduction Service No. 275 677)
- Frase, L. (1989). The effects of financial and non-financial rewards on teacher recognition and job enrichment. Journal of Educational Research, 83(1), 52-57.
- Frase, L., & Conley, S. (1989-90). From teacher compensation to school improvement--a re-examination. National Forum of Educational Administration and Supervision Journal, 7(1), 77-86.
- Frase, L., & Heck, G. (1990, October). Restructuring in the Fort McMurray Catholic schools: A research-based approach. Paper presented at the meeting of the Western Canadian Educational Administrators' Conference, Calgary, Alberta.

- Frase, L., & Piland, W. (1989). Breaking the silence about faculty rewards. Community College Review, 17(1), 25-33.
- Frase, L., Piland, W., & Ankeny, W. (In press). Restructuring schools: A research-based approach. National Forum of Educational Administration and Supervision Journal.
- Friesen, D., Holdaway, E. A., & Rice, A. W. (1983). Satisfaction of school principals with their work. Educational Administration Quarterly, 19(4), 35-58.
- Fuller, B., Wood, K., Rapoport, T., & Dornbusch, S. M. (1982). The organizational context of individual efficacy. Review of Educational Research, 52(1), 7-30.
- Gainer, J. G. (1989). Effective schools programs: Their extent and characteristics. Briefing report to the Chairman, Committee on Education and Labor, House of Representatives. U.S. General Accounting Office. (GAO/HRD-89-132BR)
- Gibson, S., & Dembo, M. H. (1984). Teacher efficacy: A construct validation. Journal of Educational Psychology, 76(4), 569-582.
- Glickman, C. D. (1987). Good and/or effective schools: What do we want? Phi Delta Kappan, 68(8), 622-624.
- Goddard, R. W. (1987). Well done! Management World, 16(6), 14-17.
- Goodlad, J. I. (1984). A place called school: Prospects for the future. San Francisco, CA: McGraw-Hill.
- Gorsuch, R. A. (1976). An investigation of the relationships between core job dimensions, psychological states, and personal and work outcomes among public school teachers. Dissertation Abstracts International, 77-22, 506.
- Gorton, D., & Kattman, B. (1985). The assistant principal: An underused asset. Principal, 65(2), 36, 39-40.
- Gottfredson, G. D. (1986, April). Using the effective school battery in school improvement and effective schools programs. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA. (ERIC Document Reproduction Service No. ED 273 041)

- Gough, P. B. (1987). The key to improving schools: An interview with William Glasser. Phi Delta Kappan, 68(9), 656-662.
- Greenberger, D. B., Strasser, S., Cummings, L. L., & Dunham, R. B. (1988). The impact of personal control on performance and satisfaction. Organizational Behavior & Human Decision Processes, 43(1), 29-51.
- Griffin, W. H., & Barry, M. G. (1986, April). Examination development for candidates in educational administration. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA. (ERIC Document Reproduction Service No. ED 268 164)
- Gunn, J. A., & Holdaway, E. A. (1986). Perceptions of effectiveness, influence, and satisfaction of senior high school principals. Educational Administration Quarterly, 22(2), 43-62.
- Guthrie, J. W. (1991). Educational research and politics. The Education Digest, 56(6), 55-58.
- Hackman, J. R., & Oldham, G. R. (1975). Development of the job diagnostic survey. Journal of Applied Psychology, 60(2), 159-170.
- Hackman, J. R., & Oldham, G. R. (1980). Work redesign. Reading, MA: Addison-Wesley.
- Hackman, J. R., Oldham, G., Janson, R., & Purdy, K. (1975). A new strategy for job enrichment. California Management Review, 17(4), 57-71.
- Hanes, R. C., & Mitchell, K. F. (1985). Teacher career development in Charlotte-Mecklenburg. Educational Leadership, 43(3), 11-13.
- Harder, W. W. (1985). Teacher job satisfaction: An application and expansion of the job characteristics model of work motivation. Dissertation Abstracts International, DA8516272.
- Heim, J. M., & Wilson, A. P. (1987, January). Situational factors contributing to administrator turnover in small Kansas school districts and high schools. Paper presented at the United School Administrators Conference, Wichita, KS. (ERIC Document Reproduction Service No. ED 279 444)

- Helmreich, R. L., Sawin, L. K., & Carsrud, A. L. (1986). The honeymoon effect in job performance: Temporal increases in the predictive power of achievement motivation. Journal of Applied Psychology, 71(2), 185-188.
- Herman, R. L., & Stephens, G. M. (1989). The four keys necessary for instructional leadership. National Association of Secondary School Principals Bulletin, 73(515), 55-59.
- Herzberg, F. (1968, January-February). One more time: How do you motivate employees? Harvard Business Review, pp. 55-64.
- Herzberg, F. I. (1979). New perspectives in the will to work. Personnel Administrator, 24(12), 72-76.
- Herzberg, F. (1987a). Innovation where is the relish? Journal of Creative Behavior, 21(3), 179-192.
- Herzberg, F. (1987b). Workers' needs: The same around the world. Industry Week, 234, 29-32.
- Holdaway, E. A. (1978). Facet and overall satisfaction of teachers. Educational Administration Quarterly, 14(1), 30-47.
- Hopkins, R. R. (1989). Career crisis: How to survive and succeed as the chief school executive. The School Administrator, 9(46), 15-17.
- Huddle, G. (1984). How complex is the principal's job? What action can principals take to be more effective? NASSP Bulletin, 68(476), 62-67.
- Isaac, S., & Michael, W. B. (1971). Handbook in research and evaluation. San Diego, CA: EdITS.
- Jorde, P. (1984, November). Teacher job satisfaction: A framework for analysis. Paper presented at the Annual Meeting of the National Association for the Education of Young Children, Los Angeles, CA. (ERIC Document Reproduction Service No. 253 304)
- Kaufman, J. W. (1984, April). Relationship between teacher motivation and commitment to the profession. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA. (ERIC Document Reproduction Service No. 252 498)
- Kazemak, E. A. (1990). Appropriate rewards are key to motivation. Healthcare Financial Management, 44(5), 64.

- Kegan, R., & Lahey, L. L. (1984). Adult leadership and adult development: A constructivist view. In B. Kellerman (Ed.), Leadership: Multidisciplinary perspectives (pp. 199-230). Englewood Cliffs, NJ: Prentice-Hall.
- Kellerman, B. (1984). Leadership as a political act. In B. Kellerman (Ed.), Leadership: Multidisciplinary perspectives (pp. 63-89). Englewood Cliffs, NJ: Prentice-Hall.
- King, S. (1989). Sex differences in a causal model of career maturity. Journal of Counseling & Development, 68, (208-215).
- Kirst, M., McLaughlin, M., & Mitchell, D. (1991). Getting our acts together. Thrust for Educational Leadership, 20(4), 22-24.
- Kouzes, M. K., & Posner, B. Z. (1988). The leadership challenge: How to get extraordinary things done in organizations. San Francisco, CA: Jossey-Bass.
- Larsen, T. (1989). Effective schools? Effective principals! Thrust, 19(1), 35-36.
- Latta, R. F. (1990, October). Leadership preparatory programs for the 21st century. A paper presented at the Convention of the University Council for Educational Administration, Pittsburg, PA.
- Lawler, E. E. (1982). Education, management style, and organizational effectiveness (rev. ed.). National Institute of Education, Washington, DC. (ERIC Document Reproduction Service No. ED 229 617)
- Lawler, E. E. (1985). Education, management style, and organizational effectiveness. Personnel Psychology, 38(1), 1-26.
- Lawler, E. E. III. (1969). Job design and employee motivation. Personnel Psychology, 22, 426-435.
- Lessinger, L. M. (1985). Technology for accountability. Technological Horizons in Education, 13(4), 75-77.
- Lester, P. E. (1986, February). Teacher job satisfaction: A perspective. Paper presented at the Annual Meeting of the Association of Teacher Educators, Atlanta, GA. (ERIC Document Reproduction Service No. ED 266 142)

- Lester, P.E. (1987). Development and factor analysis of the teacher job satisfaction questionnaire. Educational and Psychological Measurement, 47(1), 223-233.
- Levine, S. L. (1989). The principal as adult developer. Principal, 68(3), 17-18.
- Levinson, H. (1973, January-February). Asinine attitudes toward motivation. Harvard Business Review, pp. 48-54.
- Lezotte, L. W. (1984, April). School effectiveness research: A tribute to Ron Edmonds. Paper presented at the 1984 American Educational Research Association Annual Meeting, New Orleans, Louisiana.
- Lezotte, L. W. (1989). Base school improvement on what we know about effective schools. The American School Board Journal, 176(8), 18-20.
- Lieberman, A. (1988). Teachers and principals: Turf, tension, and new tasks. Phi Delta Kappan, 69(9), 648-653.
- Liou, K., Sylvia, R. D., & Brunk, G. (1990). Non-work factors and job satisfaction revisited. Human Relations, 43(1), 77-86.
- Little, J. W. (1985). Teachers as teacher advisors: The delicacy of collegial leadership. Educational Leadership, 43(3), 34-36.
- Lortie, D. C. (1986). Teacher status in Dade County: A case of structural strain? Phi Delta Kappan, 67(8), 568-575.
- Lortie, D. C. (1988). Built in tendencies towards stabilizing the principal's role. Journal of Research and Development in Education, 22(1), 80-90.
- Lovell, J. T., & Wiles, K. (1983). Supervision for better schools. Englewood Cliffs, NJ: Prentice-Hall.
- Maeroff, G. I. (1988). A blueprint for empowering teachers. Phi Delta Kappan, 69(7), 472-477.
- Maslow, A. (1988). On the shoulders of giants. Educational Forum, 52(3), 203-208.
- McAfee, R. B., & Glassman, M. (1988). Job satisfaction: It's the little things that count. Management Solutions, 33(9), 32-38.

- McCall, S. D. (1988). Restructuring schools: Changing organizational perspectives. Aurora, CO: Mid-continental Regional Laboratory.
- McCurdy, J. (1983). The role of the principal in effective schools: Problems & solutions. AASA critical issues report. Arlington, VA: American Association of School Administrators. (ERIC Document Reproduction Service No. ED 254 900)
- McKee, E. M., & Murphy, P. J. (1984). Adult education administrators' satisfaction with their worklife. Lifelong Learning, 7(8), 12-14, 25-28.
- McNeil, L. M. (1988a). Contradictions of control, part 1: Administrators and teachers. Phi Delta Kappan, 69(5), 333-339.
- McNeil, L. M. (1988b). Contradictions of control, part 3: Contradictions of reform. Phi Delta Kappan, 69(7), 478-485.
- McPherson, R. B., Crowson, R. L., & Brieschke, P. A. (1986). Marjorie Stallings' A walk through a mine field. Urban Education, 21(1), 62-85.
- Meadows, B. J. (1990). The rewards and risks of shared leadership. Phi Delta Kappan, 71(7), 545-548.
- Middlemist, R. D., & Hitt, M. A. (1988a). Organizational behavior: Managerial strategies for performance. Los Angeles, CA: West Publishing Company.
- Middlemist, R. D., & Hitt, M. A. (1988b). Organizational behavior: Managerial strategies for performance: Instructor's manual. Los Angeles, CA: West Publishing Company.
- Miller, E. A. (1987). A new balance: Reshaping the principalship. A special report to the profession. Trenton, NJ: New Jersey Principals and Supervisors Association. (ERIC Document Reproduction Service No. ED 290 200)
- Miskel, C., DeFrain, J., & Wilcox, K. (1980). A test of expectancy work motivation theory in educational organizations. Educational Administration Quarterly, 16(1), 70-92.
- Miskel, C., Glasnapp, D., & Hatley, R. (1975). A test of the inequity theory for job satisfaction using educators' attitudes toward work motivation and work incentives. Educational Administration Quarterly, 11(1), 38-54.

- Miskel, C. G. (1982). Motivation in educational organizations. Educational Administration Quarterly, 18(3), 65-88.
- Miskel, C. G., Fevurly, R., & Stewart, J. (1979). Organizational structures and processes, perceived school effectiveness, loyalty, and job satisfaction. Educational Administration Quarterly, 15(3), 97-118.
- Murphy, G. T. (1989). The paradox of decentralizing schools: Lessons from business, government, and the Catholic Church. Phi Delta Kappan, 70(6), 808-812.
- Murphy, J. T. (1988). The unheroic side of leadership: Notes from the swamp. Phi Delta Kappan, 69(9), 654-659.
- A nation at risk: The imperative for educational reform. (1983). Washington, DC: The National Commission on Excellence in Education.
- A nation prepared: Teachers for the 21st century. (1986). New York: Carnegie Forum on Education and the Economy.
- National Association of Secondary School Principals. (1991). High school leaders. The Education Digest, 56(5), 35-39.
- Noonan, R. D., & Wold, H. (1988). Partial least squares path analysis. In John P. Keeves (Ed.), Educational research, methodology, and measurement: An international handbook. New York: Pergamon Press.
- Nottingham, M. (1985, February). Public and professional expectations for an effective educational leader. Paper presented at the Annual Meeting of the American Association of School Administrators, Atlanta, GA. (ERIC Document Reproduction Service No. ED 257 213)
- Olson, D. A., & Tetrick, L. E. (1988). Organizational restructuring: The impact on role perceptions, work relationships, and satisfaction. Group & Organization Studies, 13(3), 374-388.
- Ondrack, D. A., & Evans, M. G. (1987). Job enrichment and job satisfaction in greenfield and redesign QWL sites. Group & Organization Studies, 12(1), 5-22.
- Ott, L., Mendenhall, W., & Larson, R. (1978). Statistics: A tool for the social sciences (2nd ed.). North Scituate, MA: Duxbury Press.
- Parish, R., & Krueger, J. (1987). The face of change. Planning and Changing, 18(2), 98-105.

- Pastor, M. C., & Erlandson, D. A. (1982). A study of higher order need strength and job satisfaction in secondary public school teachers. The Journal of Educational Administration, 20(2), 172-183.
- Paulu, N. (1989). Principals and school improvement: Sixteen success stories. NASSP Bulletin, 73(517), 71-77.
- Payzant, T. W. (1989, October). To restructure schools, we've changed the way the bureaucracy works. The American School Board Journal, 19-20.
- Pellicer, L. O. (1984). Job satisfaction--its impact upon teacher attendance. NASSP Bulletin, 68(475), 44-47.
- Phillip, D. J. (1987). Directions for the next five years. Education Canada, 27(1), 37-41.
- Piland, W., & Frase, L. (1989). Restructuring the faculty role: A research-based approach. The Journal of Staff, Program, & Organization Development, 7(3), 107-113.
- Plesma, D. M., Richard, G. V., Harrington, R. G., & Burry, J. A. (1987, April). The quality of teacher work life survey: A preliminary report on a measure of teacher stress and job satisfaction and the implications for school counselors. Paper presented at the Annual Convention of the American Association for Counseling and Development, New Orleans, LA. (ERIC Document Reproduction Service No. ED 286 094)
- Pratt, S. B. (1989). Lead the way: School improvement steps for boards. The American School Board Journal, 176(8), 21.
- Purkey, S. C., & Degen, S. (1985). Beyond effective schools to good schools: Some first steps. Eugene, OR: University of Oregon, Center for Educational Policy and Management. (ERIC Document Reproduction Service No. ED 263 652)
- Queen, J. A. (1989). What does it take to be an effective principal? Special report: Redefining the principalship. Principal, 68(3), 34.
- Rallis, S. (1988). Room at the top: Conditions for effective school leadership. Phi Delta Kappan, 69(9), 643-647.

- Raquepaw, J., & deHaas, P. A. (1984, May). Factors influencing teacher burnout. Paper presented at the Annual Meeting of the Midwestern Psychological Association, Chicago, IL. (ERIC Document Reproduction Service No. ED 256 980)
- Reforms score low with teachers. (1990, September 2). The San Diego Union, p. A-2.
- Reyes, D. J. (1981). Business and industry have found that positive supervision works. Educational Leadership, 38(7), 544-545.
- Rhode Island Educational Leadership Academy. (1986). Achieving school effectiveness: Process steps and variables. A ready reference guide to research findings and action steps. Rhode Island State Department of Education, Providence. (ERIC Document Reproduction Service No. ED 298 600)
- Rice, E. K. (1989). The changing principalship: A principal's perspective. Principal, 68(3), 21-22.
- Rice, R. W., Bennet, D. E., & McFarlin, D. B. (1989). Standards of comparison and job satisfaction. Journal of Applied Psychology, 74(4), 59-67.
- Richardson, R. C., Jr. (1985, November). How administrators influence student learning. Paper presented at a Meeting of the Illinois Council of Community College Administrators, Champaign, IL. (ERIC Document Reproduction Service No. ED 264 913)
- Riggar, T. F., Godley, S. H., & Hafer, M. (1984). Burnout and job satisfaction in rehabilitation administrators and direct service providers. Rehabilitation Counseling Bulletin, 27(3), 151-160.
- Rost, J. C. (1991). Leadership for the twenty-first century. New York: Praeger.
- Rottier, J., Kelly, W., & Tomhave, W. K. (1983). Teacher burnout: Small and rural school style. Education, 104(1), 72-79.
- Royer, W. L. (1987). A short perspective on educational administration. Phi Delta Kappan, 69(2), 145-146.
- Saleh, M. A., & Kashmeeri, M. O. (1987). School administration: Factors associated with distress and dissatisfaction. Education, 108(1), 93-103.

- Schmidt, G. L. (1980). An organizational model for employee job satisfaction. NASSP Bulletin, 64(436), 80-88.
- Schneider, G. T. (1985, March). The myth of curvilinearity: An analysis of decision-making involvement and job satisfaction. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL. (ERIC Document Reproduction Service No. ED 252 980)
- Schneider, C. E., Brown, A., & Burchman, S. (1988). Unlocking employee potential: Managing performance. Management Solutions, 33(1), 14-21.
- Seidman, S. A., & Zager, J. (1987). The teacher burnout scale. Educational Research Quarterly, 11(1), 26-33.
- Sergiovanni, T. J. (1967). Factors which affect satisfaction and dissatisfaction of teachers. Journal of Educational Administration, 5, 66-82.
- Sergiovanni, T. J. (1975). Financial incentives and teacher accountability: Are we paying for the wrong thing? Educational Administration Quarterly, 11(2), 112-115.
- Sergiovanni, T. J. (1980). Planning and time management: Keys to effective educational leadership. The Australian Administrator, 1(5). Deakin University, Victoria, Australia. (ERIC Document Reproduction Service No. ED 213 136)
- Sergiovanni, T. J. (1982). Ten principles of quality leadership. Educational Leadership, 39(5), 330-336.
- Sergiovanni, T. J. (1984). Leadership and excellence in schooling. Educational Leadership, 41(5), 6-13.
- Sergiovanni, T. J. (1987). The principalship: A reflective practice perspective. Boston, MA: Allyn and Bacon.
- Sexton, P. W. (1988). Catching the right bus for educational reform. The College Board Review, 148, 2-4, 36-37.
- Sherman, J. D., & Smith, H. L. (1984). The influence of organizational structure on intrinsic versus extrinsic motivation. Academy of Management Journal, 27(4), 877-885.

- Shreeve, W. C., Norby, J. R., Goetter, W. C. J., Stueckle, A. F., Midgley, T. K., & Goetter, P. S. (1987). Job satisfaction: An imperative for the coming teacher shortage. (ERIC Document Reproduction Service No. 289 818)
- Silver, P. F. (1982). Synthesis of research on teacher motivation. Educational Leadership, 39(7), 551-554.
- Snider, W. (1987, June 17). Minnesota district looks to business for tips on raising productivity. Education Week.
- Spangler, W. D. (1985). The validity of the job characteristics model. Dissertation Abstracts International, DA8520989.
- Spillane, R. R. (1989). Redefining the principalship: The changing principalship: A superintendent's perspective. Principal, 68(3), 19-20.
- Spuck, D. W. (1974). Reward structures in the public high school. Educational Administration Quarterly, 10(1), 18-34.
- Stedman, L. C. (1987). It's time we changed the effective schools formula. Phi Delta Kappan, 69(3), 215-224.
- Stedman, L. C. (1988). The effective schools formula still needs changing: A reply to Brookover. Phi Delta Kappan, 69(6), 439-442.
- Stimson, T. D., & Appelbaum, R. P. (1988). Empowering teachers: Do principals have the power? Phi Delta Kappan, 70(4), 313-316.
- Strother, D. B. (1989). An interview with Ruben Carriedo: Using research data to shape our schools. Phi Delta Kappan, 70(6), 480-483.
- Sullivan, W. M. (1986). Reconstructing public philosophy. Los Angeles: University of California Press.
- Thompson, P. H., & Dalton, G. W. (1970, January/February). Performance appraisal: Managers beware. Harvard Business Review, pp. 149-158.
- Thorndike, R. L. (1988). Reliability. In John P. Keeves (Ed.), Educational research, methodology, and measurement: An international handbook. New York: Pergamon Press.

- Trentham, L., Silvern, S., & Brogdon, R. (1985). Teacher efficacy and teacher competency ratings. Psychology in the Schools, 22(3), 343-352.
- Tucker, M., & Mandel, D. (1986). The Carnegie report--a call for redesigning the schools. Phi Delta Kappan, 68(1), 24-27.
- Tuckman, B. (1988). Conducting educational research. San Diego, CA: Harcourt Brace Jovanovich.
- U.S. Department of Labor. (1991). Labor-management relations and restructuring schools. The Education Digest, 56(6), 52-53.
- Valentine, J. W., & Bowman, M. L. (1988). Audit of principal effectiveness: A method for self-improvement. National Association of Secondary School Principals Bulletin, 72(508), 18-26.
- Van der Vegt, R., & Knip, H. (1988). The role of the principal in school improvement: Steering functions for implementation at the school level. Journal of Research and Development in Education, 22(1), 60-68.
- Waldrop, J. (1990). You'll know its the 21st century when American Demographics, 12(12), 22-27.
- Washington State University. Department of Educational Administration. (1990). Job satisfaction for chairs. Center for the Study of the Department Chair Newsletter, 2(1), 1-2.
- Weber, J. R. (1987). Instructional leadership: Contexts and challenges. ERIC Clearinghouse on Education Management, Eugene, OR. (ERIC Document Reproduction Service No. ED 288 261)
- Weller, L. D. (1982). Principals, meet Maslow: A prescription for teacher retention. NASSP Bulletin, 66(456), 32-36.
- Wentz, R.E. (1989). School principals: The emerging community heroes as the 1990 unfold. NASSP Bulletin, 73(518), 40-43.
- Which way to the future? San Diego and its schools at a crossroads. (1987). San Diego City Schools, Schools of the Future Commission. Unpublished manuscript.
- White, P. A. (1989). An overview of school-based management: What does the research say? NASSP Bulletin, 73(518), 1-8.

- White, P. L. (1987). Evaluating elementary principals. Phi Delta Kappan, 69(2), 143-144.
- Wirth, A. G. (1989). The violation of people at work in schools. Teachers College Record, 90(4), 535-547.
- Wright, R. (1985). Motivating teacher involvement in professional growth activities. The Canadian Administrator, 24(5), 1-6.
- Zaccaro, S. J., & Stone, E. F. (1988). Incremental validity of an empirically based measure of job characteristics. Journal of Applied Psychology, 73(2), 245-253.

APPENDICES

APPENDIX A
APPROVAL LETTER FROM SAN DIEGO CITY SCHOOLS
RESEARCH REVIEW COMMITTEE

SAN DIEGO CITY SCHOOLS

PLANNING, RESEARCH, & EVALUATION DIVISION

EDUCATION CENTER

4100 Normal St. San Diego, CA 92103-2682

(619) 293-8325

February 15, 1991

Mr. Rod Matheson
San Diego City Schools
4100 Normal Street
San Diego, CA 92103

Dear Mr. Matheson:

re: Administrators' Survey - Roles and Attitudes Study

After careful review, the San Diego City Schools' Research Proposal Review Panel is pleased to inform you that your research proposal has been cleared. This enables you to contact the individual site administrators and seek their participation in the study. The panel members, and special guest members Irv McClure and Anita Calhoun, of the Administrators Association, were unanimous in their support for the study. Your proposal presentation was concise and well done. The study was deemed to be both timely and important to our understanding of the roles and attitudes of our site administrators.

The research project you have proposed can provide us with valuable information to support existing practices and to promote new and hopefully better policies and practices that will complement or enhance the work of site administrators. The panel believes that the results of your study can benefit the school district and we are very interested in reviewing the results of your research as they become available.

You have demonstrated the requisite knowledge and skill to undertake the described research and the panel members are confident that your study will be very well done. The members of the panel would like to wish you well in your research endeavor.

Good luck with your research and dissertation.

Sincerely,

John Griffith, Chairman
Research Proposal Review Panel

APPENDIX B
THE INSTRUMENT

SECTION 1 - JOB CHARACTERISTICS PERCEPTIONS

1. Write a number in the blank for each statement based on the scale presented.

1	2	3	4	5	6	7
Disagree
Strongly	Disagree	Disagree
Slightly	Neutral	Agree
Slightly	Agree	Agree
Strongly
- _____ 1. It's hard in my role for me to care very much about whether or not the school runs well.
- _____ 2. Most of the things I have to do in my role seem useless or trivial.
- _____ 3. I usually know whether or not my administrative work is satisfactory.
- _____ 4. The work I do as an administrator is very meaningful to me.
- _____ 5. I feel a high degree of personal responsibility for the work I do as an administrator.
- _____ 6. I often have trouble figuring out whether I am doing well or poorly as an administrator.
- _____ 7. I feel I should personally take credit or blame for the results of my job.
- _____ 8. Whether or not the school runs well is clearly my responsibility.

2. Listed below are a number of statements which could be used to describe a job. Using the following scale, please indicate whether each statement is an accurate or inaccurate description of your job as an administrator.

1	2	3	4	5	6	7
Very
Inaccurate	Mostly
Inaccurate	Slightly
Inaccurate	Uncertain	Slightly
Accurate	Mostly
Accurate	Very
Accurate
- _____ 1. My job as an administrator requires me to use a number of complex high level skills.
- _____ 2. This job is arranged so that I do not have the chance to do an entire project or task from beginning to end.
- _____ 3. Just doing the work required by the job provides many chances for me to figure out how well I am doing.
- _____ 4. The job is quite simple and repetitive.
- _____ 5. Other administrators give me feedback about how well I am doing in my work.
- _____ 6. This job is one where a lot of other people can be affected by how well the work gets done.
- _____ 7. This job denies me any chance to use my personal judgement in carrying out the work.
- _____ 8. My superiors often let me know how well they think I am performing my job.

2. cont'd

1	2	3	4	5	6	7
Very Inaccurate	Mostly Inaccurate	Slightly Inaccurate	Uncertain	Slightly Accurate	Mostly Accurate	Very Accurate

- _____ 9. The job provides me the chance to completely finish the projects or tasks I begin.
- _____ 10. The job itself provides very few clues about whether or not I am performing well.
- _____ 11. This job gives me considerable opportunity for independence and freedom in how I do the work.
- _____ 12. The job itself is not very significant or important in the broader scheme of things.

3. Rate each of the following using the following scale.

1	2	3	4	5	6	7
Extremely Dissatisfied	Dissatisfied	Slightly Dissatisfied	Neutral	Slightly Satisfied	Satisfied	Extremely Satisfied

- _____ 1. The amount of personal growth and development I get in doing my job.
- _____ 2. The feeling of worthwhile accomplishment I get from doing my job.

4. Using the following four-point scale, please indicate how true or how false each of the following statements is to you.

1	2	3	4
Definitely true	Partially true	Partially false	Definitely false

- _____ 1. I presently have no plans for leaving administration.
- _____ 2. No matter what I do, there are always some students who seem to do nothing.
- _____ 3. If I try really hard, I can get through to even the most difficult or unmotivated student.
- _____ 4. When it comes right down to it, an administrator really can not do much because most of a student's motivation and performance depend on factors beyond my control.

5. Administrators vary in how they view their own performance from year to year. How do you personally view your own administrative work during the past year.

1	2	3	4	5	6	7
Moderately Effective			Very Effective			Extremely Effective

- _____ 1. Please rate your effectiveness over the past year.

6. Using the scale below, please indicate your response to the following.

1	2	3	4
Definitely true	Partially true	Partially false	Definitely false
-
- _____ 1. My school is too large.
- _____ 2. My students are highly motivated.
- _____ 3. My students are quite intelligent.
- _____ 4. Parents support the school programs.
- _____ 5. My students do not have sufficient background knowledge in some cases.
- _____ 6. There are always one or two groups of students who academically hold back the rest of the school in achievement tests.
- _____ 7. I am satisfied with the amount of holiday time I am able to take in my job.
- _____ 8. My students are often abnormally unruly.
- _____ 9. I have to worry about being physically confronted by my students.
- _____ 10. My school site is the object of vandalism.
- _____ 11. My students use drugs and alcohol while in school.
- _____ 12. Repairs and maintenance requests are handled in a timely manner.

7. Rate each of the following using the following scale.

1	2	3	4	5	6	7
Extremely
Dissatisfied	Dissatisfied	Slightly
Dissatisfied	Neutral	Slightly
Satisfied	Satisfied	Extremely
Satisfied
-
- _____ 1. The amount of pay and fringe benefits I receive.
- _____ 2. The degree to which I am fairly paid for what I contribute to this organization.
- _____ 3. The people I talk to and work with on my job.
- _____ 4. The chance to get to know other people while at work.
- _____ 5. The chance to help other people while at work.
- _____ 6. The amount of support and guidance I receive from my supervisor.
- _____ 7. The degree of respect and fair treatment I receive from my boss.
- _____ 8. The overall quality of the supervision I receive in my work.
- _____ 9. The quality of administrative supervision I receive from my supervisor.

7. cont'd

1	2	3	4	5	6	7
Extremely Dissatisfied	Dissatisfied	Slightly Dissatisfied	Neutral	Slightly Satisfied	Satisfied	Extremely Satisfied

_____ 10. My administrative assignment.

_____ 11. The avenues of communication within the district.

8. Rate each of the following using the following scale.

1	2	3	4
Definitely true	Partially true	Partially false	Definitely false

_____ 1. There is something different to do here every day.

_____ 2. In my position, I need to learn to do more than one job.

_____ 3. For almost every job I do as an administrator, there is something new or different happening almost everyday.

_____ 4. My job is very nonroutine.

9. Write a number in the blank for each statement, based on this scale.

1	2	3	4	5	6	7
Disagree Strongly	Disagree	Disagree Slightly	Neutral	Agree Slightly	Agree	Agree Strongly

_____ 1. My opinion of myself goes up when I do a good job in the school.

_____ 2. Generally speaking, I am very satisfied with this job.

_____ 3. I feel a great sense of personal satisfaction when the school runs well.

_____ 4. I frequently think of quitting administration.

_____ 5. I feel sad and unhappy when I discover that I have performed poorly.

_____ 6. I am generally satisfied with the kind of work I do as an administrator.

_____ 7. My own feelings generally are not affected much one way or the other by how well I do as an administrator.

10. Rate each of the following using the following scale.

1	2	3	4	5
Strongly Disagree		Neutral		Strongly Agree

_____ 1. There is more to accomplish on this job than I have the time to accomplish.

_____ 2. The superintendent and central office personnel usually make most of the important decisions that affect this school.

10. cont'd

1	2	3	4	5
Strongly Disagree		Neutral		Strongly Agree

- _____ 3. In my district, central office personnel and principals participate in making decisions that affect the school.
- _____ 4. Administrators in this district are involved in decisions that affect their work.

11. Rate each of the following using the following scale.

1	2	3	4
Definitely true	Partially true	Partially false	Definitely false

- _____ 1. I know exactly what is expected of me.
- _____ 2. I know what my responsibilities are.

12. Rate each of the following using the following scale.

1	2	3	4	5
Strongly Disagree		Neutral		Strongly Agree

- _____ 1. In my district, no one has to fear the consequences of expressing opinions.
- _____ 2. In my district, meetings are such that persons can engage in an open and frank discussion of issues.
- _____ 3. I am encouraged by the superintendent to experiment in my school with new ways to run the school.
- _____ 4. Administrators in this district frequently try new ways to run their schools.
- _____ 5. In my district, the superintendent encourages the administrators to work together.
- _____ 6. In my district, the superintendent encourages administrators to exchange ideas or opinions.

13. Listed below are four statements about your career expectations. Please rate your degree of satisfaction with the statements using the following scale.

1	2	3	4
Very Satisfied	Somewhat Satisfied	Somewhat Dissatisfied	Very Dissatisfied

- _____ 1. Progress towards goals you set for yourself when entering administration.
- _____ 2. The chance the job gives you to do what you do best.
- _____ 3. Your present job considering your expectations when you went into administration.

13. cont'd

1
Very
Satisfied2
Somewhat
Satisfied3
Somewhat
Dissatisfied4
Very
Dissatisfied

_____ 4. Your present job in light of your current career expectations.

14. Listed below are a number of characteristics which could be present on any job. Using the scale below, please indicate in the left column how much of the described condition you feel is currently present in your work situation and in the right column enter how much you would like to have the described condition as a part of your job or situation.

1	2	3	4	5	6	7
Very Little Amount			Considerable Amount			Large Amount
<i>Currently Present</i>						<i>Would Like</i>
_____ 1.	High respect and fair treatment from my supervisor.					_____
_____ 2.	Stimulating and challenging work.					_____
_____ 3.	Chances to exercise independent thought/action in my job.					_____
_____ 4.	Regular coordination with co-workers.					_____
_____ 5.	Very friendly co-workers.					_____
_____ 6.	Opportunities to learn new things from work.					_____
_____ 7.	High salary and good fringe benefits.					_____
_____ 8.	Opportunities for personal growth/development in my job.					_____
_____ 9.	Opportunities to be creative and imaginative in my work.					_____
_____ 10.	A sense of worthwhile accomplishment in my work.					_____
_____ 11.	Opportunities to work with co-workers to accomplish tasks.					_____
_____ 12.	Great job security.					_____
_____ 13.	Opportunity for promotion and advancement.					_____

 REMARKS: (Please use the back of the page as well if necessary)

SECTION 2 - BACKGROUND INFORMATION

1. What is your sex? ☐ Male
☐ Female
2. Which best describes you? ☐ Hispanic, regardless of race
☐ African-American (not of Hispanic origin)
☐ White (not of Hispanic origin)
☐ Other
3. What is your age? ☐ 20 - 29
☐ 30 - 39
☐ 40 - 49
☐ 50 - 59
☐ 60 or over

SECTION 3 - CURRENT ADMINISTRATION STATUS

1. What type of school calendar does your school use? ☐ Traditional 10-month
☐ Multitrack Year-round
☐ Single-track Year-round
2. At what school level are you currently an administrator? ☐ Elementary
☐ Middle/Junior high
☐ Senior high
3. Were you an administrator of a school that was officially designated a restructuring school prior to June 1990. ☐ Yes
☐ No
4. Are you currently a principal or a vice principal? ☐ Principal
☐ Vice Principal
5. How many years total have you been an administrator? ☐ Years
6. Do you perceive your school to have high, moderate, or low ethnic diversity? ☐ High
☐ Moderate
☐ Low
7. How would you rate the socio-economic status of the families of the majority of the students in your school. ☐ High
☐ Moderate
☐ Low

REMARKS:

SECTION 4 - EFFECTIVE SCHOOL INFORMATION

1. Listed below are a number of characteristics of effective schools that have been identified in research and in the literature on effective schools. Using the scale below, please indicate the extent to which you perceive that your school achieves or approaches each effective school characteristic listed.

	1	2	3	4	5	6	7
	Moderately Effective			Very Effective			Extremely Effective
_____ 1.	Strong and effective administrative and instructional leadership that creates consensus on instructional goals and organizational capacity for instructional problem solving.						
_____ 2.	Emphasis on the acquisition of basic and higher-order skills.						
_____ 3.	A safe and orderly school environment that allows teachers and pupils to focus their energies on academic achievement.						
_____ 4.	A climate of expectation that virtually all children can learn under appropriate conditions.						
_____ 5.	Continuous assessment of students and programs to evaluated the effects of instruction.						

Thank you very much for taking the time to participate in this educational research project. Your responses will be kept confidential and all information that is produced will be in summary form as descriptive or inferential statistics.

Please return the completed **SURVEY AND THE CONSENT FORM** in the envelope provided by February 22, 1991.

REMARKS:

APPENDIX C

CONSENT FORM TO ACT AS A RESEARCH SUBJECT

**UNIVERSITY OF SAN DIEGO
CONSENT TO ACT AS A RESEARCH SUBJECT**

Rod Matheson of the Planning Department at San Diego City Schools and a doctoral student and the University of San Diego is conducting a research study that will examine the job characteristics and job satisfaction of the administrators of the San Diego Unified School District. Since I have been selected to participate in this study, I understand that I will be completing a job characteristics questionnaire along with selected demographic information.

I understand that participation in the study should not involve any risks or discomfort to me except for the possible minor fatigue as a result of the fifteen to twenty minutes of time to answer the questions on the questionnaire. Mr. Matheson has enclosed an EASE number 277-0063 for reference, should I encounter any discomfort.

I understand that my participation in this study is entirely voluntary. I understand that I may refuse to participate or withdraw at any time without jeopardy to my job or professional standing in the San Diego Unified School District.

I understand my research records will be kept completely confidential. I further understand that the coding numbers used for identification of each questionnaire are for follow-up procedures only and that after the questionnaires and consent forms have been returned the master list of names and code numbers, kept under lock at the Education Center, will be destroyed. I further understand that all information I give on the questionnaire will appear in summary or statistical form so that I may not be identified and that my identity cannot be disclosed without consent as required by law. I further understand that to preserve my anonymity only group data will be used in any publication of the results of this study.

Rod Matheson has explained this study to me in a covering letter and has supplied his office phone number, 293-8430, should I encounter any difficulties or have any questions.

There are no other agreements, written or verbal, related to this study beyond that expressed on this consent form. I have received a copy of this consent form.

I, the undersigned, understand the above explanations and, on that basis, I give consent to my voluntary participation in this research.

Signature of Subject

Date

San Diego, California
Location

Signature of Witness

Date

Signature of Researcher

Date

PLEASE RETURN THE SIGNED CONSENT FORM AND COMPLETED SURVEY IN
THE ENVELOPE PROVIDED

OR

PLEASE RETURN THE UNSIGNED CONSENT FORM AND THE BLANK SURVEY IF
YOU HAVE ELECTED NOT TO PARTICIPATE IN THE RESEARCH PROJECT

*** This consent form is a requirement of the University of San Diego's Human Subjects Committee for faculty and dissertation research studies.

APPENDIX D
COVER LETTER TO THE SITE ADMINISTRATORS

ROD MATHESON
Planning Analyst
Planning Department

SAN DIEGO CITY SCHOOLS

EDUCATION CENTER
4100 Normal Street, San Diego, California 92103-2662
Telephone (619) 293-8430

ROD R. MATHESON
Research Associate

DEPARTMENT OF ADMINISTRATION,
REHABILITATION AND
POSTSECONDARY EDUCATION
SAN DIEGO STATE UNIVERSITY
SAN DIEGO CA 92182-0163
(619) 594-3767, 594-6115

February 15, 1991

Dear Colleague:

re: Administrators' Survey - Roles and Attitudes Study

Frederick Herzberg theorized in his Motivation-Hygiene theory that *if you want a person to do a good job then give them a good job to do*. The dissertation study I am undertaking is designed to analyze the intrinsic and extrinsic role and attitude variables associated with work as a site administrator. The variables have been identified in previous research as having an impact on satisfaction/motivation, and/or possibly dissatisfaction in the work-life of educators. The results of this study can be used to identify elements of your job that should be sustained as they are sources of satisfaction and motivation and those elements of your job that can be redesigned or improved to allow you to do a better job and to allow you to experience more satisfaction in your work.

As an educator for 17 years and as a graduate student majoring in educational administration, I believe a study of the roles and attitudes of site administrators will fill a void in our knowledge and understanding of the impact of many educational policies and practices on the quality of the working life of site administrators. The study I am conducting is an extension of the research that Dr. Larry Frase, of San Diego State University, and I have been doing for the past two years.

The enclosed questionnaire has been approved for distribution by the district's Research Proposal Review Panel. In addition, endorsements have been offered by the superintendent, the deputy superintendent, and Anita Calhoun and Irv McClure, on behalf of the San Diego Administrators Association.

I sincerely hope that my research project will identify areas of concern and/or satisfaction to you and your colleagues and that, through a collaborative effort, many improvements can be realized. The ultimate aim of these efforts is to improve the education system to allow each of us to achieve our goals in the education of children and to add to the satisfaction and quality of our working lives.

I would like to thank you for taking your valuable time to assist me in the pursuit of my personal educational goal as a doctoral student. I believe that the results of my study will offer direction to policies, procedures and staff development activities that will support and/or improve the quality of your professional life.

Very truly,

Rod Matheson

APPENDIX E
INSTRUCTIONS FOR THE COMPLETION OF THE INSTRUMENT

Site Administrators' Survey - Roles and Attitudes Study

To The Site Administrators of San Diego City Schools:

Thankyou. Your cooperation and assistance in this research effort is greatly appreciated.

Instructions:

Please select a time and place to respond to the questionnaire where you can relax, be comfortable, be free from interruptions, and spend the approximately 15 - 20 minutes necessary to complete the survey.

Your answers will be kept strictly confidential and I (Rod Matheson) will be the only person handling the coded survey data. **The number codes on the questionnaires are to assist in the retrieval of the questionnaires only.** Once all consent forms and questionnaires have been returned or accounted for the master list of code numbers and names will be destroyed. Results from this survey will appear in summary or statistical form only so that neither individuals nor schools can be identified. If any one category of sub-analysis falls below eight subjects then the analysis will not be presented to ensure confidentiality of the subjects.

If you are unsure about how to answer a question, please give the best answer you can and/or make a comment in the "Remarks" sections.

If you have any questions please call me at 293 - 8430.

Please return your completed questionnaire and signed consent form to the Planning Department in the enclosed envelope by Friday March 1, 1991. Follow-up calls on unreturned documents will begin the following week.

***Note:** a signed consent form is required by the University of San Diego's Human Subjects Protection Committee for dissertation research.

Your participation is entirely voluntary. In the event you decline participation, I would ask that you return the consent form and blank questionnaire with a note explaining your decision not to participate so that all questionnaires and the intentions of all subjects can be accounted for.

Thank you for taking part in this study. Your contributions to educational research are appreciated greatly.

Rod Matheson, Project Coordinator

APPENDIX F
MEMO TO DEPUTY SUPERINTENDENT AND
ASSISTANT SUPERINTENDENTS

SAN DIEGO CITY SCHOOLS

EDUCATION CENTER • 4100 Normal Street, San Diego, CA 92103-2682 • (619) 293-8024

PLANNING, RESEARCH AND EVALUATION DIVISION
Planning Department

Date: February 15, 1991

Memo To: Pendleton, Carriedo, Cook, Cisneros, Foster, and Hawthorne

From: Rod Matheson

Subject: Site Administrators' Survey - Roles and Attitudes Study

For your information, I have enclosed a copy of the survey that has been approved by the district's Research Proposal Review Panel to be used in my dissertation research. The survey will be going out to all site administrators in the next day or two with returns requested by the 1st of March.

Participation by the site administrator is voluntary and all reasonable precautions will be taken to ensure confidentiality as outlined in the text of the document.

Dr. Payzant, Dr. Pendleton, Dr. Carriedo, HRS Division, the Research Committee, and Irv McClure and Anita Calhoun, of the Administrators Association, have been informed of the research project or have had an opportunity to react to the proposal.

My phone number is x8430 should you have any questions or concerns with regard to my research project. I will be attending the AASA Conference at the end of the month so any discussion will have to be carried out around this commitment.

APPENDIX G
FOLLOW-UP LETTER TO NONRESPONDENTS

March 8, 1991

Dear Fellow Educator:

I am following up on unreturned Administrators' Roles and Attitudes Surveys that I requested be returned by March 1. My records indicate that 123 fellow administrators have returned useable surveys, 9 have chosen not to participate, and several returned completed surveys without consent forms. The net result to date is a return rate of about 50%.

I have not received a survey from you to date (unless you sent it in without the consent form and identification number) and I would appreciate very much your input. I elected to survey the entire administrator population for my dissertation so that every member of the Administrators Association would have an opportunity to voice his or her perceptions and opinions.

In survey research there is always the risk that the non-respondents also have a very important story to tell. That is why I wanted to give everyone an opportunity to express their perceptions and that is the primary reason I am following up on unreturned surveys.

Your views and opinions are important to you and to your fellow administrators. Only through your participation can a truly accurate picture be obtained.

I hope that you can find a few minutes in your busy schedule to respond to the survey. If you have misplaced the original copy I would be happy to send you another copy. Please call me in the Planning Department at the Ed. Center at 293-8430.

A few of you have expressed some concern about the consent form that is required by the University of San Diego. Please feel free to send the form in to me separately. Only through a high rate of return can I safely generalize the findings of the survey to the entire administrator population in San Diego City Schools. **Make sure your opinions are represented in this generalization.**

I assure you that your confidentiality is of utmost importance to me and I will be the only person handling the coded survey information. All data will be processed and presented in aggregated form so that no one individual or small group of individuals will be identified.

I thank you for taking the time to assist me in my dissertation research effort.

Sincerely,

Rod Matheson
Doctoral Student

APPENDIX H
GRAPHS BY VARIABLES 1-40 SHOWING
THE EIGHT PRIMARY HYPOTHESES

Graph 1: Experience Meaningfulness of Work

Graph 2: Experience Responsibility of Outcomes of the Work

Legend: District-Wide Mean — — —

School Calendar

Traditional ☐ Multitrack ☐ Single-track ☐

Restructuring

Yes ☐ No ☐

Gender

Male ☐ Female ☐

Age

30-39 ☐ 40-49 ☐ 50-59 ☐ 60 or over ☐

* Significant difference at alpha = .05

School Level

Elementary ☐ Middle/Jr. ☐ Senior ☐

Principal or Vice Principal

Principal ☐ Vice Principal ☐

Socio-Economic Status

High ☐ Moderate ☐ Low ☐

Ethnic Diversity

High ☐ Moderate ☐

Graph 3: Experience Knowledge of the Actual Results of the Work

Graph 4: Skill Variety

Legend: District-Wide Mean — — —

School Calendar

Traditional ☐ Multitrack ☐ Single-track ☐

Restructuring

Yes ☐ No ☐

Gender

Male ☐ Female ☐

Age

30-39 ☐ 40-49 ☐ 50-59 ☐ 60 or over ☐

* Significant difference at alpha = .05

School Level

Elementary ☐ Middle/Jr. ☐ Senior ☐

Principal or Vice Principal

Principal ☐ Vice Principal ☐

Socio-Economic Status

High ☐ Moderate ☐ Low ☐

Ethnic Diversity

High ☐ Moderate ☐

Graph 5: Task Identity

Graph 6: Task Significance

Legend: District-Wide Mean — — —

School Calendar

Traditional ☐ Multitrack ☐ Single-track ☐

Restructuring

Yes ☐ No ☐

Gender

Male ☐ Female ☐

Age

30-39 ☐ 40-49 ☐ 50-59 ☐ 60 or over ☐

* Significant difference at alpha = .05

School Level

Elementary ☐ Middle/Jr. ☐ Senior ☐

Principal or Vice Principal

Principal ☐ Vice Principal ☐

Socio-Economic Status

High ☐ Moderate ☐ Low ☐

Ethnic Diversity

High ☐ Moderate ☐

Graph 7: Autonomy

Graph 8: Feedback From Administrative Job

Legend: District-Wide Mean — — —

School Calendar

Traditional ☐ Multitrack ☐ Single-track ☐

Restructuring

Yes ☐ No ☐

Gender

Male ☐ Female ☐

Age

30-39 ☐ 40-49 ☐ 50-59 ☐ 60 or over ☐

* Significant difference at alpha = .05

School Level

Elementary ☐ Middle/Jr. ☐ Senior ☐

Principal or Vice Principal

Principal ☐ Vice Principal ☐

Socio-Economic Status

High ☐ Moderate ☐ Low ☐

Ethnic Diversity

High ☐ Moderate ☐

Graph 9: Feedback From Supervisor or Other Administrators

Graph 10: Motivating Potential Score (MPS)

Legend: District-Wide Mean — — —

School Calendar

Traditional ☐ Multitrack ☐ Single-track ☐

Restructuring

Yes ☐ No ☐

Gender

Male ☐ Female ☐

Age

30-39 ☐ 40-49 ☐ 50-59 ☐ 60 or over ☐

* Significant difference at alpha = .05

School Level

Elementary ☐ Middle/Jr. ☐ Senior ☐

Principal or Vice Principal

Principal ☐ Vice Principal ☐

Socio-Economic Status

High ☐ Moderate ☐ Low ☐

Ethnic Diversity

High ☐ Moderate ☐

Graph 11: High Satisfaction

Graph 12: High Internal Motivation

Legend: District-Wide Mean — — —

School Calendar

Traditional ☐ Multitrack ☐ Single-track ☐

Restructuring

Yes ☐ No ☐

Gender

Male ☐ Female ☐

Age

30-39 ☐ 40-49 ☐ 50-59 ☐ 60 or over ☐

* Significant difference at alpha = .05

School Level

Elementary ☐ Middle/Jr. ☐ Senior ☐

Principal or Vice Principal

Principal ☐ Vice Principal ☐

Socio-Economic Status

High ☐ Moderate ☐ Low ☐

Ethnic Diversity

High ☐ Moderate ☐

Graph 13: Career Intentions (lower score is desirable for the variable)

Graph 14: High Quality Performance

Legend: District-Wide Mean — — —

School Calendar

Traditional ☐ Multitrack ☐ Single-track ☐

Restructuring

Yes ☐ No ☐

Gender

Male ☐ Female ☐

Age

30-39 ☐ 40-49 ☐ 50-59 ☐ 60 or over ☐

* Significant difference at alpha = .05

School Level

Elementary ☐ Middle/Jr. ☐ Senior ☐

Principal or Vice Principal

Principal ☐ Vice Principal ☐

Socio-Economic Status

High ☐ Moderate ☐ Low ☐

Ethnic Diversity

High ☐ Moderate ☐

Graph 15: High Growth Satisfaction

Graph 16: Efficacy (lower score is desirable for this variable)

Legend: District-Wide Mean — — —

School Calendar

Traditional ☐ Multitrack ☐ Single-track ☐

Restructuring

Yes ☐ No ☐

Gender

Male ☐ Female ☐

Age

30-39 ☐ 40-49 ☐ 50-59 ☐ 60 or over ☐

* Significant difference at alpha = .05

School Level

Elementary ☐ Middle/Jr. ☐ Senior ☐

Principal or Vice Principal

Principal ☐ Vice Principal ☐

Socio-Economic Status

High ☐ Moderate ☐ Low ☐

Ethnic Diversity

High ☐ Moderate ☐

Graph 17: Pay

Graph 18: Co-Workers

Legend: District-Wide Mean — — —

School Calendar

Traditional ☐ Multitrack ☐ Single-track ☐

Restructuring

Yes ☐ No ☐

Gender

Male ☐ Female ☐

Age

30-39 ☐ 40-49 ☐ 50-59 ☐ 60 or over ☐

* Significant difference at alpha = .05

School Level

Elementary ☐ Middle/Jr. ☐ Senior ☐

Principal or Vice Principal

Principal ☐ Vice Principal ☐

Socio-Economic Status

High ☐ Moderate ☐ Low ☐

Ethnic Diversity

High ☐ Moderate ☐

Graph 19: Supervisor Support

Graph 20: Competence of Supervisor

Legend: District-Wide Mean — — —

School Calendar

Traditional ☐ Multitrack ☐ Single-track ☐

Restructuring

Yes ☐ No ☐

Gender

Male ☐ Female ☐

Age

30-39 ☐ 40-49 ☐ 50-59 ☐ 60 or over ☐

* Significant difference at alpha = .05

School Level

Elementary ☐ Middle/Jr. ☐ Senior ☐

Principal or Vice Principal

Principal ☐ Vice Principal ☐

Socio-Economic Status

High ☐ Moderate ☐ Low ☐

Ethnic Diversity

High ☐ Moderate ☐

Graph 21: School Size

Graph 22: Student Learning Problems (lower score is desirable for the variable)

Legend: District-Wide Mean — — —

School Calendar

Traditional ☐ Multitrack ☐ Single-track ☐

Restructuring

Yes ☐ No ☐

Gender

Male ☐ Female ☐

Age

30-39 ☐ 40-49 ☐ 50-59 ☐ 60 or over ☐

* Significant difference at alpha = .05

School Level

Elementary ☐ Middle/Jr. ☐ Senior ☐

Principal or Vice Principal

Principal ☐ Vice Principal ☐

Socio-Economic Status

High ☐ Moderate ☐ Low ☐

Ethnic Diversity

High ☐ Moderate ☐

Graph 23: Student Behavior Problems

Graph 24: Holidays (lower score is desirable for the variable)

Legend: District-Wide Mean — — —

School Calendar

Traditional ☐ Multitrack ☐ Single-track ☐

Restructuring

Yes ☐ No ☐

Gender

Male ☐ Female ☐

Age

30-39 ☐ 40-49 ☐ 50-59 ☐ 60 or over ☐

* Significant difference at alpha = .05

School Level

Elementary ☐ Middle/Jr. ☐ Senior ☐

Principal or Vice Principal

Principal ☐ Vice Principal ☐

Socio-Economic Status

High ☐ Moderate ☐ Low ☐

Ethnic Diversity

High ☐ Moderate ☐

Graph 25: Parental Support (lower score is desirable for the variable)

Graph 26: Repairs and Maintenance (lower score is desirable for the variable)

Legend: District-Wide Mean — — —

School Calendar

Traditional ☐ Multitrack ☐ Single-track ☐

Restructuring

Yes ☐ No ☐

Gender

Male ☐ Female ☐

Age

30-39 ☐ 40-49 ☐ 50-59 ☐ 60 or over ☐

* Significant difference at alpha = .05

School Level

Elementary ☐ Middle/Jr. ☐ Senior ☐

Principal or Vice Principal

Principal ☐ Vice Principal ☐

Socio-Economic Status

High ☐ Moderate ☐ Low ☐

Ethnic Diversity

High ☐ Moderate ☐

Graph 27: Communication

Graph 28: Administrative Assignment

Legend: District-Wide Mean — — —

School Calendar

Traditional ☐ Multitrack ☐ Single-track ☐

Restructuring

Yes ☐ No ☐

Gender

Male ☐ Female ☐

Age

30-39 ☐ 40-49 ☐ 50-59 ☐ 60 or over ☐

* Significant difference at alpha = .05

School Level

Elementary ☐ Middle/Jr. ☐ Senior ☐

Principal or Vice Principal

Principal ☐ Vice Principal ☐

Socio-Economic Status

High ☐ Moderate ☐ Low ☐

Ethnic Diversity

High ☐ Moderate ☐

Graph 29: Routinization (lower score is desirable for the variable)

Graph 30: Role Ambiguity (lower score is desirable for the variable)

Legend: District-Wide Mean — — —

School Calendar

Traditional ☐ Multitrack ☐ Single-track ☐

Restructuring

Yes ☐ No ☐

Gender

Male ☐ Female ☐

Age

30-39 ☐ 40-49 ☐ 50-59 ☐ 60 or over ☐

* Significant difference at alpha = .05

School Level

Elementary ☐ Middle/Jr. ☐ Senior ☐

Principal or Vice Principal

Principal ☐ Vice Principal ☐

Socio-Economic Status

High ☐ Moderate ☐ Low ☐

Ethnic Diversity

High ☐ Moderate ☐

Graph 31: Role Overload (lower score is desirable for the variable)

Graph 32: Involvement in Decision Making

Legend: District-Wide Mean — — —

School Calendar

Traditional ☐ Multitrack ☐ Single-track ☐

Restructuring

Yes ☐ No ☐

Gender

Male ☐ Female ☐

Age

30-39 ☐ 40-49 ☐ 50-59 ☐ 60 or over ☐

* Significant difference at alpha = .05

School Level

Elementary ☐ Middle/Jr. ☐ Senior ☐

Principal or Vice Principal

Principal ☐ Vice Principal ☐

Socio-Economic Status

High ☐ Moderate ☐ Low ☐

Ethnic Diversity

High ☐ Moderate ☐

Graph 33: Openness of Expression

Graph 34: Encouragement of Experimentation

Legend: District-Wide Mean — — —

School Calendar

Traditional ☐ Multitrack ☐ Single-track ☐

Restructuring

Yes ☐ No ☐

Gender

Male ☐ Female ☐

Age

30-39 ☐ 40-49 ☐ 50-59 ☐ 60 or over ☐

* Significant difference at alpha = .05

School Level

Elementary ☐ Middle/Jr. ☐ Senior ☐

Principal or Vice Principal

Principal ☐ Vice Principal ☐

Socio-Economic Status

High ☐ Moderate ☐ Low ☐

Ethnic Diversity

High ☐ Moderate ☐

Graph 35: Superintendent Facilitates Administrator Interaction

Graph 36: Career Expectations: (lower score is desirable for the variable)

Legend: District-Wide Mean — — —

School Calendar

Traditional ☐ Multitrack ☐ Single-track ☐

Restructuring

Yes ☐ No ☐

Gender

Male ☐ Female ☐

Age

30-39 ☐ 40-49 ☐ 50-59 ☐ 60 or over ☐

* Significant difference at alpha = .05

School Level

Elementary ☐ Middle/Jr. ☐ Senior ☐

Principal or Vice Principal

Principal ☐ Vice Principal ☐

Socio-Economic Status

High ☐ Moderate ☐ Low ☐

Ethnic Diversity

High ☐ Moderate ☐

Graph 37: Present Conditions

Graph 38: Would Like Conditions

Legend: District-Wide Mean — — —

School Calendar

Traditional ☐ Multitrack ☐ Single-track ☐

Restructuring

Yes ☐ No ☐

Gender

Male ☐ Female ☐

Age

30-39 ☐ 40-49 ☐ 50-59 ☐ 60 or over ☐

* Significant difference at alpha = .05

School Level

Elementary ☐ Middle/Jr. ☐ Senior ☐

Principal or Vice Principal

Principal ☐ Vice Principal ☐

Socio-Economic Status

High ☐ Moderate ☐ Low ☐

Ethnic Diversity

High ☐ Moderate ☐

Graph 39: Effectiveness of the School

Graph 40: Growth Need Strength (0 represents no desire for growth)

Legend: District-Wide Mean — — —

School Calendar

Traditional ☐ Multitrack ☐ Single-track ☐

Restructuring

Yes ☐ No ☐

Gender

Male ☐ Female ☐

Age

30-39 ☐ 40-49 ☐ 50-59 ☐ 60 or over ☐

* Significant difference at alpha = .05

School Level

Elementary ☐ Middle/Jr. ☐ Senior ☐

Principal or Vice Principal

Principal ☐ Vice Principal ☐

Socio-Economic Status

High ☐ Moderate ☐ Low ☐

Ethnic Diversity

High ☐ Moderate ☐

APPENDIX I
COMPUTER PRINTOUTS FOR THE SIGNIFICANT
ONE-WAY ANALYSES OF VARIANCE FOR
THE EIGHT PRIMARY HYPOTHESES

One Factor ANOVA X_1 : CALENDAR Y_{16} : EFFICACY

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	2	5.41	2.71	4.87
Within groups	141	78.4	.56	p = .009
Total	143	83.81		

Model II estimate of between component variance = .08

One Factor ANOVA X_1 : CALENDAR Y_{16} : EFFICACY

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
TRADITIONAL	113	2.3	.76	.07
MULTITRACK	11	1.7	.75	.23
SINGLE-TRACK	20	1.93	.64	.14

One Factor ANOVA X_1 : CALENDAR Y_{16} : EFFICACY

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnnett t:
TRADITIONAL vs. MULTITR...	.61	.47*	3.31*	2.57
TRADITIONAL vs. SINGLE-...	.37	.36*	2.1	2.05
MULTITRACK vs. SINGLE-T...	-.24	.55	.35	.84

* Significant at 95%

One Factor ANOVA X_1 : CALENDAR Y_{22} : STUDENT LEARNING PROBLEMS

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	2	2.01	1	3.7
Within groups	141	38.17	.27	p = .027
Total	143	40.18		

Model II estimate of between component variance = .03

One Factor ANOVA X_1 : CALENDAR Y_{22} : STUDENT LEARNING PROBLEMS

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
TRADITIONAL	113	2.35	.54	.05
MULTITRACK	11	1.91	.58	.18
SINGLE-TRACK	20	2.35	.38	.08

One Factor ANOVA X_1 : CALENDAR Y_{22} : STUDENT LEARNING PROBLEMS

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnnett t:
TRADITIONAL vs. MULTITR...	.44	.32*	3.66*	2.71
TRADITIONAL vs. SINGLE-...	3.98E-3	.25	4.98E-4	.03
MULTITRACK vs. SINGLE-T...	-.44	.39*	2.55	2.26

* Significant at 95%

One Factor ANOVA X_1 : CALENDAR Y_{23} : STUDENT BEHAVIOR PROBLEMS

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	2	2.99	1.5	4.89
Within groups	141	43.14	.31	p = .0089
Total	143	46.13		

Model II estimate of between component variance = .05

One Factor ANOVA X_1 : CALENDAR Y_{23} : STUDENT BEHAVIOR PROBLEMS

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
TRADITIONAL	113	3.25	.6	.06
MULTITRACK	11	3.66	.41	.12
SINGLE-TRACK	20	3.56	.3	.07

One Factor ANOVA X_1 : CALENDAR Y_{23} : STUDENT BEHAVIOR PROBLEMS

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
TRADITIONAL vs. MULTITR...	-.41	.35*	2.74	2.34
TRADITIONAL vs. SINGLE-...	-.31	.27*	2.71	2.33
MULTITRACK vs. SINGLE-T...	.1	.41	.11	.47

* Significant at 95%

One Factor ANOVA X_1 : CALENDAR Y_{24} : HOLIDAYS

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	2	10.31	5.16	4.57
Within groups	141	159.01	1.13	p = .0119
Total	143	169.33		

Model II estimate of between component variance = .16

One Factor ANOVA X_1 : CALENDAR Y_{24} : HOLIDAYS

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
TRADITIONAL	113	1.86	1.1	.1
MULTITRACK	11	2.55	1.13	.34
SINGLE-TRACK	20	1.35	.75	.17

One Factor ANOVA X_1 : CALENDAR Y_{24} : HOLIDAYS

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnnett t:
TRADITIONAL vs. MULTITR...	-.69	.66*	2.1	2.05
TRADITIONAL vs. SINGLE-...	.51	.51	1.95	1.97
MULTITRACK vs. SINGLE-T...	1.2	.79*	4.5*	3

* Significant at 95%

One Factor ANOVA X_1 : CALENDAR Y_{26} : REPAIRS AND MAINTENANCE

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	2	5.75	2.87	3.09
Within groups	141	131.08	.93	p = .0486
Total	143	136.83		

Model II estimate of between component variance = .08

One Factor ANOVA X_1 : CALENDAR Y_{26} : REPAIRS AND MAINTENANCE

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
TRADITIONAL	113	2.66	.99	.09
MULTITRACK	11	1.91	.54	.16
SINGLE-TRACK	20	2.55	1	.22

One Factor ANOVA X_1 : CALENDAR Y_{26} : REPAIRS AND MAINTENANCE

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
TRADITIONAL vs. MULTITR...	.75	.6*	3.07*	2.48
TRADITIONAL vs. SINGLE-...	.11	.46	.12	.49
MULTITRACK vs. SINGLE-T...	-.64	.72	1.57	1.77

* Significant at 95%

One Factor ANOVA X_1 : RESTRUCTURE PRIOR TO JUNE 90 Y_5 : TASK IDENTITY

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	11.14	11.14	3.96
Within groups	140	393.73	2.81	p = .0485
Total	141	404.87		

Model II estimate of between component variance = .12

One Factor ANOVA X_1 : RESTRUCTURE PRIOR TO JUNE 90 Y_5 : TASK IDENTITY

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
YES	54	3.89	1.76	.24
NO	88	4.47	1.62	.17

One Factor ANOVA X_1 : RESTRUCTURE PRIOR TO JUNE 90 Y_5 : TASK IDENTITY

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnnett t:
YES vs. NO	-.58	.57*	3.96*	1.99

* Significant at 95%

One Factor ANOVA X_1 : RESTRUCTURE PRIOR TO JUNE 90 Y_g : FEEDBACK FROM ADMIN JOB

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	6.6	6.6	4.74
Within groups	140	194.71	1.39	p = .0311
Total	141	201.31		

Model II estimate of between component variance = .08

One Factor ANOVA X_1 : RESTRUCTURE PRIOR TO JUNE 90 Y_g : FEEDBACK FROM ADMIN JOB

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
YES	54	4.95	1.25	.17
NO	88	5.4	1.13	.12

One Factor ANOVA X_1 : RESTRUCTURE PRIOR TO JUNE 90 Y_g : FEEDBACK FROM ADMIN JOB

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnnett t:
YES vs. NO	-.44	.4*	4.74*	2.18

* Significant at 95%

One Factor ANOVA X_1 : RESTRUCTURE PRIOR TO JUNE 90 Y_{17} : PAY

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	11	11	5.13
Within groups	140	300.24	2.14	p = .025
Total	141	311.25		

Model II estimate of between component variance = .13

One Factor ANOVA X_1 : RESTRUCTURE PRIOR TO JUNE 90 Y_{17} : PAY

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
YES	54	4.65	1.55	.21
NO	88	5.22	1.41	.15

One Factor ANOVA X_1 : RESTRUCTURE PRIOR TO JUNE 90 Y_{17} : PAY

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
YES vs. NO	-.57	.5*	5.13*	2.27

* Significant at 95%

One Factor ANOVA X_1 : GENDER Y_{13} : CAREER INTENTIONS

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	3.54	3.54	4.32
Within groups	142	116.35	.82	p = .0394
Total	143	119.89		

Model II estimate of between component variance = .04

One Factor ANOVA X_1 : GENDER Y_{13} : CAREER INTENTIONS

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
MALE	64	1.7	1.06	.13
FEMALE	80	1.39	.75	.08

One Factor ANOVA X_1 : GENDER Y_{13} : CAREER INTENTIONS

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnnett t:
MALE vs. FEMALE	.32	.3*	4.32*	2.08

* Significant at 95%

One Factor ANOVA X₁: GENDER Y₂₄: HOLIDAYS

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	4.59	4.59	3.96
Within groups	142	164.73	1.16	p = .0486
Total	143	169.33		

Model II estimate of between component variance = .05

One Factor ANOVA X₁: GENDER Y₂₄: HOLIDAYS

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
MALE	64	1.64	.95	.12
FEMALE	80	2	1.17	.13

One Factor ANOVA X₁: GENDER Y₂₄: HOLIDAYS

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
MALE vs. FEMALE	-.36	.36*	3.96*	1.99

* Significant at 95%

One Factor ANOVA X₁: GENDER Y₃₅: SUPER. FACILITATES INTERACTION

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	4.32	4.32	4.21
Within groups	142	145.51	1.02	p = .042
Total	143	149.83		

Model II estimate of between component variance = .05

One Factor ANOVA X₁: GENDER Y₃₅: SUPER. FACILITATES INTERACTION

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
MALE	64	3.84	.92	.11
FEMALE	80	3.49	1.08	.12

One Factor ANOVA X₁: GENDER Y₃₅: SUPER. FACILITATES INTERACTION

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnnett t:
MALE vs. FEMALE	.35	.34*	4.21*	2.05

* Significant at 95%

One Factor ANOVA X_1 : GENDER Y_{38} : WOULD LIKE CONDITIONS

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	1.83	1.83	5.91
Within groups	139	43.03	.31	p = .0163
Total	140	44.86		

Model II estimate of between component variance = .02

One Factor ANOVA X_1 : GENDER Y_{38} : WOULD LIKE CONDITIONS

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
MALE	62	6.32	.68	.09
FEMALE	79	6.55	.44	.05

One Factor ANOVA X_1 : GENDER Y_{38} : WOULD LIKE CONDITIONS

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnnett t:
MALE vs. FEMALE	-.23	.19*	5.91*	2.43

* Significant at 95%

One Factor ANOVA X₁: AGE Y₁₃: CAREER INTENTIONS

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	3	19.12	6.37	8.82
Within groups	139	100.49	.72	p = .0001
Total	142	119.61		

Model II estimate of between component variance = .19

One Factor ANOVA X₁: AGE Y₁₃: CAREER INTENTIONS

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
YEARS 30-39	18	1.28	.46	.11
YEARS 40-49	66	1.33	.62	.08
YEARS 50-59	51	1.67	1.05	.15
YEARS 60 AND OV...	8	2.88	1.55	.55

One Factor ANOVA X₁: AGE Y₁₃: CAREER INTENTIONS

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
YEARS 30-39 vs. YEARS 40-49	-.06	.45	.02	.25
YEARS 30-39 vs. YEARS 50-59	-.39	.46	.93	1.67
YEARS 30-39 vs. YEARS 60 ...	-1.6	.71*	6.51*	4.42
YEARS 40-49 vs. YEARS 50-59	-.33	.31*	1.47	2.1
YEARS 40-49 vs. YEARS 60 ...	-1.54	.63*	7.82*	4.84

* Significant at 95%

One Factor ANOVA X₁: AGE Y₁₃: CAREER INTENTIONS

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
YEARS 50-59 vs. YEARS 60 ...	-1.21	.64*	4.66*	3.74

* Significant at 95%

One Factor ANOVA X_1 : AGE Y_{26} : REPAIRS AND MAINTENANCE

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	3	10.42	3.47	3.88
Within groups	139	124.41	.9	p = .0106
Total	142	134.83		

Model II estimate of between component variance = .08

One Factor ANOVA X_1 : AGE Y_{26} : REPAIRS AND MAINTENANCE

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
YEARS 30-39	18	2.56	.86	.2
YEARS 40-49	66	2.83	1	.12
YEARS 50-59	51	2.37	.89	.13
YEARS 60 AND OV...	8	1.88	.99	.35

One Factor ANOVA X_1 : AGE Y_{26} : REPAIRS AND MAINTENANCE

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnnett t:
YEARS 30-39 vs. YEARS 40-49	-.28	.5	.41	1.1
YEARS 30-39 vs. YEARS 50-59	.18	.51	.17	.71
YEARS 30-39 vs. YEARS 60 ...	.68	.79	.96	1.69
YEARS 40-49 vs. YEARS 50-59	.46	.35*	2.27	2.61
YEARS 40-49 vs. YEARS 60 ...	.96	.7*	2.44	2.71

* Significant at 95%

One Factor ANOVA X_1 : AGE Y_{26} : REPAIRS AND MAINTENANCE

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnnett t:
YEARS 50-59 vs. YEARS 60 ...	.5	.71	.64	1.38

One Factor ANOVA X₁: AGE Y₃₂: INVOLVEMENT IN DECISION MAKING

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	3	6.28	2.09	2.73
Within groups	139	106.45	.77	p = .0462
Total	142	112.72		

Model II estimate of between component variance = .04

One Factor ANOVA X₁: AGE Y₃₂: INVOLVEMENT IN DECISION MAKING

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
YEARS 30-39	18	3.65	.73	.17
YEARS 40-49	66	3.09	.86	.11
YEARS 50-59	51	2.98	.97	.14
YEARS 60 AND OV...	8	3.29	.52	.18

One Factor ANOVA X₁: AGE Y₃₂: INVOLVEMENT IN DECISION MAKING

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnnett t:
YEARS 30-39 vs. YEARS 40-49	.56	.46*	1.91	2.39
YEARS 30-39 vs. YEARS 50-59	.67	.47*	2.58	2.78
YEARS 30-39 vs. YEARS 60 ...	.36	.74	.31	.96
YEARS 40-49 vs. YEARS 50-59	.11	.32	.15	.68
YEARS 40-49 vs. YEARS 60 ...	-.2	.65	.12	.61

* Significant at 95%

One Factor ANOVA X₁: AGE Y₃₂: INVOLVEMENT IN DECISION MAKING

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnnett t:
YEARS 50-59 vs. YEARS 60 ...	-.31	.66	.29	.93

One Factor ANOVA X₁: AGE Y₃₉: EFFECTIVENESS OF SCHOOL

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	3	15.44	5.15	3.61
Within groups	124	176.53	1.42	p = .0152
Total	127	191.97		

Model II estimate of between component variance = .13

One Factor ANOVA X₁: AGE Y₃₉: EFFECTIVENESS OF SCHOOL

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
YEARS 30-39	17	4.3	1.4	.34
YEARS 40-49	57	4.94	1.29	.17
YEARS 50-59	46	5.2	.98	.15
YEARS 60 AND OV...	8	5.8	1.11	.39

One Factor ANOVA X₁: AGE Y₃₉: EFFECTIVENESS OF SCHOOL

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnnett t:
YEARS 30-39 vs. YEARS 40-49	-.64	.65	1.24	1.93
YEARS 30-39 vs. YEARS 50-59	-.9	.67*	2.33	2.64
YEARS 30-39 vs. YEARS 60 ...	-1.5	1.01*	2.87*	2.93
YEARS 40-49 vs. YEARS 50-59	-.26	.47	.4	1.09
YEARS 40-49 vs. YEARS 60 ...	-.86	.89	1.22	1.92

* Significant at 95%

One Factor ANOVA X₁: AGE Y₃₉: EFFECTIVENESS OF SCHOOL

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnnett t:
YEARS 50-59 vs. YEARS 60 ...	-.6	.9	.58	1.32

One Factor ANOVA X₁: SCHOOL LEVEL Y₁₂: HIGH INTERNAL MOTIVATION

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	2	5.23	2.61	4.67
Within groups	139	77.77	.56	p = .0109
Total	141	83		

Model II estimate of between component variance = .05

One Factor ANOVA X₁: SCHOOL LEVEL Y₁₂: HIGH INTERNAL MOTIVATION

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
ELEMENTARY	79	6.08	.68	.08
MIDDLE/JUNIOR	35	5.98	.73	.12
SENIOR HIGH	28	5.58	.93	.18

One Factor ANOVA X₁: SCHOOL LEVEL Y₁₂: HIGH INTERNAL MOTIVATION

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnnett t:
ELEMENTARY vs. MIDDLE/...	.1	.3	.23	.68
ELEMENTARY vs. SENIOR ...	.5	.33*	4.65*	3.05
MIDDLE/JU... vs. SENIOR HI...	.4	.38*	2.2	2.1

* Significant at 95%

One Factor ANOVA X_1 : SCHOOL LEVEL Y_{23} : STUDENT BEHAVIOR PROBLEMS

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	2	9.36	4.68	17.86
Within groups	139	36.41	.26	p = .0001
Total	141	45.77		

Model II estimate of between component variance = .11

One Factor ANOVA X_1 : SCHOOL LEVEL Y_{23} : STUDENT BEHAVIOR PROBLEMS

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
ELEMENTARY	79	3.54	.45	.05
MIDDLE/JUNIOR	35	3.2	.54	.09
SENIOR HIGH	28	2.89	.64	.12

One Factor ANOVA X_1 : SCHOOL LEVEL Y_{23} : STUDENT BEHAVIOR PROBLEMS

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
ELEMENTARY vs. MIDDLE/...	.34	.21*	5.29*	3.25
ELEMENTARY vs. SENIOR ...	.65	.22*	16.42*	5.73
MIDDLE/JU... vs. SENIOR HI...	.31	.26*	2.8	2.37

* Significant at 95%

One Factor ANOVA X₁: SCHOOL LEVEL Y₂₅: PARENTAL SUPPORT

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	2	5.16	2.58	5.85
Within groups	139	61.32	.44	p = .0036
Total	141	66.48		

Model II estimate of between component variance = .05

One Factor ANOVA X₁: SCHOOL LEVEL Y₂₅: PARENTAL SUPPORT

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
ELEMENTARY	79	1.63	.72	.08
MIDDLE/JUNIOR	35	2	.49	.08
SENIOR HIGH	28	2.04	.69	.13

One Factor ANOVA X₁: SCHOOL LEVEL Y₂₅: PARENTAL SUPPORT

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnnett t:
ELEMENTARY vs. MIDDLE/...	-.37	.27*	3.7*	2.72
ELEMENTARY vs. SENIOR ...	-.4	.29*	3.8*	2.76
MIDDLE/JU... vs. SENIOR HI...	-.04	.33	.02	.21

* Significant at 95%

One Factor ANOVA X₁: SCHOOL LEVEL Y₂₆: REPAIRS AND MAINTENANCE

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	2	8.05	4.02	4.36
Within groups	139	128.26	.92	p = .0146
Total	141	136.31		

Model II estimate of between component variance = .07

One Factor ANOVA X₁: SCHOOL LEVEL Y₂₆: REPAIRS AND MAINTENANCE

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
ELEMENTARY	79	2.48	.93	.1
MIDDLE/JUNIOR	35	2.46	1.09	.18
SENIOR HIGH	28	3.07	.86	.16

One Factor ANOVA X₁: SCHOOL LEVEL Y₂₆: REPAIRS AND MAINTENANCE

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnnett t:
ELEMENTARY vs. MIDDLE/...	.02	.39	.01	.12
ELEMENTARY vs. SENIOR ...	-.59	.42*	3.9*	2.79
MIDDLE/JU... vs. SENIOR HI...	-.61	.48*	3.18*	2.52

* Significant at 95%

One Factor ANOVA X₁: SCHOOL LEVEL Y₃₅: SUPER. FACILITATES INTERACTION

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	2	8.45	4.22	4.22
Within groups	139	139.12	1	p = .0166
Total	141	147.57		

Model II estimate of between component variance = .08

One Factor ANOVA X₁: SCHOOL LEVEL Y₃₅: SUPER. FACILITATES INTERACTION

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
ELEMENTARY	79	3.58	.93	.11
MIDDLE/JUNIOR	35	4.03	.93	.16
SENIOR HIGH	28	3.32	1.24	.23

One Factor ANOVA X₁: SCHOOL LEVEL Y₃₅: SUPER. FACILITATES INTERACTION

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
ELEMENTARY vs. MIDDLE/...	-.45	.4*	2.48	2.23
ELEMENTARY vs. SENIOR ...	.25	.44	.67	1.16
MIDDLE/JU... vs. SENIOR HI...	.71	.5*	3.89*	2.79

* Significant at 95%

One Factor ANOVA X_1 : PRINCIPAL/VICE PRINC. Y_3 : EXP. KNOWLEDGE OF RESULTS

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	7.16	7.16	7.5
Within groups	142	135.66	.96	p = .007
Total	143	142.83		

Model II estimate of between component variance = .09

One Factor ANOVA X_1 : PRINCIPAL/VICE PRINC. Y_3 : EXP. KNOWLEDGE OF RESULTS

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
PRINCIPAL	82	5.85	.85	.09
VICE PRINCIPAL	62	5.4	1.12	.14

One Factor ANOVA X_1 : PRINCIPAL/VICE PRINC. Y_3 : EXP. KNOWLEDGE OF RESULTS

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
PRINCIPAL vs. VICE PRINCIPAL	.45	.33*	7.5*	2.74

* Significant at 95%

One Factor ANOVA X₁: PRINCIPAL/VICE PRINC. Y₁₃: CAREER INTENTIONS

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	7	7	8.81
Within groups	142	112.89	.79	p = .0035
Total	143	119.89		

Model II estimate of between component variance = .09

One Factor ANOVA X₁: PRINCIPAL/VICE PRINC. Y₁₃: CAREER INTENTIONS

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
PRINCIPAL	82	1.72	1.03	.11
VICE PRINCIPAL	62	1.27	.66	.08

One Factor ANOVA X₁: PRINCIPAL/VICE PRINC. Y₁₃: CAREER INTENTIONS

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnnett t:
PRINCIPAL vs. VICE PRINCIPAL	.45	.3*	8.81*	2.97

* Significant at 95%

One Factor ANOVA X₁: PRINCIPAL/VICE PRINC. Y₁₈: CO-WORKERS

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	3.56	3.56	4.7
Within groups	141	106.81	.76	p = .0319
Total	142	110.37		

Model II estimate of between component variance = .04

One Factor ANOVA X₁: PRINCIPAL/VICE PRINC. Y₁₈: CO-WORKERS

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
PRINCIPAL	81	5.9	.78	.09
VICE PRINCIPAL	62	5.58	.98	.12

One Factor ANOVA X₁: PRINCIPAL/VICE PRINC. Y₁₈: CO-WORKERS

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
PRINCIPAL vs. VICE PRINC...	.32	.29*	4.7*	2.17

* Significant at 95%

One Factor ANOVA X₁: PRINCIPAL/VICE PRINC. Y₂₁: SCHOOL SIZE

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	19.74	19.74	14.75
Within groups	142	190.08	1.34	p = .0002
Total	143	209.83		

Model II estimate of between component variance = .26

One Factor ANOVA X₁: PRINCIPAL/VICE PRINC. Y₂₁: SCHOOL SIZE

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
PRINCIPAL	82	3.23	1.1	.12
VICE PRINCIPAL	62	2.48	1.22	.16

One Factor ANOVA X₁: PRINCIPAL/VICE PRINC. Y₂₁: SCHOOL SIZE

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
PRINCIPAL vs. VICE PRINC...	.75	.38*	14.75*	3.84

* Significant at 95%

One Factor ANOVA X_1 : PRINCIPAL/VICE PRINC. Y_{23} : STUDENT BEHAVIOR PROBLEMS

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	8.31	8.31	31.2
Within groups	142	37.83	.27	p = .0001
Total	143	46.13		

Model II estimate of between component variance = .11

One Factor ANOVA X_1 : PRINCIPAL/VICE PRINC. Y_{23} : STUDENT BEHAVIOR PROBLEMS

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
PRINCIPAL	82	3.53	.45	.05
VICE PRINCIPAL	62	3.05	.59	.08

One Factor ANOVA X_1 : PRINCIPAL/VICE PRINC. Y_{23} : STUDENT BEHAVIOR PROBLEMS

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnnett t:
PRINCIPAL vs. VICE PRINCI...	.49	.17*	31.2*	5.59

* Significant at 95%

One Factor ANOVA X₁: PRINCIPAL/VICE PRINC. Y₂₅: PARENTAL SUPPORT

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	7.43	7.43	16.51
Within groups	142	63.88	.45	p = .0001
Total	143	71.31		

Model II estimate of between component variance = .1

One Factor ANOVA X₁: PRINCIPAL/VICE PRINC. Y₂₅: PARENTAL SUPPORT

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
PRINCIPAL	82	1.62	.66	.07
VICE PRINCIPAL	62	2.08	.68	.09

One Factor ANOVA X₁: PRINCIPAL/VICE PRINC. Y₂₅: PARENTAL SUPPORT

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
PRINCIPAL vs. VICE PRINCIPAL	-.46	.22*	16.51*	4.06

* Significant at 95%

One Factor ANOVA X_1 : PRINCIPAL/VICE PRINC. Y_{26} : REPAIRS AND MAINTENANCE

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	4.36	4.36	4.67
Within groups	142	132.47	.93	p = .0324
Total	143	136.83		

Model II estimate of between component variance = .05

One Factor ANOVA X_1 : PRINCIPAL/VICE PRINC. Y_{26} : REPAIRS AND MAINTENANCE

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
PRINCIPAL	82	2.44	.89	.1
VICE PRINCIPAL	62	2.79	1.06	.13

One Factor ANOVA X_1 : PRINCIPAL/VICE PRINC. Y_{26} : REPAIRS AND MAINTENANCE

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
PRINCIPAL vs. VICE PRINCIPAL	-.35	.32*	4.67*	2.16

* Significant at 95%

One Factor ANOVA X_1 : PRINCIPAL/VICE PRINC. Y_{30} : ROLE AMBIGUITY

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	1.1	1.1	4.23
Within groups	142	36.79	.26	p = .0415
Total	143	37.89		

Model II estimate of between component variance = .01

One Factor ANOVA X_1 : PRINCIPAL/VICE PRINC. Y_{30} : ROLE AMBIGUITY

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
PRINCIPAL	82	1.4	.4	.04
VICE PRINCIPAL	62	1.57	.63	.08

One Factor ANOVA X_1 : PRINCIPAL/VICE PRINC. Y_{30} : ROLE AMBIGUITY

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
PRINCIPAL vs. VICE PRINCIPAL	-.18	.17*	4.23*	2.06

* Significant at 95%

One Factor ANOVA X₁: PRINCIPAL/VICE PRINC. Y₃₆: CAREER EXPECTATIONS

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	5.65	5.65	14.58
Within groups	142	55.05	.39	p = .0002
Total	143	60.7		

Model II estimate of between component variance = .07

One Factor ANOVA X₁: PRINCIPAL/VICE PRINC. Y₃₆: CAREER EXPECTATIONS

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
PRINCIPAL	82	1.59	.56	.06
VICE PRINCIPAL	62	1.99	.7	.09

One Factor ANOVA X₁: PRINCIPAL/VICE PRINC. Y₃₆: CAREER EXPECTATIONS

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
PRINCIPAL vs. VICE PRINCL...	-.4	.21*	14.58*	3.82

* Significant at 95%

One Factor ANOVA X₁: PRINCIPAL/VICE PRINC. Y₃₉: EFFECTIVENESS OF SCHOOL

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	14.78	14.78	10.58
Within groups	127	177.54	1.4	p = .0015
Total	128	192.33		

Model II estimate of between component variance = .21

One Factor ANOVA X₁: PRINCIPAL/VICE PRINC. Y₃₉: EFFECTIVENESS OF SCHOOL

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
PRINCIPAL	71	5.31	1.03	.12
VICE PRINCIPAL	58	4.63	1.35	.18

One Factor ANOVA X₁: PRINCIPAL/VICE PRINC. Y₃₉: EFFECTIVENESS OF SCHOOL

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnnett t:
PRINCIPAL vs. VICE PRINCI...	.68	.41*	10.58*	3.25

* Significant at 95%

One Factor ANOVA X₁: SOCIO-ECONOMIC STATUS Y₇: AUTONOMY

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	2	7.46	3.73	3.11
Within groups	138	165.51	1.2	p = .0478
Total	140	172.97		

Model II estimate of between component variance = .06

One Factor ANOVA X₁: SOCIO-ECONOMIC STATUS Y₇: AUTONOMY

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
HIGH	11	5.05	1.39	.42
MODERATE	77	5.83	1.11	.13
LOW	53	5.52	1	.14

One Factor ANOVA X₁: SOCIO-ECONOMIC STATUS Y₇: AUTONOMY

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
HIGH vs. MODERATE	-.79	.7*	2.48	2.23
HIGH vs. LOW	-.47	.72	.85	1.3
MODERATE vs. LOW	.31	.39	1.28	1.6

* Significant at 95%

One Factor ANOVA X₁: SOCIO-ECONOMIC STATUS Y₁₀: MOTIVATING POTENTIAL SCORE (M...

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	2	23490.57	11745.29	4.31
Within groups	138	376295.41	2726.78	p = .0153
Total	140	399785.98		

Model II estimate of between component variance = 230.74

One Factor ANOVA X₁: SOCIO-ECONOMIC STATUS Y₁₀: MOTIVATING POTENTIAL SCORE (M...

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
HIGH	11	128.98	53.01	15.98
MODERATE	77	162.28	57.01	6.5
LOW	53	138.43	44.1	6.06

One Factor ANOVA X₁: SOCIO-ECONOMIC STATUS Y₁₀: MOTIVATING POTENTIAL SCORE (M...

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
HIGH vs. MODERATE	-33.3	33.28*	1.96	1.98
HIGH vs. LOW	-9.45	34.21	.15	.55
MODERATE vs. LOW	23.85	18.43*	3.27*	2.56

* Significant at 95%

One Factor ANOVA X₁: SOCIO-ECONOMIC STATUS Y₂₁: SCHOOL SIZE

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	2	30.28	15.14	12.04
Within groups	138	173.52	1.26	p = .0001
Total	140	203.8		

Model II estimate of between component variance = .36

One Factor ANOVA X₁: SOCIO-ECONOMIC STATUS Y₂₁: SCHOOL SIZE

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
HIGH	11	3.55	.52	.16
MODERATE	77	3.22	1.1	.12
LOW	53	2.32	1.24	.17

One Factor ANOVA X₁: SOCIO-ECONOMIC STATUS Y₂₁: SCHOOL SIZE

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnnett t:
HIGH vs. MODERATE	.32	.71	.4	.9
HIGH vs. LOW	1.22	.73*	5.43*	3.3
MODERATE vs. LOW	.9	.4*	10.11*	4.5

* Significant at 95%

One Factor ANOVA X₁: SOCIO-ECONOMIC STATUS Y₂₂: STUDENT LEARNING PROBLEMS

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	2	9.04	4.52	20.82
Within groups	138	29.97	.22	p = .0001
Total	140	39.01		

Model II estimate of between component variance = .11

One Factor ANOVA X₁: SOCIO-ECONOMIC STATUS Y₂₂: STUDENT LEARNING PROBLEMS

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
HIGH	11	1.68	.53	.16
MODERATE	77	2.22	.45	.05
LOW	53	2.59	.47	.06

One Factor ANOVA X₁: SOCIO-ECONOMIC STATUS Y₂₂: STUDENT LEARNING PROBLEMS

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnnett t:
HIGH vs. MODERATE	-.54	.3*	6.51*	3.61
HIGH vs. LOW	-.91	.31*	17.28*	5.88
MODERATE vs. LOW	-.37	.16*	9.66*	4.4

* Significant at 95%

One Factor ANOVA X₁: SOCIO-ECONOMIC STATUS Y₂₃: STUDENT BEHAVIOR PROBLEMS

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	2	6	3	10.47
Within groups	138	39.57	.29	p = .0001
Total	140	45.57		

Model II estimate of between component variance = .07

One Factor ANOVA X₁: SOCIO-ECONOMIC STATUS Y₂₃: STUDENT BEHAVIOR PROBLEMS

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
HIGH	11	3.8	.25	.07
MODERATE	77	3.42	.53	.06
LOW	53	3.09	.58	.08

One Factor ANOVA X₁: SOCIO-ECONOMIC STATUS Y₂₃: STUDENT BEHAVIOR PROBLEMS

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnnett t:
HIGH vs. MODERATE	.38	.34*	2.42	2.2
HIGH vs. LOW	.71	.35*	7.91*	3.98
MODERATE vs. LOW	.33	.19*	5.82*	3.41

* Significant at 95%

One Factor ANOVA X₁: SOCIO-ECONOMIC STATUS Y₂₅: PARENTAL SUPPORT

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	2	10.49	5.24	12.18
Within groups	138	59.43	.43	p = .0001
Total	140	69.91		

Model II estimate of between component variance = .12

One Factor ANOVA X₁: SOCIO-ECONOMIC STATUS Y₂₅: PARENTAL SUPPORT

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
HIGH	11	1.18	.4	.12
MODERATE	77	1.71	.6	.07
LOW	53	2.13	.76	.1

One Factor ANOVA X₁: SOCIO-ECONOMIC STATUS Y₂₅: PARENTAL SUPPORT

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
HIGH vs. MODERATE	-.53	.42*	3.17*	2.52
HIGH vs. LOW	-.95	.43*	9.55*	4.37
MODERATE vs. LOW	-.42	.23*	6.36*	3.57

* Significant at 95%

One Factor ANOVA X₁: SOCIO-ECONOMIC STATUS Y₃₉: EFFECTIVENESS OF SCHOOL

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	2	21.53	10.76	7.89
Within groups	125	170.44	1.36	p = .0006
Total	127	191.97		

Model II estimate of between component variance = .27

One Factor ANOVA X₁: SOCIO-ECONOMIC STATUS Y₃₉: EFFECTIVENESS OF SCHOOL

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
HIGH	10	5.88	.54	.17
MODERATE	71	5.2	1.16	.14
LOW	47	4.51	1.26	.18

One Factor ANOVA X₁: SOCIO-ECONOMIC STATUS Y₃₉: EFFECTIVENESS OF SCHOOL

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
HIGH vs. MODERATE	.68	.78	1.5	1.73
HIGH vs. LOW	1.37	.8*	5.63*	3.36
MODERATE vs. LOW	.68	.43*	4.81*	3.1

* Significant at 95%

One Factor ANOVA X_1 : ETHNIC DIVERSITY Y_{21} : SCHOOL SIZE

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	2	14.15	7.08	5.16
Within groups	140	192	1.37	p = .0069
Total	142	206.15		

Model II estimate of between component variance = .17

One Factor ANOVA X_1 : ETHNIC DIVERSITY Y_{21} : SCHOOL SIZE

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
HIGH	93	2.7	1.27	.13
MODERATE	44	3.39	.92	.14
LOW	6	3	1.26	.52

One Factor ANOVA X_1 : ETHNIC DIVERSITY Y_{21} : SCHOOL SIZE

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnnett t:
HIGH vs. MODERATE	-.69	.42*	5.15*	3.21
HIGH vs. LOW	-.3	.98	.19	.61
MODERATE vs. LOW	.39	1.01	.29	.76

* Significant at 95%

One Factor ANOVA X_1 : ETHNIC DIVERSITY Y_{22} : STUDENT LEARNING PROBLEMS

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	2	1.73	.86	3.15
Within groups	140	38.42	.27	p = .046
Total	142	40.15		

Model II estimate of between component variance = .02

One Factor ANOVA X_1 : ETHNIC DIVERSITY Y_{22} : STUDENT LEARNING PROBLEMS

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
HIGH	93	2.38	.56	.06
MODERATE	44	2.25	.45	.07
LOW	6	1.88	.41	.17

One Factor ANOVA X_1 : ETHNIC DIVERSITY Y_{22} : STUDENT LEARNING PROBLEMS

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnnett t:
HIGH vs. MODERATE	.13	.19	.91	1.35
HIGH vs. LOW	.5	.44*	2.61	2.28
MODERATE vs. LOW	.38	.45	1.35	1.64

* Significant at 95%

One Factor ANOVA X₁: ETHNIC DIVERSITY Y₂₅: PARENTAL SUPPORT

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	2	8.68	4.34	9.71
Within groups	140	62.59	.45	p = .0001
Total	142	71.27		

Model II estimate of between component variance = .11

One Factor ANOVA X₁: ETHNIC DIVERSITY Y₂₅: PARENTAL SUPPORT

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
HIGH	93	1.98	.72	.07
MODERATE	44	1.59	.58	.09
LOW	6	1	0	0

One Factor ANOVA X₁: ETHNIC DIVERSITY Y₂₅: PARENTAL SUPPORT

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnnett t:
HIGH vs. MODERATE	.39	.24*	5.02*	3.17
HIGH vs. LOW	.98	.56*	6.04*	3.47
MODERATE vs. LOW	.59	.58*	2.06	2.03

* Significant at 95%

APPENDIX J
COMPUTER PRINTOUTS FOR THE SIGNIFICANT
TWO-WAY ANALYSES OF VARIANCE FOR THE
FIFTEEN SECONDARY HYPOTHESES

Restructuring School by Gender Factorial Design Anova - Secondary Hypothesis Four

Anova table for a 2-factor Analysis of Variance on Y₃: EXP. KNOWLEDGE OF RESULTS

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
RESTRUCTURE PRIOR ...	1	.85	.85	.89	.346
GENDER (B)	1	.39	.39	.41	.522
AB	1	4.46	4.46	4.67	.0325
Error	138	131.79	.95		

There were no missing cells found. 2 cases deleted with missing values.

The AB Incidence table on Y₃: EXP. KNOWLEDGE OF RESULTS

GENDER:		MALE	FEMALE	Totals:
RESTRU...	YES	24	30	54
		5.46	5.72	5.6
	NO	38	50	88
		5.99	5.51	5.72
	Totals:	62	80	142
5.78		5.59	5.67	

Restructuring School by Gender Factorial Design Anova - Secondary Hypothesis Four

Anova table for a 2-factor Analysis of Variance on Y₁₃: CAREER INTENTIONS

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
RESTRUCTURE PRIOR ...	1	1.27	1.27	1.59	.209
GENDER (B)	1	2.08	2.08	2.61	.1083
AB	1	4.67	4.67	5.86	.0168
Error	138	109.9	.8		

There were no missing cells found. 2 cases deleted with missing values.

The AB Incidence table on Y₁₃: CAREER INTENTIONS

GENDER:		MALE	FEMALE	Totals:
RESTRU...	YES	24 1.38	30 1.5	54 1.44
	NO	38 1.95	50 1.32	88 1.59
	Totals:	62 1.73	80 1.39	142 1.54

Restructuring School by School Level Factorial Design Anova - Secondary Hypothesis Six

Anova table for a 2-factor Analysis of Variance on Y₁₂: HIGH INTERNAL MOTIVATION

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
RESTRUCTURE PRIOR ...	1	1.02	1.02	1.88	.1726
SCHOOL LEVEL (B)	2	5.4	2.7	4.99	.0081
AB	2	4.09	2.05	3.78	.0252
Error	134	72.52	.54		

There were no missing cells found. 4 cases deleted with missing values.

The AB Incidence table on Y₁₂: HIGH INTERNAL MOTIVATION

SCHOOL LEVEL:		ELEMENT...	MIDDLE/J...	SENIOR H...	Totals:
RESTRU..	YES	26 6.04	15 6.38	11 5.5	52 6.02
	NO	53 6.1	19 5.64	16 5.59	88 5.91
	Totals:	79 6.08	34 5.97	27 5.56	140 5.95

Restructuring School by School Level Factorial Design Anova - Secondary Hypothesis Six

Anova table for a 2-factor Analysis of Variance on Y18: CO-WORKERS

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
RESTRUCTURE PRIOR ...	1	.07	.07	.1	.7532
SCHOOL LEVEL (B)	2	1.38	.69	.97	.3807
AB	2	9.8	4.9	6.92	.0014
Error	133	94.2	.71		

There were no missing cells found. 4 cases deleted with missing values.

The AB Incidence table on Y18: CO-WORKERS

SCHOOL LEVEL:		ELEMENT...	MIDDLE/J...	SENIOR H...	Totals:
RESTRU..	YES	26 5.91	15 6.22	11 5.15	52 5.84
	NO	52 5.73	19 5.42	16 5.98	87 5.71
Totals:		78 5.79	34 5.77	27 5.64	139 5.76

Restructuring School by School Level Factorial Design Anova - Secondary Hypothesis Six

Anova table for a 2-factor Analysis of Variance on Y₂₂: STUDENT LEARNING PROBLEMS

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
RESTRUCTURE PRIOR ...	1	.16	.16	.6	.44
SCHOOL LEVEL (B)	2	1.33	.66	2.42	.0925
AB	2	1.79	.9	3.27	.0412
Error	134	36.76	.27		

There were no missing cells found. 4 cases deleted with missing values.

The AB Incidence table on Y₂₂: STUDENT LEARNING PROBLEMS

SCHOOL LEVEL:		ELEMENT...	MIDDLE/J...	SENIOR H...	Totals:
RESTRU..	YES	26	15	11	52
		2.17	2.37	2.66	2.33
	NO	53	19	16	88
		2.28	2.5	2.19	2.31
Totals:		79	34	27	140
		2.24	2.44	2.38	2.32

Restructuring School by School Level Factorial Design Anova - Secondary Hypothesis Six

Anova table for a 2-factor Analysis of Variance on Y₂₃: STUDENT BEHAVIOR PROBLEMS

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
RESTRUCTURE PRIOR ...	1	.49	.49	1.92	.1681
SCHOOL LEVEL (B)	2	9	4.5	17.67	.0001
AB	2	1.62	.81	3.19	.0444
Error	134	34.14	.25		

There were no missing cells found. 4 cases deleted with missing values.

The AB Incidence table on Y₂₃: STUDENT BEHAVIOR PROBLEMS

SCHOOL LEVEL:		ELEMENT...	MIDDLE/J...	SENIOR H...	Totals:
RESTRU...	YES	26 3.54	15 3.27	11 2.61	52 3.26
	NO	53 3.54	19 3.16	16 3.12	88 3.38
Totals:		79 3.54	34 3.21	27 2.92	140 3.34

Restructuring School by School Level Factorial Design Anova - Secondary Hypothesis Six

Anova table for a 2-factor Analysis of Variance on Y₃₅: SUPER. FACILITATES INTERACTION

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
RESTRUCTURE PRIOR ...	1	.04	.04	.04	.8464
SCHOOL LEVEL (B)	2	9.96	4.98	5.03	.0078
AB	2	6.39	3.19	3.23	.0428
Error	134	132.62	.99		

There were no missing cells found. 4 cases deleted with missing values.

The AB Incidence table on Y₃₅: SUPER. FACILITATES INTERACTION

SCHOOL LEVEL:		ELEMENT...	MIDDLE/J...	SENIOR H...	Totals:
RESTRU...	YES	26	15	11	52
		3.58	4.37	2.91	3.66
	NO	53	19	16	88
		3.58	3.76	3.62	3.62
Totals:		79	34	27	140
		3.58	4.03	3.33	3.64

Restructuring School by School Level Factorial Design Anova - Secondary Hypothesis Six

Anova table for a 2-factor Analysis of Variance on Y39: EFFECTIVENESS OF SCHOOL

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
RESTRUCTURE PRIOR ...	1	.1	.1	.07	.7923
SCHOOL LEVEL (B)	2	6.32	3.16	2.29	.1059
AB	2	9.06	4.53	3.28	.041
Error	120	165.81	1.38		

There were no missing cells found. 4 cases deleted with missing values.

The AB Incidence table on Y39: EFFECTIVENESS OF SCHOOL

SCHOOL LEVEL:		ELEMENT...	MIDDLE/J...	SENIOR H...	Totals:
RESTRU...	YES	22	14	11	47
		5.19	5.53	4.22	5.06
	NO	48	19	12	79
		5.19	4.63	4.93	5.01
Totals:		70	33	23	126
		5.19	5.01	4.59	5.03

Restructuring School by Administrative Position Factorial Design Anova - Secondary Hypothesis Seven

Anova table for a 2-factor Analysis of Variance on Y₅: TASK IDENTITY

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
RESTRUCTURE PRIOR ...	1	9.44	9.44	3.54	.0621
PRINCIPAL/VICE PRIN...	1	11.98	11.98	4.49	.0359
AB	1	19.02	19.02	7.13	.0085
Error	138	368.13	2.67		

There were no missing cells found. 2 cases deleted with missing values.

The AB Incidence table on Y₅: TASK IDENTITY

	PRINCIPAL/VI...	PRINCIPAL	VICE PRIN...	Totals:
RESTRU..	YES	28 3.23	26 4.6	54 3.89
	NO	53 4.53	35 4.37	88 4.47
	Totals:	81 4.08	61 4.47	142 4.25

Restructuring School by Administrative Position Factorial Design Anova - Secondary Hypothesis Seven

Anova table for a 2-factor Analysis of Variance on Y7: AUTONOMY

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
RESTRUCTURE PRIOR ...	1	.06	.06	.05	.8256
PRINCIPAL/VICE PRIN...	1	1.80E-3	1.80E-3	1.47E-3	.9695
AB	1	5.49	5.49	4.48	.036
Error	138	168.96	1.22		

There were no missing cells found. 2 cases deleted with missing values.

The AB Incidence table on Y7: AUTONOMY

	PRINCIPAL/VI...	PRINCIPAL	VICE PRIN...	Totals:
RESTRU..	YES	28 5.46	26 5.87	54 5.66
	NO	53 5.83	35 5.41	88 5.66
	Totals:	81 5.7	61 5.61	142 5.66

Restructuring School by Administrative Position Factorial Design Anova - Secondary Hypothesis Seven

Anova table for a 2-factor Analysis of Variance on Y₁₀: MOTIVATING POTENTIAL SCORE (MPS)

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
RESTRUCTURE PRIOR ...	1	145.15	145.15	.05	.8184
PRINCIPAL/VICE PRIN...	1	1012.98	1012.98	.37	.5444
AB	1	17030.63	17030.63	6.21	.0139
Error	138	378548.4	2743.1		

There were no missing cells found. 2 cases deleted with missing values.

The AB Incidence table on Y₁₀: MOTIVATING POTENTIAL SCORE (MPS)

	PRINCIPAL/VI...	PRINCIPAL	VICE PRIN...	Totals:
RESTRU...	YES	28 135.12	26 163.42	54 148.74
	NO	53 159.97	35 142.77	88 153.13
	Totals:	81 151.38	61 151.57	142 151.46

Restructuring School by Administrative Position Factorial Design Anova - Secondary Hypothesis Seven

Anova table for a 2-factor Analysis of Variance on Y₁₇: PAY

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
RESTRUCTURE PRIOR ...	1	8.33	8.33	3.97	.0484
PRINCIPAL/VICE PRIN...	1	.18	.18	.09	.7684
AB	1	9.26	9.26	4.41	.0375
Error	138	289.72	2.1		

There were no missing cells found. 2 cases deleted with missing values.

The AB Incidence table on Y₁₇: PAY

	PRINCIPAL/VI...	PRINCIPAL	VICE PRIN...	Totals:
RESTRU...	YES	28 4.43	26 4.88	54 4.65
	NO	53 5.46	35 4.86	88 5.22
	Totals:	81 5.1	61 4.87	142 5

Restructuring School by Administrative Position Factorial Design Anova - Secondary Hypothesis Seven

Anova table for a 2-factor Analysis of Variance on Y₂₀: COMPETENCE OF SUPERVISOR

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
RESTRUCTURE PRIOR ...	1	4.61	4.61	2.27	.1345
PRINCIPAL/VICE PRIN...	1	5	5	2.46	.1191
AB	1	9.74	9.74	4.79	.0303
Error	138	280.65	2.03		

There were no missing cells found. 2 cases deleted with missing values.

The AB Incidence table on Y₂₀: COMPETENCE OF SUPERVISOR

	PRINCIPAL/VI...	PRINCIPAL	VICE PRIN...	Totals:
RESTRU...	YES	28	26	54
		4.89	5.83	5.34
	NO	53	35	88
		5.81	5.66	5.75
	Totals:	81	61	142
		5.49	5.73	5.6

Restructuring School by Administrative Position Factorial Design Anova - Secondary Hypothesis Seven

Anova table for a 2-factor Analysis of Variance on Y22: STUDENT LEARNING PROBLEMS

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
RESTRUCTURE PRIOR ...	1	.01	.01	.05	.8223
PRINCIPAL/VICE PRIN...	1	1.21	1.21	4.4	.0378
AB	1	1.12	1.12	4.05	.046
Error	138	38.04	.28		

There were no missing cells found. 2 cases deleted with missing values.

The AB Incidence table on Y22: STUDENT LEARNING PROBLEMS

	PRINCIPAL/VI...	PRINCIPAL	VICE PRIN...	Totals:
RESTRU...	YES	28 2.14	26 2.52	54 2.32
	NO	53 2.31	35 2.31	88 2.31
	Totals:	81 2.25	61 2.4	142 2.32

Restructuring School by Administrative Position Factorial Design Anova - Secondary Hypothesis Seven

Anova table for a 2-factor Analysis of Variance on Y₃₂: INVOLVEMENT IN DECISION MAKING

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
RESTRUCTURE PRIOR ...	1	.03	.03	.04	.838
PRINCIPAL/VICE PRIN...	1	1.9	1.9	2.42	.1221
AB	1	3.52	3.52	4.49	.036
Error	138	108.2	.78		

There were no missing cells found. 2 cases deleted with missing values.

The AB Incidence table on Y₃₂: INVOLVEMENT IN DECISION MAKING

		PRINCIPAL/VI...	PRINCIPAL	VICE PRIN...	Totals:
RESTRU...	YES		28 2.87	26 3.44	54 3.14
	NO		53 3.16	35 3.08	88 3.13
	Totals:		81 3.06	61 3.23	142 3.13

Restructuring School by Administrative Position Factorial Design Anova - Secondary Hypothesis Seven

Anova table for a 2-factor Analysis of Variance on Y₃₇: PRESENT CONDITIONS

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
RESTRUCTURE PRIOR ...	1	1.95	1.95	1.94	.1657
PRINCIPAL/VICE PRIN...	1	1.58	1.58	1.57	.2121
AB	1	4.63	4.63	4.61	.0336
Error	138	138.69	1		

There were no missing cells found. 2 cases deleted with missing values.

The AB Incidence table on Y₃₇: PRESENT CONDITIONS

	PRINCIPAL/VI...	PRINCIPAL	VICE PRIN...	Totals:
RESTRU...	YES	28 5.22	26 5.38	54 5.29
	NO	53 5.35	35 4.76	88 5.11
	Totals:	81 5.31	61 5.02	142 5.18

Gender by Administrative Position Factorial Design - Secondary Hypothesis Ten

Anova table for a 2-factor Analysis of Variance on Y7: AUTONOMY

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
GENDER (A)	1	.97	.97	.8	.3719
PRINCIPAL/VICE PRIN...	1	.03	.03	.03	.8741
AB	1	4.82	4.82	3.97	.0484
Error	140	170.03	1.21		

There were no missing cells found.

The AB Incidence table on Y7: AUTONOMY

PRINCIPAL/VI...		PRINCIPAL	VICE PRIN...	Totals:
GENDER	MALE	41	23	64
		5.61	5.96	5.73
	FEMALE	41	39	80
		5.82	5.41	5.62
Totals:		82	62	144
		5.71	5.61	5.67

Gender by Administrative Position Factorial Design - Secondary Hypothesis Ten

Anova table for a 2-factor Analysis of Variance on Y₂₄: HOLIDAYS

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
GENDER (A)	1	3.32	3.32	2.92	.0898
PRINCIPAL/VICE PRIN...	1	.22	.22	.19	.6615
AB	1	4.64	4.64	4.08	.0454
Error	140	159.45	1.14		

There were no missing cells found.

The AB Incidence table on Y₂₄: HOLIDAYS

PRINCIPAL/VI...		PRINCIPAL	VICE PRIN...	Totals:
GENDER	MALE	41	23	64
		1.54	1.83	1.64
	FEMALE	41	39	80
		2.22	1.77	2
Totals:		82	62	144
		1.88	1.79	1.84

School Level by Administrative Position Factorial Design - Secondary Hypothesis Fifteen

Anova table for a 2-factor Analysis of Variance on Y₁₁: HIGH SATISFACTION

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
SCHOOL LEVEL (A)	2	1.01	.5	.8	.4518
PRINCIPAL/VICE PRIN...	1	.18	.18	.29	.5936
AB	2	4.42	2.21	3.5	.0329
Error	136	85.9	.63		

There were no missing cells found. 2 cases deleted with missing values.

The AB Incidence table on Y₁₁: HIGH SATISFACTION

		PRINCIPAL/VI...	PRINCIPAL	VICE PRIN...	Totals:
SCHOOL LEVEL	ELEMENTARY		54 5.89	25 6	79 5.93
	MIDDLE/JU...		16 5.92	19 6.26	35 6.1
	SENIOR HIGH		11 6.18	17 5.49	28 5.76
	Totals:		81 5.94	61 5.94	142 5.94

School Level by Administrative Position Factorial Design - Secondary Hypothesis Fifteen

Anova table for a 2-factor Analysis of Variance on Y₁₇: PAY

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
SCHOOL LEVEL (A)	2	.8	.4	.19	.8251
PRINCIPAL/VICE PRIN...	1	6.69	6.69	3.21	.0756
AB	2	24.73	12.37	5.92	.0034
Error	136	283.89	2.09		

There were no missing cells found. 2 cases deleted with missing values.

The AB Incidence table on Y₁₇: PAY

PRINCIPAL/VI...		PRINCIPAL	VICE PRIN...	Totals:
SCHOOL LEVEL	ELEMENTARY	54 4.99	25 5.28	79 5.08
	MIDDLE/JU...	16 4.88	19 5.03	35 4.96
	SENIOR HIGH	11 6	17 4.09	28 4.84
	Totals:	81 5.1	61 4.87	142 5

School Level by Administrative Position Factorial Design - Secondary Hypothesis Fifteen

Anova table for a 2-factor Analysis of Variance on Y₂₈: ADMINISTRATIVE ASSIGNMENT

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
SCHOOL LEVEL (A)	2	.61	.3	.2	.8213
PRINCIPAL/VICE PRIN...	1	11.41	11.41	7.41	.0073
AB	2	15.01	7.5	4.88	.009
Error	136	209.33	1.54		

There were no missing cells found. 2 cases deleted with missing values.

The AB Incidence table on Y₂₈: ADMINISTRATIVE ASSIGNMENT

PRINCIPAL/VI...		PRINCIPAL	VICE PRIN...	Totals:
SCHOOL LEVEL	ELEMENTARY	54	25	79
		5.85	6.12	5.94
	MIDDLE/JU...	16	19	35
		6.44	5.53	5.94
	SENIOR HIGH	11	17	28
		6.45	5.18	5.68
Totals:		81	61	142
		6.05	5.67	5.89