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AN IMPORTANCE-WEIGHTED APPROACH TO OVERALL AND JOB-FACET SATISFACTION OF TEACHERS

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AN IMPORTANCE-WEIGHTED APPROACH TO OVERALL AND JOB-FACET SATISFACTION OF TEACHERS

By

Laurence W. MacQueen

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ABSTRACT

AN IMPORTANCE-WEIGHTED APPROACH TO OVERALL AND JOB-FACET SATISFACTION OF TEACHERS

By

Laurence W. MacQueen

The objectives of this study were to (a) determine underlying job satisfaction factors present among the job-facet satisfaction perceptions of teachers, (b) assess current levels of overall and job-facet satisfaction experienced by teachers, (c) understand the relationship between job satisfaction factors and overall job satisfaction, (d) understand the effect of job-facet importance on the prediction of overall job satisfaction, and (e) assess differences in job satisfaction between groups of teachers who varied according to selected personal and school-organization characteristics. A mailed questionnaire enabled collection of teachers' perceptions of satisfaction and importance on 58 different aspects of teacher work and overall job satisfaction perceptions. The sample comprised 1,994 randomly selected Michigan teachers, and a response rate of 53.8% resulted.

Factor-analysis procedures identified the following job satisfaction factor structure: Factor 1: Teacher-student interaction, Factor 2: Teacher resources, Factor 3: Teacher compensation and labor relations, Factor 4: Teaching assignment, Factor 5: Teacher achievement

and growth, Factor 6: Teacher workload, and Factor 7: Teacher status. A regression analysis identified three significant predictors of overall job satisfaction, with teacher achievement and growth, teacher-student interaction, and teacher resources combining to account for 46.8% of the variance.

Four analyses to test the efficacy of weighting job-facet satisfaction by facet importance included correlations between weighted and unweighted satisfaction, a test for differences between correlations for unweighted and weighted job-facet satisfaction with overall satisfaction, a series of t-tests assessing satisfaction differences between high importance and low importance settings, regression analyses appraising the predictive power of both unweighted and weighted job-facet satisfaction on overall job satisfaction, and a moderator regression analysis assessing the same predictive relationship. Generally, these analyses indicated that weighting adds little valuable information.

The writer considered differences in levels of overall and job-facet satisfaction between groups of teachers who varied on 17 personal and school-organization characteristics. Sixty-nine significant differences in overall and factor satisfaction levels were determined. Finally, the status of job satisfaction for Michigan teachers was described. It was found that 17.7% of the teachers surveyed were dissatisfied, 37.5% were neither satisfied nor dissatisfied, and 44.5% were satisfied.

To Karen, Patrick, and Kelly in appreciation of their support throughout my doctoral program. Without their patience and encouragement, achievement of this and many other goals would not have been possible.

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CHAPTER I

RESEARCH PROBLEM

Introduction

With the continuing effect of declining enrollment, fiscal constraint, and an ever-growing demand for excellence in public schooling, a greater reliance on school systems' human resources is necessary in order to achieve the vital missions of public education. This need for increased reliance comes at a time when the research suggests the teaching profession may be attitudinally unfit for accepting these challenges.

The evidence of this dilemma comes from several sources, including headlines from a recent National Education Association survey concerning teacher attitudes about their jobs, revealing that "Teachers Are Better Educated, More Experienced, But Less Satisfied Than in the Past" (Newsfront, 1982, p. 579). This nationwide survey, published as The Status of the American Public School Teacher, 1980-81, reported that "more than one-third of the teachers said that they 'probably' or 'certainly' would not choose the teaching profession again, up from 18.6% in 1976" (p. 579).

In commenting on this study, Feistritzer (1983) pointed out that "this is a shocking increase in the number of dissatisfied teachers. Twenty years ago only 11 percent of teachers polled reported they

certainly or probably would not choose teaching if they had it to do over again" (p. 29).

Among several reported findings concerning teachers and teaching, the National Commission on Educational Excellence (1983) suggested that "the professional working life of teachers is on the whole unacceptable" (p. 22). The concern expressed by this suggestion was confirmed by comments made by Boyer (1983), who found that "the teacher's world is often frustrating, frequently demeaning, and sometimes dangerous" (pp. 154-55).

Recent findings in both New York and across the nation have presented additional evidence of the growing levels of dissatisfaction among members of the teaching workforce. Data from a New York Times survey of 5,702 New York public school teachers revealed that 34% of the respondents "were not so proud to be a teacher" and that 47% "would go into another profession" if they had to make a career choice all over again (Fiske, 1982, p. 52). Similar findings were reported in a survey conducted for the Metropolitan Life Insurance Company by Louis Harris and Associates in June 1984 (Keever, 1984). Only 45% of the 1,981 respondents in this national random sample of school teachers indicated that they would advise a young person to pursue a career in teaching.

Studies conducted by the Institute for Social Research at the University of Michigan have confirmed the dissatisfactions of teachers and have presented a gloomy picture for southeastern Michigan teachers in particular.

> Teachers are significantly less satisfied with the quality of their worklives, more apt to fear losing their jobs, and more likely to experience problems with their jobs than are U.S. workers in a nationwide sample. These are some of the major findings from our 1979 study of 200 randomly chosen teachers (K-12) in southeastern Michigan. (Cooke, Kornbluh, & Abramis, 1982, p. 637)

That southeastern Michigan teachers are substantially less satisfied than workers nationwide was quantified further in a study by Sparks (1979) when he reported that "forty-six percent of the teachers surveyed were dissatisfied with their job as a whole, and an identical percentage said that, if they had it to do all over again, they would not choose teaching as a career" (p. 447).

Sparks attempted to explain the nature of Michigan teacher job dissatisfaction by asking his sample of teachers a series of questions. His research revealed that 54% of the surveyed teachers indicated it was somewhat likely that they would change occupations in the next five years. Seventy percent of the teachers reported frequently or always leaving school physically or emotionally exhausted. Seventy percent of the surveyed teachers also reported that they felt trapped in their present jobs.

It should be recognized that school organizations have attempted to respond to the growing levels of teacher dissatisfaction through organizational development strategies and work-life improvement programs. In several Michigan school districts, work-life improvement programs have been formulated to meet the specific challenge presented by teacher dissatisfaction (Nikoloff & Brown, 1982). Even with such programs, however, improving teacher job satisfaction has proven to be an elusive and difficult-to-obtain goal.

Problem Statement

In response to the growing levels of teacher job dissatisfaction, the general interest of this researcher was the development of an understanding of teacher job satisfaction that is sufficiently insightful to provide school managers with some directions to pursue in their efforts to improve teacher job satisfaction. Implied by this interest were four specific problems evident in past teacher job satisfaction research. This researcher presumed that resolution of these problems would enable research on teacher job satisfaction to provide the kinds of results that inform the development of successful work-improvement programs.

The first problem was identifying or devising a measure that can be used to provide an up-to-date assessment of perceived levels of satisfaction teachers have with a variety of important aspects of their work. It is not sufficient to ascertain that teachers "would" or "would not" become teachers again or that some percentage of teachers currently are dissatisfied with their jobs. Instead, school managers need to know which aspects or facets of teachers' work are perceived as satisfactory and which facets are perceived as sources of dissatisfaction.

Second, quantifying the degree to which a particular aspect or cluster of work aspects contributes to a teacher's perceived level of overall job satisfaction is a theoretical problem area that research on teacher job satisfaction must address in order to provide meaningful insight to school managers planning work-improvement efforts. Pursuit

of this problem was accomplished by asking: Which underlying job satisfaction factors account for the largest amount of variance in the overall job satisfaction experienced by teachers?

An unsettled theoretical debate concerning the interaction between an individual's values and subsequent perceptions of job satisfaction provided the third problem of interest to this researcher. In an effort to demonstrate theoretically and empirically more appealing measures of job satisfaction, several researchers have found that an individual's perceived importance of a job facet (a single aspect of a teacher's job, e.g., class size) affects that facet's ability to influence overall job satisfaction. It should be noted that other researchers investigating this question have been unable to quantify any advantage to a multiplication process that seeks to measure the differential contributions to overall satisfaction made by important and unimportant job facets. This writer sought to add further insight into this debate.

The fourth problem of interest to this researcher was understanding how levels of teacher job satisfaction vary on the basis of differences in individual and organizational characteristics of teachers and the school districts and school buildings they serve. The nature of the population of teachers now serving in our nation's schools is dramatically different than it was 10 or 20 years ago. The teaching force is aging, more experienced, more highly educated, and has been subjected to the effect of an era of decline and a new era of reform. Schools and school districts have been subjected to these same

forces and vary substantially on a number of characteristics that may influence teachers' perceptions of job satisfaction. Improving our understanding of teacher job satisfaction implies understanding the environments within which teacher job attitudes emerge, in order to develop managerial sensitivities to those factors that yield variations in teacher perceived job satisfaction.

In summary, four specific problems affecting our understanding of teacher job satisfaction were pursued by this researcher. These problems included (a) identifying or devising an effective measure of teacher satisfaction with a number of aspects of teachers' work, (b) assessing the relationship between levels of job-facet satisfaction and overall job satisfaction for teachers, (c) assessing the value of a multiplication process that seeks to improve measurement of job satisfaction through quantifying the interaction between job values and perceived levels of satisfaction with various aspects of work, and (d) examining several selected characteristics of teachers and the school districts and buildings in which they serve to determine if these variables influence perceived levels of teacher job satisfaction. By addressing the problems that impede our understanding of teacher job satisfaction, the results of this study may facilitate the focusing of management resources and future research strategies on issues that most directly affect teacher job attitudes.

Background

That our current understanding of teacher job satisfaction appears limited was suggested by the frequent failure of past programs designed to improve teacher job satisfaction. These failures appeared to result from building work-improvement efforts on an inadequate understanding of the nature and causes of teacher job satisfaction. Initial assessments of significant work-improvement experiments taking place in four Michigan urban school districts confirmed this conclusion. In summarizing evaluative comments made by school officials from these districts, a consensus indicated that teachers generally are receptive to job satisfaction improvement efforts. However, progress toward implementing improvement procedures is slow, and the accomplishments of work-improvement programs are less than expected.

Specific interview comments offered by school officials responsible for work-improvement programs in each district described the nature of the problem (MacQueen, 1984, p. 1):

> I can't believe how slow our work-improvement efforts are progressing.
>
> In our district, we have not fully achieved the potential expected from quality-of-work-life procedures. We have only been somewhat successful.
>
> Teachers are more reluctant participants than other employee groups. The non-teaching personnel groups enthusiastically embrace our work-improvement efforts.
>
> Many of our principals and teachers view quality of work life as unnecessary, believing that in most situations teachers already have sufficient input means.

The most revealing assessment concerning the limited success of the work-improvement endeavors came in comments describing the lack of

interest and enthusiasm displayed by a sizable number of teachers in one particular district.

> It's almost as though the teachers view job satisfaction as a demanded fringe benefit. Some teachers see the value in quality-of-work-life participation while many see the program as an unnecessary waste of effort that does not serve their interest. Perhaps we don't have an adequate understanding about what really causes teachers to be satisfied with their jobs. (MacQueen, 1984, p. 2)

It seemed clear that the adequacy of our understanding of the nature, causes, and measurement of teacher job satisfaction needed improvement before we could expect to successfully design programs that would predictably improve teacher job satisfaction. Seashore (1975) concurred with this conclusion about our understanding of teacher job attitudes. "It is clear that if the present concern with the quality of working life is going to produce any significant social change, valid measures of it must be developed and used adroitly" (p. 124).

Our present understanding of job satisfaction in general, and teacher job satisfaction in particular, appears limited due to seemingly weak theoretical considerations of this concept. Lawler (1973) was critical of the theoretical formulations underlying the concept of job satisfaction.

> Compared to what is known about motivation, relatively little is known about the determinants and consequences of satisfaction. Most of the psychological research on motivation simply has not been concerned with the kinds of affective reactions that people experience in association with or as a result of motivated behavior. No well-developed theories of satisfaction have appeared and little theoretically based research has been done on satisfaction. (p. 61)

Dunn and Stephens (1972) concurred with Lawler's observation, indicating that the development of a general theory of employee satisfaction still lies ahead.

Research on educational organizations is no further developed according to Miskel et al. (1975): "Descriptive, explanative, and predictive theoretical models, and also comparable empirical investigations which specifically relate to the work attitude of educators, are limited in number and scope" (p. 38).

The resulting condition of job satisfaction research due to an inadequate theoretical conceptualization was described by Lawler (1973).

> Due to the lack of a theory stating causal relationships, the research on job satisfaction has consistently looked simply for relationships among variables. A great deal is known about what factors are related to satisfaction, but very little is known about the causal basis for the relationships. (p. 63)

The earlier-reported observation from the school official concerned about the poor progress of efforts to improve teacher satisfaction in his district takes on added meaning. He suggested that "perhaps we don't have an adequate understanding about what really causes teachers to be satisfied with their jobs." Lawler agreed.

Clearly, there is room for improving our understanding of job satisfaction. However, is there justification for this kind of research? Increasing attention is being paid in many countries to improving the quality of the working experience of employees. Lawler (1973) expressed the issue in this manner: "What happens to people during the work day has profound effects both on the individual

employee's life and on the society as a whole, and thus these events cannot be ignored if the quality of life in a society is to be high" (p. 63). Job satisfaction was seen by Lawler to be "one measure of the quality of life in organizations" (p. 62). Smith et al. (1969) felt that "the improvement of satisfaction is of humanitarian value. . . . Satisfaction is a legitimate goal in itself" (p. 3).

On a practical level, research improving our understanding of job satisfaction seems justified in that it may lead to enhanced organizational effectiveness. Suresh (1975) argued that "job satisfaction, though not linked conclusively to superior job performance and high levels of productivity, should be of concern to management" (p. 25). The rationale for such an argument has been developed from a number of sources and was presented by Lawler (1979):

> As it turns out, satisfaction is related to absenteeism and turnover, both of which are very costly to organizations. Thus, there is a very "practical" economic reason for organizations to be concerned with job satisfaction, since it can influence organizational effectiveness. (p. 289)

Additionally, employee health and welfare and employer health-related costs may be directly affected by an improved understanding of job satisfaction. A number of studies have linked job dissatisfaction to heart disease and to other illnesses (House, 1974; Jenkins, 1971; Sales & House, 1971). Friis (1976) commented on this hypothesis, indicating that:

> Prolonged dissatisfaction may produce permanent activation of biochemical mechanisms, such as persistent essential hypertension and increased heart rate, or it may be associated with abnormal elevation of blood chemistry, such as serum cholesterol or

> triglycerides. Permanent activation of these arousal mechanisms may cause stress to the circulatory system and, as a result, cause premature death from coronary disease. (p. 596)

For teachers in particular, an improved understanding of job satisfaction seems particularly well justified. In general, workers from this vitally important occupation report substantially lower levels of job satisfaction than do workers from other occupations (Cooke, Kornbluh, & Abramis, 1982). Furthermore, Michigan's teachers express lower levels of satisfaction when compared to teachers nationwide (Sparks, 1979).

These findings take on added significance when the results of a study by Greenwood and Soar (1973) are considered. These investigators examined some relationships between teacher morale and teacher behavior and concluded their study by stating that "the significant relationships revealed in this study could generally be summarized as an association between aspects of good teaching and aspects of higher morale" (p. 106). Additionally, Knoop and O'Reilly (1976) concluded from data in their study that high job satisfaction and perceived school effectiveness have a positive relationship, and Mount and Muchinsky (1978) reported a similar relationship between productivity and teacher morale.

Through identification of facets of a teacher's work that have an important influence on perceived levels of satisfaction, meaningful work-improvement efforts may be planned. This potential for improving a teacher's work experience through increased understanding of job satisfaction provides a compelling justification for the kind of

research undertaken here. Lawler (1979) phrased the justification for this kind of research in the following manner:

> Before any practical use can be made of the finding that job dissatisfaction causes absenteeism and turnover, we must understand what factors cause and influence job satisfaction. Organizations can influence job satisfaction and prevent absenteeism and turnover only if the organizations can pinpoint the factors causing and influencing these affective responses. (p. 289)

Purpose

Advancing an understanding of teacher job satisfaction that can inform school management practice was the primary purpose of this study. To accomplish this purpose and to overcome problems present within past research on teacher job satisfaction, specific research objectives were established. Through replication and adaptation of previous work, the following objectives were pursued in this study: (a) determining the underlying job satisfaction factors present among the job-facet satisfaction perceptions of teachers, (b) assessing current levels of overall and job-facet satisfaction experienced by teachers, (c) understanding the relationship between job satisfaction factors and teachers' overall job satisfaction, (d) understanding the effect of job-facet importance on the prediction of teacher overall job satisfaction, and (e) assessing differences in job satisfaction between groups of teachers who vary according to selected demographic, personal, and work-environment variables.

The study was initiated from an "interactionist" perspective, which suggests that job satisfaction is a consequence of a complex interplay between the teacher and his/her job situation. Specifically,

it is the perceived job situation in relation to the individual's values that is the most direct determinant of job satisfaction. This researcher sought to test the theoretical argument as to whether weighting of satisfaction measures by importance (value) provides a significant increase in predicting overall job satisfaction when compared with unweighted measures. If use of a multiplicative weighting expression meaningfully approximates the interaction between an individual's values and current job circumstances, the result is a powerful explanatory tool for better understanding the sources of job satisfaction.

Informing the conduct of future job satisfaction research was a secondary purpose of this study. In addition to determining the usefulness of importance-weighting facet satisfaction scores, several other conclusions valuable to the conduct of future satisfaction research were pursued. An attempt to confirm the usefulness and applicability of a previously devised job satisfaction measure in a new setting with a different population was made. Further, by examining changes in job satisfaction that accompany changes in individual and organizational characteristics of teachers and their schools, researchers interested in the effect an independent variable has on groups of teachers have a basis for matching key variables to establish comparable groups.

Significance

Although understanding teacher job satisfaction has been the focus of a large number of studies, several observations and concerns

established the significance of this study. First, few studies have dealt with quantifying the relationship between overall and job-facet satisfaction. In fact, as Holdaway (1978) pointed out in a review of teacher-satisfaction literature, "no studies have been encountered that dealt quantitatively with the relationship between facet and overall satisfaction of teachers" (p. 32). By knowing which facets of teachers' work are most predictive of overall job satisfaction, school leaders may be able to focus management resources on those aspects of work that would maximize an improved work life for teachers.

Furthermore, limitations of past research on teacher job satisfaction also contribute to the significance of this study. Some of these limitations include (a) the specific nature of many past studies that used small samples with little ability to generalize results, (b) the necessity to frequently measure current levels of teacher job satisfaction to account for changes occurring within the occupational environment of teachers, (c) the reliance by past studies of teacher job satisfaction on measures that are occupationally insensitive, and (d) the importance of validating the effectiveness of previously developed measures of job satisfaction in new circumstances with different subjects. The design of this study sought to embrace these concerns in a manner that would enhance an understanding of teacher job satisfaction and overcome previously imposed limitations.

Finally, this researcher sought to resolve a theoretical debate on the contribution of an individual's values toward determining levels of job-facet satisfaction. If knowing an individual's value for a

particular job aspect adds meaning to a measure and understanding of teacher job satisfaction, it may be appropriate to modify measurement procedures to account for this interaction in future satisfaction research.

Nature of the Study

In an effort to better understand the nature of teacher job satisfaction, this researcher used survey research methodology. Use of survey research methodology to explore teacher job satisfaction made it feasible to select a probabilistic random sample of public school teachers and to collect data on a large number of variables presumed to be related to teacher job satisfaction.

The nature of the problem and the specific research questions guiding this study resulted in the use of several research methods including descriptive research, correlation research and prediction, and studying differences. Descriptive study methods commonly employ a survey, and the purpose is to collect information that permits the description of characteristics held by persons, educational processes, and/or institutions. The advantage of descriptive methods for this study was expressed by Borg and Gall (1979), who wrote: "Careful quantitative description by itself often leads to improved understanding of educational phenomena" (p. 38).

Correlation research was used in this study because of the investigator's concern with measuring relationships among a large number of variables. Specifically, multiple correlation permitted the

researcher to determine the relationship between a combination of variables and a single criterion. Additionally, multiple regression was used to predict an individual's performance on a criterion variable by entering his/her scores on a group of predictive variables into a multiple-regression equation.

Finally, a quasi-experimental design was developed to study differences between groups of individuals on their score-performance for selected criterion variables. The groups were established based on differing individual, organizational, and environmental characteristics that were naturally occurring and not subject to the control of the investigator. A variety of statistical tools were used to determine if differences were statistically significant.

The research focus and resulting sample of this study included currently employed Michigan K-12 public school teachers. Careful randomized sampling procedures were used to establish a probabilistic random sample of this population. The conclusions of this investigation, therefore, are delimited to this population.

For purposes of reader clarity, the following terms operationally defined by this study are presented here:

Teacher: Any individual who is currently employed and certified as a public school teacher in the state of Michigan and has responsibility for direct classroom instruction of students in grades K-12.

Overall job satisfaction: A person's affective reactions to his/her total work role, as measured by a seven-item summed scale of overall job satisfaction.

Job-facet satisfaction: A person's affective reactions to particular aspects of his/her job (e.g., pay, supervision, promotion opportunities), as measured by a 58-item scale of job-facet satisfaction.

Interactionist perspective: A view that the causes of job satisfaction are not in the job or solely in the person but lie in the relationship between them as measured by an importance-weighted scale of job-facet satisfaction.

Five general research questions guided this investigation of teacher job satisfaction. Each question resulted in specific hypotheses and research designs focused on the intention of the individual questions and are delineated later. The research questions included:

1. Are there underlying job satisfaction factors in the job-facet satisfaction scores for a sample of Michigan K-12 public school teachers?

2. What current levels of overall and job-facet satisfaction are expressed by Michigan K-12 public school teachers?

3. Which underlying job satisfaction factors account for the largest amount of variance in overall job satisfaction for a sample of Michigan K-12 public school teachers?

4. Do measures of job-facet importance give useful information, over and above that provided by satisfaction scores alone, for the purpose of estimating overall job satisfaction?

5. Are there differences between groups of teachers defined by nonassignable individual, organizational, and environmental characteristics on job satisfaction factor scores and on overall job satisfaction scores?

The remainder of this study was organized to answer these questions and to consider both research and school-management implications generated by the results of this study. Additional chapters include a review of literature, a description of research methods, a report of results, and a discussion of conclusions and implications.

CHAPTER II

LITERATURE REVIEW

Scope

Job satisfaction literature from business and industry and from school organizations is extensive, and a variety of definitions and findings have emerged. Locke (1975) compiled an extensive review of job satisfaction literature and reported a minimum estimate of articles on the subject to date at 3,350.

Teacher job satisfaction as a research interest has been evident for a long time. Two years after Mayo's preliminary report on the Hawthorne studies appeared, Hoppock (1935) published the first intensive study of teacher job satisfaction. He used samples that included most employed adults in one small town and 500 school teachers from several dozen communities. Although the major developmental research on job satisfaction has come from business and industrial organizations, a lengthy history of teacher job satisfaction research began with Hoppock's study.

Review of Teacher Satisfaction Studies

To adequately assess our current understanding of teacher job satisfaction, familiarity with a sizable literature that has emerged over the past 25 years is necessary. This time frame roughly

approximates the publication date of another 25-year critical review of teacher morale/job satisfaction literature conducted by Blocker and Richardson (1963).

Using insights gained from the Blocker and Richardson review as a starting point, this researcher constructed a systematic review of teacher job satisfaction literature that has been published since 1960. To be included in this review, a research contribution must have been listed in the Education Index, published by the H. W. Wilson Company (Bronx, New York) beginning with Volume 12 (1959-1961) to the present date. The Education Index lists all popular education periodicals, journals, and monographs and maintains a list of over 300 submitting publications. The subject index "Teacher Job Satisfaction" was screened for any studies employing a sample of school teachers and using some measure(s) of teacher job satisfaction.

To ensure comprehensive coverage of the research on teacher job satisfaction, the Current Index to Journals in Education was used as a second source of titles. Published by the Orynx Press (Phoenix, Arizona), this reference guide is related to the Educational Resources Information Center sponsored by the National Institute of Education and covers 780 major educational and education-related journals. Volume I of CIJE was published in 1969, and each subsequent issue was reviewed for additional titles meeting the criteria for inclusion with this review.

Use of this review procedure generated 55 titles of studies that sampled teachers in terms of their expressed levels of job

satisfaction. Although a review of 55 teacher job satisfaction studies is not an exhaustive search of the subject, the essence and focus of teacher job satisfaction research can be suggested on the basis of this consideration of literature. Each study is summarized in Appendix A and may be cited in the following discussion of research on teacher job satisfaction.

The status of our understanding of teacher job satisfaction has advanced meaningfully over the past two decades. However, because of the variety of satisfaction-measurement approaches resulting from differing theoretical models of job satisfaction, only tentative conclusions about teacher job satisfaction have emerged with any consistent support from the literature. The primary findings suggested by this review include:

1. Teacher job dissatisfaction has increased substantially over the past 25 years and has become a matter of serious proportion.

2. A somewhat consistent but sizable number of variables have been identified as possible determinants of job satisfaction and/or dissatisfaction.

3. Conditions, environments, and characteristics of teachers and their workplaces that associate with varying levels of satisfaction can be described.

4. The effect of both high and low levels of job satisfaction on teacher behavior has not been fully described by teacher job satisfaction research during this time frame.

5. Certain theoretical and problematic shortcomings of past efforts to measure and explain teacher job satisfaction are evident and preclude a full understanding of teacher job satisfaction.

Finding 1: Teacher dissatisfaction on the rise. It was evident from this review that the proportion of teachers expressing a general feeling of dissatisfaction with their occupation has grown during the past 25 years. Although surveys designed to assess the levels of satisfaction or dissatisfaction of teachers have been somewhat infrequent in the past, a trend toward increased levels of dissatisfaction is discernible. A note of caution is required when considering this trend, however, due to the widely varying satisfaction measures used in studies reporting data on levels of teacher job satisfaction. Furthermore, the samples used in these studies have shown wide variation on such factors as age, level taught, years of teaching experience, and so on.

According to data presented in the National Education Association's (NEA) report entitled Status of the American Public School Teacher (1980-81), in 1961 only 11% of the teachers polled said they certainly or probably would not become a teacher again. This publication has been a periodic effort on the part of the NEA to sample teachers nationwide concerning their attitudes toward their jobs and the teaching profession.

Although revisions to the survey instrument were implemented over the years, a substantial swing in teacher job attitudes could be detected with publication of the results from the 1978-79 NEA teacher

poll. According to McGuire (1979), the study revealed that one-third of those teaching now would not go into teaching if they could go back to college and start again.

In the 1980 edition of the NEA's survey of teachers' attitudes, 41% of the sampled teachers indicated that they would probably not become teachers again. This survey was followed by a 1981 version in which 55% of the teachers sampled said they either certainly or probably would not become teachers again. Both the 1980 and 1981 editions of the survey contained data indicating that over one-third of the sampled teachers were dissatisfied with their jobs as teachers.

Other teachers have confirmed the results of the NEA surveys using different samples of teachers. In 1979, Cooke et al. (1982) examined survey data gathered from 200 randomly selected Michigan teachers in grades K-12. The major finding of this study revealed that "Michigan teachers report more work-related problems and a lower overall quality of work life than did teachers in a national sample" (p. 637). During that same year, Sparks (1979) sampled levels of teacher job satisfaction in southeastern Michigan and found that "forty-six percent of the teachers were dissatisfied with their job as a whole, and an identical percentage said that, if they had it to do all over again, they would not choose teaching as a career" (p. 447).

To determine why so many female elementary school teachers were dissatisfied with their teaching careers, Metzger and Wangberg (1981) surveyed 257 female elementary teachers from a variety of school-district types. Forty percent of the sampled teachers indicated they

would not choose elementary school teaching if they had to make their career choice again.

Taking a different approach to teacher job attitudes, Saville (1981) surveyed 1,468 teachers concerning their perceptions of job stress. The data reported in this study included the finding that 51% of the respondents had experienced a "stress-related" physical illness during the past four years. Sixty-five percent of the sample considered teaching a stressful occupation, and 58% indicated they had seriously considered leaving the profession because of stress-related problems on the job.

In 1982, The New York Times conducted a statewide survey of teachers in New York in an effort to identify the prevailing mood of members of this profession. About 5,700 teachers returned surveys that asked for their views on a variety of topics. Fiske, a Times writer, commented on the study, relating:

> Perhaps the most notable response to emerge from the survey was that while two-thirds said they were proud to be teachers, nearly half, 47 percent, said they would go into another profession if they had it to do over again. The figure was even higher, 55 percent, in New York City. (p. 52)

In a study of job satisfaction of rural teachers in Canada, Haughey and Murphy (1983) found that only 22% of the 528 respondents indicated that they experienced some level of satisfaction from their jobs. Several months later, Louis Harris and Associates conducted the National Survey of the American Teacher, sponsored by the Metropolitan Life Insurance Company. In commenting on this study, Kirst (1984) wrote:

> Teachers receive little public respect, are dissatisfied with their university preparation, contend their salaries are too low, and believe they spend too much time on administration. . . . All of these factors help cause an alarming rate of teacher turnover. About one-half leave the profession within their first five to seven years. (p. 146)

Data from the National Survey of the American Teacher (presented in Table 1) make clear the serious nature of this problem:

Table 1.--Teachers and job satisfaction.

	Agree Strongly	Agree Somewhat	Disagree Somewhat	Disagree Strongly	Not Sure
I love to teach.	78%	18%	3%	*	*
I have to spend too much time on administrative tasks.	38%	34%	19%	7%	*
I am usually recognized for good performance.	33%	37%	29%	10%	*
I would advise a young person to pursue a career in teaching.	12%	33%	29%	24%	1%
As a teacher, I feel respected in today's society.	10%	37%	31%	21%	*
The training and preparation teachers receive today does a good job preparing them for the classroom.	10%	36%	31%	19%	3%
My job allows me the opportunity to earn a decent salary.	8%	29%	26%	37%	*

Source: Harris and Associates, National Survey of The American Teacher.

*Less than 0.5%

That levels of teacher job dissatisfaction have continued to increase into 1985 was established by reports on two recent teacher satisfaction studies. An Educational Research Service (1985) poll of 1,346 teachers nationwide found that 51% said they would hesitate before recommending a teaching career to a student, while an additional 22% would advise students against entering teaching. Additionally, a survey of 450 Missouri teachers showed that 28% were currently satisfied with their jobs, compared with 89% who were satisfied when they got their college degrees (Holifield, 1985).

The results of these several studies combine to form a convincing picture about the shift in teacher job attitudes over the past 25 years. Although methods, samples, and research strategies varied among these studies, a fairly consistent finding emerged, indicating an increasing level of teacher job dissatisfaction.

Finding 2: Identifying the determinants of teacher job satisfaction. A large portion of teacher job satisfaction literature over the past 25 years has focused on identifying the sources or determinants of job satisfaction and/or dissatisfaction. Blocker and Richardson (1963) concluded their 25-year review of teacher morale by stating that "the administrator appears in study after study as the key person with respect to morale. With virtually the same environmental factors operating, high or low morale can be induced depending upon the behavior pattern of the chief administrator" (p. 208). Although several other studies reviewed determined a similar conclusion, many other variables

have been identified as important sources of job satisfaction and/or dissatisfaction.

The following series of propositions and accompanying research citations were drawn from those studies in the review that focused on the determinants of teacher job satisfaction. The research citations are included to reference studies that provided clear examples of support for the proposition they accompany. Again, caution should be used in reviewing these results as the studies considered offered widely varying methods, measures, and samples.

1. As teachers experience a sense of achievement with their work, satisfaction increases (Adair, 1968; Holdaway, 1978; Sergiovanni, 1967; Sweeney, 1981).

2. As teachers receive recognition for their work, satisfaction increases (Adair, 1968; Holdaway, 1978; Metzger & Wangberg, 1981; Sergiovanni, 1967).

3. As teachers assume increased responsibility for their own work, satisfaction increases (Erlandson & Pastor, 1981; Sergiovanni, 1967).

4. Interpersonal relations with students tend to be a source of satisfaction for teachers (Adair, 1968; Holdaway, 1978; Raschke et al., 1985; Smilansky, 1984).

5. As teachers' professional self-image increases so does satisfaction (Schackmuth, 1979).

6. Salaries tend to be a source of dissatisfaction for teachers (Check, 1971; Holdaway, 1978; Litt & Turk, 1985; Metzger & Wangberg, 1981; NEA, 1980; Rudd & Wiseman, 1962).

7. Interpersonal relationships among staff tend to be a source of dissatisfaction for teachers (Raschke et al., 1985; Rudd & Wiseman, 1962; Sergiovanni, 1967).

8. Inadequate teaching resources contribute to teacher job dissatisfaction (Gottlieb, 1964; Holdaway, 1978; Rudd & Wiseman, 1962).

9. High teacher work load contributes to teacher job dissatisfaction (Holdaway, 1978; Medved, 1982; Rudd & Wiseman, 1962; Smilansky, 1984).

10. Large class size contributes to teacher job dissatisfaction (Gottlieb, 1964; NEA, 1975; Rudd & Wiseman, 1962; Saville, 1981).

11. Status of the profession in society contributes to teacher job dissatisfaction (Haughey & Murphy, 1983; Litt & Turk, 1985; NEA, 1975, 1980; Raschke et al., 1985; Rudd & Wiseman, 1962; Sweeney, 1981).

12. Maintaining discipline contributes to teacher job dissatisfaction (Bienenstok, 1964; Gottlieb, 1964; NEA, 1975; Perkes, 1968; Saville, 1981).

13. Limited opportunity to apply knowledge contributes to teacher job dissatisfaction (Bienenstok, 1964).

14. Lack of parental concern contributes to teacher job dissatisfaction (Gottlieb, 1964; NEA, 1975).

15. Menial tasks and administrative busywork contribute to teacher job dissatisfaction (Check, 1971; Farber, 1984; Greenfield & Blase, 19981; Litt & Turk, 1985; Raschke et al., 1985; Saville, 1981).

16. Lack of adult contact contributes to teacher job dissatisfaction (Metzberg & Wangberg, 1981).

17. Student absences contribute to teacher job dissatisfaction (Greenfield & Blase, 1981).

18. Threat of potential lawsuit contributes to teacher job dissatisfaction (Saville, 1981).

19. Teacher involvement in decision making contributes to both teacher satisfaction and dissatisfaction, depending on the amount (as involvement increases, so does satisfaction; as involvement decreases, dissatisfaction increases) (Belasco & Alutto, 1972; Butler, 1961; Grassie & Carrs, 1972; Schackmuth, 1979--studied centralization of decision making).

20. Ability levels of students contribute to both teacher satisfaction and dissatisfaction, depending on level (as ability levels increase, so does satisfaction; as ability levels decrease, dissatisfaction increases) (Gottlieb, 1964).

21. Student interest levels contribute to both teacher satisfaction and dissatisfaction, depending on level (as student interest increases, so does satisfaction; as student interest decreases,

dissatisfaction increases) (Greenfield & Blase, 1981; Gottlieb, 1964; NEA, 1980).

22. The quality of school administration/leadership contributes to both teacher satisfaction and dissatisfaction, depending on level (as principal relations and leadership improve, so does satisfaction; as principal relations and leadership become poor, dissatisfaction increases) (Adair, 1968; Check, 1971; Cooke et al., 1982; Farber, 1984; Holdaway, 1978; Lacy, 1973; Litt & Turk, 1985; Miskel, Fevurly, & Stewart, 1979; NEA, 1975; Saville, 1981; Sergiovanni, 1967).

23. Perception of career options contributes to teacher satisfaction and dissatisfaction (as perceived options rise, so does satisfaction; as options decline, dissatisfaction increases) (Medved, 1982; Metzger & Wangberg, 1981).

24. Level of teacher control/freedom in the classroom contributes to both teacher satisfaction and dissatisfaction (as teacher control increases, so does satisfaction; as control decreases, dissatisfaction rises) (Butler, 1961; Lyons & Goldman, 1972; Raschke et al., 1985).

25. The principal's compliance with teacher work-related norms contributes to both teacher satisfaction and dissatisfaction (as compliance increases, so does satisfaction; as compliance decreases, dissatisfaction increases) (Haralick, 1968).

26. Central life interests contribute to both teacher satisfaction and dissatisfaction (as interests focus on the job, satisfaction increases; as interests focus on other aspects of life, dissatisfaction increases (Miskel & Gerhardt, 1974; Miskel, Glasnapp, & Hatley, 1975).

27. The level of conflict in an organization contributes to teacher satisfaction and dissatisfaction (high levels of conflict tend to produce high levels of dissatisfaction; low levels of conflict tend to produce higher levels of satisfaction) (Miskel & Gerhardt, 1974).

Finding 3: Effect of teacher and school-organization variables on job satisfaction. Teacher job satisfaction research during the past 25 years has displayed less interest in understanding the effect of teacher characteristics and the organizational properties of the

schools in which they teach on levels of job satisfaction than research from business and industry. Fraser (1970) pointed out that

> The properties of schools have not been investigated as morale-influencing factors. This is surprising, because many studies outside of education have been concerned with the extent to which organizational properties affect work attitudes of their members. (p. 21)

The teacher characteristics that have been explored most commonly include such variables as teacher age, sex, race, years of teaching experience, degree preparation, marital status, and family size. Frequently, the results of studies comparing levels of teacher job satisfaction on the basis of these variables have been inconsistent.

Teacher sex and the notion that differences exist between male and female teachers in terms of their levels of job satisfaction have received substantial research attention. In 1962, Rudd and Wiseman determined that male teachers in grammar schools appeared to derive the most satisfaction compared to female subjects teaching in infant schools. In contrast, Trusty and Sergiovanni (1966) found that female teachers had smaller need deficiencies compared with their male counterparts. In this study, small need deficiencies were the equivalent of satisfaction.

In their study of decisional participation, Belasco and Alutto (1972) found that female teachers tended to be more satisfied than male teachers. Lacy (1973) could not confirm this conclusion as data in his study suggested that teacher satisfaction levels did not vary on the

basis of sex. Miskel and Gerhardt (1974), however, found that female elementary teachers tended to be the most satisfied.

By using a comprehensive interview and survey design on teachers sampled in his study, Lortie (1975) reported that men were less satisfied with their work than either single or married women. Further, Lortie found that men were considerably less certain than women that they would repeat their decision to teach again. Other studies confirming higher levels of satisfaction for women teachers included those by the NEA (1980, 1981) and by Chapman and Lowther (1982). Although the majority of studies considering satisfaction differences between male and female teachers have indicated that females tend to be more satisfied, several exceptions in the literature are evident, including recent findings by Galloway et al. (1985) suggesting that male teachers are more satisfied than females, but on only one dimension (professional autonomy).

Teacher age has been examined in a number of studies including Trusty and Sergiovanni's (1966) study of teacher need deficiencies. Results reported in this study indicated that teachers between the ages of 25 and 35 had the largest need deficiencies (unmet needs on the job). In a design examining satisfaction directly, Perkes (1968) found that job satisfaction was greater for younger teachers, particularly beginning teachers. Fraser's (1970) study of teacher job satisfaction reported that as the average age of staff increased, the number of reported satisfactions decreased and the number of dissatisfactions increased.

These inconsistent findings typify the results of studies pursuing job satisfaction differences on the basis of age. Belasco and Alutto (1972) discerned that teachers age 38 and above were more satisfied than other age groups. Holdaway (1978) attempted to analyze satisfaction differences due to age and discovered that teachers under 40 mentioned dissatisfaction with salary far more frequently than did those teachers over 40. Furthermore, few differences in satisfaction levels with other job dimensions including attitudes of society and parents, policy and administration, physical conditions, and attitudes of students could be detected. Finally, Sweeney (1981) concluded his study of teacher satisfaction by noting that satisfaction increased with age.

While closely related to teacher age, years of teaching experience has been examined as a source of difference in levels of job satisfaction among groups varying on this criterion. Both Trusty and Sergiovanni (1966) and Perkes (1968) examined experience and produced results identical to those obtained when age was the variable being considered. Trusty and Sergiovanni learned that need deficiencies were greatest among teachers with 5 to 12 years' experience, while Perkes concluded that satisfaction was greatest for beginning teachers. Fraser (1970) tended to support Perkes by using an alternative comparison strategy. Fraser discerned that schools with greater numbers of beginning teachers reported higher levels of teacher satisfaction. Lacy (1973), in a study of business education teachers, reported that job satisfaction increased as years of teaching

experience accumulated. Finally, Holdaway's (1978) study of teacher job satisfaction presented data indicating that first-year teachers experienced the lowest overall satisfaction among a number of experience groups and that beginning teachers tended to experience lower levels of satisfaction with more aspects of their jobs than did teachers with more experience.

In terms of race, Gottlieb (1964) examined teacher race and concluded that black teachers tended to express higher levels of satisfaction than did white teachers. When racial characteristics of schools were examined, it was found that teachers (both white and black) expressed higher levels of satisfaction in predominantly white-student high schools compared to predominantly black-student schools (Eubanks, 1974). No other research in the review considered racial variables.

Only one study in the review presented data considering the effect of marriage and children on levels of teacher job satisfaction. In reference to both characteristics, no differences between groups of teachers distinguished by these variables were detected.

Although other important personal teacher variables may affect satisfaction differences between groups of teachers who differ on such characteristics, few comprehensive research studies have pursued these differences. For those variables that have received some research attention, the results have frequently been inconsistent, and few clear directions for school managers have emerged as to how satisfaction can be improved for these varying groups.

The status of research on the organizational properties of schools and their effect on teacher job attitudes is no further advanced. Variables that have been considered in past research include school building size, school district size, geographic nature of schools, student racial composition of the school, school level, school wealth, and the architectural and curricular design of schools.

In terms of school building size, no ideal size has been determined by research on this variable. Three studies included in this review presented mixed conclusions. In 1970, Fraser related that "in larger schools . . . teachers were more likely to have considered leaving teaching, to be anticipating withdrawing from the profession and to be anticipating career advancement" (p. 26). Lacy's (1973) satisfaction study reported that the size of high school enrollment had no effect on satisfaction. Finally, Farber (1984) concluded from data in his study that teachers in midsize schools (600 to 950 students) were less committed to teaching than those in smaller schools.

In a similar manner to building size, school district size has received limited research attention as an organizational variable likely to affect teacher job satisfaction. The NEA (1980) reported that teachers in systems over 25,000 students were more dissatisfied. The NEA reported a similar finding in its 1981 study of teacher job attitudes, indicating that large city school teachers were more dissatisfied. No further results on this variable were present in the studies reviewed.

Two studies in the review compared the levels of teacher job satisfaction between teachers from districts of varying geographic natures. Parkhouse and Holmen (1980) discerned that suburban faculty tended to be satisfied with intrinsic aspects (work, colleagues, and supervision) and dissatisfied with extrinsic aspects, including pay. Conversely, inner-city teachers were more satisfied with pay and dissatisfied with work, co-workers, and supervision. The NEA (1981) found in a nationwide survey of teachers that teachers in large cities and suburbs were more dissatisfied than teachers from other types of districts.

Racial composition of schools as a factor affecting differences in levels of teacher satisfaction received limited attention by the studies included in this review. Eubanks (1974) discovered that teachers in predominantly white high schools were more satisfied than teachers in predominantly black high schools. Galloway et al. (1985) examined minority populations in New Zealand schools and determined that teachers in schools where more than 75% of pupils were of European origin reported significantly more job satisfaction than teachers in schools with fewer children of European origin.

School level, the grade-level constellation of schools, was the most frequently studied organizational variable in the studies reviewed. Fraser (1970) reported that as one moves from the elementary to the secondary level, the number of dissatisfactions reported by teachers increases. Additionally, the possibility of leaving teaching increases. Several studies consistently found higher levels of teacher

satisfaction at the elementary level compared to the secondary level (Alutto & Belasco, 1972; Bentzen, Williams, & Heckman, 1980; NEA, 1980).

In comparing satisfaction levels of teachers at junior and senior high schools, three additional studies are relevant. Trusty and Sergiovanni (1966) and Perkes (1968) found that junior high teachers expressed higher levels of dissatisfaction. In assessing teacher stress, Farber (1984) revealed that those teaching at the junior high school level were "most at risk" for career burnout (p. 32).

School wealth was measured indirectly and in only a few studies included in this review. Lacy (1973) found that teachers with a high level of job satisfaction had adequate financial support and adequate equipment to carry out their teaching assignments. Additionally, Lacy reported that as teaching salaries and fringe benefits increased, so did the level of teacher job satisfaction. Bentzen et al. (1980) indicated that teachers in higher-income communities tended to be more satisfied, the likely result of increased funding available for the schools.

Finally, two studies considered the architectural and curricular "openness" and "closedness" of schools as the variable responsible for differences in levels of teacher job satisfaction. Both Coughlan (1971) and Khan and Traub (1980) found that more open schools tended to have more satisfied teachers.

Again, limited insights have been generated from the results of current research on how organizational properties of schools relate to

differences in expressed levels of teacher job satisfaction. Studies were few, and the scope of variables examined was not comprehensive. With frequently inconsistent findings, relatively few conclusions can be drawn confidently about how organizational properties influence job satisfaction.

Finding 4: The results of teacher job satisfaction. Perhaps due to the suggestion in reviews of satisfaction-productivity studies by Brayfield and Crockett (1955) and Vroom (1964) that no systematic relationship between job satisfaction and worker performance or productivity exists, researchers in education infrequently have pursued the results of high and low levels of job satisfaction on teacher behavior. The limited number of studies exploring the results of varying levels of job satisfaction that were included in this review varied in purpose, design, and results.

In 1961, Butler studied job satisfaction levels of beginning teachers in Illinois. The main finding of this study revealed that "there is a direct relationship between job satisfaction and the retention of beginning teachers" (p. 13). Ten years later, Davison (1971) pursued the results of satisfaction levels expressed by 230 secondary school teachers beginning their second year of teaching. The main finding of this study contrasted with that of Butler as Davison concluded that "the data showed few of the teachers with minimal work satisfaction expressing any strong interest in leaving their present position" (p. 267).

Greenwood and Soar (1973) sought to understand relationships between teacher morale and verbal teacher behavior. Through a carefully designed study of 39 female elementary school teachers, these researchers arrived at the following conclusion:

> If smaller amounts of teacher talk, greater amounts of pupil-pupil talk, and greater teacher acceptance of pupils are seen as aspects of good teaching, the significant relationships revealed in this study could generally be summarized as an association between aspects of good teaching and aspects of higher morale. (p. 106)

Knoop and O'Reilly (1976) measured the job satisfaction of 322 randomly selected elementary school teachers from 75 schools in three Canadian urban school districts, using the Job Descriptive Index (Smith et al., 1969). School performance was also measured, using Georgopoulos and Mann's (1962) instrument for subjectively measuring hospital effectiveness, adapted for school use. The results of t-tests indicated that the mean level of job satisfaction of teachers in a school was positively associated with the overall effectiveness of that school. Knoop and O'Reilly commented that although "the correlations reported . . . are higher than those of similar studies, it is evident that many other personal and situational factors also account for effectiveness" (p. 12).

In an effort to investigate the association between self-reported teacher stress and three response correlates of teacher stress including job satisfaction, absenteeism, and intention to leave teaching, Kyriacou and Sutcliffe (1979) surveyed 218 teachers from medium-sized schools. These investigators found a negative association between self-reported teacher stress and job satisfaction.

Additionally, it was found that a positive association between self-reported teacher stress and intention to leave teaching existed. Although the investigators did not comment on the direction of causality, they suggested that low levels of satisfaction were associated with higher levels of stress. High stress levels reportedly were associated with intention to leave teaching.

In contrast to these findings, Bridge's (1980) more limited view of the satisfaction-absenteeism relationship concluded that:

> The relationship between job satisfaction and absenteeism among elementary school teachers is tenuous. In none of the twelve multiple regression analyses performed in this study did the shared variance exceed 7%, suggesting that job satisfaction is not a major factor in absenteeism. (p. 53)

Other conclusions may have been suggested if Bridges had advanced a more comprehensive view of the satisfaction-absenteeism relationship. Bridges made this suggestion himself; however, the fact that his findings were in contrast to findings by Kyriacou and Sutcliffe (1979) follows a pattern of inconsistent findings through research on the effect varying levels of satisfaction have on teacher behavior.

Finding 5: Shortcomings in teacher job satisfaction research. Our understanding of teacher job satisfaction has advanced as a result of the information generated by the studies included in this review. Certain theoretical and problematic shortcomings of past approaches, however, have impaired a full understanding of teacher job satisfaction. In general, limitations affecting the usefulness of information generated by these studies have included such problems as the use of

small samples, samples drawn from a limited population for a specific purpose that were not well suited for constructing generalizations, use of job satisfaction measures developed in business and industrial settings that may not be sensitive to unique aspects of teachers and teaching as work, and the infrequent validation of measures.

Furthermore, the variety of job satisfaction measures used among the studies reviewed constitutes a serious problem when attempting to compare the results of various studies. For instance, of the 55 studies included in this review, 6 studies used single-item measures of overall job satisfaction, 24 studies used multiple-question measures of overall job satisfaction ranging from two to six questions, 20 studies asked respondents to rate specific aspects of their job situations in terms of level of satisfaction for anywhere from 10 to 100 different job facets, and 5 studies asked respondents to identify critical incidents in teaching and to list aspects of the incidents that produced feelings of satisfaction and/or dissatisfaction.

Another concern left unresolved by the studies reviewed relates to the importance of various determinants of job satisfaction. Although a variety of satisfaction and dissatisfaction determinants were identified in the review studies, very little effort was directed toward discovering the most meaningful or important determinants. Holdaway (1978) commented on this situation when he wrote, "Many studies have examined the job satisfaction of teachers. . . . No studies have been encountered that dealt quantitatively with the relationship between facet and overall satisfaction of teachers" (p. 32). In this

review, only two studies pursued this relationship: Holdaway (1978) and Golloway et al. (1985).

Finally, studies in the review left unresolved a conceptual debate as to whether job satisfaction variables exist on a continuum. Lawler (1973) explained one side of the debate when he wrote about Herzberg's two-factor theory of job satisfaction/motivation:

> First, two-factor theory says that satisfaction and dissatisfaction do not exist on a continuum running from satisfaction through neutral to dissatisfaction. Two independent continua exist, one running from satisfied to neutral, and another running from dissatisfied to neutral. Second, the theory stresses that different job facets influence feelings of satisfaction and dissatisfaction. (p. 69)

Medved (1982) presented the opposing conceptualization of job satisfaction, arguing that "those factors that most often contribute to the satisfaction of teachers are also, if absent, most often the cause for teacher dissatisfaction" (p. 555). The failure of past studies to reconcile these perspectives probably resulted in the use of a wide variety of job satisfaction measures, as evidenced in this review.

As this review considers theoretical models of job satisfaction, some of these shortcomings will be addressed in greater detail. For now, Holdaway's (1978) comments seem appropriate as he stated, "The often specific nature of teacher job satisfaction studies makes the preparation of concise summaries and syntheses very difficult" (p. 32).

At this point, it is important to expand the scope of this review to include research on job satisfaction from business and industrial settings. The major conceptual and methodological developments in job satisfaction literature have come from these settings. The

combined job satisfaction literature from business, industry, and education has grown substantially over the past 25 years.

Job Satisfaction Defined

With so much research pursuit for so many years, job satisfaction definitions abound. Holdaway (1978) argued that some of these definitions are abstract; however, "most are operational, being precisely defined by the researcher or investigator attempting to study job satisfaction empirically" (p. 5).

In general, job satisfaction definitions emphasize either an affective or a behavioral orientation. In the affective category are such definitions as "job satisfaction and dissatisfaction are complex emotional reactions to the job" (Locke, 1969, p. 314); "a feeling which has arisen in the worker as a response to the total job situation" (Dunn & Stephens, 1972, p. 318); "persistent feelings toward discriminable aspects of the job situation" (Smith et al., 1969, p. 37); and "the difference between what a person thinks he should receive and what he feels he actually does receive" (Porter, cited in Lawler, 1973, p. 64). In the behavioral category of definitions are those such as "a willingness to remain within the current school organization despite inducement to leave" (Belasco & Alutto, 1972, p. 44; following the approach of March & Simon, 1958, and Katz & Kahn, 1966); and "readiness to teach again" (Lortie, 1975, p. 91), i.e., readiness to choose teaching again as a career.

Vroom in 1964 and Locke in 1969 both conducted extensive reviews of literature concerning job satisfaction. Vroom extracted the following definition of job satisfaction from his review:

> The terms job satisfaction and job attitudes are typically used interchangeably. Both refer to affective orientations on the part of individuals toward work roles which they are presently occupying. Positive attitudes toward the job are conceptually equivalent to job satisfaction and negative attitudes toward the job are equivalent to job dissatisfaction. (p. 99)

In comparison, Locke's review produced this definition of job satisfaction:

> Job satisfaction is the pleasurable emotional state resulting from the appraisal of one's job as achieving or facilitating the achievement of one's job values. Job dissatisfaction is the unpleasurable emotional state resulting from the appraisal of one's job as frustrating or blocking the attainment of one's job values or as entailing disvalues. Job satisfaction and dissatisfaction are a function of the perceived relationship between what one wants from one's job and what one perceives it as offering or entailing. (p. 316)

Although important conceptual differences exist between many of the popular definitions of job satisfaction, the terms used frequently describe job satisfaction as a complex set of variables rather than a single variable. The notion that an individual's level of satisfaction can vary with each aspect of the job has been referred to as job-facet satisfaction. There are job facets that presumably affect overall job satisfaction differentially. Vroom (1964) noted that:

> Although we have been referring to job satisfaction as if it were a single variable, most investigators have treated it as a rather complex set of variables. The reasons for doing so are quite compelling. For example, workers can be found who report that they are very satisfied with their supervisors, indifferent toward company policies, and very dissatisfied with their wages. Which one,

> or combination of these, represents their level of job satisfaction? Is it not both theoretically and practically useful to consider specific referents for satisfaction within the work role? (p. 101)

Lawler (1973) supported Vroom's observations and used language that is well accepted in dealing with the difference between overall job satisfaction and Vroom's "variables":

> It is important to distinguish between the concepts of facet or factor satisfaction and overall job satisfaction. Facet satisfaction refers to people's affective reactions to particular aspects of their job. Pay, supervision, and promotion opportunities are frequently studied facets. Job satisfaction refers to a person's affective reactions to his total work role. (p. 64)

To summarize the discussion on defining job satisfaction, two points are important. First, job satisfaction has been viewed both as a single global concept, i.e., "overall job satisfaction," and as a multidimensional concept, i.e., "satisfaction with various facets of the job situation." Second, job satisfaction has generally been viewed as an outcome, not a determinant. In some early studies (Mayo, 1933; Roethlisberger & Dickson, 1939), job satisfaction was treated as a determinant of worker productivity, but "most of the later studies have focused on the determinants of job satisfaction itself. Thus, various conceptual frameworks have been developed to relate job satisfaction to posited determinants" (Holdaway, 1978, p. 6).

Theoretical Perspectives

To resolve the conflicting definitions of job satisfaction and select one definition to serve as the basis of this research required a consideration of theoretical explanations of the causes of job satisfaction. As previously indicated (Lawler, 1973; Miskel et al., 1975),

the theoretical formulations underlying the concept of job satisfaction are limited.

There have been attempts, however, to develop "mini-theories" of job satisfaction, and a number of conceptual frameworks can be extracted from job satisfaction literature. Locke (1969) implied three views when he wrote,

> There is still confusion over whether the determinants lie solely in the job itself (the "intrinsic" view), whether they reside wholly in the worker's mind (the "subjective" view), or whether satisfaction is the consequence of an interaction between the worker and his work environment. (p. 309)

The struggle to resolve this confusion was evident in the multitude of approaches used to measure teacher job satisfaction apparent in this literature review. These views can be examined separately and entail the following frameworks: (a) the "subjective" view, i.e., that the determinants of job satisfaction reside within the worker; (b) the "intrinsic" view, i.e., that the determinants lie within the job itself; and (c) the "interactionist" view, i.e., that job satisfaction is a consequence of a complex interplay between the worker and his job situation.

The "subjective" view of job satisfaction is exemplified in Maslow's (1954) "hierarchy of needs" theory. According to Maslow, human needs are arranged in a prepotent ascendancy from satisfaction of physiological needs through self-actualization. As an individual satisfies his prepotent lower-order needs, the satisfaction of other higher-order needs becomes important. Following Maslow, Porter et al. (1975) suggested that "existence, security, social, esteem, autonomy,

and self-actualization needs exist for workers in organizations" (pp. 42-43).

According to the subjective view, satisfaction is achieved when one of the lower-order needs an individual has is met. Once satisfied, however, this need is no longer seen as motivating. Both support and challenge to Maslow's hierarchy were offered by Porter et al., who wrote:

> There is strong evidence to support the view that unless the existence needs are satisfied none of the higher-order needs will come into play. There is also some evidence that unless security needs are satisfied, people will not be concerned with higher order needs (Cofer & Appley, 1964; Alderfer, 1972). There is, however, little evidence to support the view that a hierarchy exists once one moves above the security level (Lawler & Suttle, 1972). Thus, it is probably <u>not</u> safe to assume more than a two-step hierarchy, with existence and security needs at the lower level and all the higher-order needs at the next level. It is safe to assume that unless the lower-order needs are satisfied, the others will not come into play in any major way. (p. 43)

Holdaway (1978) offered an example of the subjective view in an organizational context: "Pay, for example, may allow the worker to satisfy several needs, including existence needs, security needs, and even esteem needs" (p. 7).

In contrast to the "subjective" framework is the "intrinsic" framework, which argues that the determinants of job satisfaction lie within the job itself. Herzberg's (1959, 1966) "dual factor" construct argues that a dichotomy exists, with intrinsic satisfaction factors (achievement, recognition, work itself, responsibility, advancement, and growth) being distinct from extrinsic dissatisfaction factors (company policy and administration, technical supervision, working

conditions, salary, relations with superordinates, relations with peers, status, job security, and personal life). Herzberg called intrinsic factors the "motivators," while he labeled the extrinsic dissatisfaction factors the "hygiene factors." The claim was made that hygiene factors do not have any motivational force; however, if not effectively present, they yield dissatisfaction.

Porter et al. (1975) supported and challenged Herzberg's two-factor explanation. These authors suggested that Herzberg's model has stimulated a great deal of empirical research; however, frequent efforts have been unable to provide quantitative support for Herzberg's major tenets. The essence of criticism challenging Herzberg's formulation was captured by Porter et al. when they reported that:

> Aside from the difficulties in obtaining consistent empirical support for the original two-factor dichotomy, problems on the conceptual level arise when one attempts to use the theory to understand how jobs should be designed for optimal work effectiveness and employee satisfaction. The implementation of the theory in the AT&T studies (Ford, 1969) assumes that the presence of the motivating conditions (i.e., recognition, achievement, etc.) can potentially motivate <u>all</u> employees. And indeed, such an assumption is not inconsistent with published statements of the theory; it appears in fact that the theory has not yet been elaborated to specify the way in which characteristics of workers interact with the presence or absence of the motivators in affecting worker performance and satisfaction--or even if such an interaction is to be expected. Data reviewed . . . have suggested strongly that the characteristics of workers <u>must</u> be considered if the impact of job design on worker affective and behavioral responses is to be fully understood. (p. 299)

The third view is the "interactionist" framework, which suggests that job satisfaction is a consequence of a complex interplay between the worker and his job situation. The idea that job satisfaction is the result of an interaction between the person and his

environment is not new. In 1939, Roethlisberger and Dickson wrote that workers' attitudes toward objects in the work environment "can be referred to the relation between an organism and its physical environment" (pp. 261-62). Likert wrote in 1961 that "the subordinate's reaction to the supervisor's behavior always depends upon the relationship between the supervisory act as perceived by the subordinate and the expectations, values, and interpersonal skills of the subordinate" (pp. 94-95). Rosen and Rosen (1955) viewed job satisfaction as a consequence of the discrepancy between percepts and value standards. Views similar in certain respects to the above were expressed by Katzell (1964), Morse (1953), and Vroom (1964).

In summarizing research on the interactionist framework of job satisfaction, Locke (1969) clearly expressed the need for such a view.

> The causes of job satisfaction are not in the job nor solely in man but lie in the relationship between them. The prediction of job satisfaction necessarily requires an interactive approach--not because 20 or 30 correlational studies have "proved" it, but because of the nature of man and of the evaluation process. (p. 319)

Importance-Weighted Interactionist Model

In reference to the problem identified earlier, i.e., that we do not have an adequate understanding about what really causes teachers to be satisfied with their jobs, findings from research exploring the interactionist framework have suggested a meaningful source of insight. Specifically, several researchers have examined the interaction between job aspects, worker values, and job satisfaction. Mikes and Hulin (1968) suggested this focus of research when they wrote:

> Strong and consistent relationships between employees' responses to attitude questionnaires and job behavior have only rarely been obtained. It has been implied frequently that those aspects of the job which are perceived as more important by the worker have a greater influence on the behavioral and overall affective responses of the worker to his job than do less important aspects. However, most job-attitude questionnaires fail to ask employees about aspects regarded as more or less important. (p. 394)

The theoretical argument present within Mikes and Hulin's implication--that those aspects of the job that are perceived as more important by the worker have a greater influence on the behavioral and overall affective responses of the worker to his job than do less important aspects--was presented by Lawler (1973):

> A strong theoretical argument can be made for weighting the facet-satisfaction scores according to their importance. Some factors do make larger contributions to overall satisfaction than others. Pay satisfaction, satisfaction with the work itself, and satisfaction with supervision seem to have particularly strong influences on overall satisfaction for most people. Also, employees tend to rate these factors as important. Thus, there is a connection between how important employees say job factors are and how much job factors influence overall job satisfaction. (pp. 77-78)

Earlier, Vroom (1964) had suggested a similar theoretical foundation:

> The last ten years have witnessed the proposal, by a number of different researchers, of theories regarding the causes of job satisfaction which encompass both work role and personality variables. In these theories, the satisfaction that an individual derives from a work role, or more precisely the valence of a work role to its occupant, is assumed to be a function not only of the objective properties of that work role but also of the motives of the individual. Insofar as people differ in their motives, the "optimal" or most satisfying work role will differ for each person. (p. 162)

The relationship between how individuals value certain aspects of their jobs and the degree to which these aspects influence overall

job satisfaction was expressed by Lawler (1973) in the following manner:

> Conceptually, therefore, it seems worthwhile to think of the various job-facet-satisfaction scores as influencing total satisfaction in terms of their importance. One way to express the relationship is by defining overall job satisfaction as being equal to the sum of (facet satisfaction x facet importance). (p. 78)

Measures of overall satisfaction typically have been obtained by summing items concerning satisfaction with particular aspects of the work situation. As Glennon, Owens, Smith, and Albright (1960) pointed out, this procedure ignores the importance of each item to the respondent. If importance is a meaningful dimension, then the response to each item should be weighted by the importance of the item to the employee. Waters (1969) pointed out, "While importance weighting is intuitively appealing, it must be shown that use of importance weighting adds to the prediction of separately measured overall satisfaction" (p. 519).

It is important to note that verification of this expressed relationship between importance of job aspects and overall job satisfaction has not been fully achieved.

> The nature of the relationship between the importance of a job aspect or element to a person and his degree of satisfaction with that aspect has been of interest to industrial psychologists for some years. To date very limited progress has been made in this area. This is revealed both by the inconclusive results of studies on this topic and by the absence of a theory that would account adequately for all the results obtained. (Mobley & Locke, 1970, p. 463)

On balance, the literature has suggested that importance-weighting facet satisfaction scores has little efficacy. Only two studies have shown that importance weights add to the prediction of

overall satisfaction. Youngberg, Hedberg, and Baxter (1962) found that using importance and satisfaction measures together produced better results than satisfaction measures used alone. However, as the authors themselves stated, no outside criterion was available against which the methods could be validated. Froelich and Wolins (1960) found that items low in satisfaction and high in importance best defined satisfaction as determined by a factor analysis. It should be noted that other studies used importance-weighting procedures but failed to report the relationship between the weighted and unweighted totals (Glennon et al., 1960; Owens, 1965b).

On the negative side, a number of studies have attempted to improve the prediction of overall job satisfaction by multiplying the individual's satisfaction rating for each job aspect by his/her (or some group's) importance rating for that aspect. It has typically been found that the sum of these weighted scores does not predict ratings of overall job satisfaction any better than the sum of the unweighted satisfaction ratings (Decker, 1955; Ewen, 1967; Schaffer, 1953; Waters, 1969). Mikes and Hulin (1968) obtained similar results using turnover as the criterion.

The Ewen (1967) investigation is particularly noteworthy in that it established three distinct tests for evaluating the efficacy of importance-weighting strategies. Based on a careful review of previous literature, Ewen described three separate procedures, "to determine whether or not importance measures give useful information, over and

above that provided by satisfaction scores alone, for the purposes of estimating overall job satisfaction" (p. 69).

The first procedure suggested by Ewen requires the "computation of correlations between totals arrived at using differential weightings and totals arrived at using equal (unit) weights for all components" (p. 69). The usefulness of this procedure was first described by Chiselli and Brown (1955), who were concerned with weightings of ratings of different aspects of job performance.

> The coefficient of correlation between the final ratings when the items are equally weighted and the final ratings when they are differentially weighted provides the necessary index. If the coefficient is very high, then the weighting system adds nothing, whereas if the coefficient is moderate or low, the weighting system can be said to be contributing. (pp. 124-25)

According to Ewen, application of this procedure holds for weighting job satisfaction facets.

The second procedure called for by Ewen suggests the "computation of correlations of both the weighted and unweighted totals with measures of overall job satisfaction" (p. 69). This approach was used by Schaffer (1953) and by Decker (1955). If the weighted total does not yield a significantly higher correlation with an overall satisfaction measure than the unweighted total, it would properly be concluded that weighting by importance for purposes of determining overall job satisfaction has no efficacy (Ewen, 1967).

Ewen's third procedure to test the value of importance weighting uses a different approach by establishing hypotheses and testing for differences. He explained this approach in the following manner:

> In addition to simply computing correlations between the various total scores and the overall measures, one may make tests of hypotheses which should hold if the totals weighted by the importance measures are more indicative of overall job satisfaction than the unweighted totals. It may be hypothesized that people who state that a component is important and who are dissatisfied with that component should show greater overall dissatisfaction than people who are dissatisfied with the component but who state that it is <u>not</u> important to them. (p. 69)

When the job satisfaction data collected by Ewen were subjected to these procedures, he concluded that "the results . . . raise doubts regarding the merits of including importance measures for purposes of weighting components of job satisfaction to estimate overall job satisfaction" (p. 72), a finding consistent with the majority of investigations on this concept.

Although the arguments for use of importance weights in scale construction seem plausible, ample evidence has been presented that a measure of job satisfaction derived from an importance-weighted multiplication equation does not yield significantly higher correlations with an external criterion of overall job satisfaction than does a simple sum of the job facets alone. At least two basic reasons for the failure of the weighting strategy have been reported in the literature. First, satisfaction with the various facets of one's work is inherently "self-weighted" by the importance the facets hold for each respondent. Thus, more important facets are given more extreme responses of satisfaction or dissatisfaction than responses given to unimportant facets. The use of separate weights, therefore, only adds redundant information (Dachler & Hulin, 1969; Locke, 1969; Mobley & Locke, 1970; Wanous & Lawler, 1972).

The second reason for the failure of weighting strategies was suggested by Seashore and Taber (1976). The correlation of any variable with a composite scale created from a set of items tends to be very insensitive to the weighting scheme that is used to create the composite if there are many items in the composite scale that are moderately to highly correlated. Caston and Briato (1983) argued that "under such conditions, even the application of zero weights to some of the scale items would have little effect on the distribution of the total scale scores or on the bivariate distribution of these scores with those of another variable" (p. 340).

In view of these two arguments, Caston and Briato conducted an investigation into the use of facet importance as a weighting component of job satisfaction and determined that "importance weights . . . can contribute a good deal to scaling procedures when a multivariate framework is used that represents the additive and multiplicative contributions of work place facets and facet importance to a criterion" (p. 339), such as overall job satisfaction.

These investigators pointed out that literature dealing with importance weighting has failed to take advantage of

> statistically powerful tests available for multivariate analyses. The most straight-forward and powerful test for the effect of a variable on the relationship between two other variables (in this case, for the influence of importance weights on the contribution of workplace facet satisfaction to the development of an overall job satisfaction scale) is that of the test for "interaction effects" in an analysis of variance design. Within the framework of the general linear model, this technique is known as moderator regression. Using this procedure one would simultaneously partial the variation of an employment outcome measure into its "main effects" and "interaction effects." The main effects would reflect the linear contributions of the workplace job facets and their

> importance to the outcome measure while the interaction effects would reflect the multiplicative contributions of facets weighted by importance. If the interaction effects are statistically significant, then one has evidence that weighting is a useful strategy. If significant, such a test would indicate that the contributions of job facet satisfactions to the employment outcome vary depending on whether the facets themselves are considered important to respondents. Not only could straightforward interpretations of these multiplicative interaction terms be made, but the combined information on the relative contributions of the main effect and interaction terms to the outcome measure could be used to create a scale that is maximally correlated with the outcome measure--hence achieving maximal validity in scale construction. (pp. 340-41)

By employing a moderator regression analysis of facet and overall job satisfaction data obtained from survey responses of 467 registered nurses in three large hospitals of a northwestern metropolitan area, Caston and Briato reported a significant gain in information in terms of accounting for the variance in overall job satisfaction scores.

> Inclusion of information about the importance of workplace facets to workers accounts for almost 9 percent additional variation in the criterion over what could be accounted for by facet satisfaction alone. The interaction terms for the importance weighting of facet satisfaction by themselves accounts for 4% additional variation. (p. 345)

It should be noted that these investigators also used a traditional method of determining the usefulness of importance weighting as outlined in past literature on this concept. The method, Ewen's (1967) second procedure, calls for the computation of correlations of both the unweighted and weighted job-facet satisfaction totals with overall job satisfaction. Caston and Briato reported the results of this procedure on their data:

> In only one case does a facet indicator become more valid as an indicator of overall job satisfaction when weighted by its

> importance. The increment in this one case, however, is trivial. Furthermore, in the great majority of the cases where a facet is weighted by importance, a decrease in correlation is found. (p. 344)

By assessing these data through traditional analyses suggested by past importance-weighting literature, Caston and Briato would have been forced to accept the conclusion that importance weighting has little efficacy in predicting overall job satisfaction. Through the use of moderator regression, however, a different result emerged as expressed by Caston and Briato: "Contrary to previous reports, therefore, our evidence shows that the use of a weighting strategy can increase significantly the correlation between a scale of job facet indicators and a criterion of overall job satisfaction" (p. 345).

It is evident from past research that the causes of job satisfaction are difficult to determine, and findings have been somewhat inconclusive. It seems fairly certain, however, that the value an individual assigns to a particular aspect of a job affects the degree of influence that aspect has on the individual's overall job satisfaction. Regardless of how the relationship between job-facet importance and overall job satisfaction is determined, this relationship may be the key to unlocking an improved understanding of what really causes teachers to be satisfied with their jobs.

Measuring Job Satisfaction

It is noteworthy that past measures of job satisfaction also contributed to a less-than-adequate understanding of satisfaction for

teachers. The reason this is true results from the development of job satisfaction measures on occupations other than teaching.

> Job satisfaction, job attitudes, and morale are typically measured by means of interviews or questionnaires in which workers are asked to state the degree to which they like or dislike various aspects of their work roles. The degree to which a person is satisfied with his job is inferred from his verbal responses to one or more questions about how he feels about his job. (Vroom, 1964, p. 100)

Locke (1976) pointed out that "most researchers have followed the lead of Hoppock (1935) in using direct verbal self-reports to measure job satisfaction" (p. 1334).

An important deficiency of this approach to measuring satisfaction is the problem of poor standardization of measures between studies, as identified by Vroom (1964):

> Unfortunately, there has been little standardization of job satisfaction measures. Most investigators "tailor-make" an instrument for the particular population they are studying. There are exceptions to this, such as the Brayfield-Rothe job satisfaction scale (Brayfield & Rothe, 1951) and the Kerr Tear Ballot (Kerr, 1948) both of which have had repeated use. However, investigators more commonly "adapt" old instruments or devise new ones to meet their requirements at a given time. This practice greatly restricts the comparability of different studies and results in relatively little attention for problems of scaling and of reliability or validity. (p. 100)

A satisfaction scale that has been used in numerous studies including samples of teachers is the Job Description Index. Vroom commented on the development of this scale:

> Smith and her associates (Smith, 1963; Hulin, Smith, Kendall, & Locke, 1963; Macaulay, Smith, Locke, Kendall, & Hulin, 1963; Kendall, Smith, Hulin, & Locke, 1963; Locke, Smith, Hulin, & Kendall, 1963; Smith & Kendall, 1963) have recently completed an impressive program of research on the measurement of job satisfaction. The product of this research, an instrument called the Job Description Index, is without doubt the most carefully constructed measure of job satisfaction in existence today. The developers of the JDI have already obtained data from some 2500 workers and 1000

> retirees in 21 different plants. The extensive methodological work underlying this measure as well as the available norms should insure its widespread use in both research and practice. (p. 100)

Although the Job Description Index was developed with care, the scale fails to consider some of the unique aspects of teaching that may directly influence the satisfaction of teachers with their occupation. The Job Description Index is not the only scale that fails to deal specifically with unique features of the teaching occupation. As recently as 1979, a compilation of "Measures of Occupational Attitudes and Job Satisfaction," published by the Educational Testing Service, cited only one instance of a scale dealing directly with teacher job satisfaction. The scale referred to is the Purdue Teacher Opinionnaire, which purports to measure teacher morale on the following factors: Teacher Rapport with Principal, Satisfaction with Teaching, Rapport Among Teachers, Teacher Salary, Teacher Load, Curriculum Issues, Teacher Status, Community Support of Education, School Facilities and Services, and Community Pressures (Bentley & Rempel, 1969-1972).

That a focus on the unique features and aspects of the work associated with teaching is justified was expressed by Lortie (1975):

> Other sources of satisfaction . . . pale in comparison with teachers' exchanges with students and the feeling that students have learned. We would therefore expect that much of a teacher's work motivation will rotate around the conduct of daily tasks--the actual instruction of students. (p. 104)

Lortie focused on the primacy of teacher-student interaction as a source of overall satisfaction and suggested a relationship between satisfaction and motivation.

Failure to consider such a potentially powerful influence on overall job satisfaction as teacher-student interaction may have obscured an adequate understanding of teacher job satisfaction in the past. To resolve this situation, Holdaway (1978) sought to develop a Satisfaction with Teaching and Employment Questionnaire, a measure to assess the job satisfaction of teachers on particular facets of their work.

> Based on extensive interviews with teachers, items in teacher contracts, a literature review, and pilot tests, he selected fifty-two items to measure seven job satisfaction factors. (Factors included were (1) Recognition and Status, (2) Students, (3) Resources, (4) Teaching Assignment, (5) Involvement with Administrators, (6) Work Load, and (7) Salary and Benefits). . . . This diverse content, combined with the fact that the instrument was carefully developed, indicate that the questionnaire can serve as an excellent measure in future studies. (Hoy & Miskel, 1982, p. 335)

Using measures that directly address the unique aspects of the teaching occupation may enable a better understanding of teacher job satisfaction.

Chapter Summary

To summarize this review, it is evident that teacher dissatisfaction has grown substantially over the past 25 years. Although research has made some progress toward an improved understanding of teacher job satisfaction, the rising levels of dissatisfaction press for a greater understanding. Numerous determinants of teacher job satisfaction have been identified. The shortcoming of many of these studies seeking to identify determinants of job satisfaction, however, has been a lack of focus on identifying which determinants are most

influential on job satisfaction. Past studies seeking to determine the important causes of job satisfaction turned this researcher to an interactionist framework, which suggests that job satisfaction is a consequence of a complex interaction between the teacher and his/her job situation. Specifically, it is the perceived job situation in relation to the individual's values that is the most direct determinant of job satisfaction. It was suggested by the literature and remains a presumption of this researcher that use of a multiplicative weighting expression meaningfully approximates the interaction between an individual's values and current job circumstances and results in a powerful explanatory tool for better understanding the important sources of teacher job satisfaction. Toward building an improved understanding of teacher job satisfaction, this investigator devised and implemented a research methodology to test the efficacy of importance weighting and to clarify the important sources of teacher job satisfaction.

CHAPTER III

DESIGN OF THE STUDY

A survey research design was devised in an effort to capture an improved understanding of teacher job satisfaction. Use of survey research methodology to explore teacher job satisfaction made it feasible to select a probabilistic random sample of public school teachers and to collect data on a large number of variables presumed to be related to teacher job satisfaction. Components of the study design presented here include the sample, data-collection procedures, research questions and hypotheses, and the statistical design for each question.

Sample

The target population for this study included all currently employed and professionally certified Michigan public school teachers in grades K-12. The Michigan State Department of Education maintains a current list of this population on microfische cards and computer tape. During the 1983-84 school year, the population of teachers meeting this definition numbered 74,814. Permission to use the computer-tape version of the Michigan Professional Register was obtained from the Office of Teacher and Certification Services, Michigan Department of Education. (See Appendix B.) The Professional Register identifies each teacher's employing district, school building assignment, subject areas

the teacher is certified to teach, and a host of work-assignment and personal demographic information.

Selection of a large sample was necessary to facilitate factor-analytic procedures included in the design of this study. It was determined that a sample of 2,000 Michigan public school teachers would be the target sample size for the computer-generated random-sampling procedure. This proposed sample size seemed reasonable in light of Fletcher's (1972) comments on factor-analytic procedures: "If a new instrument must be constructed, it should be tested with as many subjects as possible . . . in as many contexts as possible. In response to the number of subjects, Nunnally suggests no fewer than ten subjects per scale" (p. 274). A strict adherence to Nunnally's suggestion would require a minimum sample of 650 subjects to accommodate the 65 scale items that constitute the survey device used by this investigation. Although 2,000 subjects is three times the minimum number required for factor analysis, sampling experience described in the literature review reported sample response rates ranging from 30% to 90% of the initial sample. A 33% response rate is necessary to achieve Nunnally's suggested minimum sample size for factor-analytic procedures.

Furthermore, a sample of 2,000 Michigan public school teachers seemed reasonable in light of survey response patterns in past mailed-questionnaire studies reported by the Survey Research Office at the University of Hawaii. This office conducts frequent student surveys and has discerned a consistent pattern of returns that transcends

differences in survey content, quality of instrument, and so forth. They reported:

> Within two weeks after the first mailing, approximately 40 percent of the questionnaires are returned; within two weeks after the first follow-up, an additional 20 percent are received, and within two weeks after the final follow-up an additional 10 percent are received. There are no grounds for assuming that a similar pattern would appear in surveys of different populations. (Babbie, 1973, p. 164)

Although a similar response rate in the present study would ensure a sufficient sample size, Babbie pointed out that such a return rate is considered "very good." "I feel that a response rate of at least 50 percent is adequate for analysis and reporting. A response rate of at least 60 percent is good. And a response rate of 70 percent or more is very good" (p. 165). By providing for an adequate sample size initially, this investigator presumed that with survey follow-up activity the necessary minimum response rate could be achieved.

The design of the sample used in this investigation was a stratified random sample using three variables including teacher assignment, building grade level, and teacher sex. The purpose of using particular variables in stratifying a random sample is to ensure representation of important population characteristics within the sample. Fletcher (1972) explained the justification for stratifying the sample in a study like this. "To the extent possible when a new instrument is used, the pretest subjects should be like those in the main investigation and as homogeneous a group as possible" (p. 274). Using stratified random sampling allows for data more homogeneous in every stratum than would be found in the whole population. Teacher job

satisfaction is an outcome variable likely to be influenced by teacher assignment, building grade level, and teacher sex. A reduction in the variability within each stratum likely will yield stratified sampling estimators that have smaller variances than the corresponding random-sampling estimator from the same sampling size.

The choice of teacher assignment, building grade level, and teacher sex as stratifying variables to determine the parameters of this sample appeared justified for two reasons. In terms of research logistics, the organization of the population list from the State Department of Education provided easy access to the values of the stratifying variables for each teacher.

More important than researcher convenience, however, these stratifying variables seemed justified because each variable should reduce the variance within each stratified sample cell in relation to perceived teacher job satisfaction. The review of literature revealed that differences in perceived levels of facet and overall job satisfaction could be established between groups of teachers varying on building grade level and sex (Belasco & Alutto, 1972; Chapman & Lowther, 1982; Farber, 1984; Fraser, 1970; Lacy, 1973; Rudd & Wiseman, 1962; Trusty & Sergiovanni, 1966). Additionally, Holdaway (1978) discerned substantial variation in levels of facet and overall job satisfaction between groups of teachers who varied on teacher assignment. Recognizing these variations in the population through a stratified random sample protects against sample bias by having these characteristics

represented in the sample in proportion to their presence in the population.

Before entering proportions data on the three variables used to stratify the sample, certain teacher categories were eliminated from the population list to ensure that sample subjects all had direct responsibility for the classroom instruction of students. The categories eliminated from the list included teachers designated as library/media specialists, counselors, special education teacher consultants, other teachers, superintendents, assistant superintendents, all classifications of principals, supervisors, bilingual teachers, and school nurses.

By using a computer-generated stratified random-sampling program, 1,994 Michigan K-12 public school teachers were selected as sample subjects for this investigation. Table 2 presents a summary of the parameters that characterize the teachers who were randomly drawn for participation in this study.

Data-Collection Procedures

Pursuit of the objectives of this research was accomplished through survey research methodology employing a mailed questionnaire for sample subjects to complete and return. The questionnaire package was mailed to each sample subject at his/her school/work address on April 26, 1985, and included the following components: (a) a letter of introduction encouraging sample subjects to participate and providing basic directions on how to participate in the study, (c) a three-page multisection questionnaire printed on machine-scorable answer sheets,

Table 2.--Sampling parameters.

Variable	Frequency	% of Sample
Sex of Respondent:		
Male	790	39.6%
Female	1,204	60.4
Grade-Level Assignment:		
Kindergarten	86	4.3
Elementary	887	44.5
Junior high	412	20.7
Senior high	526	26.4
Junior/senior high	86	4.3
Subject-Area Assignment:		
Language arts	172	8.6
Social science	146	7.3
Science	125	6.3
Mathematics	146	7.3
Foreign language	27	1.4
Business education	58	2.9
Agriculture	4	.2
Industrial arts	84	4.2
Music	48	2.4
Home economics	39	2.0
Art education	41	2.1
Health and physical education	116	5.8
Elementary	896	44.9
Junior high school/elem. cert.	58	2.9
Reading	34	1.7

and (c) a postage-paid self-addressed return envelope for use in returning completed questionnaires. The questionnaire package is presented in Appendix C.

The questionnaire package was mailed bulk rate under a bulk-mailing permit, and the return-postage envelope carried sufficient postage to be returned in first-class mail. A follow-up letter (presented in Appendix D) and a second questionnaire package were mailed to all sample subjects whose completed questionnaires had not been received by May 21, 1985. This was the extent of survey follow-up due to expense and the close of the academic school year and the resulting lack of accessibility to subjects at their work addresses.

The multipart questionnaire consisted of the following sections: (a) Personal Data (Items 1-6), including questions that sought personal demographic information about the sample subjects; (b) Job Facet Satisfaction Scales (Items 7-64), the presentation of a multitude of job facets to be evaluated both in terms of importance and current level of satisfaction each facet held for the sample subjects; (c) Overall Satisfaction Scale (Items 65-71), including several general statements concerning sample subjects' overall evaluation of their level of job satisfaction; and (d) Comments Section for the subjects to report any comments they may have had regarding any aspect of the research project.

A fifth component of the data-gathering procedure was the use of a Variable Coding Sheet, presented in Appendix E. The purpose of the Coding Sheet was to record data concerning a number of variables

that reflect meaningful characteristics of a teacher's workplace. These data were gathered unobtrusively from information available through Michigan Department of Education documents, including the following publications: Bulletin 1011: Analysis of Michigan Public School Revenues and Expenditures, 1983-84; Bulletin 1014: Michigan K-12 School Districts Ranked by Selected Financial Data, 1983-84; and the Michigan Department of Education Racial Ethnic Census, 1984-85.

Questionnaire Sections B and C constituted the heart of this investigation. Section B, Holdaway's (1978) Satisfaction with Teaching and Employment Questionnaire, was used as the primary survey instrument for this study. Permission to adapt and use this instrument was obtained from the author and may be reviewed in Appendix F. This instrument was designed to obtain data relative to teachers' perceptions of satisfaction on 58 different aspects of teacher work (see Items 7-64, located in Appendix C). As suggested by Hoy and Miskel (1982), this questionnaire is occupationally sensitive to the unique aspects of a teacher's work. The purpose of using this survey was to obtain data relative to the levels of job-facet satisfaction currently expressed by a random sample of Michigan K-12 public school teachers.

A shortcoming of the Holdaway questionnaire was his measure of overall job satisfaction. Holdaway sought data on this concept through the use of a single-item measure, thereby eliminating the possibility of testing for measure reliability. A scale of overall teacher job satisfaction preferred by this investigator was developed by Miskel (1974) and consists of seven questions (Items 65-71 in Appendix C).

This scale displays adequate reliability (0.81) and high face validity (Miskel, 1974).

To collect data relative to an individual's levels of importance for job aspects, modification of the Holdaway questionnaire created the opportunity for a respondent to complete an importance scale and a satisfaction scale for each aspect of work considered. Instructions directed subjects to answer two questions about each aspect of work contained in the original Holdaway questionnaire: (a) "Generally speaking, how important are the following aspects of work to you?" and (b) "Given your present assignment, how satisfied or dissatisfied are you with these aspects?" Again, Appendix C presents the adapted version of the Holdaway questionnaire (Items 7-64).

Research Questions and Hypotheses

Advancing an improved understanding of teacher job satisfaction that might inform the development of management strategies aimed at improving the satisfaction levels of teachers was the purpose of this study. To arrive at such an understanding, this investigator proposed five general research questions. It was presumed that answering these questions and testing several related hypotheses would produce the kind of information necessary to overcome deficiencies evident in our present understanding of teacher job satisfaction, as discussed in the review of literature. The following questions and hypotheses were explored in this study:

1. Are there underlying job satisfaction factors in the job-facet satisfaction scores for a sample of Michigan K-12 public school teachers?

1a. What combination of individual job facets constitutes the various satisfaction factors present within the job-facet satisfaction scores for this sample?

1b. How do the various underlying satisfaction factors identified by this study compare to satisfaction factors determined by previous studies using the same job-facet satisfaction scale?

2. What current levels of overall and job-facet satisfaction are expressed by Michigan K-12 public school teachers?

3. Which underlying satisfaction factors account for the largest amount of variance in overall job satisfaction for this sample of Michigan K-12 public school teachers?

4. Do measures of job-facet importance give useful information, over and above that provided by satisfaction scores alone, for the purpose of estimating overall job satisfaction?

4a. What is the correlation between unweighted and weighted-by-importance job satisfaction factor scores?

4b. There will be no difference between correlations when comparing the correlation between unweighted satisfaction factor scores and overall job satisfaction to the correlation between weighted-by-importance satisfaction factor scores and overall job satisfaction.

4c. There will be no difference between the overall satisfaction scores for a group of teachers who express high importance and dissatisfaction on a particular satisfaction factor and a group of teachers who express low importance and dissatisfaction on the same satisfaction factor.

4d. There will be no difference between the overall satisfaction scores for a group of teachers who express high importance and satisfaction on a particular satisfaction factor and a group of teachers who express low importance and high satisfaction on the same satisfaction factor.

4e. There will be no difference between the amount of variance accounted for in a sample of overall job satisfaction scores by knowing the linear contributions of the job satisfaction factors and their importance (main effects) compared to also knowing the multiplicative contributions of factors weighted by importance (interaction effects).

5. Are there differences between groups of teachers defined by non-assignable individual, organizational, and environmental characteristics on satisfaction factor scores and overall job satisfaction scores?

   5a. There will be no difference in satisfaction factor scores and overall job satisfaction scores between male and female teachers.

   5b. There will be no difference in satisfaction factor scores and overall job satisfaction scores between teachers who vary according to the following age ranges: 23-28, 29-37, 38-49, and 50-59.

   5c. There will be no difference in satisfaction factor scores and overall job satisfaction scores between beginning, early-career, mid-career, and late-career teachers.

   5d. There will be no difference in satisfaction factor scores and overall job satisfaction scores between teachers who are married and teachers who are not married.

   5e. There will be no difference in satisfaction factor scores and overall job satisfaction scores between teachers who are parents responsible for dependent children and teachers who have no dependent children.

   5f. There will be no difference in satisfaction factor scores and overall job satisfaction scores between teachers who have a second job in addition to teaching and teachers who have teaching as their only job.

   5g. There will be no difference in satisfaction factor scores and overall job satisfaction scores between teachers who have a spouse employed full time and teachers who have a spouse not employed full time.

   5h. There will be no difference in satisfaction factor scores and overall job satisfaction scores between teachers who have an assignment consistent with their training and experience and teachers who have an assignment that is not consistent with their training and experience.

   5i. There will be no difference in satisfaction factor scores and overall job satisfaction scores between groups of teachers from elementary schools, junior high/middle schools, and high schools.

5j. There will be no difference in satisfaction factor scores and overall job satisfaction scores between teachers from small elementary schools and large elementary schools.

5k. There will be no difference in satisfaction factor scores and overall job satisfaction scores between teachers from small junior high/middle schools and large junior high/middle schools.

5l. There will be no difference in satisfaction factor scores and overall job satisfaction scores between teachers from small high schools and large high schools.

5m. There will be no difference in satisfaction factor scores and overall job satisfaction scores between teachers from small, medium, and large-size school districts.

5n. There will be no difference in satisfaction factor scores and overall job satisfaction scores between teachers from school districts located in areas described as metropolitan core, city, town, urban fringe, and rural.

5o. There will be no difference in satisfaction factor scores and overall job satisfaction scores between teachers from districts with below-average teaching salaries, average-level teaching salaries, and above-average teaching salaries.

5p. There will be no difference in satisfaction factor scores and overall job satisfaction scores between teachers from districts with below-average staff/student ratios, average-level staff/student ratios, and above-average staff/student ratios.

5q. There will be no difference in satisfaction factor scores and overall job satisfaction scores between teachers from districts with below-average per-pupil expenditures, average-level per-pupil expenditures, and above-average per-pupil expenditures.

5r. There will be no difference in satisfaction factor scores and overall job satisfaction scores between teachers from districts having a less than 10% minority-student population and districts having a larger than 10% minority-student population.

5s. There will be no difference in satisfaction factor scores and overall job satisfaction scores between teachers from schools who have levels of student achievement designated as high needs/low achievement, moderate needs/moderate achievement, and low needs/high achievement.

Each general research question, follow-up question, and hypothesis considered in this investigation required the development of specific procedures and statistical analyses. A description of these procedures follows.

Statistical Design by Questions

Question 1: Underlying Satisfaction Factors

The first research question explored in this investigation dealt with the possibility that there exist underlying satisfaction factor dimensions within the job-facet satisfaction scores of a sample of teachers. Specifically, this study asked: Are there underlying job satisfaction factors in the job-facet satisfaction scores for a sample of Michigan K-12 public school teachers?

Two purposes motivated the inclusion of this question in the design of the present investigation. The first purpose was the development of a parsimonious explanation of the sources of variance among the job-facet satisfaction scores of teachers sampled in this study. Producing such an explanation should help focus satisfaction-improvement strategies on the more critical sources of job-facet satisfaction variance.

The second purpose for including this question had to do with confirming the usefulness and applicability of a previously devised job satisfaction measure in a new setting with a different population. Holdaway (1978) devised a job-facet satisfaction scale and set about to identify clusters of satisfaction variables. To accomplish this task,

Holdaway used factor analysis and arrived at a seven-factor solution that hypothetically constituted the underlying dimensions of teacher job satisfaction. Given the problem of error variance in factor analysis, however, it is important to determine if the factor structure Holdaway identified was present among the job-facet satisfaction scores of a sample of Michigan K-12 public school teachers. Fletcher (1972) discussed the inherent weakness of factor analysis and offered the following "specific solution" when he wrote:

> The specific solution assumes that the factor structure derived from a data matrix can be generalized only when (1) concepts (stimuli) in the various separate studies compared are the same, (2) scales (responses) are the same, (3) subjects are drawn from the same population, and (4) measurement contexts are comparable in time and setting. In other words, the researcher using a factorially complex measure must subject the instrument to a "new" factor analysis which proves whether the factorial composition supposed by the investigator does, in fact, hold for the new data. (p. 273)

Confirmation of Holdaway's factor structure using this solution would lend credence to his explanation of teacher job satisfaction.

The statistical design and procedures involved with factor analysis seemed appropriate for answering these questions. Kim (1975) discussed the purpose of using factor analysis:

> The single most distinctive characteristic of factor analysis is its data-reduction capability. Given an array of correlation coefficients for a set of variables, factor-analytic techniques enable us to see whether some underlying pattern of relationships exists such that the data may be "rearranged" or "reduced" to a smaller set of factors or components that may be taken as source variables accounting for the observed interrelations in the data. (p. 469)

Procedurally, the job-facet satisfaction scores of sample subjects from this study were analyzed using subprograms from the Statistical Package for the Social Sciences (SPSS) (Nie et al., 1975). Using

principal-components factoring with iterations and varimax rotation, three major steps were performed, including (a) the preparation of the correlation matrix, (b) the extraction of the initial factors--the exploration of possible data reduction, and (c) the rotation to a terminal solution--the search for simple and interpretable factors.

This investigator presumed that the performance of these procedures would generate results sufficient to answer Questions 1 and 1a. Question 1a asked: What combination of individual job facets constitutes the various satisfaction factors present within the job-facet satisfaction scores for this sample? Question 1b asked: How do the various underlying satisfaction factors identified by this study compare to satisfaction factors determined by previous studies using the same job-facet satisfaction scale? This question required an additional step of setting up, through visual inspection, the comparison between Holdaway's (1978) results and the results of this study.

Question 2: Satisfaction Levels of Michigan Teachers

The second research question considered in this investigation asked: What current levels of overall and job-facet satisfaction are expressed by Michigan K-12 public school teachers? To answer this question, job-facet satisfaction item scores, overall satisfaction item scores, and facet importance item scores were analyzed to determine the basic distributional characteristics of each of the variables included in this study. Information on the distribution, variability, and central tendencies of these variables provided the statistical base

necessary for the selection of subsequent statistical techniques required by other questions included in this study. Additionally, this information created a detailed description of current levels of overall and job-facet satisfaction expressed by Michigan K-12 public school teachers.

Procedurally, item scores for overall and job-facet satisfaction and for facet importance measures were entered into SPSS subprograms. Summary statistics were generated for each measure included in this study.

The reporting of these statistical procedures was simplified in an effort to convey a meaningful description of currently expressed levels of teacher job-facet and overall job satisfaction. Reporting procedures included a summary table of response-frequency percentages and means for importance and satisfaction facet items, a listing of the ten job-facet items generating the largest percentage of sample satisfied and dissatisfied, a listing of the ten job-facet items generating the highest and lowest mean importance ratings, a report on the mean performance of the sample subjects in terms of levels of satisfaction on the factor-dimensions of teacher job satisfaction, a percentage-frequency distribution and mean-response analysis of responses to overall job satisfaction items, and a percentage-frequency distribution of summated responses to overall job satisfaction items describing overall levels of job satisfaction. In combination with a summary of comments from respondents, these reports present a meaningful description of

current levels of job-facet and overall job satisfaction of Michigan K-12 public school teachers.

Question 3: Factors Accounting for Overall Job Satisfaction

The third research question asked: Which underlying satisfaction factors account for the largest amount of variance in overall job satisfaction for this sample of Michigan K-12 public school teachers? The reason for including this question had to do with a primary purpose of this investigation--understanding the relationship between job satisfaction facets and teachers' overall job satisfaction. By determining which job-facet satisfaction dimensions accounted for the largest amount of variance in overall job satisfaction, understanding the important sources of overall satisfaction was possible.

The statistical procedure used to pursue this question was multiple regression. Kim and Kohout (1975) pointed out that "multiple regression is a general statistical technique through which one can analyze the relationship between a dependent or criterion variable and a set of independent or predictor variables" (p. 321). In the case of this question, the relationship between overall job satisfaction as the dependent variable and the job satisfaction factors as independent variables was the focus of inquiry.

Using the SPSS subprograms, a stepwise multiple-regression procedure was used to analyze the effect the combined independent variables (the job satisfaction factors) had on the dependent outcome variable (separately measured overall job satisfaction). Stepwise

regression means that the independent variable that explains the greatest amount of variance in the dependent variable is entered first, the variable that explains the greatest amount of variance in conjunction with the first is entered second, and the final variable that explains the least is entered last. In other words, the variable that explains the greatest amount of variance that is unexplained by the variables already in the equation is entered at each step. The independent variable that is entered first is the one with the largest squared partial correlation with the dependent variable. The results of this stepwise multiple regression procedure identified the important sources of overall job satisfaction present within the job-facet satisfaction scores from the sample in this study.

Question 4: Value of Importance Weighting Satisfaction Scores

The fourth research question considered in this study asked: Do measures of job-facet importance give useful information, over and above that provided by satisfaction scores alone, for the purpose of estimating overall job satisfaction? This question had as its purpose advancing the theoretical debate evident in past job satisfaction literature concerning the efficacy of weighting job-facet satisfaction scores by importance to improve the prediction of overall job satisfaction. Procedurally, weighting-by-importance was accomplished by multiplying each job-facet satisfaction score by the facet's corresponding importance score. Determining the effect of this procedure and the

answer to this fourth research question relied on answers to five related questions, each with its own analysis.

The first related question (4a) asked: What is the correlation between unweighted and weighted-by-importance job satisfaction factor scores? Although no specific decision criterion was established to evaluate the correlations, past researchers have suggested that strong positive correlations would indicate that importance weighting is unnecessary (Ewen, 1967).

Using SPSS subprograms, the correlation between each of seven unweighted job satisfaction factor scores and the weighted version of these factor scores was produced. The resulting Pearson correlation coefficients from this procedure were inspected for the strength and direction of relationship in order to comment on this question.

The second related question concerning the efficacy of importance weighting was consideration of Null Hypothesis 4b: There will be no difference between correlations when comparing the correlation between unweighted satisfaction factor scores and overall job satisfaction to the correlation between weighted-by-importance satisfaction factor scores and overall job satisfaction. By using the data that produced the job satisfaction factors, exploration of this hypothesis attempted to determine if the weighted factors form a stronger (more highly correlated) relationship with separately measured overall job satisfaction than the relationship between unweighted factors and overall job satisfaction. Ewen (1967) claimed that if weighting-by-importance improves (strengthens) the correlation between job

satisfaction factors and overall job satisfaction, this would be proof that weighting has efficacy.

To test this hypothesis, two sets of correlation coefficients were produced. The difference between the correlations for each of the job satisfaction factors and overall job satisfaction was calculated and entered into Hotelling's (1940) Test for Significance of Difference Between Two Related Correlations. This test produces a Z-statistic, which was subjected to a one-tailed test of probability with an alpha level of .01. Applying Ewen's (1967) criterion suggests that any positive significant differences between correlations indicate that importance weighting is meaningful.

Questions 4c and 4d also related to the issue of whether or not importance weighting job-facet satisfaction scores has any value in terms of predicting overall job satisfaction. These questions explored related null hypotheses which read as follows: Null Hypothesis 4c: There will be no difference between the overall satisfaction scores for a group of teachers who express high importance and dissatisfaction on a particular satisfaction factor and a group of teachers who express low importance and dissatisfaction on the same satisfaction factor. Null Hypothesis 4d: There will be no difference between the overall satisfaction scores for a group of teachers who express high importance and satisfaction on a particular satisfaction factor and a group of teachers who express low importance and satisfaction on the same satisfaction factor. Both hypotheses were tested on all satisfaction factors in an effort to determine if the relative importance of

satisfaction factors influences differences in overall satisfaction. Rejecting the null hypotheses and finding significant differences in levels of overall satisfaction between groups would indicate that importance weighting is meaningful (Ewen, 1967).

To establish a high importance/dissatisfied group of teachers to compare to a low importance/dissatisfied group and to establish a high importance/satisfied group of teachers to compare to a low importance/satisfied group, an extreme-groups design was developed. Mean satisfaction and importance performance were examined for each of the satisfaction factors. For both importance and satisfaction, high and low performance were operationalized as respondents who scored one-half standard deviation above or below the mean for each factor. This procedure enabled the designation of teacher groups on the basis of high and low performance for both the importance and satisfaction variables.

To analyze differences in overall job satisfaction levels between groups of teachers who varied on importance and satisfaction ratings required the use of Student's t-tests. Specifically, a Student's t-test was used to compare the overall levels of job satisfaction expressed by a group of teachers who rated a particular satisfaction factor as highly important and dissatisfying compared to a group of teachers who rated the same factor as not important and dissatisfying. The corollary to this expression was also tested using groups of teachers who were satisfied with a factor but varied in terms of importance perceptions.

A series of t-tests was required to perform this analysis. An alpha level of .01 was set to test for significance of differences. Performance of t-tests was accomplished by entering the appropriate satisfaction factor data into SPSS subprograms.

The final question related to the issue of importance weighting considered Null Hypothesis 4e: There will be no difference between the amount of variance accounted for in a sample of overall job satisfaction scores by knowing the linear contributions of the job satisfaction factors and their importance (main effects) compared to also knowing the multiplicative contributions of factors weighted by importance (interaction effects). The statistical procedure used for testing this hypothesis was moderator regression. By using this procedure, the researcher was able to simultaneously partial the variation of overall job satisfaction into "main effects" and "interaction effects." The main effects reflected the linear contributions of job satisfaction factors and their importance to overall job satisfaction, while the interaction effects reflected the multiplicative contributions of factors weighted by importance. Caston and Briato (1983) pointed out that if the interaction effects are statistically significant, one has evidence that weighting is a useful strategy.

Two procedural steps were operationalized to determine the outcome of this moderator regression analysis. First, the satisfaction, importance, and weighted-by-importance satisfaction ratings from each of the job satisfaction factors were entered into SPSS subprograms. A stepwise multiple-regression procedure was used to analyze

the combined effect that the job satisfaction factors had on overall job satisfaction by considering in three steps the influence of (a) the satisfaction ratings, (b) the combined effect of the satisfaction and importance ratings, and (c) the multiplicative contributions of factors weighted by importance. A test of significance for an increment in the proportion of variance of a dependent variable (Pedhauzer, 1982) was used to statistically assess the improved accounting of variation in overall job satisfaction due to both the inclusion of importance ratings and to the multiplicative contribution of job satisfaction factors weighted by importance.

Question 5: Satisfaction Differences and Variations in Teacher/School Characteristics

The fifth and final general research question included in this study asked: Are there differences between groups of teachers defined by nonassignable individual, organizational, and environmental characteristics on satisfaction factor scores and overall job satisfaction scores? In pursuit of this question, 17 teacher and school-organization variables were used to establish different groups of teachers. The performance of these groups on the satisfaction factors and on overall job satisfaction was compared to determine if differences in grouping variables were accompanied by significant differences in levels of factor and overall job satisfaction.

The variables included were the following teacher and school-organization characteristics: teacher sex, teacher age, teacher experience, teacher marital status, teacher family status in terms of

dependent children, teacher career status in terms of a second job, status of spouse's employment, teacher assignment consistency, school level, school building size, school district size, geographic nature of a teacher's school district, teacher salary levels, teacher-student ratios, district per-pupil expenditures, the proportion of minority students within a teacher's district, and student achievement levels by building.

Justification for examining these teacher and school-organization characteristics was derived from the possibility that job-facet satisfaction and overall job satisfaction may vary systematically between groups of teachers established by these characteristics. Such knowledge would enable the development of management strategies designed to improve job satisfaction to vary according to the nature and characteristic conditions confronting a particular group of teachers. This possibility provided the motivation for studies like Fraser's (1970) investigation of the effect of school size on teacher morale and behavior, Lacy's (1973) study that considered the results of salary increases on teacher job satisfaction, and Eubank's (1974) study that examined racial characteristics of schools in relation to teacher job satisfaction.

Selection of the specific variables was determined in three ways, including (a) the clear possibility that the variable could influence some aspect of the teacher job satisfaction measure used in this study, (b) that the variable had been examined in past research with no clear-cut sustained finding, and (c) that the variable was

accurately accessible through either a self-report or through an unobtrusive data source such as State Department of Education records.

The first step in proceeding to examine the job satisfaction performance of varied groups of teachers was to operationally define the teacher groups on the basis of the characteristic being considered. A null hypothesis was developed to express how each variable grouping would be tested. Once this step was accomplished with all 17 grouping variables, statistical tests for differences were selected on the basis of number of groups being compared in each hypothesis. For variables resulting in two different groups of teachers, a Student's t-test was used. For variables resulting in three or more groups, one-way fixed-effects analysis of variance was used. In those instances where three or more groups were being compared with analysis of variance, a Scheffé procedure was used to determine between which groups the difference was occurring. These statistical procedures were accomplished by entering mean performance data for the job satisfaction factors and for overall job satisfaction from the sampled teachers into appropriate SPSS subprograms. All F-ratios were tested for significance at an alpha level of .01.

To convey how the various groups were formed, Table 3 lists the variable involved with each null hypothesis and presents the criteria and procedures used to establish the groupings of teachers being tested.

Table 3.--Variables and procedures used to establish teacher groups.

Hypothesis/ Variable	Grouping Procedures
5a: Teacher sex	Two teacher groups were established on the basis of self-reported teacher sex including male teachers and female teachers.
5b: Teacher age	Four groups of teachers were established on the basis of age including groups with the following age ranges: Group 1: 23-28, Group 2: 29-37, Group 3: 38-49, and Group 4: 50-69. Age data were obtained through self-report measures.
5c: Career experience	Teacher career experience was used to establish four different groups of teachers including beginning teachers (1-5 years experience), early-career teachers (6-14 years experience), mid-career teachers (15-23 years experience), and late-career teachers (24 years and above). Teacher experience data were gathered through a self-report measure.
5d: Marital status	Two groups of teachers were established on the basis of their marital status. Group 1 teachers were married while Group 2 teachers were not married. Marital status information came from teacher self-reports.
5e: Dependent children	Two groups of teachers were established on the basis of whether or not they were responsible for dependent children. Group 1 teachers reported dependent children while Group 2 teachers reported no dependent children.
5f: Second job	Teachers were divided into two groups depending on their self-reported status in terms of a second job. Group 1 teachers reported having a second job while Group 2 teachers reported not having a second job.

Table 3.--Continued.

Hypothesis/ Variable	Grouping Procedures
5g: Spouse employment	Teachers were divided into two groups on the basis of their spouse's employment status. Group 1 teachers reported that their spouse was working full time while Group 2 teachers reported spouses not being employed full time.
5h: Assignment consistency	Two teacher groups were identified on the basis of whether or not their teaching assignment was consistent with their training and experience including a group with consistent assignments and a group with assignments not consistent with teachers' training and experience.
5i: School level	Three teacher groups were established on the basis of school-building grade level constellation including teachers from elementary schools, junior high/middle schools, and high schools. Because of some grade-level variability among school levels, school level was determined from teacher self-report information.
5j: Building size	Two groups of teachers were established on the basis of elementary school size including small elementary schools (299 students or less) and large elementary schools (300 students and above). School-size data were taken from State Department of Education records.
5k: Building size	Two groups of teachers were established on the basis of junior high/middle school size including small junior high schools (499 students or less) and large junior high schools (500 students and above).
5l: Building size	Two groups of teachers were established on the basis of high school size including small high schools (999 students or less) and large high schools (1,000 students and above).

Table 3.--Continued.

Hypothesis/ Variable	Grouping Procedures
5m: District size	Three groups of teachers were established on the basis of school-district size including small districts (2,499 students or less), medium-size districts (between 2,500 and 9,999 students), and large-size districts (10,000 students and above). School-district enrollment data were gathered from State Department of Education records.
5n: District location	The geographic location of a teacher's school district was used to establish five different groups of teachers. The groups included teachers from districts located in metropolitan core areas, cities, towns, urban fringe areas, and rural areas. All districts in the state have been assigned to one of these location codes by the State Department of Education (Porter, 1972).
5o: Teaching salaries	Three groups of teachers were determined on the basis of low, average, and high teaching salaries. Teachers in the high and low salary groups received salaries one-half standard deviation above and below the mean-average salary for the state. Teachers in the middle salary group received salaries within one-half standard deviation of the mean. All salary data were obtained from State Department of Education records.
5p: Staff/student ratio	Professional staff-to-student ratio within districts was used to establish three groups of teachers. Teachers in high student-load and low student-load districts experienced staff-to-student ratios one-half standard deviation above or below the state-average staff-to-student ratio. Students in the middle-ratio group experienced ratios within one-half standard deviation of the mean. All student-load data were ascertained from State Department of Education records.

Table 3.--Continued.

Hypothesis/ Variable	Grouping Procedures
5q: Per-pupil expenditures	District per-pupil expenditure was used to establish three groups of teachers including teachers from high-spending and low-spending districts (per-pupil expenditures one-half standard deviation above or below the state average) and teachers from average-spending districts (per-pupil expenditures within one-half standard deviation of the mean). Data were taken from State Department of Education records.
5r: Percent minority enrollment	Two groups of teachers were established on the basis of the percentage of minority students within their employing district. Group 1 teachers were from districts reporting less than 10% minority student enrollment while Group 2 teachers were from districts reporting more than 10% minority student enrollment. Data were taken from State Department of Education records.
5s: Achievement	Three groups of teachers were drawn from school buildings with varying levels of student achievement as measured by the Michigan Educational Assessment Test in reading and math in grades 4, 7, and 10. On the basis of student test performance, the State Department of Education designates an achievement status for each school building in the state. Group 1 teachers were drawn from buildings designated as high needs/low achievement, Group 2 teachers were from buildings designated as moderate needs/moderate achievement, and Group 3 teachers were drawn from buildings designated as low needs/high achievement (Donovan, 1984).

During June 1985 the statistical procedures described here were carried out at the Michigan State University Computer Center. The results of these analyses follow in the next chapter.

CHAPTER IV

FINDINGS

The following presentation of findings details the results of procedures and statistical analyses described earlier. After reporting the results of the sampling procedure, findings generated in response to each general research question and specific hypotheses will be presented in order of their occurrence in this investigation.

Study Sample

The target population for this study included all currently employed and professionally certified Michigan public school teachers in grades K-12. A computer-generated stratified random sample of 1,994 teachers was drawn from a population list of Michigan teachers numbering 74,814. The sample list drew teachers on the basis of their sex, building grade level, and subject-matter assignment in direct proportion to which these characteristics exist among the population of teachers.

By using an original and one follow-up mailing, 1,104 sample subjects responded to the survey. Thirty-one surveys were missing data that could not be retrieved, resulting in a usable return of 1,073 surveys. The usable return rate of 53.81% was determined to be acceptable on the basis of sample criteria listed earlier.

Characteristics of the responding sample are detailed in Tables 4 and 5. It is noteworthy that teacher respondents represented a wide variety of Michigan public school teacher characteristics, including both personal and school-organization characteristics. A comparison of characteristics between the original sample and the responding sample reduced concern about sample bias due to nonreturns. The similarity between the original sample and the responding sample on two of the variables used to stratify the original sample can be examined in Table 6. On teacher sex and grade-level assignment, responding-sample teachers clearly were similar to the original-sample teachers. Combined with the knowledge that a wide variety of personal and school-organization characteristics were represented in the responding sample, the similarities described in Table 6 added to the suggestion that the responding sample was fairly representative of Michigan public school teachers.

Table 4.--Descriptive characteristics of teacher respondents and their employing school organizations.

Characteristic	Mean	Range	Minimum	Maximum
Teacher age	42.926	46	23	69
Years experience	17.393	43	1	44
District size	21,725.697	195,935	10	195,935
Building size	699.640	3,2282	10	3,292
Salary	26,941.249	18,520	17,460	35,980
Staff/student ratio	22.876	30	11	41
Per-pupil spending	2,697.012	3,751	972	4,723
% minority students	17.728	99	0	99

Table 5.--Frequency characteristics of teacher respondents and their employing school organizations.

Characteristic	Frequency	% of Sample
Teacher Sex		
Male	425	40%
Female	648	60%
Marital Status		
Married	879	82%
Not married	194	18%
Dependent Children		
Yes	693	65%
No	380	35%
Second Job		
Yes	233	22%
No	841	78%
Assignment Consistency		
Consistent	1,011	94%
Inconsistent	62	6%
Spouse Works		
Yes	646	60%
No	236	22%
Not married	192	18%
Building Level		
Elementary	497	46%
Junior high	250	23%
High school	326	30%
Achievement Status		
High needs	91	8%
Moderate needs	541	50%
Low needs	442	41%
District Geographic Nature		
Metropolitan city	199	19%
City	104	10%
Town	145	14%
Urban fringe	361	34%
Rural	265	25%

Table 6.--A comparison of variable frequency within the original sample and the responding sample.

Variable	Original Sample		Responding Sample	
	Freq.	% of Sample	Freq.	% of Sample
Teacher Sex				
Male	790	39.6%	425	39.6%
Female	1,204	60.4%	648	60.4%
Grade Level Assignment				
Elementary	973	48.7%	497	46.0%
Junior high/middle	455	22.8%	250	23.0%
High school	569	28.5%	326	30.0%

Findings by Questions

Question 1: Underlying Satisfaction Factors

The first question considered in this investigation asked: Are there underlying job satisfaction factors in the job-facet satisfaction scores for a sample of Michigan K-12 public school teachers? To answer this question, the job-facet satisfaction scores from the sample respondents were subjected to factor analysis. Through this procedure, an initial solution with 13 factors emerged. Each factor had to achieve an eigenvalue of 1.00 to be retained as a factor. The 13-factor solution is presented in Table 7, which includes reports of the eigenvalues, percentage of variance, and cumulative variance for each factor.

Table 7.--Job satisfaction factor eigenvalues for a 13-factor solution using principal-components factor analysis with iterations.

Factor	Eigenvalue	Percent of Variance	Cumulative Percent
1	16.29256	28.1	28.1
2	3.16087	5.4	33.5
3	2.63656	4.5	38.1
4	1.93657	3.3	41.4
5	1.82771	3.2	44.6
6	1.60647	2.8	47.3
7	1.48835	2.6	49.9
8	1.38208	2.4	52.3
9	1.32091	2.3	54.6
10	1.22969	2.1	56.7
11	1.14657	2.0	58.7
12	1.05057	1.8	60.5
13	1.00186	1.7	62.2

An attempt to interpret the 13-factor solution was made. Because very little item clustering took place beyond Factor 7, a seven-factor solution was attempted. On the basis of simplicity and clarity of job-facet patterning, this solution proved more satisfactory and is reported in Table 8.

Question 1a: Job-facet composition of satisfaction factors. The assignment of factor titles was an attempt to interpret and describe the cluster of job-facet items that formed each factor. The number of job-facet items, range of factor loadings, and the reliability coefficient for each factor are presented in Table 9. Three criteria were established to determine the job-facet composition of each

factor. Through the process of applying the criteria, Question 1a--What combination of individual job facets constitutes the various satisfaction factors present within the job-facet satisfaction scores for this sample?--was answered.

Table 8.--Job satisfaction factor eigenvalues for a seven-factor solution using principal-components factor analysis with iterations.

Factor	Eigenvalue	Percent of Variance	Cumulative Percent
1. Teacher-Student Interaction	15.75358	62.2	62.2
2. Teacher Resources	2.71390	10.7	73.0
3. Teacher Compensation	2.12217	8.4	81.3
4. Teaching Assignment	1.38273	5.5	86.8
5. Teacher Work Achievement	1.27152	5.0	91.8
6. Teacher Workload	1.05249	4.2	96.0
7. Teacher Status	1.01528	4.0	100.0

Table 9.--Number of items, range of loadings, and reliability coefficients for seven job satisfaction factors.

Factor	N	Range	Reliability Coefficient
1. Teacher-Student Interaction	6	.51-.77	.88523
2. Teacher Resources	11	.35-.62	.86133
3. Teacher Compensation	11	.29-.62	.84217
4. Teaching Assignment	3	.64-.70	.85028
5. Teacher Work Achievement	8	.36-.58	.82386
6. Teacher Workload	5	.38-.66	.78366
7. Teacher Status	3	.59-.75	.88058

The primary criterion used to evaluate factor loadings was a decision rule requiring that factor loadings be greater than 0.40. In the event that a job-facet item failed to load on any factor at or above 0.40, the highest item loading for that particular job facet was considered in relation to the cluster of items already established within the factor in which the high-loading item occurred. In the event that a job-facet item loaded on more than one factor (two instances within the present study), the factor within which the highest item loading occurred retained the item. In both cases, this criterion resulted in the most logical solution in terms of factor composition. Application of these criteria resulted in an interpretable seven-factor solution, which is presented in Table 10.

Question 1b: Replication of satisfaction factors. The question--How do the various underlying satisfaction factors identified by this study compare to satisfaction factors determined by previous studies using the same job-facet satisfaction scale?--had as a purpose the replication of results obtained by Holdaway (1978). Table 11 begins to reveal the similarity in findings between this study and the Holdaway study. Each study arrived at seven-factor solutions accounting for nearly identical percentages of variance among each sample of job-facet satisfaction scores.

Table 10.--Seven-factor varimax rotated factor matrix of job-facet satisfaction scores after rotation with Kaiser normalization.

Job Facets	Item Loadings
Factor 1: Teacher-Student Interaction	
Attitudes of students toward learning	.77397
General behavior of students in the school	.76693
Average level of student achievement	.75663
General behavior of students in your classes	.71795
Ability levels of students taking your classes	.66283
Your relationships with students	.51857
Factor 2: Teacher Resources	
Availability of audio-visual resources	.61701
Availability of library resources	.59801
The distribution of resources within your school	.56407
Availability of useful advice on teaching problems	.55569
Your involvement in decision-making in your school	.44873
Your involvement in decision-making in your district	.44854
Physical conditions of staffrooms and staff offices	.43614
Availability of diagnostic services	.41773
Opportunities for useful in-service education	.41165
Physical conditions of your classrooms	.40218
Availability of community facilities for recreation	.34610
Factor 3: Teacher Compensation/Labor Relations	
Salary you receive	.62121
The use of seniority in determining salaries	.60704
Your long-term salary prospects in education	.60238
The use of education level in determining salaries	.58370
Retirement benefits provided	.48740
Teacher/board consultation on working conditions	.46736
Teacher/board collective bargaining	.45118
Methods used in the promotion of teachers	.38043
Provisions for sick leave	.37655
Methods used to evaluate teachers	.36332
Provisions for sabbatical leave	.29201

Table 10.--Continued.

Job Facets	Item Loadings
Factor 4: Teaching Assignment	
Your assignment to teach particular subjects	.69947
Your assignment to teach particular grade levels	.68400
Schedule of your teaching assignments	.63595
Factor 5: Teacher Work Achievement and Growth	
Intellectual stimulation in your work	.58324
Social relationships in your work	.56870
Your sense of achievement in teaching	.54094
Recognition by others of your work	.53807
The prospect of teaching as your life-time career	.39859
Opportunities for further formal study	.38775
Your opportunity for promotion	.38693
Your relationships with other teachers	.35862
Factor 6: Teacher Workload	
Preparation time during the school day	.65544
Amount of preparation required by your assignment	.53273
Hours of non-teaching duties assigned per week	.49832
Availability of teachers' aides to assist you	.38319
Average size of classes you teach	.37804
Factor 7: Teacher Status	
Attitude of society toward education	.75397
Status of teachers in society	.67703
Attitudes of parents towards education	.59088

Table 11.--Comparison of satisfaction factors between the Holdaway (1978) study and the present study.

Factors in Holdaway Study			Factors in Present Study		
Factor	Eigen-value	Percent of Variance	Factor	Eigen-value	Percent of Variance
1. Recognition and Status	13.1	25.3	1. Teacher-Student Interaction	16.2	28.1
2. Students	3.0	5.7	2. Teacher Resources	3.1	5.4
3. Resources	2.8	5.4	3. Teacher Compensation	2.6	4.5
4. Teaching Assignment	2.2	4.2	4. Teaching Assignment	1.9	3.3
5. Involvement-Administrators	1.9	3.7	5. Teacher Work Achievement	1.8	3.2
6. Work Load	1.6	3.1	6. Teacher Workload	1.6	2.8
7. Salary and Benefits	1.4	2.7	7. Teacher Status	1.4	2.6
	Cumulative percent:	50.1		Cumulative percent:	49.9

Note: Data derived from the 13-factor solution.

Although the percentage of variance accounted for by the factors identified in each study differed, Table 12 reveals that the factors frequently consisted of the same items. The similarities between factor content were particularly evident among the following factors: Holdaway's Factor 2: Students compared with this study's Factor 1: Teacher-Student Interaction; Holdaway's Factor 3: Resources compared with this study's Factor 2: Teacher Resources; Holdaway's Factor 4: Teaching Assignment compared with this study's Factor 4: Teaching Assignment; Holdaway's Factor 6: Workload compared with this study's Factor 6: Teacher Workload; Holdaway's Factor 7: Salary and Benefits compared with this study's Factor 3: Teacher Compensation and Labor Relations; and Holdaway's Factor 1: Recognition and Status compared with this study's Factor 7: Teacher Status.

Differences among findings between this investigation and Holdaway's (1978) study were less evident. Holdaway's Factor 5: Involvement with Administrators did not emerge as a factor in the present study. It should be noted, however, that three out of five job-facet items present within Holdaway's Factor 5 were present within this study's Factor 2: Teacher Resources. This study's Factor 5: Teacher Achievement and Growth did not emerge as a satisfaction dimension in the Holdaway study. Again, a number of job-facet items from Factor 5 in this study appeared in Holdaway's Factor 1: Recognition and Status. Upon inspection of the factor structures from both investigations, it appears that the present study generally confirmed the job satisfaction structure found by Holdaway.

Table 12.--Comparison of satisfaction factor items between the Holdaway (1978) study and the present study.

Holdaway Factors	Present Study Factors
1. Recognition and Status	1. Teacher-Student Interaction
Attitude of society to education	Attitudes of students toward learning
Attitude of parents to education	General behavior of students in the school
Status of teachers in society	Average level of student achievement
Recognition by others	Behavior of students in your classes
Sense of achievement	Ability levels of students in class
Overall satisfaction	Your relationships with students
Teaching as life-time career	
Intellectual stimulation	
Social relationships in work	
Board/teachers consultations	
2. Students	2. Teacher Resources
Attitudes of students to learning	Availability of audio-visual resources
General behavior of students-school	Availability of library resources
General behavior of students-class	Distribution of resources in school
Average level of student achievement	Availability of useful advice
Ability levels of your students	School decision-making involvement
Relationships with students	District decision-making involvement
	Physical conditions of staffrooms/offices
	Availability of diagnostic services
	In-service education opportunities
	Physical conditions of classrooms
	Community recreation facilities
3. Resources	3. Teacher Compensation/Labor Relations
Availability of library resources	Salary you receive
Availability of audio-visual resources	Seniority in determining salaries
Availability of community facilities	Long-term salary prospects
Distribution of resources in school	Education level in determining salaries
In-service education opportunities	Retirement benefits provided
Availability of diagnostic services	Teacher/board consultation on work
Physical conditions of classrooms	Teacher/board collective bargaining
	Methods used in promotion
	Provisions for sick leave
	Methods used to evaluate teachers
	Provisions for sabbatical leave

Table 12.--Continued.

Holdaway Factors	Present Study Factors
4. Teaching Assignment Freedom to select teaching methods Assignment to particular grade levels Assignment to particular subjects Freedom to select subject matter Freedom to select teaching materials Job security	4. Teaching Assignment Assignment to teach particular subjects Assignment to teach particular grades Schedule of your teaching assignments
5. Involvement With Administrators Relations with in-school administrators Involvement in school decision-making Administrators' expectations of you Availability of useful advice Physical conditions-staffrooms	5. Teacher Work Achievement/Growth Intellectual stimulation with work Social relations at work Your sense of achievement in teaching Recognition by others of your work Prospect of teaching a life-time Opportunities for further study Your opportunity for promotion Your relations with other teachers
6. Work Load Available preparation time Amount of required preparation/correction Number of hours taught each week Average class size Timetabling of your classes	6. Teacher Workload Available preparation time Amount of required preparation/correction Hours of non-teaching duties per week Availability of teachers' aides Average size of classes you teach
7. Salary and Benefits Seniority in determining salaries Education in determining salaries Salary Long-term salary prospects Retirement benefits Sabbatical leave provisions Opportunities for further study	7. Teacher Status Attitude of society towards education Status of teachers in society Attitudes of parents towards education

Question 2: Satisfaction
Levels of Michigan Teachers

The second general research question included in this investigation asked: What current levels of overall and job-facet satisfaction are expressed by Michigan K-12 public school teachers? To answer this question, frequency distributions and means of the 1,073 respondents with respect to both their levels of job-facet satisfaction and job-facet importance are presented. Table 13 lists a response summary for each job-facet measure included in the survey. Both importance and satisfaction responses are summarized.

To describe current levels of job satisfaction among the sample subjects, the investigator first examined mean levels of job-facet satisfaction. Assuming normal distribution of responses, the theoretical mean score for each satisfaction scale is 4.0. A total of 47 job-facet items displayed mean satisfaction levels greater than 4.0. The ten highest job-facet means are listed in Table 14. Although mean levels of satisfaction do not express the degree of satisfaction being reported by sample subjects, the results reported here indicate that the average sample respondent was well satisfied with these particular job facets.

Twelve job-facet satisfaction scale items had mean ratings that fell below the theoretical mean, indicating that the average respondent viewed these particular job facets as sources of dissatisfaction. The job-facet items presented in Table 15 each had below-average mean ratings.

Table 13.--Summary of response distribution to importance and satisfaction items.

$\bar{X}$ Item Importance	Very Important 4	Important 3	Slightly Important 2	Not Important 1			Highly Satisfied 7	Moderately Satisfied 6	Slightly Satisfied 5	Neither Satisfied nor Dissatisfied 4	Slightly Dissatisfied 3	Moderately Dissatisfied 2	Highly Dissatisfied 1	Percentage Answering Highly, Moderately or Slightly Satisfied	$\bar{X}$ Item Satisfaction
	%'s of Responses					WORKING CONDITIONS	Percentages of Responses								
3.39	50	39	10	1	7.	The way in which teacher/board collective bargaining is conducted in Michigan	5	34	13	10	10	12	15	52	4.18
3.37	48	42	8	1	8.	The way in which consultation between board and teachers concerning working conditions is conducted during the school year	3	19	13	12	15	16	21	35	3.52
3.56	59	38	3	0	9.	Salary you receive	9	32	13	6	10	14	16	54	4.19
2.98	26	52	17	6	10.	The use of level of education in partly determining salaries	15	34	15	19	8	5	4	69	4.97
3.19	35	50	14	1	11.	The use of length of teaching experience in partly determining salaries	17	36	18	12	6	6	5	71	5.05
3.63	68	27	4	0	12.	Retirement benefits provided by the Michigan Teachers' Retirement Fund	3	20	17	18	16	13	14	40	3.83
2.42	14	33	34	19	13.	Provisions for sabbatical leave	8	17	9	41	7	6	12	34	4.11
3.38	48	43	8	1	14.	Provisions for sick leave	25	36	11	12	8	4	3	72	5.33
2.49	21	34	16	28	15.	Provisions for maternity leave	14	23	8	45	5	3	2	45	4.75
3.37	47	45	7	1	16.	Number of hours you teach per week	25	37	13	11	6	4	3	75	5.40
3.15	39	41	15	5	17.	Number of hours of non-teaching duties assigned	19	24	10	21	12	8	7	53	4.65
3.55	60	36	4	1	18.	Preparation time available to you during the official school day	14	27	13	5	15	11	16	54	4.24
						TEACHING-RELATED MATTERS									
2.76	27	38	19	16	19.	Your opportunity for promotion	5	15	10	31	12	10	18	30	3.72
3.25	40	48	10	2	20.	Expectations of administrators for you as a teacher	13	31	14	17	9	9	8	58	4.62
2.97	31	43	17	9	21.	Methods used in promotion of teachers	3	15	11	29	14	12	17	29	3.61
3.40	53	36	8	3	22.	The prospect of classroom teaching as your life-time career	24	29	10	10	10	8	9	63	4.86

Table 13.--Continued.

$\bar{x}$ Item Importance	Very Important 4	Important 3	Slightly Important 2	Not Important 1		Highly Satisfied 7	Moderately Satisfied 6	Slightly Satisfied 5	Neither Satisfied nor Dissatisfied 4	Slightly Dissatisfied 3	Moderately Dissatisfied 2	Highly Dissatisfied 1	Percentage Answering Highly, Moderately or Slightly Satisfied	$\bar{x}$ Item Satisfaction
	%'s of Responses				TEACHING-RELATED MATTERS (Continued)	Percentages of Responses								
3.61	66	30	3	1	23. Your long-term salary prospects in education	6	18	13	6	14	17	26	27	3.40
3.39	49	42	8	1	24. Methods used to evaluate teachers	5	24	15	12	15	15	14	44	3.89
3.32	42	49	9	0	25. The distribution of resources within your school	8	23	15	13	16	14	12	46	4.08
3.46	53	41	6	1	26. Your relationships with in-school administrators	27	34	12	8	8	6	6	73	5.22
3.71	74	23	2	0	27. Your job security	29	34	13	7	7	4	6	76	5.34
3.38	47	45	7	1	28. Your relationships with other teachers	39	38	9	7	4	2	1	86	5.93
3.01	27	50	21	3	29. Physical conditions of staffrooms and staff offices	12	27	14	11	13	12	12	53	4.32
3.23	39	46	13	1	30. Availability of useful advice to assist you with problems you encounter in teaching	8	23	17	14	15	12	10	48	4.19
3.29	39	52	9	0	31. Your involvement in decision-making in your school	8	23	19	10	14	11	14	50	4.10
3.07	29	50	19	2	32. Your involvement in decision-making in your school district	5	13	17	20	15	13	18	35	3.59
					TEACHING MATTERS									
3.43	51	42	7	1	33. Your freedom to select subject matter for classes you teach	34	35	11	8	5	4	3	80	5.64
3.63	64	34	1	0	34. Your freedom to select teaching methods	45	33	9	6	3	3	2	87	5.97
3.47	50	46	3	0	35. Your freedom to select teaching materials within the constraint of available funds	28	33	13	8	8	5	5	74	5.31
3.40	50	42	6	2	36. Schedule of your teaching assignments	21	32	13	11	9	7	7	66	4.97
3.43	53	39	5	3	37. Your assignment to teach particular grade levels	32	31	11	11	6	4	5	74	5.38

Table 13.--Continued.

$\bar{X}$ Item Importance	Very Important 4	Important 3	Slightly Important 2	Not Important 1		Highly Satisfied 7	Moderately Satisfied 6	Slightly Satisfied 5	Neither Satisfied nor Dissatisfied 4	Slightly Dissatisfied 3	Moderately Dissatisfied 2	Highly Dissatisfied 1	Percentage Answering Highly, Moderately or Slightly Satisfied	$\bar{X}$ Item Satisfaction
	%'s of Responses				TEACHING MATTERS (Continued)	Percentages of Responses								
3.44	55	36	5	3	38. Your assignment to teach particular subjects	30	31	10	14	6	5	5	71	5.33
3.66	69	28	3	0	39. Average size of classes you teach	15	22	15	5	13	12	18	52	4.14
3.45	54	38	6	1	40. Amount of preparation/correction required by your teaching assignment	10	21	19	11	14	13	12	50	4.13
3.13	36	45	16	3	41. Availability of library resources	20	28	14	12	10	8	7	62	4.84
3.12	32	51	16	2	42. Availability of audio-visual resources	19	29	16	13	10	7	6	64	4.91
2.58	23	32	27	19	43. Availability of teachers' aides to assist you	10	12	10	30	10	10	19	32	3.76
3.34	44	47	8	1	44. Physical conditions of your classrooms	13	28	13	9	14	12	10	54	4.40
3.25	42	44	11	3	45. Availability of substitute teacher services when you wish to be absent for professional activities	24	27	11	13	8	7	11	62	4.81
3.31	44	45	9	2	46. Performance of on-call substitute teachers who teach your classes when you are absent	12	27	16	13	12	12	8	55	4.45
					STUDENT-RELATED MATTERS									
3.76	77	22	1	0	47. Your relationships with students	43	44	7	2	3	1	0	94	6.16
3.84	85	14	1	0	48. Attitudes of students towards learning	7	25	19	4	18	14	14	51	4.04
3.77	78	22	0	0	49. General behavior of students in the school	7	30	17	5	17	14	10	54	4.23
3.55	60	36	4	1	50. Average level of student achievement	6	31	22	7	17	11	7	59	4.42
3.18	40	41	15	4	51. Ability levels of students taking your classes	7	32	19	15	14	8	5	58	4.59

Table 13.--Continued.

$\bar{X}$ Item Importance	Very Important 4	Important 3	Slightly Important 2	Not Important 1			Highly Satisfied 7	Moderately Satisfied 6	Slightly Satisfied 5	Neither Satisfied nor Dissatisfied 4	Slightly Dissatisfied 3	Moderately Dissatisfied 2	Highly Dissatisfied 1	Percentage Answering Highly, Moderately or Slightly Satisfied	$\bar{X}$ Item Satisfaction
	%'s of Responses					STUDENT-RELATED MATTERS (Continued)	Percentages of Responses								
3.75	75	24	1	0	52.	General behavior of students in your classes	17	43	13	3	12	8	5	73	5.06
3.50	54	42	3	1	53.	Methods used in reporting pupils' attitudes and achievements to parents	11	34	19	7	15	8	5	64	4.74
3.27	44	41	12	2	54.	Availability of diagnostic services	8	24	18	15	14	8	13	50	4.21
						OCCUPATION-RELATED MATTERS									
3.40	50	42	7	1	55.	Status of teachers in society	2	11	15	8	19	18	27	28	3.07
3.69	72	26	3	0	56.	Attitude of society towards education	1	9	11	5	23	24	27	21	2.78
3.78	79	19	1	0	57.	Attitudes of parents towards education	1	11	15	5	24	25	20	27	3.09
3.73	74	25	1	0	58.	Your sense of achievement in teaching	17	41	17	4	8	7	5	75	5.12
2.95	28	44	23	5	59.	Recognition by others of your work	9	29	19	21	9	7	6	57	4.62
2.75	18	46	30	6	60.	Social relationships in your work	17	34	16	23	4	3	2	67	5.21
3.25	37	53	10	0	61.	Intellectual stimulation in your work	10	30	22	15	11	8	5	62	4.69
2.96	26	49	20	5	62.	Opportunities for further formal study (i.e., in university, college, or institute)	16	28	14	23	8	6	6	58	4.80
3.06	32	46	18	4	63.	Opportunities for useful in-service education	7	17	17	15	15	14	14	41	3.87
3.03	30	48	19	4	64.	Availability of facilities in your community for recreation, fine arts, etc.	16	21	14	16	11	11	10	51	4.41

Table 14.--Job-facet satisfaction items generating the highest mean ratings.

Item		Mean Rating
47	Your relationship with students	6.16
34	Your freedom to select teaching methods	5.97
28	Your relationships with other teachers	5.93
33	Your freedom to select subject matter	5.64
16	Number of hours you teach per week	5.40
37	Your assignment to teach particular grades	5.38
27	Your job security	5.34
14	Provisions for sick leave	5.33
38	Your assignment to teach particular subjects	5.33
35	Your freedom to select teaching materials	5.31

Table 15.--Job-facet satisfaction items generating the lowest mean ratings.

Item		Mean Rating
56	Attitude of society towards education	2.78
55	Status of teacher in society	3.07
57	Attitudes of parents towards education	3.09
23	Long-term salary prospects	3.40
8	Teacher/board consultation on working conditions	3.52
32	Involvement in district decision-making	3.59
21	Methods used in promotion of teachers	3.61
19	Promotion opportunities	3.72
43	Availability of teachers' aides	3.76
12	Retirement benefits	3.83
63	Opportunities for useful in-service education	3.87
24	Methods used to evaluate teachers	3.89

A more visible manner in which to describe current levels of teacher job satisfaction and dissatisfaction is the presentation of response frequencies for job-facet scales. Table 16 is a report of the 11 job-facet satisfaction items generating the highest percentage of sample responding satisfied out of all the job-facet measures. "Satisfied" was operationalized as any one of three possible survey responses, including (7) highly satisfied, (6) moderately satisfied, and (5) slightly satisfied. Not surprisingly, this list compares favorably to the list of job facets with high mean satisfaction ratings presented earlier. In fact, the lists share eight common job facets that tended to be perceived as sources of satisfaction by the average sample respondent.

Table 17 presents a similar consideration of job-facet satisfaction items generating the highest percentage of sample responding dissatisfied. Again, this list can be compared to the list of 12 job-facet items that had response averages below the theoretical mean of 4.0. These lists are very similar, sharing 10 out of 12 job facets in common. Although other job facets produced ratings of satisfaction and dissatisfaction, these lists present a fairly consistent description of job facets that were perceived as satisfying or dissatisfying by the average sample respondent.

Table 16.--Job-facet satisfaction items generating the highest percentage of sample responding satisfied.

Item		% of Sample Satisfied
47	Your relationships with students	94%
34	Your freedom to select teaching materials	87%
28	Your relationships with other teachers	86%
33	Your freedom to select subject matter for classes you teach	80%
27	Your job security	76%
16	Number of hours you teach per week	75%
58	Your sense of achievement in teaching	75%
35	Your freedom to select teaching materials with the constraint of available funds	74%
38	Your assignment to teach particular grade levels	74%
26	Your relationships with in-school administrators	73%
52	General behavior of students in your classes	73%

Table 17.--Job-facet satisfaction items generating the highest percentage of sample responding dissatisfied.

Item		% of Sample Dissatisfied
56	Attitude of society towards education	74%
57	Attitude of parents towards education	69%
55	Status of teachers in society	64%
23	Your long-term salary prospects in education	57%
8	Board/teacher consultation concerning working conditions	52%
32	Your involvement in school decision-making	46%
48	Attitudes of students towards learning	46%
24	Methods used to evaluate teachers	44%
63	Opportunities for useful in-service	43%
39	Average size of classes you teach	43%
21	Methods used in promotion of teachers	43%
12	Retirement benefits	43%

Two findings draw support from the results reported here. First, it is evident that teachers derived their greatest satisfaction from those job facets that concerned the work itself. The job facet generating the highest mean satisfaction level and the highest percentage of sample satisfied had to do with teachers' relationships with students. Furthermore, job facets such as work autonomy, specific work assignment including subject and grade levels taught, work

achievement, and hours of work were frequent and important sources of satisfaction. The consistently identified sources of satisfaction were job facets descriptive of the work performed by teachers.

The second finding supported by these results has to do with the nature of those job facets identified as sources of dissatisfaction. With a similar consistency, job facets identified as sources of dissatisfaction tended to describe aspects of a teacher's job not directly involved with the work itself. Instead, the dissatisfiers were more descriptive of the conditions under which the work of teachers was performed. For instance, the job facet generating the lowest mean satisfaction level and the highest percentage of sample dissatisfied had to do with societal attitudes toward education. Job facets such as teacher status, parental attitudes, salary prospects, promotion opportunities, and retirement benefits were frequent and important sources of dissatisfaction. These aspects of a teacher's job reflected the conditions under which their work was performed, and such conditions, rather than the work itself, tended to be perceived as sources of dissatisfaction.

In addition to collecting satisfaction ratings on each job facet included in the survey, importance ratings were collected. To describe job-facet importance levels of sample respondents, mean importance ratings for each facet were examined. Table 18 presents the ten job-facet items that generated the highest mean importance ratings. These ten items constituted the most important job facets to the average sample respondent. The ten job facets generating the lowest

mean importance ratings are presented in Table 19. These survey items constituted the least important job facets according to the perceptions of sampled teachers.

Table 18.--Job-facet items generating the highest importance rating means.

Item		Mean Importance Rating
48	Attitudes of students towards learning	3.84
57	Attitudes of parents towards education	3.78
49	General behavior of students in the school	3.77
47	Your relationships with students	3.76
52	General behavior of students in class	3.75
58	Your sense of achievement in teaching	3.73
27	Your job security	3.71
56	Attitude of society towards education	3.69
39	Average sizes of classes you teach	3.66
34	Your freedom to select teaching methods	3.63
12	Retirement benefits provided by the Michigan Teachers' Retirement Fund	3.63

Table 19.--Job-facet items generating the lowest importance rating means.

Item		Mean Importance Rating
13	Provisions for sabbatical leave	2.42
15	Provisions for maternity leave	2.49
43	Availability of teachers' aides to assist you	2.58
60	Social relationships in your work	2.75
19	Your opportunity for promotion	2.76
59	Recognition by others of your work	2.95
62	Opportunities for further formal study	2.96
21	Methods used in promotion of teachers	2.97
10	The use of level of education in partly determining salaries	2.98
29	Physical conditions of staffrooms and staff offices	3.01

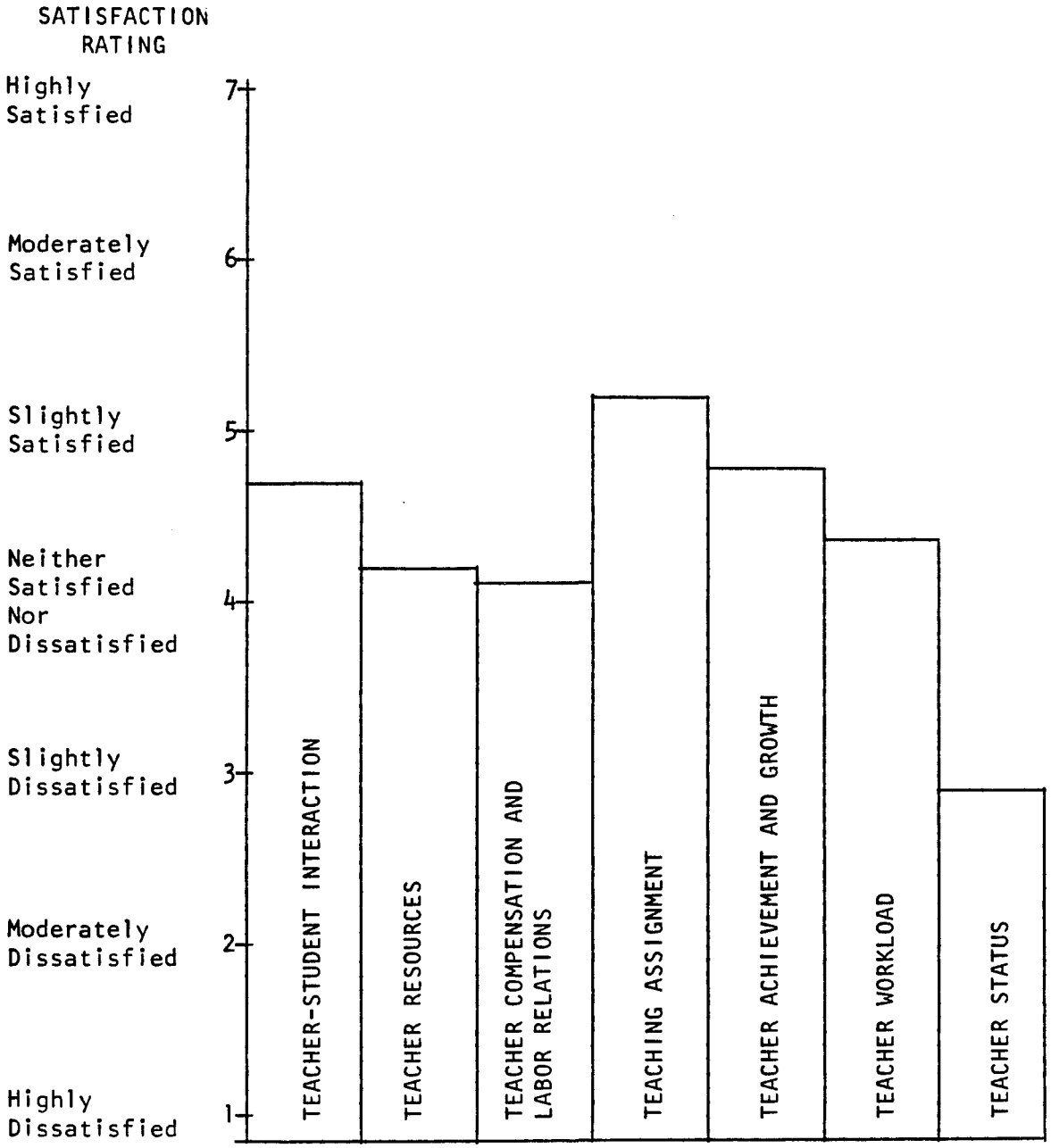
It appears that job facets identified as highly important describe both the work itself and conditions under which the work of teachers is performed. For instance, teachers' relationships with students describes the work itself, while attitudes of parents toward education describes a condition under which teachers perform their work. The significance of this finding is the suggestion that both the work itself and working conditions appeared important to teachers. It should be noted, however, that facets identified as having low

importance were frequently descriptive of working conditions and seldom described the work itself.

Several job facets rated high on importance or low on importance also were included on the high mean satisfaction or dissatisfaction lists. Job facets common to both lists include Facet 47: Your relationships with students (high satisfaction/high importance), Facet 27: Your job security (high satisfaction/high importance), Facet 34: Your freedom to select teaching methods (high satisfaction/high importance), Facet 57: Attitudes of parents toward education (low satisfaction/high importance), Facet 56: Attitude of society towards education (low satisfaction/high importance), Facet 12: Retirement benefits (low satisfaction/high importance), Facet 43: Availability of teachers' aides (low satisfaction/low importance), Facet 19: Your opportunity for promotion (low satisfaction/low importance), and Facet 21: Methods used in the promotion of teachers (low satisfaction/low importance).

Findings concerning levels of job-facet satisfaction expressed by Michigan K-12 teachers are varied. Although a detailed facet-by-facet description has been presented, these findings do not provide for a general description of current levels of job satisfaction for Michigan K-12 public school teachers. In an effort to describe the average sample respondent in terms of his/her expressed levels of job-facet satisfaction, considerations of the seven factors presented earlier is helpful. Table 20 graphically profiles the average respondent's satisfaction levels with each job satisfaction factor. Based on this

Table 20.--Profile of the average respondent's satisfaction levels with each job satisfaction factor.



profile, it would appear that the average teacher respondent was slightly satisfied with teacher-student interaction, teaching assignment, and teacher achievement and growth. The same respondent was neither satisfied nor dissatisfied with teacher resources, teacher compensation, and teacher workload. Finally, the average respondent was slightly dissatisfied with teacher status.

To facilitate a more general description of teacher job satisfaction levels, Miskel's (1974) scale of overall job satisfaction was incorporated into this study's survey instrument. An item analysis of each question used in this scale can be reviewed in Table 21, and a reliability coefficient of .73440 was calculated for the scale. Although variance among the items is evident, a single summated overall job satisfaction score was produced for each respondent, and the frequency distribution of these scores is presented in Table 22. The range of possible scores is from a low of 7.0 (high dissatisfaction) to a high of 35.0 (high satisfaction). To be considered a dissatisfied teacher, a respondent's summated overall job satisfaction score must have fallen below 17.5. To be identified as a satisfied teacher, a respondent's score must have been greater than 24.5. Respondents whose scores were between these parameters were identified as neither satisfied nor dissatisfied. On the basis of this method, it was determined that 17.7% of the sampled teachers were dissatisfied with their jobs, while 44.8% were satisfied. An additional 37.5% of the sampled teachers were neither satisfied nor dissatisfied.

Table 21.--Percentage frequency distribution of responses to overall job satisfaction items and item response means.

Item	Agree	Neutral	Disagree	Mean
65. As I evaluate my future as an educator, I feel my level of satisfaction will increase.	33%	29%	39%	2.891
66. I am somewhat dissatisfied with my job.	44%	11%	45%	3.081
67. If I came into enough money so that I could live comfortably without working, I would quit my job.	45%	16%	39%	2.860
68. I often think of changing jobs.	31%	17%	52%	3.333
69. My job as an educator gives me a great deal of personal satisfaction.	71%	14%	14%	3.788
70. I am satisfied with my job.	59%	17%	30%	3.473
71. Most other educators are more satisfied with their jobs than I am.	5%	21%	74%	3.922

Table 22.--Percentage frequency distribution of summated responses to overall job satisfaction items.

Satisfaction Category	Absolute Frequency	Relative Frequency
Dissatisfied	190	17.7%
Neither satisfied nor dissatisfied	403	37.5%
Satisfied	481	44.8%

Comments describing satisfaction levels. To enrich the description of job satisfaction levels currently being expressed by Michigan K-12 public school teachers, sample subjects were invited to include comments on the last page of their survey package. Many sample respondents offered comments ranging from two- or three-word exclamations concerning their job to page-long typewritten narrations on the future of teaching as a career. The majority of comments tended to be negative and focused on perceived sources of teacher dissatisfaction.

A total of 442 sample respondents (41% of the responding sample) included comments on their survey return. No attempt was made to statistically test the representativeness of the respondents offering comments compared to noncommenting respondents. Descriptive insight can be gained, however, through an examination of selected comments that exemplify dominant themes and patterns running through the comment response.

Although comments were more frequently focused on teacher dissatisfaction, a substantial number of comments were offered by teachers who appeared very satisfied with their jobs. Frequently, the students, student learning, and the challenge of teaching were identified as sources of satisfaction in teaching. The following comments exemplify apparently well-satisfied teachers.

From a female elementary school teacher:

> I teach second grade in a small-town elementary school. I love my job and wouldn't trade it for anything. To me teaching is a challenge and I am always eager to go back in the fall to begin a new year.

From a female junior high school teacher:

Since I am retiring this June, I am not sure of the validity of some of my comments. However, after 28 years, I can think of no other profession I would have felt the satisfaction and personal accomplishment which I felt in teaching!

From a female high school teacher:

I enjoy teaching and wouldn't think of changing careers even to move into an administrative level. Working with students is where education is at!

From a male junior high school teacher:

Teaching is a highly personal affair with its "ups and downs." I wouldn't want to be doing many other things.

From a female high school teacher:

I teach "for" and "because" of my students. The reward is in seeing a young person grasp a concept or stretch their thinking and understanding beyond their self-imposed limits. Nothing is as satisfying as helping a young adult stretch their imagination to the limit.

A larger number of comments were expressed by teachers who appeared to be seriously dissatisfied with teaching as an occupation. In fact, several of the teacher respondents expressing serious dissatisfaction seemed on the verge of "burnout" and began listing sources of dissatisfaction that rendered teaching virtually unbearable for them. Evident from the comments was a pattern among seriously dissatisfied teachers that suggested they perceived being "locked" into their teaching position by virtue of circumstances over which they had little control. Comments expressing this point included the following examples.

From a female high school teacher:

I've changed since I have been married. I no longer am so dedicated a teacher as I used to be, although I know I am in the

building later and putting in more hours than many of my colleagues. I also really enjoy my vacations more. Finally, I would quit my job if it no longer were necessary for me to work. Teaching is tough, under the best of circumstances, and I am ready to pass the baton to someone with more time and energy.

From a female elementary school teacher:

I love kids and love teaching, but the demands on the teaching profession are tremendous. The lack of respect, being a babysitter, mother, father, counselor, doctor, the constant additions to the curriculum, and nothing being taken out, etc. One doesn't have to wonder why teachers are "burned out." I would discourage anyone from even considering the teaching field.

From a male junior high school teacher:

Given the current situation in public education, if I were just starting my career or even in mid-career, I would leave it in a minute. Compensation is low and job satisfaction almost nonexistent. Daily stresses and frustrations mount and the general public's apathy and/or contempt for education is manifest in the students I attempt to teach.

From a male junior high school teacher:

Teaching is a dead profession; little respect, little pay.

From a male high school teacher:

I am disappointed with my choice of teaching as a profession. I don't feel that teachers are paid well enough for the amount of work and stress that is involved. . . . As a first year teacher, I feel uncertain of my future in education.

From a male elementary school teacher:

Where I teach is a zoo! I would quit if I could, but I can't. I still come to work and give it my all.

From a male high school teacher:

Class size, teachers' salaries, the mountain of paper work, the many hours spent at home in preparation, little or no administrative support, a lack of interest by parents and students, few safeguards to protect teachers from violence . . . and more, makes the teaching profession in public schools "A Journey Into the Twilight Zone," to say the least.

To facilitate organizing a summary of the comments offered by respondents, the seven job satisfaction factors presented earlier were used to categorize the teachers' remarks. Comments typical of those offered by respondents concerning Factor 1: Teacher-student interaction, frequently conveyed a growing a concern on the part of teachers over what appears to be worsening student attitudes toward learning. These comments are noteworthy in that "student attitudes toward learning" was the single most important job facet for teachers and also was a job facet generating a high percentage of sample dissatisfied. Comments serving as examples to this point follow.

From a female high school teacher:

> I often feel a high level of frustration when I have classes full of students who do not want to learn. They see no need for math in their lives. They care not if they pass or fail. Some seem to think they are supposed to pass just by being in class.

From a female elementary school teacher:

> The attitudes of the children and parents have changed so much in the last several years. This year I have had a rough group so some of my answers will lean toward the negative side.

From a male high school teacher:

> My overwhelming concern is with student behavior and attitudes. Work habits have deteriorated and self-control and temperance are increasingly weaker. Except with the best students, there is a reluctance to do homework and outside planning. Copying and cheating seem to be ever greater problems. Fewer students seem able to settle down with their thoughts and concentrate on class work for extended periods. Talking is probably the number one offense, creating constant disruption.

From a male junior high school teacher:

> In the past 17 years, I have seen some distinct attitudinal changes in myself and my students. When I first started teaching, I thought that I could do it forever. I don't feel that way anymore. Also, I feel that students have changed drastically over the past

> 17 years. My prime concern is their lack of respect for adults and the administrators of the school.

Factor 2: Teacher resources, was the second job satisfaction factor used to categorize teacher comments. Three pervasive themes dominated comments concerning teacher resources. First, many teachers reflected the poor condition of their educational facilities, charging that lack of maintenance was the result of inadequate funding or inappropriate funding priorities.

From a female elementary school teacher:

> The upkeep of schools is poor. They are getting old and require expensive repairs, therefore, the funding isn't available to replace instructional hardware. When materials are replaced, they are not of the same quality.

From a female high school teacher:

> Our school does not provide adequate classroom space for teachers. I have been a "rover" for five years and often find myself in rooms not conducive to my subject matter. Money is a great problem in our district--they have it but prefer to spend it on football rather than classroom space, supplies or academics (I coach and I still disagree with this philosophy).

From a female elementary school teacher:

> In this particular district, class size is still too high except in kindergarten and possibly high school. Our supplies are lousy even though there is plenty of money.

The second theme present among comments aimed at teacher resources had to do with the quality of teacher in-service training. Opportunities for useful teacher in-service as a job facet was one of the ten most dissatisfying items in the survey. The specific comments offered by respondents help convey teacher frustration with this aspect of their work.

From a female elementary school teacher:

I am tired of administrators thinking that they have invented the wheel, e.g., in-service on Bloom's taxonomy. The principal had just learned of Bloom; I read his book two decades ago. This is only one of many similar examples of in-services that I didn't benefit from attending.

From a female elementary school teacher:

I feel the in-service time set aside in our contract is not used to its fullest extent. Teachers are asked for their input, then ignored by the administrator setting it up.

From a female high school teacher:

In-service education programs are a mortal sin as per what they offer for the realistic classroom of today!

From a female elementary school teacher:

I have never attended a good, or even slightly enlightened in-service. I think they should be forever banned!

The third theme to pervade comments on the quality of teacher resources had to do with school leaders and their willingness to involve teachers in decision making. Of all comments offered by respondents, teacher frustration resulting from little or no meaningful involvement with decision making was the most frequently occurring remark.

From a female elementary school teacher:

I also feel "driven" by our principal, as a machine. But, it is my job to oil, maintain, recharge and schedule use of machinery. Administrators do not consult or give authority to teachers. This is a mistake. Lack of a higher degree does not mean inadequate professionalism.

From a male elementary school teacher:

Another problem that exists is between school boards and teacher staffs. The communications between these two parties must improve

before education is to reach a higher level of social status and importance within the community. The same is true between administration and teacher staffs.

From a female elementary school teacher:

I enjoy my job. However, I feel administrators are out of touch with what is really important--the child. They are interested in budgets, numbers, etc. They do not listen to the teachers' opinions and advice.

From a female elementary school teacher:

School board members control the schools! Teachers are rarely asked for opinions or suggestions. Most boards are made up of community members and are instilled with beliefs that a school is a private industry and their jobs are to protect the taxpayers' investments: their money, not their students. I have been employed in my district 10 years and have never been visited by a board member in my classroom. How can they choose what is best for my students when they exist in numbers only? In order to improve schools, we need to get the administrators and local boards into the classroom and involved with education, not business and marketing.

From a male high school teacher:

Our schools are run by authority not leadership. We are dogged by outdated school boards and administrators who have only one success--a winning coaching record. Teachers do not have enough say in the education process. We spend years preparing to teach and years teaching. The decision making is up to the politicians and school boards.

Factor 3: Teacher compensation and labor relations, was the focus of numerous comments with a very consistent theme, i.e., "teaching does not pay enough." In several instances, teachers remarked that low pay may force them into other occupations.

From a male high school teacher:

After 34 years in education and my wife working full time, we still make peanuts. My son who goes to college full time and is a bartender makes close to what I do (tips included). We have six children and not one of them will ever be a teacher. Thank God they know where money can be made.

From a female elementary school teacher:

Since this is my 26th year of teaching and I am nearing retirement age, I feel my life as a teacher has been a rewarding one in all ways except monetarily. The stressful situation of dealing with many individual students every day and providing opportunities for them to learn is highly underpaid. Yet people not in the profession think it is an easy job.

From a male elementary school teacher:

Teaching is an extremely rewarding profession. If the monetary benefits equalled the personal satisfaction, I would never consider leaving the profession.

From a male junior high school teacher:

I feel that if salary and fringe benefits do not improve soon, I will be forced to seek other more profitable employment.

From a female junior high school teacher:

I am a music educator. There are many things that are very rewarding in my work and there are some frustrations, too. I am dissatisfied with my income. I have worked two jobs for the past five years. This is very exhausting.

A single theme was dominant among the many comments expressed concerning Factor 4: Teacher assignments. Reflecting on the conditions of decline that have resulted in layoff and reassignment, sample teachers conveyed an urgent need for the assignment of teachers within grade levels and subject areas they are qualified to teach.

From a female junior high school teacher:

I am a teacher who has worked in my school district for 14 years. Because of declining enrollment, I have changed jobs every year. I have taught all grades K-8 and many different subjects in almost all our district's schools.

From a male high school teacher:

As teacher skills decline from lack of use, no opportunity is provided to improve those skills. My last physics class was in 1967. I last taught physics in 1968. However, I may be asked to

teach it next year, after a lapse of 17 years. How can I be expected to do a competent job?

From a male high school teacher:

I have more than 80 hours in Biology and have not been able to teach the subject in our small rural school because of bumping during lay-offs! I feel it is ridiculous that an English teacher can go back to school for a summer and pick up enough hours to take such a position. Then too, allowing a first grade teacher to bump into high school science is a bit much to take!!!

From a female high school teacher:

I feel very strongly that educators should be teaching what they are qualified in and interested in teaching. I am in the area of foreign language and often see people who are certified in a foreign language placed in a position teaching that language even if they have not used it in years, have not maintained their own personal skills, and make little effort to develop oral skills in the instruction of the students.

From a female high school teacher:

What happens between me and my students in the classroom gives me a great deal of satisfaction usually. Not teaching in my major subject area gives me much dissatisfaction.

For teachers commenting on Factor 5: Teacher achievement and growth, an almost universal theme was sounded: "In teaching, promotion does not exist." Not only was concern about career growth evident among comments, but promotion as a job facet generated one of the ten highest levels of teacher dissatisfaction.

From a female elementary school teacher:

I feel the lack of opportunity to grow career wise. I really enjoy my work. I have taught for 17 years. I have a 1/2 time teaching assignment and 1/2 time specialist position. If I'm not allowed to continue to climb the career ladder, I'm fearful of how I might feel about my job 10 years from today.

From a male high school teacher:

I have been teaching for 23 years. In all that time I have been complemented on my work only half-a-dozen times, and most of those were in my first job. Now I have no control over what I am going to teach and there is no real chance of advancement.

From a male high school teacher:

Teachers have almost no chance to advance. Even if you constantly improve at your job, you have no recognition or salary advancement. We are in a dead-end situation of not being rewarded in any way for doing an excellent job.

From a female elementary school teacher:

Teacher promotion--there is no such thing as promoting a teacher when he/she does a good job. Where would you go, to a different grade level?

From a male junior high school teacher:

The biggest factor affecting morale is the fact that no matter how good or bad one performs; the pay, respect, working conditions, classload, etc. are the same. The best do not get ahead in education.

Factor 6: Teacher workload, was the focus of a wide range of comments concerning numerous workload issues. Teachers frequently expressed concern about the amount of correcting and grading attendant with their jobs. In addition, administrative paperwork, assignment to more than one building, class size, and lack of preparation time were all issues addressed by comments in this category.

From a female elementary school teacher:

I find that being assigned to four different schools in my district makes my job a difficult task. I usually teach 180 students per day. There is little chance of continuity in the program. You really don't have a chance to become acquainted with the students and you feel like an outsider with the staff members.

From a female elementary school teacher:

Seems there is a lot of unnecessary teacher "busy work." Frequently, little time is allowed before due dates.

From a male junior high school teacher:

The single greatest improvement in any facet of education would come as a result of a reduction in class size!

From a female high school teacher:

I personally feel I do not have enough planning time for four preparations (one is a lab course). I have to get my lab supplies on my own time once a week.

From a female junior high school teacher:

I feel there should be more preparation time built into a teaching schedule, whether it be coming to school an hour before the students each day or a week or so before school begins in the fall. There is not enough time to plan and meet with other teachers the way things are now, and I am tired of spending many hours of my own time doing these things.

The final category of comments dealt with Factor 7: Teacher status. A very large number of comments discussed the negative view society and parents have about teachers and schooling.

From a male elementary school teacher:

Much of the dissatisfaction with my job comes from the attitude of society and parents toward education and teachers.

From a female high school teacher:

Sometimes I become discouraged because learning does not seem to be a priority in our society.

From a female elementary school teacher:

At this time, I think the most dissatisfying aspect of education for teachers is the general attitude of the public regarding teachers--they are not looked upon as professionals, they are not paid as other professionals, and at times are not recognized as professionals in their own district by administration. It's only because teaching can be a personally rewarding career that people are even entering the profession these days.

From a female high school teacher:

> The most disturbing part of being a teacher is the constant criticism of teaching methods or teachers. There are some of us who try to do a good job and care about the students we teach. This is seldom reflected in the news.

From a female junior high school teacher:

> I love my students; I don't mind not getting rich on the salary I make; but, once in a while, I'd feel better if I knew the parents, or community, or administration would admit that I work hard and do my best for their children.

From a female elementary school teacher:

> It's a sad reality that society behaves as if teaching and teachers are unimportant for the world's future. I thought I was "called" to teach and now realize that all you get for your efforts are ridicule and insults. Not a good career!

A comparison between the quantitative description of current levels of teacher job satisfaction presented earlier with this review of selected comments produced a consistent and comprehensive picture of the job satisfaction attitudes held by Michigan public school teachers. Although conclusions will be drawn from these descriptions later, it can be stated with some confidence that there is room for improving levels of teacher satisfaction within Michigan public schools.

Question 3: Factors Accounting for Overall Job Satisfaction

The third major research question included in this investigation dealt with determining which job satisfaction factors accounted for the largest amount of variance in overall job satisfaction. Table 23 is a report of a stepwise multiple regression of the seven job satisfaction factor measures and overall job satisfaction. The

Table 23.--Stepwise multiple regression of seven job satisfaction factors and overall job satisfaction.

Step	Variable Entered	Signif.	Multiple R	R Square	R Square Change	Simple R
1	Teacher Achievement and Growth	.000	.64284	.41325	.41325	.64284
2	Teacher-Student Interaction	.000	.67697	.45829	.04505	.51866
3	Teacher Resources	.000	.68297	.46645	.00816	.36015
4	Teacher Compensation and Labor Relations	.052	.68435	.46834	.00189	.40548
5	Teacher Workload	.310	.68473	.46885	.00051	.30596
6	Teacher Status	.452	.68494	.46914	.00028	.39349
7	Teaching Assignment	.454	.68514	.46942	.00028	.31086

Step 1

		Analysis of Variance	df	Sum of Square	Mean Square	F
Multiple R =	.64284	Regression	1	15074.26928	15074.26928	755.00507*
R Square	.41325	Residual	1072	21403.32197	19.96579	p = .000
St. Deviation	4.46831					

Step 2

		Analysis of Variance	df	Sum of Square	Mean Square	F
Multiple R =	.67697	Regression	2	16717.45932	8358.72966	453.04351*
R Square	.45829	Residual	1071	19760.13193	18.45017	p = .000
St. Deviation	4.29537					

Table 23.--Continued.

Step 3

		Analysis of Variance	df	Sum of Square	Mean Square	F
Multiple R =	.68297					
R Square	.46645	Regression	3	17015.07104	5671.69035	311.81515*
St. Deviation	4.26489	Residual	1070	19462.52021	18.18927	p = .000

Step 4

		Analysis of Variance	df	Sum of Square	Mean Square	F
Multiple R =	.68435					
R Square	.46834	Regression	4	17083.97265	4270.99316	235.42237*
St. Deviation	4.25932	Residual	1069	19393.61860	18.14183	p = .000

Step 5

		Analysis of Variance	df	Sum of Square	Mean Square	F
Multiple R =	.68473					
R Square	.46885	Regression	5	17102.69496	3420.53899	188.54995*
St. Deviation	4.25926	Residual	1068	19374.89629	18.14129	p = .000

Step 6

		Analysis of Variance	df	Sum of Square	Mean Square	F
Multiple R =	.68494					
R Square	.46914	Regression	6	17112.98908	2852.16485	157.15582*
St. Deviation	4.26012	Residual	1067	19364.60217	18.14864	p = .000

Step 7

		Analysis of Variance	df	Sum of Square	Mean Square	F
Multiple R =	.68514					
R Square	.46942	Regression	7	17123.18030	2446.16861	134.72979*
St. Deviation	4.26100	Residual	1066	19354.41094	18.15611	

independent variable entered first into the regression was Factor 5: Teacher achievement and growth. Singularly, this factor accounted for 41% of the variance in overall job satisfaction. Factor 1: Teacher-student interaction was entered next and accounted for an additional 4.5% of the variance in overall satisfaction. Factor 2: Teacher resources was the third factor entered into the regression and accounted for an additional 1% of the variance. Each of these factor contributions through Step 3 was significant and formed a cumulative accounting of nearly 47% of the variance in overall job satisfaction. The remaining four factors were entered into the regression equation, and their contribution at each step was negligible and statistically insignificant. Based on this regression, Factor 5: Teacher achievement and growth, Factor 1: Teacher-student interaction, and Factor 2: Teacher resources combined to form the most powerful predictor of overall job satisfaction for this sample of teachers.

Question 4: Value of Importance Weighting Satisfaction Scores

Question 4a: Correlation between weighted and unweighted satisfaction scores. In an attempt to determine if measures of job-facet importance give useful information for the purpose of estimating overall job satisfaction, Question 4 of this investigation consisted of several distinct analyses. The first question called for a comparison between unweighted and weighted-by-importance job satisfaction factor scores. It was reasoned that strong positive correlations would indicate that the unweighted and weighted measures were measuring the

same thing; therefore, weighting by importance would be redundant. Table 24 presents the Pearson correlation coefficients between unweighted and weighted-by-importance teacher job satisfaction factor scores. Each comparison resulted in strong-positive correlations, which indicates that importance weighting offers redundant information and the procedure lacks efficacy.

Table 24.--Pearson correlation coefficients between unweighted and weighted-by-importance satisfaction factor scores.

Satisfaction Factor Dimensions	*r*
1. Teacher-Student Interaction	.9432
2. Teacher Resources	.8930
3. Teacher Compensation and Labor Relations	.9036
4. Teaching Assignment	.8840
5. Teacher Achievement and Growth	.8779
6. Teacher Workload	.8804
7. Teacher Status	.9555

Question 4b: Weighting to improve the correlation between factors and overall job satisfaction. The second component of this examination of the value of weighting by importance was a comparison of correlations between the seven job satisfaction factors and overall job satisfaction using unweighted and weighted-by-importance measures. The purpose of this examination was to determine if weighting would improve the correlation between the various job satisfaction factors and overall job satisfaction. Table 25 presents the correlation between the unweighted factors and overall satisfaction, between the weighted

Table 25.--A comparison of Pearson correlation coefficients between unweighted satisfaction factor scores correlated with overall job satisfaction and weighted satisfaction factor scores correlated with overall job satisfaction scores.

Job Satisfaction Factor	Unweighted *r*	Weighted *r*	Difference	Hotelling's Z-Value
1. Teacher-Student Interaction	.5187	.5159	-.0028	.32
2. Teacher Resources	.3601	.3502	-.0099	.75
3. Teacher Compensation and Labor Relations	.4055	.3580	-.0475	4.00*
4. Teaching Assignment	.3109	.2605	-.0504	3.55*
5. Teacher Achievement and Growth	.6428	.5961	-.0467	4.39*
6. Teacher Workload	.3060	.2689	-.0371	2.75*
7. Teacher Status	.3935	.4017	+.0082	-1.24

*Significant difference on a one-tailed test with an alpha level of .01.

factors and overall satisfaction, the difference between correlations, and Hotelling's test for differences between correlations. For six of the seven factors, weighting resulted in a weaker correlation between the factor and overall job satisfaction. In four of these cases, weighting significantly reduced the correlation. Weighting Factor 7: Teacher status, by importance improved the correlation; however, the difference was not significant at the .01 level. The failure of the weighting procedure to improve the correlation between the satisfaction factors and overall job satisfaction suggests that weighting offers little toward understanding overall job satisfaction.

Question 4c: Factor importance and differences in satisfaction levels. The third strategy used to test the value of importance weighting job-facet satisfaction scores in predicting overall job satisfaction involved difference testing. Two separate null hypotheses were structured to predict no differences in levels of overall job satisfaction between groups of teachers who expressed similar levels of satisfaction on the various satisfaction factors, but who varied on the levels of importance they assigned to the same factors. The first hypothesis compared the overall job satisfaction performance of teachers expressing high importance and dissatisfaction on a particular satisfaction factor with a group of teachers expressing low importance and dissatisfaction on the same factor. The second hypothesis compared the overall job satisfaction performance of teachers expressing high importance and satisfaction on a particular satisfaction factor with a group of teachers expressing low importance and satisfaction on the

same factor. Comparisons were performed on each of the seven job satisfaction factors presented earlier. It was presumed that if importance weighting contributed valuable information not already present within the satisfaction scores, each null hypothesis would be rejected.

Table 26 reports the results of t-tests comparing overall job satisfaction between Group 1 (teachers expressing high importance and dissatisfaction) and Group 2 (teachers expressing low importance and dissatisfaction) on seven job satisfaction factors. No significant differences in overall job satisfaction were evident among the seven comparisons using factor importance ratings as the variable to distinguish two groups of dissatisfied teachers. Each null hypothesis, therefore, was retained.

Table 27 reports the results of t-tests comparing overall job satisfaction between Group 1 (teachers expressing high importance and satisfaction) and Group 2 (teachers expressing low importance and satisfaction) on seven job satisfaction factors. Only one significant difference on overall job satisfaction was evident among the seven comparisons using factor importance ratings as the variable to distinguish two groups of satisfied teachers. In the case of Factor 7: Teacher status, the finding of significant differences resulted in rejection of the null hypothesis. With each of the six other satisfaction factors, the null hypothesis was retained.

The result of this third strategy used to test the value of importance weighting generally supported the finding that little reason exists to use weighting. With the exception of one factor (Teacher

Table 26.--Comparison of overall job satisfaction between two groups of dissatisfied teachers who varied on importance ratings.

Job Satisfaction Factor	n	Mean	S.D.	F-Value	t-Value	df	2-Tail Prob.
Teacher-Student Interaction							
Group 1: High importance	174	19.5920	5.612	1.17	.87	260	.383
Group 2: Low importance	88	18.9659	5.189				
Teacher Resources							
Group 1: High importance	114	20.5614	5.855	1.03	-.31	208	.756
Group 2: Low importance	96	20.8125	5.777				
Teacher Compensation/Labor Relations							
Group 1: High importance	169	20.3077	5.924	1.10	-1.11	216	.266
Group 2: Low importance	49	21.3673	5.637				
Teaching Assignment							
Group 1: High importance	121	20.7438	6.153	1.46	.01	221	.991
Group 2: Low importance	102	20.7353	5.101				
Teacher Work Achievement							
Group 1: High importance	118	17.9153	4.931	1.17	-1.29	195	.197
Group 2: Low importance	79	18.8734	5.324				
Teacher Workload							
Group 1: High importance	192	20.7813	6.010	1.72	-1.52	147.27	.130
Group 2: Low importance	66	21.8636	4.577				
Teacher Status							
Group 1: High importance	250	20.5720	5.775	1.05	-.43	329	.666
Group 2: Low importance	81	20.8889	5.628				

*Significant at alpha = .01.

Table 27.--Comparison of overall job satisfaction between two groups of satisfied teachers who varied on importance ratings.

Job Satisfaction Factor	n	Mean	S.D.	F-Value	t-Value	df	2-Tail Prob.
Teacher-Student Interaction							
Group 3: High importance	215	26.4326	5.178	1.25	1.30	304	.194
Group 4: Low importance	91	25.6154	4.628				
Teacher Resources							
Group 3: High importance	128	26.2656	5.459	1.04	1.73	250	.085
Group 4: Low importance	124	25.0887	5.348				
Teacher Compensation/Labor Relations							
Group 3: High importance	140	25.4714	5.287	1.01	-1.10	234	.273
Group 4: Low importance	96	26.2396	5.257				
Teaching Assignment							
Group 3: High importance	206	24.9709	5.710	1.16	-.69	369	.491
Group 4: Low importance	165	25.3697	5.307				
Teacher Work Achievement							
Group 3: High importance	165	27.5879	4.274	1.20	2.22	280	.027
Group 4: Low importance	117	26.3932	4.683				
Teacher Workload							
Group 3: High importance	150	24.8133	5.866	1.01	.35	322	.272
Group 4: Low importance	174	24.5862	5.824				
Teacher Status							
Group 3: High importance	131	26.9695	4.883	1.03	3.17	270	.002*
Group 4: Low importance	141	25.0780	4.959				

*Significant at alpha = .01.

status) in the comparison of satisfied teacher groups, factor importance was not accompanied by significantly different levels of overall job satisfaction. Because variations in factor importance were not accompanied by differences in satisfaction levels, the value of this weighting procedure was suspect.

Question 4d: Multiplicative contributions of satisfaction factors weighted by importance. The final component in determining the value of importance weighting job satisfaction measures was a moderator regression procedure. Through this procedure, the proportion of variance in overall job satisfaction accounted for by the satisfaction factor ratings was determined first. In the second step of the procedure, the additional variance in overall job satisfaction accounted for by adding the factor importance ratings to the regression equation was calculated. By combining the linear contributions of the job satisfaction factors and their importance, the main effects analysis of the regression procedure was performed. The final step of the regression procedure, i.e., the interaction effects, determined the amount of variance in overall job satisfaction accounted for by the multiplicative contributions of factors weighted by importance.

Both the main effects and interaction effects contributions to overall job satisfaction were tested for significance by using a procedure described by Pedhazur (1982) entitled: "A test for the significance of a squared semipartial correlation" (p. 122). A test formula determines the significance of an increment in the proportion

of variance of the dependent variable accounted for by any number of independent variables.

Table 28 presents the moderator regression analysis of the effect of satisfaction factor ratings (Step 1), importance factor ratings (Step 2), and weighted-by-importance ratings (Step 3) on levels of overall job satisfaction. Step 1 of the regression analysis revealed that the seven satisfaction factor ratings accounted for nearly 46.942% of the variance in overall job satisfaction. By adding the knowledge gained from the importance ratings of each factor, Step 2 increased the variance accounted for in overall job satisfaction by 1.438% to 48.038%. This increase in variance accounted for was subjected to the test for significance of a squared semipartial correlation, and it was determined that the increased accountability resulted in an F-value of 3.19, which was significant at an alpha level of .01.

Step 3 of the moderator regression analysis considered the multiplicative contributions of factors weighted by importance. A gain of 0.595% in variance accounted for was produced, yielding a total of 48.633% of the variance in overall satisfaction being accounted for by combining all three steps of the moderator regression procedure. The gain of 0.595% in variance accounted for was subjected to the test for significance of a squared semipartial correlation, and it was determined that the increased accountability resulted in an F-value of 1.741, which was not significant at an alpha level of .01.

Failure of the weighting procedure to result in a significant improvement in the variance accounted for in overall job satisfaction

Table 28.--Moderator regression analysis of the effect of satisfaction factor ratings, importance factor ratings, and weighted-by-importance factor ratings on levels of overall job satisfaction.

Step	Variable Entered	Factor Significance	Multiple R	R Square	R Square Change	Simple R
1	Satisfaction					
	SSAT 1	.000*	.51866	.26900	.26900	.51866
	SSAT 6	.406	.53973	.29130	.02230	.30596
	SSAT 4	.454	.54717	.29939	.00809	.31086
	SSAT 7	.424	.56204	.31589	.01650	.39349
	SSAT 3	.159	.57659	.33246	.01656	.40548
	SSAT 5	.000*	.67718	.45858	.12612	.64284
	SSAT 2	.000*	.68514	.46942	.01084	.36015
2	Importance					
	ISAT 4	.264	.68531	.46965	.00023	-.01117
	ISAT 5	.086	.68700	.47198	.00023	.04956
	ISAT 1	.007*	.68923	.47504	.00307	.07854
	ISAT 7	.910	.68923	.47504	.00000	.01667
	ISAT 3	.049	.69186	.47867	.00362	-.08937
	ISAT 6	.066	.69283	.48002	.00135	-.07823
	ISAT 2	.393	.69309	.48038	.00036	.05499
3	Importance-Weighted					
	MSAT 5	.245	.69472	.48284	.00227	.59607
	MSAT 6	.383	.69539	.48357	.00093	.26885
	MSAT 7	.929	.69542	.48361	.00005	.40175
	MSAT 4	.281	.69568	.48397	.00036	.26048
	MSAT 2	.812	.69569	.48398	.00001	.35023
	MSAT 3	.120	.69651	.48513	.00115	.35798
	MSAT 1	.118	.69737	.48633	.00120	.51591

Table 28.--Continued.

Step 1: Satisfaction

		Analysis of Variance	df	Sum of Square	Mean Square	F
Multiple R =	.68514					
R Square	.46942	Regression	7	17123.18030	2446.16861	134.72979
St. Deviation	4.26100	Residual	1066	19354.41094	18.15611	p = .000

Step 2: Importance

		Analysis of Variance	df	Sum of Square	Mean Square	F
Multiple R =	.69309					
R Square	.48038	Regression	14	17522.97573	1251.64112	69.92956
St. Deviation	4.23067	Residual	1059	18954.61552	17.89860	p = .000

Step 3: Importance-Weighted

		Analysis of Variance	df	Sum of Square	Mean Square	F
Multiple R =	.69737					
R Square	.48633	Regression	21	17740.10605	844.76695	47.42871
St. Deviation	4.22034	Residual	1052	18737.48520	17.81130	p = .000

leads to the suggestion that weighting has little to offer. The multiplicative weighting procedure (Step 3) did not result in a statistically significant information gain. Further, the information gained by the added knowledge derived from the importance scores (Step 2) seemed insufficient to warrant the weighting procedures from a practical sense. This step required seven added variables to account for an additional 1.4% variance in overall job satisfaction. Recognizing that the satisfaction scores alone accounted for the major portion of variance in overall job satisfaction, the added knowledge from weighting appears neither statistically nor practically worthwhile.

Question 5: Variation in Teacher and School Characteristics and Satisfaction Differences

In an effort to determine if changes in job satisfaction levels accompanied changes in individual and organizational characteristics of teachers and the schools in which they worked, the fifth and final general research question examined differences in job satisfaction evident with variations in 17 nonassignable teacher and school-organization variables. Differing groups of teachers were established on the basis of variations among each of the personal and organizational characteristics included in this study. A separate analysis of satisfaction differences was conducted for each characteristic. The mean overall job satisfaction performance and performance on the seven job satisfaction factors for the various teacher groups were analyzed for differences using either a Student's t-test or analysis of variance.

The choice of test was dependent on the number of teacher groups operationalized in each comparison.

The general form of the null hypothesis being tested by each comparison was: "There will be no difference in satisfaction factor scores and overall job satisfaction scores between X number of groups of teachers who vary on Y characteristic." For each personal and organizational characteristic used to establish a comparison, the null hypothesis was tested on overall job satisfaction and on each of the seven satisfaction factors. The findings from this hypothesis testing follow and include a short description of the personal or organizational characteristic used to establish teacher groups, a summary of the acceptance and rejection of the eight null hypotheses formulated for each comparison, and a report of findings discerned whenever a null hypothesis was rejected.

Question 5a: Teacher sex and satisfaction differences. The first comparison was between groups of teachers who varied on the basis of their self-reported sex: male and female teachers. Table 29 presents the results of t-tests comparing overall job satisfaction and satisfaction on seven job factors for Group 1: male teachers and Group 2: female teachers. Significant t-values were found for the following factors: overall job satisfaction, teacher-student interaction, teacher compensation and labor relations, teacher achievement and growth, and teacher workload. No differences were found for the remaining factors.

Table 29.--Comparison of overall job satisfaction and seven job satisfaction factors between male and female teachers.

Job Satisfaction Factor	n	Mean	S.D.	F-Value	t-Value	df	2-Tail Prob.
Overall Job Satisfaction							
Group 1: Male	425	22.3600	5.799	1.04	-4.56	1071	.000*
Group 2: Female	648	23.9938	5.696				
Teacher-Student Interaction							
Group 1: Male	425	27.3624	7.960	1.04	-3.70	1071	.000*
Group 2: Female	648	29.2253	8.132				
Teacher Resources							
Group 1: Male	425	46.5929	12.779	1.16	-.63	1071	.529
Group 2: Female	648	47.1188	13.780				
Teacher Compensation/Labor Relations							
Group 1: Male	425	44.7082	12.648	1.06	-2.92	1071	.004*
Group 2: Female	648	46.9691	12.269				
Teaching Assignment							
Group 1: Male	425	15.5459	4.620	1.02	-.77	1071	.443
Group 2: Female	648	15.7685	4.659				
Teacher Achievement and Growth							
Group 1: Male	425	37.7153	8.824	1.00	-3.72	1071	.000*
Group 2: Female	648	39.7593	8.808				
Teacher Workload							
Group 1: Male	425	27.8659	7.631	1.12	5.21	1071	.000*
Group 2: Female	648	25.2948	8.071				
Teacher Status							
Group 1: Male	425	9.0682	4.504	1.10	.80	1071	.424
Group 2: Female	648	8.8364	4.732				

*Significant at alpha = .01.

Findings from these analyses indicated that female teachers generally experienced more satisfaction with their jobs than did male teachers. Specifically, it was found that female teachers reported significantly higher overall job satisfaction, higher satisfaction with teacher-student interaction, higher satisfaction with teacher compensation and labor relations, and higher satisfaction with teacher achievement and growth. Although no satisfaction differences were evident between male and female teachers on teacher resources and teacher status, male teachers appeared significantly more satisfied than female teachers on teacher workload.

Question 5b: Teacher age and satisfaction differences. The second comparison was between groups of teachers who varied according to their self-reported ages. Table 30 summarizes analysis of variance analyses comparing overall job satisfaction and satisfaction on seven job factors for Group 1: teachers between the ages of 23 and 28, Group 2: teachers between the ages of 29 and 37, Group 3: teachers between the ages of 38 and 49, and Group 4: teachers who were 50 years of age and above. Significant F-ratios were found for the following factors: overall job satisfaction, teacher resources, teaching assignment, teacher achievement and growth, and teacher status. No differences were found for the remaining factors.

Table 31 is a summary of Scheffe procedures used to determine the nature of significant differences between groups of teachers who varied on age. Findings from these procedures indicated the following:

Table 30.--Comparison of overall job satisfaction and seven job satisfaction factors between teachers who varied on age.

Source	df	Sum of Squares	Mean Squares	F-Ratio	F-Prob.
Overall Job Satisfaction					
Between groups	3	783.7156	261.2385	7.831	.0000*
Within groups	1070	35693.8756	33.3588		
Total	1073	36477.5912			
Teacher-Student Interaction					
Between groups	3	310.8113	103.6038	1.560	.1973
Within groups	1070	71040.0462	66.3926		
Total	1073	71350.8575			
Teacher Resources					
Between groups	3	3152.6563	1050.8854	5.921	.0005*
Within groups	1070	189902.5616	177.4790		
Total	1073	193055.2179			
Teacher Compensation/Labor Relations					
Between groups	3	1308.1984	436.0661	2.821	.0378
Within groups	1070	165397.7457	154.5773		
Total	1073	166705.9441			
Teaching Assignment					
Between groups	3	279.7446	93.2482	4.365	.0046*
Within groups	1070	22859.8467	21.3643		
Total	1073	23139.5912			
Teacher Achievement and Growth					
Between groups	3	3301.6040	1100.5347	14.393	.0000*
Within groups	1070	81814.9817	76.4626		
Total	1073	85116.5857			
Teacher Workload					
Between groups	3	247.3373	82.4458	1.292	.2758
Within groups	1070	68281.9187	63.8149		
Total	1073	68529.2561			
Teacher Status					
Between groups	3	389.9224	129.9741	6.101	.0004*
Within groups	1070	22793.1912	21.3020		
Total	1073	23183.1136			

*Significant at alpha = .01.

Table 31.--Report of Scheffe procedures on ANOVA comparing groups of teachers who varied on age.

Satisfaction Dimension Mean	Group	Group	Group	Group	Group
Overall Satisfaction		3	2	4	1
22.7131	3 (38-49)				
22.9932	2 (29-37)				
24.7220	4 (50-69)	*	*		
24.8800	1 (23-28)				
Teacher Resources		1	2	3	4
42.4000	1 (23-28)				
44.9390	2 (29-37)				
46.9960	3 (38-49)				
49.3127	4 (50-69)		*		
Teaching Assignment		2	3	4	1
14.9288	2 (29-37)				
15.7596	3 (38-49)				
16.3012	4 (50-69)	*			
16.3200	1 (23-28)				
Teacher Achievement/Growth		2	1	3	4
37.1220	2 (29-37)				
38.3200	1 (23-28)				
38.4869	3 (38-49)				
41.8649	4 (50-69)	*		*	
Teacher Status		1	2	3	4
8.4800	1 (23-28)				
8.5831	2 (29-37)				
8.5838	3 (38-49)				
9.9884	4 (50-69)		*	*	

*Denotes pairs of groups significantly different at the .05 level.

1. Teachers who were age 50 and above reported significantly higher levels of overall job satisfaction compared to teachers between the ages of 38 and 49 and teachers between the ages of 29 and 37.

2. Teachers who were age 50 and above reported significantly higher levels of satisfaction with teacher resources compared to teachers between the ages of 29 and 37.

3. Teachers who were age 50 and above reported significantly higher levels of satisfaction with teaching assignment compared to teachers between the ages of 29 and 37.

4. Teachers who were age 50 and above reported significantly higher levels of satisfaction with teacher achievement and growth compared to teachers between the ages of 29 and 37 and teachers between the ages of 38 and 49.

5. Teachers who were age 50 and above reported significantly higher levels of satisfaction with teacher status compared to teachers between the ages of 29 and 37 and teachers between the ages of 38 and 49.

For older teachers age 50 through 69, the findings from these analyses indicated significantly higher levels of job satisfaction compared to teachers from most other age groups. These higher levels of satisfaction experienced by older teachers included overall job satisfaction and satisfaction with teacher resources, teaching assignment, teacher achievement and growth, and teacher status. Although no significant differences in satisfaction levels were evident between these older teachers and teachers between the ages of 23 and

28, it should be noted that satisfaction among these younger teachers was not significantly different from the satisfaction experienced by teachers between the ages of 29 and 37 or teachers between the ages of 38 and 49.

Question 5c: Career experience and satisfaction differences. In the third comparison, length of teacher career experience was used to determine groups of teachers. Table 32 presents the analysis of variance findings comparing overall job satisfaction performance and satisfaction on seven job factors for Group 1: beginning-career teachers, Group 2: early-career teachers, Group 3: mid-career teachers, and Group 4: late-career teachers. Significant F-ratios were found for the following factors: overall job satisfaction, teacher resources, teaching assignment, teacher achievement and growth, teacher workload, and teacher status. The null hypothesis was retained for the remaining factors.

Table 33 presents the results of using the Scheffe procedure to determine the location of significant differences between groups of teachers who varied on length of career experience. Findings from these procedures indicated the following:

1. Late-career teachers and beginning-career teachers reported significantly higher levels of overall job satisfaction than mid-career teachers.

2. Late-career teachers reported significantly higher levels of satisfaction with teacher resources than early-career teachers and mid-career teachers.

Table 32.--Comparison of overall job satisfaction and seven job satisfaction factors between teachers who varied on career experience.

Source	df	Sum of Squares	Mean Squares	F-Ratio	F-Prob.
Overall Job Satisfaction					
Between groups	3	744.7903	248.2634	7.434	.0001*
Within groups	1070	35732.8009	33.3951		
Total	1073	36477.5912			
Teacher-Student Interaction					
Between groups	3	696.9360	232.3120	3.518	.0147
Within groups	1070	70653.9215	66.0317		
Total	1073	71350.9215			
Teacher Resources					
Between groups	3	3623.4228	1207.8076	6.822	.0001*
Within groups	1070	189431.7951	177.0391		
Total	1073	193055.2179			
Teacher Compensation/Labor Relations					
Between groups	3	977.8972	325.9657	2.105	.0980
Within groups	1070	165728.0469	154.8860		
Total	1073	166705.9441			
Teaching Assignment					
Between groups	3	284.5475	94.8492	4.441	.0041*
Within groups	1070	22855.0438	21.3599		
Total	1073	23139.5912			
Teacher Achievement and Growth					
Between groups	3	1693.7494	564.5831	7.241	.0001*
Within groups	1070	83422.8362	77.9653		
Total	1073	85116.5857			
Teacher Workload					
Between groups	3	759.8455	253.2818	3.999	.0076*
Within groups	1070	67769.4106	63.3359		
Total	1073	68529.2561			
Teacher Status					
Between groups	3	286.5880	95.5293	4.464	.0040*
Within groups	1070	22896.5256	21.3986		
Total	1073	23183.1136			

*Significant at alpha = .01.

Table 33.--Report of Scheffe procedures on ANOVA comparing groups of teachers who varied on career experience.

Satisfaction Dimension Mean	Group	Group	Group	Group	Group
Overall Satisfaction		3	2	4	1
22.6806	3 (mid-career)				
23.3333	2 (early-career)				
24.4372	4 (late-career)	*			
26.2000	1 (beginning)	*			
Teacher Resources		1	2	3	4
44.0857	1 (beginning)				
45.2381	2 (early-career)				
46.7197	3 (mid-career)				
50.3819	4 (late-career)		*	*	
Teaching Assignment		2	3	1	4
15.0923	2 (early-career)				
15.6885	3 (mid-career)				
15.8286	1 (beginning)				
16.5980	4 (late-career)	*			
Teacher Achievement/Growth		2	1	3	
37.9911	2 (early-career)				
38.2571	1 (beginning)				
38.5174	3 (mid-career)				
41.5025	4 (late-career)	*		*	
Teacher Workload		2	3	4	1
25.6101	2 (early-career)				
26.0635	3 (mid-career)				
27.8543	4 (late-career)	*			
27.9143	1 (beginning)				
Teacher Status		2	3	1	4
8.6220	2 (early-career)				
8.7024	3 (mid-career				
8.7714	1 (beginning)				
10.0000	4 (late-career)	*	*		

*Denotes pairs of groups significantly different at the .05 level.

3. Late-career teachers reported significantly higher levels of satisfaction with teaching assignment than early-career teachers.

4. Late-career teachers reported significantly higher levels of satisfaction with teacher achievement and growth than early-career teachers and mid-career teachers.

5. Late-career teachers reported significantly higher levels of satisfaction with teacher workload than early-career teachers.

6. Late-career teachers reported significantly higher levels of satisfaction with teacher status than early-career teachers and mid-career teachers.

The findings from these analyses of career stage and accompanying satisfaction levels supported the conclusion that late-career teachers and beginning teachers experienced significantly higher levels of overall job satisfaction than mid-career teachers. Late-career teachers also expressed significantly higher levels of satisfaction with teacher resources, teaching assignment, teacher achievement and growth, teacher workload, and teacher status than early-career teachers. Furthermore, late-career teachers expressed significantly higher levels of satisfaction with teacher resources, teacher growth and achievement, and teacher status than mid-career teachers. Although beginning teachers reported significantly higher levels of overall job satisfaction than mid-career teachers, on no other satisfaction factors were beginning teachers different from either early-career or mid-career teachers. Generally, the findings descriptive of higher levels

of satisfaction for late-career teachers were consistent with findings from the analysis concerning teacher age and satisfaction differences.

Question 5d: Marital status and satisfaction differences. The next comparison was between groups of teachers who varied on the basis of their marital status. Table 34 presents results of t-tests comparing overall job satisfaction and satisfaction on seven job factors between Group 1: married teachers and Group 2: not married teachers. A significant t-value was found for one factor: teacher achievement and growth. The null hypothesis was retained for the remaining factors.

Findings from these analyses indicated that married teachers reported significantly higher levels of satisfaction with teacher achievement and growth than teachers who were not married. For the remaining factors, however, no differences in satisfaction levels were found.

Question 5e: Dependent children and satisfaction differences. The fifth comparison was between groups of teachers who varied as to whether or not they were parents responsible for dependent children. Table 35 presents results of t-tests comparing overall job satisfaction and satisfaction on seven job factors for Group 1: teachers with dependents and Group 2: teachers with no dependents. Significant t-values were found for the following factors: overall job satisfaction, teaching assignment, and teacher achievement and growth. The null hypothesis was retained for the remaining factors.

Findings from these analyses indicated that teachers with responsibilities for dependent children consistently expressed

Table 34.--Comparison of overall job satisfaction and seven job satisfaction factors between married and not married teachers.

Job Satisfaction Factor	n	Mean	S.D.	F-Value	t-Value	df	2-Tail Prob.
Overall Job Satisfaction							
Group 1: Married	879	23.4630	5.630	1.31	1.28	261.65	.200
Group 2: Not married	194	22.8196	6.454				
Teacher-Student Interaction							
Group 1: Married	879	28.7793	7.858	1.33	2.29	260.55	.023
Group 2: Not married	194	27.1649	9.078				
Teacher Resources							
Group 1: Married	879	47.3891	13.258	1.08	2.50	1071	.013
Group 2: Not married	194	44.7423	13.791				
Teacher Compensation/Labor Relations							
Group 1: Married	879	46.3936	12.302	1.14	1.79	1071	.073
Group 2: Not married	194	44.6237	13.110				
Teaching Assignment							
Group 1: Married	879	15.7429	4.620	1.06	.94	1071	.348
Group 2: Not married	194	15.3969	4.747				
Teacher Achievement and Growth							
Group 1: Married	879	39.3629	8.607	1.29	3.01	263.11	.003*
Group 2: Not married	194	37.0773	9.768				
Teacher Workload							
Group 1: Married	879	26.5142	7.922	1.09	1.76	1071	.079
Group 2: Not married	194	25.4021	8.280				
Teacher Status							
Group 1: Married	879	9.0671	4.592	1.10	2.09	1071	.037
Group 2: Not married	194	8.2990	4.826				

*Significant at alpha = .01.

Table 35.--Comparison of overall job satisfaction and seven job satisfaction factors between teachers who varied on dependent status.

Job Satisfaction Factor	n	Mean	S.D.	F-Value	t-Value	df	2-Tail Prob.
Overall Job Satisfaction							
Group 1: Dependents	693	22.9206	5.662	1.10	-3.27	1071	.001*
Group 2: No dependents	380	24.1237	5.945				
Teacher-Student Interaction							
Group 1: Dependents	693	28.1934	8.069	1.03	-1.60	1071	.109
Group 2: No dependents	380	29.0237	8.174				
Teacher Resources							
Group 1: Dependents	693	46.6898	13.071	1.14	- .73	1071	.466
Group 2: No dependents	380	47.3132	13.958				
Teacher Compensation/Labor Relations							
Group 1: Dependents	693	45.6032	12.591	1.07	-1.67	1071	.095
Group 2: No dependents	380	46.9316	12.198				
Teaching Assignment							
Group 1: Dependents	693	15.3997	4.504	1.10	-2.68	1071	.007*
Group 2: No dependents	380	16.1921	4.490				
Teacher Achievement and Growth							
Group 1: Dependents	693	38.2655	8.782	1.03	-.343	1071	.001*
Group 2: No dependents	380	40.1974	8.895				
Teacher Workload							
Group 1: Dependents	693	26.0924	8.142	1.11	-1.22	1071	.222
Group 2: No dependents	380	26.7158	7.715				
Teacher Status							
Group 1: Dependents	693	8.8442	4.547	1.12	- .80	1071	.423
Group 2: No dependents	380	9.0816	4.813				

*Significant at alpha = .01.

significantly lower levels of overall job satisfaction, lower levels of satisfaction with teaching assignment, and lower levels of satisfaction with teacher achievement and growth than teachers with no responsibilities for dependent children. No differences in satisfaction were found for the remaining factors, including teacher-student interaction, teacher resources, teacher compensation, teacher workload, and teacher status.

Question 5f: Second job and satisfaction differences. The sixth comparison was between groups of teachers who varied according to whether or not they had a second job in addition to their teaching responsibilities. Table 36 presents results of t-tests comparing overall job satisfaction and satisfaction on seven job factors for Group 1: teachers with a second job and Group 2: teachers with no second job. Significant t-values were found for the following factors: overall job satisfaction, teacher-student interaction, teacher compensation and labor relations, and teacher achievement and growth. The null hypothesis was retained for the remaining factors.

Findings from these analyses indicated that teachers who had a second job consistently reported significantly lower overall job satisfaction, lower satisfaction with teacher-student interaction, lower satisfaction with teacher compensation and labor relations, and lower satisfaction with teacher achievement and growth than teachers who did not have a second job.

Question 5g: Spouse employment and satisfaction differences. The seventh comparison was between groups of teachers who varied

Table 36.--Comparison of overall job satisfaction and seven job satisfaction factors between teachers with and without second jobs.

Job Satisfaction Factor	n	Mean	S.D.	F-Value	t-Value	df	2-Tail Prob.
Overall Job Satisfaction							
Group 1: Second job	233	21.4764	5.930	1.08	-5.54	1072	.000*
Group 2: No second job	841	23.8371	5.701				
Teacher-Student Interaction							
Group 1: Second job	233	27.0815	8.132	1.00	-2.93	1072	.003*
Group 2: No second job	841	28.8430	8.124				
Teacher Resources							
Group 1: Second job	233	45.3605	13.696	1.06	-1.96	1072	.050
Group 2: No second job	841	47.3044	13.312				
Teacher Compensation/Labor Relations							
Group 1: Second job	233	42.9485	12.898	1.12	-4.34	1072	.000*
Group 2: No second job	841	46.9239	12.210				
Teaching Assignment							
Group 1: Second job	233	15.5107	4.612	1.02	- .61	1072	.542
Group 2: No second job	841	15.7206	4.654				
Teacher Achievement and Growth							
Group 1: Second job	233	36.4807	9.248	1.13	-4.78	1072	.000*
Group 2: No second job	841	39.5993	8.695				
Teacher Workload							
Group 1: Second job	233	27.2232	8.406	1.14	1.97	1072	.050
Group 2: No second job	841	26.0618	7.860				
Teacher Status							
Group 1: Second job	233	8.3433	4.404	1.14	-2.14	1072	.032
Group 2: No second job	841	9.0797	4.704				

*Significant at alpha = .01.

according to whether or not their spouse was fully employed. Table 37 presents the results of t-tests comparing overall job satisfaction and satisfaction on seven job factors for Group 1: teachers who have a fully employed spouse and Group 2: teachers who have a spouse not employed. A significant t-value was found for the following factor: teacher status. The null hypothesis was retained for the remaining factors.

Findings from these analyses indicated that teachers whose spouse was fully employed reported significantly lower levels of satisfaction with teacher status than teachers whose spouse was not employed. The status of spouse employment resulted in no satisfaction differences on overall job satisfaction or on the six remaining job satisfaction factors.

Question 5h: Assignment consistency and satisfaction differences. The eighth comparison was between groups of teachers who varied on whether or not their teaching assignment was consistent with their training and experience. Table 38 presents results of t-tests comparing overall job satisfaction and satisfaction on seven job factors for Group 1: teachers with a consistent assignment and Group 2: teachers with an inconsistent assignment. Significant t-values were found for the following factors: overall job satisfaction, teaching assignment, and teacher achievement and growth. The null hypothesis was retained for the remaining factors.

Findings from these analyses indicated that teachers with an assignment consistent with their training and experience expressed

Table 37.--Comparison of overall job satisfaction and seven job satisfaction factors between teachers who varied on spouse employment status.

Job Satisfaction Factor	n	Mean	S.D.	F-Value	t-Value	df	2-Tail Prob.
Overall Job Satisfaction							
Group 1: Spouse employed	646	23.5217	5.656	1.03	.37	880	.714
Group 2: Spouse not employed	236	23.3644	5.571				
Teacher-Student Interaction							
Group 1: Spouse employed	646	28.8700	8.082	1.25	.55	462.88	.580
Group 2: Spouse not employed	236	28.5551	7.238				
Teacher Resources							
Group 1: Spouse employed	646	47.3808	13.338	1.04	.10	880	.917
Group 2: Spouse not employed	236	47.2754	13.055				
Teacher Compensation/Labor Relations							
Group 1: Spouse employed	646	46.3839	12.101	1.12	- .00	880	.999
Group 2: Spouse not employed	236	46.3856	12.816				
Teaching Assignment							
Group 1: Spouse employed	646	15.7090	4.681	1.11	- .47	880	.641
Group 2: Spouse not employed	236	15.8729	4.447				
Teacher Achievement and Growth							
Group 1: Spouse employed	646	39.4814	8.738	1.14	.67	880	.502
Group 2: Spouse not employed	236	39.0424	8.189				
Teacher Workload							
Group 1: Spouse employed	646	26.3713	7.922	1.01	-1.23	880	.218
Group 2: Spouse not employed	236	27.0593	7.887				
Teacher Status							
Group 1: Spouse employed	646	8.8127	4.571	1.00	-2.66	880	.008*
Group 2: Spouse not employed	236	9.7373	4.579				

*Significant at alpha = .01.

Table 38.--Comparison of overall job satisfaction and seven job satisfaction factors between teachers who varied on assignment consistency.

Job Satisfaction Factor	n	Mean	S.D.	F-Value	t-Value	df	2-Tail Prob.
Overall Job Satisfaction							
Group 1: Consistent assignment	1011	23.5005	5.558	1.08	3.53	1071	.000*
Group 2: Inconsistent assignment	62	20.8387	5.558				
Teacher-Student Interaction							
Group 1: Consistent assignment	1011	28.5964	8.113	1.04	1.78	1071	.075
Group 2: Inconsistent assignment	62	26.7097	7.947				
Teacher Resources							
Group 1: Consistent assignment	1011	47.0633	13.415	1.10	1.51	1071	.131
Group 2: Inconsistent assignment	62	44.4194	12.797				
Teacher Compensation/Labor Relations							
Group 1: Consistent assignment	1011	46.2413	12.433	1.05	1.78	1071	.075
Group 2: Inconsistent assignment	62	43.3387	12.750				
Teaching Assignment							
Group 1: Consistent assignment	1011	15.9149	4.478	1.54	5.64	65.94	.000*
Group 2: Inconsistent assignment	62	11.8548	5.563				
Teacher Achievement and Growth							
Group 1: Consistent assignment	1011	39.1246	8.843	1.00	2.62	1071	.009*
Group 2: Inconsistent assignment	62	36.0968	8.831				
Teacher Workload							
Group 1: Consistent assignment	1011	26.2779	8.034	1.19	-.58	1071	.561
Group 2: Inconsistent assignment	62	26.8871	7.380				
Teacher Status							
Group 1: Consistent assignment	1011	8.9862	4.668	1.29	1.65	1071	.099
Group 2: Inconsistent assignment	62	7.9838	4.115				

*Significant at alpha = .01.

significantly higher levels of overall job satisfaction, higher satisfaction with teaching assignment, and higher satisfaction with teacher achievement and growth. Variation in assignment consistency, however, did not result in satisfaction differences for teacher-student interaction, teacher resources, teacher compensation, teacher workload, and teacher status.

Question 5i: School building grade level and satisfaction differences. The ninth comparison was between groups of teachers who varied on the basis of the school building grade level in which they taught. Table 39 presents results of an analysis of variance comparing overall job satisfaction and satisfaction on seven job factors for Group 1: elementary teachers, Group 2: middle/junior high school teachers, and Group 3: high school teachers. Significant F-ratios were found for the following factors: overall job satisfaction, teacher-student interaction, teaching assignment, teacher achievement and growth, and teacher workload. The null hypothesis was retained for the remaining factors.

Table 40 summarizes the findings of Scheffe procedures used to determine the location of significant differences occurring between groups of teachers. Findings from these procedures indicated the following:

1. Teachers from elementary school buildings expressed significantly higher levels of overall satisfaction than teachers from junior high/middle school buildings and teachers from high school buildings.

Table 39.--Comparison of overall job satisfaction and seven job satisfaction factors between teachers from buildings with varying grade levels.

Source	df	Sum of Squares	Mean Squares	F-Ratio	F-Prob.
Overall Job Satisfaction					
Between groups	2	858.8019	429.4010	13.100	.0000*
Within groups	1070	35074.2289	32.7797		
Total	1072	35933.0308			
Teacher-Student Interaction					
Between groups	2	2733.0533	1355.5266	21.564	.0000*
Within groups	1070	67807.0269	63.3711		
Total	1072	70540.0801			
Teacher Resources					
Between groups	2	1203.3753	601.6876	3.371	.0347
Within groups	1070	190958.0357	178.4655		
Total	1072	192161.4110			
Teacher Compensation/Labor Relations					
Between groups	2	1401.6396	700.8198	4.541	.0109
Within groups	1070	165133.5440	154.3304		
Total	1072	166535.1836			
Teaching Assignment					
Between groups	2	261.6646	130.8323	6.128	.0023*
Within groups	1070	22845.6904	21.3511		
Total	1072	23107.3551			
Teacher Achievement and Growth					
Between groups	2	1421.8259	710.9129	9.181	.0001*
Within groups	1070	82857.4565	77.4369		
Total	1072	84279.2824			
Teacher Workload					
Between groups	2	2403.4209	1201.7055	19.445	.0000*
Within groups	1070	66125.3738	61.7994		
Total	1072	68528.7847			
Teacher Status					
Between groups	2	7.1779	3.5890	.166	.8468
Within groups	1070	23096.2964	21.5853		
Total	1072	23103.4744			

*Significant at alpha = .01.

Table 40.--Report of Scheffe procedures on ANOVA comparing groups of teachers from buildings of varying grade levels.

Satisfaction Dimension				
Mean	Group	Group	Group	Group
Overall Satisfaction		2	3	1
22.0760	2 (middle/junior high)			
22.9479	3 (senior high)			
24.2475	1 (elementary)	*	*	
Teacher-Student Interaction		2	3	1
26.6400	2 (middle/junior high)			
27.3160	3 (senior high)			
30.1851	1 (elementary)	*	*	
Teaching Assignment		3	2	1
15.1472	3 (senior high)			
15.3280	2 (middle/junior high)			
16.2072	1 (elementary)	*	*	
Teacher Achievement and Growth		3	2	1
37.6871	3 (senior high)			
38.1600	2 (middle/junior high)			
40.1751	1 (elementary)	*	*	
Teacher Workload		1	3	2
24.7082	1 (elementary)			
27.5399	3 (senior high)	*		
27.9040	2 (middle/junior high)	*		

*Denotes pairs of groups significantly different at the .05 level.

2. Teachers from elementary school buildings expressed significantly higher levels of satisfaction with teacher-student interaction compared to teachers from junior high/middle school buildings and teachers from high school buildings.

3. Teachers from elementary school buildings reported significantly higher levels of satisfaction with teaching assignment than teachers from junior high/middle school buildings and teachers from high school buildings.

4. Teachers from elementary school buildings reported significantly higher levels of satisfaction with teacher achievement and growth than teachers from junior high/middle school buildings and teachers from high school buildings.

5. Teachers from both high school and junior high/middle school buildings reported significantly higher levels of satisfaction with teacher workload than teachers from elementary school buildings.

The findings from these analyses formed a clear indication that elementary teachers experienced significantly more satisfaction with their jobs than either junior high or senior high school teachers. This conclusion was found for overall job satisfaction and satisfaction with teacher-student interaction, teaching assignment, and teacher achievement and growth. No differences in satisfaction levels between junior high school teachers and senior high school teachers were found. Although elementary teachers generally reported significantly higher levels of satisfaction, this was not the case for satisfaction with teacher workload. Teachers from both senior high and junior high

school buildings were significantly more satisfied with teacher workload than teachers from elementary school buildings.

Question 5j: Elementary school size and satisfaction differences. The tenth comparison was between groups of elementary school teachers who varied according to the enrollment size of their elementary schools. Table 41 presents results of t-tests comparing overall job satisfaction and satisfaction on seven job factors for Group 1: teachers from small elementary schools and Group 2: teachers from large elementary schools. One significant t-value was found for the following factor: teacher-student interaction. The null hypothesis was retained for the remaining factors.

Findings from these analyses indicated that teachers from small elementary schools expressed significantly higher levels of satisfaction with teacher-student interaction than teachers from large elementary schools. For overall job satisfaction and satisfaction with teacher resources, teacher compensation, teaching assignment, teacher achievement and growth, teacher workload, and teacher status, elementary school size resulted in no differences.

Question 5k: Junior high school size and satisfaction differences. The eleventh comparison was between groups of junior high/middle school teachers who taught in large- and small-enrollment schools. Table 42 summarizes results of t-tests comparing overall job satisfaction and satisfaction on seven job factors for Group 1: teachers from small junior high/middle schools and Group 2: teachers from large junior high/middle schools. Significant t-values at the .01

Table 41.--Comparison of overall job satisfaction and seven job satisfaction factors between teachers from small and large elementary schools.

Job Satisfaction Factor	n	Mean	S.D.	F-Value	t-Value	df	2-Tail Prob.
Overall Job Satisfaction							
Group 1: Small elementary	111	25.2252	5.220	1.20	2.08	495	.038
Group 2: Large elementary	386	23.9663	5.714				
Teacher-Student Interaction							
Group 1: Small elementary	111	32.4505	7.011	1.35	3.42	495	.001*
Group 2: Large elementary	386	29.5337	8.155				
Teacher Resources							
Group 1: Small elementary	111	49.3333	14.051	1.05	1.67	495	.096
Group 2: Large elementary	386	46.8947	13.739				
Teacher Compensation/Labor Relations							
Group 1: Small elementary	111	48.2523	11.337	1.18	1.18	495	.238
Group 2: Large elementary	386	46.7150	12.295				
Teaching Assignment							
Group 1: Small elementary	111	16.3063	4.335	1.05	.28	495	.780
Group 2: Large elementary	386	16.1788	4.221				
Teacher Achievement and Growth							
Group 1: Small elementary	111	41.0360	8.572	1.02	1.19	495	.235
Group 2: Large elementary	386	39.9275	8.673				
Teacher Workload							
Group 1: Small elementary	111	25.5315	8.036	1.01	1.23	495	.219
Group 2: Large elementary	386	24.4715	7.988				
Teacher Status							
Group 1: Small elementary	111	9.3874	4.505	1.10	.95	495	.344
Group 2: Large elementary	386	8.9093	4.731				

*Significant at alpha = .01.

Table 42.--Comparison of overall job satisfaction and seven job satisfaction factors between teachers from small and large junior high schools.

Job Satisfaction Factor	n	Mean	S.D.	F-Value	t-Value	df	2-Tail Prob.
Overall Job Satisfaction							
Group 1: Small junior high	84	23.0476	5.897	1.00	1.85	248	.065
Group 2: Large junior high	166	21.5843	5.905				
Teacher-Student Interaction							
Group 1: Small junior high	84	27.7500	7.488	1.29	1.53	248	.128
Group 2: Large junior high	166	26.0783	8.492				
Teacher Resources							
Group 1: Small junior high	84	49.0476	11.643	1.45	.91	248	.362
Group 2: Large junior high	166	47.4277	13.996				
Teacher Compensation/Labor Relations							
Group 1: Small junior high	84	45.7857	13.209	1.22	-.46	248	.646
Group 2: Large junior high	166	46.5482	11.965				
Teaching Assignment							
Group 1: Small junior high	84	15.6429	4.913	1.02	.72	248	.475
Group 2: Large junior high	166	15.1687	4.966				
Teacher Achievement and Growth							
Group 1: Small junior high	84	38.8810	8.333	1.11	.94	248	.349
Group 2: Large junior high	166	37.7952	8.783				
Teacher Workload							
Group 1: Small junior high	84	27.7024	7.078	1.27	-.30	248	.768
Group 2: Large junior high	166	28.0060	7.973				
Teacher Status							
Group 1: Small junior high	84	9.2143	4.555	1.14	.87	248	.383
Group 2: Large junior high	166	8.6566	4.874				

*Significant at alpha = .01.

level were not found for this variable, indicating that no differences existed among the satisfaction levels of teachers from small and large junior high/middle schools.

Question 5l: High school size and satisfaction differences. The next comparison was between groups of high school teachers who taught in small- and large-enrollment schools. Table 43 presents results of t-tests comparing overall job satisfaction and satisfaction on seven job factors for Group 1: teachers from small high schools and Group 2: teachers from large high schools. A significant t-value was found for the following factor: teacher workload. The null hypothesis was retained for the remaining factors.

Findings from these analyses indicated that teachers from small high schools expressed significantly higher levels of satisfaction with teacher workload than teachers from large high schools. However, no differences were found for any other job satisfaction factors or for overall satisfaction.

Question 5m: School district size and satisfaction differences. The thirteenth comparison was between groups of teachers who varied on the size of school district in which they taught. Table 44 is a summary of analysis of variance analyses comparing overall job satisfaction and satisfaction on seven job factors for Group 1: teachers from small districts, Group 2: teachers from medium-size districts, and Group 3: teachers from large districts. Significant F-ratios were found for the following factors: teacher-student

Table 43.--Comparison of overall job satisfaction and seven job satisfaction factors between teachers from small and large high schools.

Job Satisfaction Factor	n	Mean	S.D.	F-Value	t-Value	df	2-Tail Prob.
Overall Job Satisfaction							
Group 1: Small high school	156	23.3590	5.590	1.08	1.25	324	.214
Group 2: Large high school	170	22.5706	5.816				
Teacher-Student Interaction							
Group 1: Small high school	156	28.2115	7.373	1.16	2.02	324	.045
Group 2: Large high school	170	26.4941	7.953				
Teacher Resources							
Group 1: Small high school	156	45.2564	12.334	1.12	-.12	324	.906
Group 2: Large high school	170	45.4235	13.039				
Teacher Compensation/Labor Relations							
Group 1: Small high school	156	45.4167	12.065	1.28	1.35	324	.177
Group 2: Large high school	170	43.4765	13.672				
Teaching Assignment							
Group 1: Small high school	156	15.1090	4.788	1.10	-.13	324	.893
Group 2: Large high school	170	15.1824	5.031				
Teacher Achievement and Growth							
Group 1: Small high school	156	37.7885	8.387	1.37	.19	322.44	.847
Group 2: Large high school	170	37.5941	9.805				
Teacher Workload							
Group 1: Small high school	156	28.8333	7.475	1.12	2.91	324	.004*
Group 2: Large high school	170	26.3529	7.900				
Teacher Status							
Group 1: Small high school	156	8.9423	4.403	1.09	.32	324	.749
Group 2: Large high school	170	8.7824	4.590				

*Significant at alpha = .01.

Table 44.--Comparison of overall job satisfaction and seven job satisfaction factors between teachers from districts of varying sizes.

Source	df	Sum of Squares	Mean Squares	F-Ratio	F-Prob.
Overall Job Satisfaction					
Between groups	2	222.5820	111.2910	3.288	.0377
Within groups	1071	36255.0092	33.8515		
Total	1073	36477.5912			
Teacher-Student Interaction					
Between groups	2	1862.7805	931.3902	14.355	.0000*
Within groups	1071	69488.0771	64.8815		
Total	1073	71350.8575			
Teacher Resources					
Between groups	2	1960.0110	980.0055	5.492	.0042*
Within groups	1071	191095.2069	178.4269		
Total	1073	193055.2179			
Teacher Compensation/Labor Relations					
Between groups	2	2130.9845	1065.4922	6.934	.0010*
Within groups	1071	164574.9596	153.6648		
Total	1073	166705.9441			
Teaching Assignment					
Between groups	2	7.4173	3.7087	.172	.8422
Within groups	1071	23132.1739	21.5987		
Total	1073	23139.5912			
Teacher Achievement and Growth					
Between groups	2	515.7161	257.8581	3.264	.0386
Within groups	1071	84600.8696	78.9924		
Total	1073	85116.5857			
Teacher Workload					
Between groups	2	765.9420	382.9710	6.053	.0024*
Within groups	1071	67763.3140	63.2711		
Total	1073	68529.2561			
Teacher Status					
Between groups	2	121.8481	60.9241	2.829	.0595
Within groups	1071	23061.2655	21.5325		
Total	1073	23183.1136			

*Significant at alpha = .01.

interaction, teacher resources, teacher compensation and labor relations, and teacher workload.

Table 45 is a summary of Scheffe procedures used to determine the nature of significant differences between groups of teachers who varied on the size district in which they taught. Findings from these procedures indicated the following:

1. Teachers from both small and medium-size districts reported significantly higher levels of satisfaction with teacher-student interaction than teachers from large districts.

2. Teachers from medium-size districts expressed significantly higher levels of satisfaction with teacher resources than teachers from either small or large districts.

3. Teachers from medium-size districts expressed significantly higher levels of satisfaction with teacher compensation and labor relations than teachers from either small or large districts.

4. Teachers from small districts and medium-size districts expressed significantly higher levels of satisfaction with teacher workload than teachers from large districts.

The findings from these analyses concerning district size supported the conclusion that teachers from medium-size districts (between 2,500 and 9,999 students) were more satisfied than teachers from either large districts (10,000 students or more) or small districts (2,499 students or less). This conclusion was true for satisfaction with teacher-student interaction, teacher resources, teacher compensation, and teacher workload when comparing medium-size

Table 45.--Report of Scheffe procedures on ANOVA comparing groups of teachers from districts of varying sizes.

Satisfaction Dimension Mean	Group	Group 3	Group 2	Group 1
Teacher-Student Interaction				
26.1955	3 (large-size districts)			
28.9865	2 (medium-size districts)	*		
29.4779	1 (small-size districts)	*		
Teacher Resources		1	3	2
45.6188	1 (small-size districts)			
45.9248	3 (large-size districts)			
48.4798	2 (medium-size districts)	*	*	
Teacher Compensation/Labor Relations		3	1	2
44.5752	3 (large-size districts)			
45.1160	1 (small-size districts)			
47.7152	2 (medium-size districts)	*	*	
Teacher Workload		3	2	1
24.8496	3 (large-size districts)			
26.7063	2 (medium-size districts)	*		
26.9061	1 (small-size districts)	*		

*Denotes pairs of groups significantly different at the .05 level.

districts with large-size districts. Small districts tended to have teachers who were significantly more satisfied than teachers from large districts on teacher-student interaction and teacher workload. Also, it was found that medium-size-district teachers were significantly more satisfied with teacher resources and teacher compensation than teachers from small districts.

Question 5n: District location and satisfaction differences. The fourteenth comparison was between groups of teachers who varied according to the geographic location of the districts in which they taught. Table 46 summarizes analysis of variance analyses comparing overall job satisfaction and satisfaction on seven job factors for Group 1: teachers from metropolitan core school districts, Group 2: teachers from city school districts, Group 3: teachers from town school districts, Group 4: teachers from urban fringe school districts, and Group 5: teachers from rural school districts. Significant F-ratios were found for the following factors: overall job satisfaction, teacher-student interaction, teacher resources, teacher compensation and labor relations, teacher achievement and growth, and teacher workload. The null hypothesis was retained for the remaining factors.

Table 47 presents a summary of Scheffe procedures used to determine the nature of significant differences between groups of teachers who varied on district location. Findings from these procedures indicated the following:

Table 46.--Comparison of overall job satisfaction and seven job satisfaction factors between teachers from districts of varying locations.

Source	df	Sum of Squares	Mean Squares	F-Ratio	F-Prob.
Overall Job Satisfaction					
Between groups	4	604.7330	151.1833	4.505	.0013*
Within groups	1069	35872.8582	33.5574		
Total	1073	36477.5912			
Teacher-Student Interaction					
Between groups	4	4428.8543	1107.2136	17.686	.0000*
Within groups	1069	66922.0033	62.6024		
Total	1073	71350.8575			
Teacher Resources					
Between groups	4	6113.8018	1528.4504	8.740	.0000*
Within groups	1069	186941.4161	174.8750		
Total	1073	193055.2179			
Teacher Compensation/Labor Relations					
Between groups	4	3557.4292	889.3573	5.827	.001*
Within groups	1069	163148.5149	152.6179		
Total	1073	166705.9441			
Teaching Assignment					
Between groups	4	71.1772	17.7943	.825	.5095
Within groups	1069	23068.4141	21.5794		
Total	1073	23139.5912			
Teacher Achievement and Growth					
Between groups	4	1928.2599	482.0650	6.195	.0001*
Within groups	1069	83188.3258	77.8188		
Total	1073	85116.5857			
Teacher Workload					
Between groups	4	1288.1038	322.0260	5.120	.0004*
Within groups	1069	67241.1522	62.9010		
Total	1073	68529.2561			
Teacher Status					
Between groups	4	249.6623	62.4156	2.909	.0207
Within groups	1069	22933.4513	21.4532		
Total	1073	23183.1136			

*Significant at alpha = .01.

Table 47.--Report of Scheffe procedures on ANOVA comparing groups of teachers from districts of varying geographic locations.

Satisfaction Dimension Mean	Group	Group	Group	Group	Group	Group
Overall Satisfaction		1	3	2	4	5
21.8744	1 (metropolitan core)					
23.0828	3 (town)					
23.3173	2 (city)					
23.7396	4 (urban fringe)	*				
23.9849	5 (rural)	*				
Teacher-Student Interaction		1	2	3	4	5
24.2764	1 (metropolitan core)					
28.8077	2 (city)	*				
29.0000	3 (town)	*				
29.3324	4 (urban fringe)	*				
29.9849	5 (rural)	*				
Teacher Resources		5	1	3	4	2
44.3-74	5 (rural)					
44.4020	1 (metropolitan core)					
46.4552	3 (town)					
49.4820	4 (urban fringe)	*	*			
49.5845	2 (city)	*	*			
Teacher Compensation		1	5	3	2	4
43.4724	1 (metropolitan core)					
44.6981	5 (rural)					
45.9241	3 (town)					
47.9712	2 (city)					
47.9945	4 (urban fringe)	*	*			
Teacher Achievement		1	3	5	4	2
36.3668	1 (metropolitan core)					
38.7034	3 (town)					
38.9509	5 (rural)	*				
39.9889	4 (urban fringe)	*				
40.3462	2 (city)	*				
Teacher Workload		1	2	3	5	4
24.2563	1 (metropolitan core)					
26.1731	2 (city)					
26.2897	3 (town)					
26.4226	5 (rural)					
27.4183	4 (urban fringe)	*				

*Denotes pairs of groups significantly different at the .05 level.

1. Teachers from both urban fringe and rural school districts reported significantly higher levels of overall job satisfaction than teachers from metropolitan core districts.

2. Teachers from rural, urban fringe, town, and city districts reported significantly higher levels of satisfaction with teacher-student interaction than teachers from metropolitan core districts.

3. Teachers from both city and urban fringe districts reported significantly higher levels of satisfaction with teacher resources than teachers from either rural or metropolitan core districts.

4. Teachers from urban fringe districts reported significantly higher levels of satisfaction with teacher compensation and labor relations than teachers from either metropolitan core or rural districts.

5. Teachers from city, urban fringe, and rural districts reported significantly higher levels of satisfaction with teacher achievement and growth than teachers from metropolitan core districts.

6. Teachers from urban fringe districts reported higher levels of satisfaction with teacher workload than teachers from metropolitan core districts.

Variation in geographic location of school districts was frequently accompanied by significant differences in teachers' satisfaction levels. Findings from these analyses indicated that teachers from urban fringe districts expressed significantly higher levels of overall job satisfaction and higher levels of satisfaction with teacher-student interaction, teacher resources, teacher compensation,

teacher achievement and growth, and teacher workload than teachers from metropolitan core districts. Satisfaction differences were not found for teaching assignment and teacher status in comparing urban fringe and metropolitan core districts.

Teachers from districts of other geographic locations frequently reported significantly higher levels of satisfaction than teachers from metropolitan core districts. This conclusion was true for rural districts on overall job satisfaction; rural, town, and city districts on teacher-student interaction; city districts on teacher resources; and city and rural districts on teacher achievement and growth. Clearly, teachers from metropolitan core districts were less satisfied with more aspects of their jobs than teachers from any other district location.

Question 5o: Salary level and satisfaction differences. The next comparison was between groups of teachers who varied according to the salary level that existed in the districts in which they taught. Table 48 presents analysis of variance analyses comparing overall job satisfaction and satisfaction on seven job factors for Group 1: teachers from low-salary districts, Group 2: teachers from medium-salary districts, and Group 3: teachers from high-salary districts. Significant F-ratios were found for the following factors: teacher-student interaction, teacher resources, teacher compensation and labor relations, teacher achievement and growth, and teacher workload. The null hypothesis was retained for the remaining factors.

Table 48.--Comparison of overall job satisfaction and seven job satisfaction factors between teachers from districts with varying salary levels.

Source	df	Sum of Squares	Mean Squares	F-Ratio	F-Prob.
Overall Job Satisfaction					
Between groups	2	86.8660	43.4330	1.278	.2789
Within groups	1071	36390.7252	33.9783		
Total	1073	36477.5912			
Teacher-Student Interaction					
Between groups	2	1131.0443	565.5222	8.625	.0002*
Within groups	1071	70219.8132	65.5647		
Total	1073	71350.8575			
Teacher Resources					
Between groups	2	2395.1414	1197.5707	6.727	.0012*
Within groups	1071	190660.0765	178.0206		
Total	1073	193055.2179			
Teacher Compensation/Labor Relations					
Between groups	2	3753.2776	1876.6388	12.334	.0000*
Within groups	1071	162952.6665	152.1500		
Total	1073	166705.9441			
Teaching Assignment					
Between groups	2	4.7658	2.3829	.110	.8956
Within groups	1071	23134.8255	21.6011		
Total	1073	23139.5912			
Teacher Achievement and Growth					
Between groups	2	777.0468	388.5234	4.934	.0074*
Within groups	1071	84339.5388	78.7484		
Total	1073	85116.5857			
Teacher Workload					
Between groups	2	754.2655	377.1327	5.960	.0027*
Within groups	1071	67774.9906	63.2820		
Total	1073	68529.2561			
Teacher Status					
Between groups	2	101.1183	50.5591	2.346	.0962
Within groups	1071	23081.9953	21.5518		
Total	1073	23183.1136			

*Significant at alpha = .01.

Table 49 summarizes Scheffe procedures used to determine the nature of significant differences between groups of teachers who varied according to the average level of salary within the districts in which they taught. Findings from these analyses indicated the following:

1. Teachers from low-salary and high-salary districts reported significantly higher levels of satisfaction with teacher-student interaction than teachers from medium-salary districts.

2. Teachers from high-salary districts reported significantly higher levels of satisfaction with teacher resources than teachers from both medium- and low-salary districts.

3. Teachers from high-salary districts reported significantly higher levels of satisfaction with teacher compensation and labor relations than teachers from both medium- and low-salary districts.

4. Teachers from high-salary districts reported significantly higher levels of satisfaction with teacher achievement and growth than teachers from medium-salary districts.

5. Teachers from high- and low-salary districts reported significantly higher levels of satisfaction with teacher workload than teachers from medium-salary districts.

Mixed findings were supported by these analyses of salary level and satisfaction differences. It was found that no differences in overall job satisfaction existed between groups of teachers from districts with either high, medium, or low salaries. Other findings, however, indicated that salary variations were accompanied by satisfaction differences. In particular, it was found that teachers

Table 49.--Report of Scheffe procedures on ANOVA comparing groups of teachers from districts with varying teacher salaries.

Satisfaction Dimension Mean	Group	Group	Group	Group
Teacher-Student Interaction		2	3	1
27.1561	2 (medium salary)			
28.7382	3 (high salary)	*		
29.6291	1 (low salary)	*		
Teacher Resources		2	1	3
45.5926	2 (medium salary)			
46.1068	1 (low salary)			
48.9694	3 (high salary)	*	*	
Teacher Compensation		2	1	3
44.5397	2 (medium salary)			
44.9703	1 (low salary)			
48.6880	3 (high salary)	*	*	
Teacher Achievement and Growth		2	1	3
37.9206	2 (medium salary)			
38.9258	1 (low salary)			
39.9749	3 (high salary)	*		
Teacher Workload		2	1	3
25.1905	2 (medium salary)			
26.7567	1 (low salary)	*		
27.0808	3 (high salary)	*		

*Denotes pairs of groups significantly different at the .05 level.

from high-salary districts expressed significantly higher levels of satisfaction with teacher resources and with teacher compensation and labor relations than teachers from either medium- or low-salary districts. It was found that teachers from high-salary districts expressed significantly higher levels of satisfaction with teacher achievement and growth than teachers from medium-salary districts. Finally, teachers from both low- and high-salary districts reported significantly higher levels of satisfaction with teacher-student interaction and teacher workload than teachers from medium-salary districts.

Question 5p: Teacher/student load and satisfaction differences. The sixteenth comparison was between groups of teachers who varied on the basis of average teacher/student load within the districts in which they taught. Table 50 summarizes analysis of variance analyses comparing overall job satisfaction and satisfaction on seven job factors for Group 1: teachers from districts with low teacher/student load, Group 2: teachers from districts with medium teacher/student load, and Group 3: teachers from districts with high teacher/student load. A significant F-ratio was found for the following factor: teacher workload. The null hypothesis was retained for the remaining factors.

Table 51 is a summary of Scheffe procedures used to determine the nature of significant differences between groups of teachers who varied on district average teacher/student load. Findings from these procedures indicated the following:

Table 50.--Comparison of overall job satisfaction and seven job satisfaction factors between teachers from districts with varying teacher/student loads.

Source	df	Sum of Squares	Mean Squares	F-Ratio	P-Prob.
Overall Job Satisfaction					
Between groups	2	73.1810	36.5905	1.076	.3412
Within groups	1071	36404.4102	33.9910		
Total	1073	36477.5912			
Teacher-Student Interaction					
Between groups	2	269.6781	134.8391	2.032	.1316
Within groups	1071	71081.1794	66.3690		
Total	1073	71350.8575			
Teacher Resources					
Between groups	2	556.2215	278.1107	1.547	.2133
Within groups	1071	192498.9964	179.7376		
Total	1073	193055.2179			
Teacher Compensation/Labor Relations					
Between groups	2	1284.1430	532.0715	4.157	.0159
Within groups	1071	165421.8011	154.4555		
Total	1073	166705.9441			
Teaching Assignment					
Between groups	2	48.0465	24.0233	1.114	.3286
Within groups	1071	23091.5447	21.5607		
Total	1073	23139.5912			
Teacher Achievement and Growth					
Between groups	2	203.6598	101.8299	1.284	.2773
Within groups	1071	84912.9259	79.2838		
Total	1073	85116.5857			
Teacher Workload					
Between groups	2	617.0545	308.5273	4.866	.0079*
Within groups	1071	67912.2015	63.4101		
Total	1073	68529.2561			
Teacher Status					
Between groups	2	175.4288	87.7144	4.083	.0171
Within groups	1071	23007.6848	21.4824		
Total	1073	23183.1136			

*Significant at alphá = .01.

1. Teachers from districts with a low teacher/student load reported significantly higher levels of satisfaction with teacher workload than teachers from districts with a high teacher/student load.

Table 51.--Report of Scheffe procedures on ANOVA comparing groups of teachers from districts with varying teacher/student loads.

Satisfaction Dimension Mean	Group	Group 3	Group 2	Group 1
Teacher Workload				
24.0179	3 (high teacher/student load)			
26.2812	2 (medium teacher/student load)			
28.3291	1 (low teacher/student load)	*		

*Denotes pairs of groups significantly different at the .05 level.

Based on analyses concerning teacher/student load and satisfaction differences, it was concluded that teachers from districts with lower loads expressed significantly higher levels of satisfaction with teacher workload than teachers from districts with high loads. No differences in overall job satisfaction and in the satisfaction levels for the remaining job factors were found between groups of teachers from districts with varying teacher/student loads.

Question 5q: Per-pupil expenditures and satisfaction differences. The seventeenth comparison was between groups of teachers who varied according to the level of per-pupil spending within the districts in which they taught. Table 52 summarizes analysis of variance analyses comparing overall job satisfaction and satisfaction on seven

Table 52.--Comparison of overall job satisfaction and seven job satisfaction factors between teachers from districts with varying per-pupil expenditures.

Source	df	Sum of Squares	Mean Squares	F-Ratio	F-Prob.
Overall Job Satisfaction					
Between groups	2	51.3527	25.6763	.755	.4703
Within groups	1071	36426.2386	34.0114		
Total	1073	36477.5912			
Teacher-Student Interaction					
Between groups	2	794.0522	397.0261	6.027	.0025*
Within groups	1071	70556.8054	65.8794		
Total	1073	71350.8575			
Teacher Resources					
Between groups	2	8471.1470	4235.5708	24.576	.0000*
Within groups	1071	184584.0762	172.3474		
Total	1073	193055.2179			
Teacher Compensation/Labor Relations					
Between groups	2	3705.8143	1852.9071	12.175	.0000*
Within groups	1071	163000.1298	152.1943		
Total	1073	166705.9441			
Teaching Assignment					
Between groups	2	175.0733	87.5366	4.082	.0171
Within groups	1071	22964.5180	21.4421		
Total	1073	23139.5912			
Teacher Achievement and Growth					
Between groups	2	1054.7612	527.3806	6.719	.0013*
Within groups	1071	84061.8245	78.4891		
Total	1073	85116.5857			
Teacher Workload					
Between groups	2	2129.0268	1064.5134	17.170	.0000*
Within groups	1071	66400.2292	61.9983		
Total	1073	68529.2561			
Teacher Status					
Between groups	2	83.7518	41.8759	1.942	.1440
Within groups	1071	23099.3618	21.5680		
Total	1073	23183.1136			

*Significant at alpha = .01.

job factors for Group 1: teachers from low-spending districts, Group 2: teachers from average-spending districts, and Group 3: teachers from high-spending districts. Significant F-ratios were found for the following factors: teacher-student interaction, teacher resources, teacher compensation and labor relations, teacher achievement and growth, and teacher workload. The null hypothesis was retained for the remaining factors.

Table 53 is a summary of Scheffe procedures used to determine the nature of significant differences between groups of teachers from districts that varied on per-pupil spending. Findings from these procedures indicated the following:

1. Teachers from both low- and high-spending districts reported significantly higher levels of satisfaction with teacher-student interaction than medium-spending districts.

2. Teachers from high-spending districts reported significantly higher levels of satisfaction with teacher resources than teachers from either low- or medium-spending districts.

3. Teachers from high-spending districts reported significantly higher levels of satisfaction with teacher compensation and labor relations than teachers from either low- or medium-spending districts.

4. Teachers from high-spending districts reported significantly higher levels of satisfaction with teacher achievement and growth than teachers from medium-spending districts.

Table 53.--Report of Scheffe procedures on ANOVA comparing groups of teachers from districts with varying per-pupil expenditures.

Satisfaction Dimension Mean	Group	Group	Group	Group
Teacher-Student Interaction		2	3	1
27.2791	2 (average spending)			
28.9382	3 (high spending)	*		
29.1698	1 (low spending)	*		
Teacher Resources		2	1	3
44.5583	2 (average spending)			
45.8791	1 (low spending)			
51.5709	3 (high spending)	*	*	
Teacher Compensation		2	1	3
44.4634	2 (average spending)			
45.4628	1 (low spending)			
49.1418	3 (high spending)	*	*	
Teacher Achievement		2	1	3
37.7615	2 (average spending)			
39.0116	1 (low spending)			
40.3418	3 (high spending)	*		
Teacher Workload		2	1	3
24.7805	2 (average spending)			
26.2605	1 (low spending)	*		
28.4545	3 (high spending)	*	*	

*Denotes pairs of groups significantly different at the .05 level.

5. Teachers from high-spending districts reported significantly higher levels of satisfaction with teacher workload than teachers from either medium- or low-spending districts.

6. Teachers from low-spending districts reported significantly higher levels of satisfaction with teacher workload than teachers from medium-spending districts.

Several findings resulted from analyses concerning variations in district spending and accompanying differences in teacher satisfaction levels. Generally, it was found that teachers from high-spending districts experienced higher levels of satisfaction than teachers from either low- or medium-spending districts. This conclusion was supported by the findings that teachers from high-spending districts expressed significantly higher levels of satisfaction with teacher resources, teacher compensation and labor relations, and teacher workload. Teachers from both low- and high-spending districts were significantly more satisfied with teacher-student interaction than teachers from medium-spending districts.

Question 5r: Minority enrollment and satisfaction differences. The next comparison was between groups of teachers who varied on the proportion of minority students enrolled in the districts in which they taught. Table 54 summarizes results of t-tests comparing overall job satisfaction and satisfaction on seven job factors for Group 1: teachers from districts enrolling less than 10% minority students and Group 2: teachers from districts enrolling more than 10% minority students. Significant t-values were found for the following factors: overall job

Table 54.--Comparison of overall job satisfaction and seven job satisfaction factors between teachers from districts with varying minority enrollments.

Job Satisfaction Factor	n	Mean	S.D.	F-Value	t-Value	df	2-Tail Prob.
Overall Job Satisfaction							
Group 1: Below 10% minority students	750	23.7120	5.631	1.21	3.20	564.20	.001*
Group 2: Above 10% minority students	324	22.4290	6.186				
Teacher-Student Interaction							
Group 1: Below 10% minority students	750	29.6973	7.455	1.44	7.23	524.97	.000*
Group 2: Above 10% minority students	324	25.5988	8.958				
Teacher Resources							
Group 1: Below 10% minority students	750	47.6053	12.763	1.33	2.55	542.96	.011
Group 2: Above 10% minority students	324	45.2099	14.695				
Teacher Compensation/Labor Relations							
Group 1: Below 10% minority students	750	47.0373	11.802	1.33	3.71	541.63	.000*
Group 2: Above 10% minority students	324	43.8025	13.630				
Teaching Assignment							
Group 1: Below 10% minority students	750	15.7320	4.621	1.04	.61	1072	.541
Group 2: Above 10% minority students	324	15.5432	4.701				
Teacher Achievement and Growth							
Group 1: Below 10% minority students	750	39.8107	8.203	1.51	4.64	516.40	.000*
Group 2: Above 10% minority students	324	36.8673	10.071				
Teacher Workload							
Group 1: Below 10% minority students	750	26.8933	7.704	1.21	3.50	563.36	.001*
Group 2: Above 10% minority students	324	24.9722	8.482				
Teacher Status							
Group 1: Below 10% minority students	750	9.1800	4.624	1.01	2.80	1072	.005*
Group 2: Above 10% minority students	324	8.3179	4.655				

*Significant at alpha = .01.

satisfaction, teacher-student interaction, teacher compensation and labor relations, teacher achievement and growth, teacher workload, and teacher status. The null hypothesis was retained for the remaining factors.

Findings from these analyses indicated that teachers from districts with a minority student population in excess of 10% of the total students within the district reported significantly lower levels of overall job satisfaction and significantly lower levels of satisfaction with teacher-student interaction, teacher resources, teacher compensation and labor relations, teacher achievement and growth, teacher workload, and teacher status. No differences existed between groups for teacher resources or teaching assignment.

Question 5s: Achievement levels and satisfaction differences. The final comparison was between groups of teachers who varied according to achievement levels of students within the buildings in which they taught. Table 55 reports analysis of variance analyses comparing overall job satisfaction and satisfaction on seven job factors for Group 1: teachers from low-achieving schools, Group 2: teachers from moderate-achieving schools, and Group 3: teachers from high-achieving schools. Significant F-ratios were found for the following factors: overall job satisfaction, teacher-student interaction, teacher resources, teacher compensation and labor relations, teaching assignment, teacher achievement and growth, and teacher status. The null hypothesis was retained for the remaining factors.

Table 55.--Comparison of overall job satisfaction and seven job satisfaction factors between teachers from school buildings with varying achievement levels.

Source	df	Sum of Squares	Mean Squares	F-Ratio	F-Prob.
Overall Job Satisfaction					
Between groups	2	722.5292	361.2646	10.821	.0000*
Within groups	1071	35755.0621	33.3847		
Total	1073	36477.5912			
Teacher-Student Interaction					
Between groups	2	6345.7013	3172.8506	52.275	.0000*
Within groups	1071	65005.1563	60.6958		
Total	1073	71350.8575			
Teacher Resources					
Between groups	2	5533.3068	2766.6534	15.801	.0000*
Within groups	1071	187521.9111	175.0905		
Total	1073	193055.2179			
Teacher Compensation/Labor Relations					
Between groups	2	5613.2299	2806.6149	18.659	.0000*
Within groups	1071	161092.7143	150.4134		
Total	1073	166705.9441			
Teaching Assignment					
Between groups	2	255.2211	127.6105	5.972	.0026*
Within groups	1071	22884.3702	21.3673		
Total	1073	23139.5912			
Teacher Achievement and Growth					
Between groups	2	3071.4388	1535.7194	20.047	.0000*
Within groups	1071	82045.1469	76.6061		
Total	1073	85116.5857			
Teacher Workload					
Between groups	2	424.7482	212.3741	3.340	.0358
Within groups	1071	68104.5078	63.5896		
Total	1073	68529.2561			
Teacher Status					
Between groups	2	302.7186	151.3593	7.058	.0009*
Within groups	1071	22880.3950	21.3636		
Total	1073	23183.1136			

*Significant at alpha = .01.

Table 56 is a summary of Scheffe procedures used to determine the nature of significant differences between groups of teachers who varied on student achievement levels within the buildings in which they taught. Findings from these procedures indicated the following:

1. Teachers from buildings with high student achievement reported significantly higher levels of overall job satisfaction than teachers from buildings with either low or moderate student achievement.

2. Teachers from buildings with moderate student achievement reported significantly higher levels of overall job satisfaction than teachers from buildings with low student achievement.

3. Teachers from buildings with high student achievement reported significantly higher levels of satisfaction with teacher-student interaction than teachers from buildings with either moderate or low student achievement.

4. Teachers from buildings with moderate student achievement reported significantly higher levels of satisfaction with teacher-student interaction than teachers from buildings with low student achievement.

5. Teachers from buildings with high student achievement reported significantly higher levels of satisfaction with teacher resources than teachers from buildings with either moderate or low student achievement.

Table 56.--Report of Scheffe procedures on ANOVA comparing groups of teachers from districts with varying student achievement.

Satisfaction Dimension Mean	Group	Group	Group	Group
Overall Satisfaction		1	2	3
21.3516	1 (low achievement)			
22.9797	2 (moderate achievement)	*		
24.1538	3 (high achievement)	*	*	
Teacher-Student Interaction		1	2	3
22.5934	1 (low achievement)			
27.4455	2 (moderate achievement)	*		
30.9118	3 (high achievement)	*	*	
Teacher Resources		1	2	3
41.3516	1 (low achievement)			
45.9556	2 (moderate achievement)	*		
49.1561	3 (high achievement)	*	*	
Teacher Compensation		1	2	3
38.9231	1 (low achievement)			
46.0481	2 (moderate achievement)	*		
47.5475	3 (high achievement)	*		
Teaching Assignment		2	1	3
15.2643	2 (moderate achievement)			
15.2857	1 (low achievement)			
16.2579	3 (high achievement)	*		
Teacher Achievement and Growth		1	2	3
34.5165	1 (low achievement)			
38.3567	2 (moderate achievement)	*		
40.5226	3 (high achievement)	*	*	
Teacher Status		1	2	3
7.5714	1 (low achievement)			
8.7264	2 (moderate achievement)			
9.4344	3 (high achievement)	*		

*Denotes pairs of groups significantly different at the .05 level.

6. Teachers from buildings with moderate student achievement reported significantly higher levels of satisfaction with teacher resources than teachers from buildings with low student achievement.

7. Teachers from both high- and moderate-achieving buildings reported significantly higher levels of satisfaction with teacher compensation and labor relations than teachers from buildings with low achievement.

8. Teachers from buildings with high student achievement expressed significantly higher levels of satisfaction with teaching assignment than teachers from buildings with moderate student achievement.

9. Teachers from buildings with high student achievement expressed significantly higher levels of satisfaction with teacher achievement and growth than teachers from buildings with either moderate or low student achievement.

10. Teachers from buildings with moderate student achievement expressed significantly higher levels of satisfaction with teacher achievement and growth than teachers from buildings with low student achievement.

11. Teachers from buildings with high student achievement reported significantly higher levels of satisfaction with teacher status than teachers from buildings with low student achievement.

Variations in school-building achievement levels were frequently accompanied by significant differences in teachers' satisfaction levels. Findings from these analyses indicated that teachers from

buildings with high achievement levels expressed significantly higher overall job satisfaction than teachers from either moderate- or low-achievement buildings. Teachers from moderate-achievement buildings also expressed higher overall job satisfaction than teachers from low-achievement buildings. This pattern of satisfaction differences was sustained for the following factors when comparing teachers from high- and moderate-achievement buildings with teachers from low-achievement buildings: teacher-student interaction, teacher resources, teacher compensation and labor relations, and teacher achievement and growth. Teachers from high-achievement buildings also experienced significantly higher levels of satisfaction for each of these factors when compared with teachers from moderate-achievement buildings.

The results of these 19 analyses clearly indicated that satisfaction differences frequently accompanied variations in the personal characteristics of teachers and in the organizational characteristics of the schools in which they worked. Sixty-nine significant differences in overall job satisfaction levels and in levels of satisfaction with seven job factors accompanied variations in the selected personal and school-organization variables examined in this study. The single exception to this pattern was junior high school size, and for variations within this characteristic, no differences in satisfaction levels occurred.

This concludes the reporting of findings determined by this investigation. The following section explores the implications and conclusions that were drawn from these findings. Suggestions for

school managers interested in developing strategies designed to improve teacher job satisfaction are presented. Finally, the design, procedures, and results of the present investigation are reviewed in an effort to formulate suggestions for future research on teacher job attitudes.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Introduction

Constructing an understanding of teacher job satisfaction that can inform effective school management practice was the primary purpose of this study. It was presumed by this investigator that such an understanding would emerge if answers to the five general research questions used to guide this investigation were found. A number of meaningful conclusions can be drawn from the statistical analyses presented in this study and combine to form answers to these general research questions. The purpose of this chapter is to present these conclusions and demonstrate how they combine to answer the questions. In addition, recommendations concerning management strategies toward improving teacher job satisfaction and the improvement of future job satisfaction research conclude this study.

Conclusions by Questions

Question 1: Underlying Satisfaction Factors

The first question considered in this investigation asked: Are there underlying job satisfaction factors in the job-facet satisfaction scores for a sample of Michigan K-12 public school teachers? Based on data gathered from a factor analysis reported in Table 8, it was

concluded that there was dimensionality to the job-facet satisfaction scores of teachers in this sample. Seven factors emerged, including Factor 1: Teacher-student interaction, Factor 2: Teacher resources, Factor 3: Teacher compensation, Factor 4: Teaching assignment, Factor 5: Teacher achievement and growth, Factor 6: Teacher workload, and Factor 7: Teacher status.

Furthermore, two related questions were considered in this investigation, including: What combination of job-facet items constitute the various satisfaction factors? and How do satisfaction factors identified in this study compare to satisfaction factors determined by previous studies? Table 10 details the job-facet content of the seven job satisfaction factors found in this study. The factors ranged in job-facet content from a low of three job-facet items to a high of 11 job-facet items. It was concluded that the job facets within each satisfaction factor were consistently measuring that factor on the basis of the high reliability coefficients evident for each satisfaction factor.

In terms of comparing the present investigation's job satisfaction factor structure to structures determined by previous studies using the same scale, it was concluded that a fairly stable factor structure underlies the job-facet satisfaction perceptions of public school teachers. Support for this conclusion can be drawn from Table 11, which compares the satisfaction factor solutions between the Holdaway (1978) study and the present investigation. Both studies determined seven-factor solutions, and each solution accounted for nearly an

identical percentage of the cumulative variance within the job-facet satisfaction scores. The Holdaway solution accounted for 50.1% of the variance among job-facet satisfaction scores, while a solution accounting for 49.9% of the variance emerged in the present investigation.

Further evidence of this factor stability can be reviewed in Table 12, which is a comparison of the job-facet content of the seven satisfaction factors from each study. It is noteworthy that on six of the seven factors from both studies, the majority of job-facet items were the same. Further, in those instances where factors differed, job-facet items frequently could be matched between other dimensions. In fact, only five job facets determined in the Holdaway study failed to appear in the present study.

Finally, the results of a study conducted by Haughey and Murphy (1982) again suggested that some stability exists in the dimensionality of teacher job satisfaction as first suggested by Holdaway (1978). These investigators factor analyzed survey results obtained by using the Holdaway questionnaire and determined another seven-factor solution accounting for 47% of the total variance among the job-facet satisfaction scores. This solution included the following dimensions: Factor 1: Administration, Factor 2: Students, Factor 3: Professional autonomy, Factor 4: Affiliation and esteem, Factor 5: Working conditions, Factor 6: Support services, and Factor 7: Salary. Although the ordering of factors by virtue of their relative accounting of variance among the job-facet satisfaction scores was different in all three studies, job-facet content of these seven-factor solutions was very similar.

Question 2: Satisfaction
Levels of Michigan Teachers

The second general research question asked: What current levels of overall and job-facet satisfaction are expressed by Michigan K-12 public school teachers? A number of meaningful conclusions about the current job satisfaction status of Michigan public school teachers were supported by this study.

First, it was concluded that the average Michigan K-12 public school teacher appeared slightly more satisfied than dissatisfied in terms of the sample mean performance on seven satisfaction factors. The profile of the average sample respondent on the seven satisfaction factors is presented in Table 20. Examination of this profile reveals that on Factor 1: Teacher-student interaction, Factor 4: Teacher assignment, and Factor 5: Teacher achievement and growth, the average sample respondent was slightly satisfied. On Factor 2: Teacher resources, Factor 3: Teacher compensation and labor relations, and Factor 6: Teacher workload, the average sample respondent in this study was neither satisfied nor dissatisfied. On Factor 7: Teacher status, the average sample respondent was slightly dissatisfied.

The conclusion that the average Michigan teacher was slightly more satisfied than dissatisfied also drew support from measures of overall job satisfaction. Table 23 is a frequency distribution of summated responses to overall job satisfaction. By creating satisfaction-category ranges, a respondent's mean overall job satisfaction score was calculated and distributed among three categories of

satisfaction, including satisfied, neither satisfied nor dissatisfied, and dissatisfied. Less than half of the respondents (44.8%) reported levels of overall job satisfaction that could be described as satisfied. Fewer respondents (37.5%) reported levels of overall job satisfaction that could be described as neither satisfied nor dissatisfied. Finally, 17.7% of the sample respondents reported levels of overall job satisfaction that could be characterized as dissatisfied. Although Michigan teachers in this sample more frequently reported being satisfied than dissatisfied with respect to their overall job satisfaction, it is noteworthy that fewer than half of the sample teachers were satisfied and nearly as many teachers were neither satisfied nor dissatisfied.

Additional support concerning the conclusion that the average Michigan teacher tended to be slightly more satisfied than dissatisfied can be ascertained from Table 13. This table presents a percentage-of-sample frequency distribution of respondents indicating some degree of satisfaction with each job facet. By comparing the percentage of sample satisfied to the percentage of sample dissatisfied, it was found that on 45 work-facet items a greater proportion of the sample was satisfied than dissatisfied. On 13 job-facet items, sample respondents were more frequently dissatisfied than satisfied. On balance, therefore, Michigan teachers appeared somewhat more satisfied than dissatisfied.

The conclusion that the average Michigan teacher in this sample tended to be slightly more satisfied than dissatisfied has to be viewed

cautiously. Although the data suggest the validity of this conclusion, it can also be concluded that a number of particular job facets were dissatisfying to a high proportion of Michigan school teachers. The following job facets were dissatisfying to more than half of the sample respondents, including attitude of society towards education, attitude of parents towards education, status of teachers in society, long-term salary prospects in teaching, and board-teacher consultation on working conditions. A total of 26 work facets were viewed as dissatisfying by at least one-third or more of the sample respondents.

In comparison to several recent studies reporting on levels of teacher satisfaction (Cooke, Kornbluh, & Abramis, 1982; Fiske, 1982; Holifield, 1985; NEA, 1980, 1981), it may be reasonable to conclude that teacher dissatisfaction has declined, based on results reported in this study. Comparing this study's 17% rate of overall dissatisfaction to rates reported in excess of 50% of the sample dissatisfied in these other studies lends support to this conclusion. Careful examination of methods used to determine whether a teacher was satisfied or dissatisfied in these studies, however, suggests an alternative conclusion.

It may be reasonably concluded that methods frequently used in past studies attempting to determine whether teachers were satisfied or dissatisfied with their jobs may have overstated the rate of teacher dissatisfaction. Relying on one-, two-, or three-item measures of overall satisfaction, several past studies (in particular, Cooke et al., 1982; NEA, 1981, 1981) concluded that a high percentage of their sample respondents were dissatisfied. This conclusion was largely

supported by subject responses to the following question found in each of these studies: "If you had it to do over again, would you choose teaching as a career?" Teachers answering "no" to this question were presumed to be dissatisfied with their jobs.

Comments from sample respondents in the present investigation lead to the suggestion that not all teachers who would choose a career different from teaching "a second time around" are dissatisfied with their jobs.

From a male elementary school teacher:

> Although I am happy in the profession and feel I am a very successful teacher, I still feel that maybe I'll try something "new" someday. However, because the years seem to fly by so smoothly, I'll probably be retired when that "someday" arrives. But, I still have my dreams.

From a male high school teacher:

> I'm now 40 years of age and would "like a change" in professions. I'm not dissatisfied but would like to view the workforce in another profession. I'm in Real Estate sales and this can be enjoyable too.

From a male high school teacher:

> Teaching is a rich and rewarding experience. I enjoy my job and look forward to most days. At times, I like to think about changing jobs. It gives me a feeling of liberation!

It appears evident from these comments that a teacher can contemplate a career change without being dissatisfied with his/her present job. Because past studies relied heavily on this and other single-item measures of overall job satisfaction, levels of teacher dissatisfaction may have been overstated.

Question 3: Factors Accounting for Overall Job Satisfaction

The third major research question included in this study asked: Which underlying satisfaction factors account for the largest amount of variance in overall job satisfaction for this sample of Michigan K-12 public school teachers? This question was approached by using stepwise multiple regression to determine which job satisfaction factors account for the largest amount of variance in separately measured overall job satisfaction. The results of this regression analysis are presented in Table 23. Support was found for the conclusion that the more influential sources of job satisfaction for teachers tended to be aspects of the work itself rather than aspects found in the work environment.

By examining the job facets that clustered to form the various job satisfaction factors that significantly contributed to the prediction of overall job satisfaction, it became evident that work facets rather than facets associated with the work environment were important. Factor 5: Teacher work achievement and growth was the single factor most predictive of overall job satisfaction. Alone, this factor accounted for 41% of the variance in overall job satisfaction. The job facets that clustered to form this factor included intellectual stimulation in your work, social relationships in your work, your sense of achievement in teaching, recognition by others of your work, the prospect of teaching as your life-time career, opportunities for further formal study, your opportunity for promotion, and your relationships with other teachers. Not every job facet clustering to form this factor was a facet concerned with the work itself; a few of the

facets concerned the work environment. However, this factor primarily focused on the satisfaction an individual derived from the work itself.

The factor determined to be the second most significant predictor of overall job satisfaction was Factor 1: Teacher-student interaction. This factor accounted for nearly 6% additional variance in overall job satisfaction and included the following job facets: attitudes of students toward learning, general behavior of students in the school, average level of student achievement, general behavior of students in your classes, ability levels of students taking your classes, and your relationships with students. Again, these job facets reflect the degree of satisfaction a teacher derived from the teaching act, which constitutes the work performed by teachers.

The final significant predictor of overall job satisfaction determined through this regression analysis was Factor 2: Teacher resources. This factor accounted for an additional 1% of the variance in overall job satisfaction and included the following job facets: availability of audio-visual resources, availability of library resources, the distribution of resources within your school, availability of useful advice on teaching problems, both school and district-level decision-making involvement, physical conditions of staffrooms, availability of diagnostic services, opportunities for useful in-service education, physical conditions of your classrooms, and availability of community resources for recreation. Although these job facets are more descriptive of the work environment than of the work

itself, it should be noted that these aspects of the work environment help facilitate the work performed by teachers.

The job-facet clusters forming the four remaining satisfaction factors primarily described the setting within which the work of teachers is performed. These factors included job facets ranging from teacher salary levels to the attitude of society toward education. These factors did not contribute significantly to an accounting of variance in overall job satisfaction.

Inspection of the job facets clustering to form the significant satisfaction factors supported the conclusion that the more predictive sources of overall job satisfaction for teachers tended to be aspects of the work itself rather than aspects found in the environment of work. It is noteworthy that this conclusion finds some support in past investigations seeking to determine the important sources of teacher job satisfaction. For example, correlation coefficients between measures of job-facet satisfaction and overall job satisfaction were used by Holdaway (1978) to identify those job facets most related to overall job satisfaction. He reported that:

> The highest correlations were with "Sense of achievement in teaching" (0.70), "Prospect of teaching as a life-time career" (0.61), "Recognition by others of your work" (0.51), and "Intellectual stimulation in your work" (0.49). These variables relate more to the work done by teachers than to the conditions under which they work. (p. 89)

All four of these job facets identified in the Holdaway study clustered in the present study to help form Factor 5: Teacher work achievement and growth, and this factor was the most influential predictor of overall job satisfaction within the present study.

Herzberg, Mausner, and Snyderman (1959) observed that job factors that resulted in satisfaction were directly related to the work itself. These factors were labeled "satisfiers" and included achievement, recognition, work itself, responsibility, and advancement. Job factors that resulted in dissatisfaction tended to be related to the environment of work, according to these investigators.

Sergiovanni (1967) replicated the Herzberg et al. study on a sample of teachers. His study provided support for Herzberg's hypothesis that job factors that influence satisfaction tend to be factors associated with the work itself.

Although findings from the present investigation tended to confirm the "work relatedness" of satisfaction-producing job facets, a dispute exists between this study's results and Herzberg's theoretical description of the causes of job satisfaction. In brief, the two-factor theory postulates that one set of factors (motivators) produces satisfaction, while another set (hygienes) produces dissatisfaction. Work satisfaction and dissatisfaction are not opposites; rather, they are separate and distinct dimensions of a teacher's attitudes about work.

Herzberg suggested through his theoretical formulation that a teacher who perceives little intellectual stimulation in teaching would rate this job facet as neither satisfying nor dissatisfying. Lack of intellectual stimulation, according to Herzberg, does not contribute to increased dissatisfaction because this job facet functions only as a satisfier (motivator).

Herzberg's dual-factor notion is challenged by data from this study analyzed in Table 57. This table is a presentation of the job-facet clusters that were determined to be important predictors of overall job satisfaction. For each job facet, the proportions of sample responding satisfied and dissatisfied have been identified.

Without exception, the job facets considered important to the prediction of overall job satisfaction in this study produced both levels of satisfaction and dissatisfaction among sample respondents. It would appear that each job facet is capable of influencing perceptions of satisfaction or dissatisfaction as a result of the interaction between teachers and their work. It is noteworthy, however, that the job facets most descriptive of the work itself tend to influence perceptions of satisfaction more frequently than perceptions of dissatisfaction. This tendency provides some limited support for Herzberg's dual-factor theory.

Question 4: Value of Importance Weighting Satisfaction Scores

The fourth general research question included in this study asked: Do measures of job-facet importance give useful information, over and above that provided by satisfaction scores alone, for the purpose of estimating overall job satisfaction? This question focused on determining the efficacy of importance weighting job-facet satisfaction scores to improve the prediction of separately measured overall job satisfaction from these facet measures. Four specific research questions with varying designs were pursued to assess the

Table 57.--Satisfaction and dissatisfaction response distribution on job facets clustering to form factors important to the prediction of overall job satisfaction.

	DISSATISFACTION										SATISFACTION								
	90%	80%	70%	60%	50%	40%	30%	20%	10%	0	10%	20%	30%	40%	50%	60%	70%	80%	90%
Factor 5: Teacher Work Achievement and Growth																			
Intellectual stimulation in your work								24%								62%			
Social relationships in your work									9%							67%			
Your sense of achievement in teaching								20%									75%		
Recognition by others of your work								22%							57%				
Teaching as a life-time career							27%									63%			
Opportunities for further study								20%							58%				
Opportunity for promotion						40%							30%						
Relationships with other teachers									7%										86%
Factor 1: Teacher-Student Interaction																			
Student learning attitudes					46%										51%				
Student behavior in school						41%									54%				
Student achievement							35%									59%			
Student behavior in class								25%									73%		
Student ability							27%								58%				
Your relationships with students										4%									94%
Factor 2: Teacher Resources																			
Availability of audio-visual resources								23%								64%			
Availability of library resources								25%								62%			
Resource distribution in school						42%								46%					
Advice on teaching problems							37%							48%					
School decision-making						39%								50%					
District decision-making							35%							46%					
Conditions of staffrooms							37%								53%				
Diagnostic services							35%								50%				
In-service opportunities						43%							41%						
Classroom conditions							36%								54%				
Community recreation facilities							32%								51%				

value of importance weighting. Generally, these analyses supported the conclusion that importance weighting job-facet satisfaction scores has little efficacy for the researcher interested in predicting overall job satisfaction from measures of facet satisfaction. Further, it appears from these analyses that importance weighting adds little new information to an understanding of teacher job satisfaction that is not already present among the job-facet satisfaction scores alone. Support for these conclusions is evident within each of the four analyses.

First, Pearson correlation coefficients between seven unweighted and weighted-by-importance teacher job satisfaction factor scores were produced with the presumption that strong-positive correlations would indicate that importance weighting would be redundant. Table 24 presents the results of this analysis, indicating that each comparison resulted in a strong-positive correlation. Both the unweighted and weighted job satisfaction facet measures appeared to be describing the same phenomenon.

The second analysis designed to assess the efficacy of importance weighting was a comparison of correlations between seven job satisfaction factors and overall job satisfaction using unweighted and weighted-by-importance measures. Weighted-by-importance factors would have to result in improved correlations between each factor and overall job satisfaction if weighting was adding new and valuable information. Table 27 presents data indicating that with six of the seven factors, importance weighting reduced the correlation. Using Hotelling's test for differences between correlations revealed that importance weighting

significantly reduced the correlation between overall job satisfaction and four of the seven factors. The conclusion that importance weighting contributes little information toward understanding the relationship between facet satisfaction and overall satisfaction was supported by this analysis.

The third analysis used to determine the efficacy of importance weighting compared overall job satisfaction performance levels between groups of teachers who expressed similar levels of satisfaction on each of seven factors but varied on the level of importance they assigned to these factors. This investigator presumed that if importance weighting contributed valuable information not already present within the satisfaction scores, overall job satisfaction performance would vary significantly in relation to the importance teachers assigned to a particular factor.

Tables 26 and 27 present the results of t-tests comparing overall job satisfaction between groups of teachers who varied on factor importance in both high- and low-satisfaction settings. On all factors in both satisfaction settings, no significant differences in mean overall job satisfaction performance were detected. Factor 7: Teacher status was an exception in the high-satisfaction setting. It was discovered that teachers assigning high importance to teacher status, who were also highly satisfied with their status, expressed significantly higher levels of overall job satisfaction than teachers who assigned low levels of importance to teacher status and who were highly satisfied with this factor. The predominant finding among the

t-tests indicated that varied levels of perceived factor importance between groups of teachers were not accompanied by significant variations in overall job satisfaction.

Assessing the effect that importance weighting job-facet satisfaction scores has on the ability to predict overall job satisfaction from facet measures was the fourth analysis used to test the efficacy of importance weighting. Through the use of a moderator regression analysis reported in Table 28, the amount of variance in overall job satisfaction accounted for by each of three measures was determined, including the variance accounted for by knowing (a) the job-facet satisfaction scores alone, (b) both the job-facet satisfaction and importance scores, and (c) the weighted-by-importance job-facet satisfaction scores as determined by multiplying the job-facet satisfaction scores by the importance scores.

Job-facet satisfaction scores alone accounted for nearly 47% of the variance in the overall job satisfaction performance of respondents in this study. The added information determined by including the job-facet importance measures constituted a statistically significant gain in accounting of overall job satisfaction variance by 1.44%. The gain generated by including the weighted-by-importance job-facet satisfaction scores was not significant and improved the accounting of variance by only .595%. On the basis of statistical significance, weighting job-facet satisfaction scores by importance did not measurably improve the prediction of overall job satisfaction. Although the additional knowledge gained from the importance scores was a statistically

significant contribution, the large sample used in this study and the addition of seven more factor variables to improve the variance accounting by only 1.438% suggested that including importance measures offers little practical significance in predicting overall job satisfaction.

On the basis of the four analyses included in this study to determine the efficacy of importance weighting job-facet satisfaction scores, it appears that weighting is unnecessary in that job-facet satisfaction scores already express the value an individual assigns to a particular facet. Locke (1969), Dachler and Hulin (1969), Mobley and Locke (1970), and Wanous and Lawler (1972) all arrived at a similar conclusion--that the various facets of one's work are inherently "self-weighted" by the importance the facets hold for each respondent. Accordingly, more important facets are given more extreme responses of satisfaction or dissatisfaction than responses given to less important facets.

The validity of this conclusion can be assessed easily by turning to findings reported in the present investigation. Tables 14 and 15 present the job-facet satisfaction items generating the highest and lowest mean satisfaction ratings, respectively. These ratings constituted the extreme responses of satisfaction or dissatisfaction within the present investigation. Table 18 presents the job-facet items generating the highest mean importance ratings. If the conclusion that important facets are given more extreme responses of satisfaction or dissatisfaction is valid, facets rated highly important also

should appear on either the extremely satisfied or dissatisfied list of facets.

As it turned out, seven out of ten job facets rated highly important were also among the ten highest mean facet satisfaction ratings. The three remaining job facets rated highly important were not among the job-facet satisfaction items generating the highest mean facet satisfaction levels. Each of these three facets, however, appears in Table 16, which reports the job-facet satisfaction items generating the highest percentage of sample responding satisfied. These results confirmed the validity of the conclusion that job-facet satisfaction scores already express the value an individual assigns to a particular aspect of work.

Question 5: Variation in Teacher/ School Characteristics and Satisfaction Differences

The fifth and final general research question included in this study sought to determine if differences in individual and organizational characteristics of teachers and the schools in which they worked were accompanied by differences in job satisfaction levels. Data from 19 separate analyses of satisfaction differences between groups of teachers who varied on 17 individual or school-organization characteristics suggested the conclusion that differences in levels of job satisfaction frequently accompanied differences in both personal and organizational characteristics of teachers and the schools in which they worked.

Sixty-nine significant differences in overall satisfaction levels and/or factor satisfaction levels were determined to accompany variations in personal or school-organization characteristics of groups of teachers. Table 58 summarizes the occurrence of these differences, and clear support for this conclusion is evident as significant differences on one or more satisfaction factors appeared with each characteristic examined. The single exception was junior high school size, with no significant differences evident in satisfaction levels for this characteristic, which may be due to their homogeneous size.

Informative patterns of satisfaction differences emerged from these analyses, and several general conclusions about teacher job satisfaction were formed. In regard to characteristics of teachers, it was found that female teachers generally experienced more satisfaction with their jobs than male teachers. The single exception to this finding was that male teachers were more satisfied than female teachers when it came to teacher workload. Older teachers, age 50 and above, expressed higher levels of satisfaction with their work compared to younger teachers. Teachers between the ages of 38 and 49 appeared least satisfied. Late-career teachers (teachers with 22 years experience or more) appeared most satisfied, while mid-career teachers (teachers with 13 to 21 years experience) were least satisfied. Married teachers expressed significantly higher levels of job satisfaction than teachers who were not married; however, teachers with responsibilities for dependent children consistently expressed lower levels of satisfaction compared to teachers who did not have such

Table 58.--Differences in overall and factor satisfaction levels that accompanied variations in personal or school-organization characteristics.

Characteristic	Overall Satisfaction	Teacher-Student Interaction	Teacher Resources	Teacher Compensation	Teaching Assignment	Teacher Achievement	Teacher Workload	Teacher Status
Sex	*	*		*		*	*	
Age	*		*		*	*		*
Experience	*		*		*	*	*	*
Marital status						*		
Dependents	*				*	*		
Second job	*	*		*		*		
Spouse employment								*
Assignment consistency	*				*	*		
School level	*	*			*	*	*	
Elementary size		*						
Jr. high size								
High school size							*	
District size		*	*	*			*	
District geography	*	*	*	*		*	*	
District salary		*	*	*		*	*	
Student ratio							*	
Expenditures		*	*	*		*	*	
Minority students	*	*		*		*	*	*
Achievement	*	*	*	*	*	*		*

responsibilities. Teachers who had second jobs in addition to teaching were less satisfied than teachers whose only job was teaching. Finally, for teachers placed in an assignment that was not consistent with their experience and background, lower levels of job satisfaction were evident compared to teachers correctly placed.

Satisfaction differences that accompanied variation in the organizational characteristics of teachers' schools also were informative. Teachers from elementary schools expressed higher satisfaction levels than either junior high/middle school teachers or high school teachers. The exception to this finding was that teachers from both junior high/middle schools and high schools were significantly more satisfied with teacher workload than elementary teachers. Teachers from small elementary schools expressed more satisfaction with teacher-student interaction than teachers from large elementary schools. This was the only factor in which satisfaction levels changed as a result of elementary school size. No differences in teacher satisfaction levels accompanied changes in junior high/middle school size. At the high school level, teachers from small high schools expressed higher satisfaction with teacher workload than teachers from large high schools. Variation in district size frequently accompanied differences in teacher job satisfaction levels. Teachers from small districts expressed significantly higher levels of job satisfaction than teachers from large districts. Changes in the geographic location of school districts also were accompanied by differences in teacher job satisfaction levels. The least satisfied teachers were from metropolitan

core districts, while the most satisfied teachers worked in urban fringe or rural districts. Variations in district salary levels were accompanied by satisfaction differences. Generally, teachers from high-salary districts were more satisfied than teachers from medium- and low-salary districts. Teachers from districts with low teacher/student load expressed higher satisfaction with teacher workload than teachers from districts with high teacher/student load. Districts with high per-pupil expenditures tended to have teachers who were more satisfied than did low-spending districts. Districts that had a minority student enrollment in excess of 10% of the total student population in the district had teacher satisfaction levels that were significantly lower than the teacher satisfaction levels in districts with smaller minority student enrollments. Finally, districts with high and moderate student achievement levels also had teacher satisfaction levels that were significantly higher than the teacher satisfaction levels that existed in districts with low student achievement.

Several additional conclusions were drawn from the findings summarized in Table 58. First, it was concluded that the several job satisfaction factor measures and the measure of overall job satisfaction varied in regard to their sensitivity toward changes in the teacher and school-organization characteristics included in this study. For instance, significant differences in teacher satisfaction with teacher achievement and growth accompanied changes in 13 different teacher and school-organization characteristics. Significant

differences in satisfaction with teacher status, however, accompanied changes in only five teacher and school-organization characteristics.

The sensitivity of teacher achievement and growth as a satisfaction factor measure confirmed the key role that job facets descriptive of the "work itself" serve in understanding teacher job satisfaction. Teacher status appeared to be a less sensitive measure of satisfaction differences and was more descriptive of "work conditions" rather than the "work itself." Other satisfaction measures that were particularly sensitive to changes in teacher and school-organization characteristics included overall job satisfaction, teacher-student interaction, and teacher workload. Significant differences in teacher satisfaction with each of these measures accompanied changes in ten or more teacher and school-organization characteristics.

It is also worthwhile to note that the different teacher and school-organization characteristics varied in the number of satisfaction factor measures they affected in terms of satisfaction differences among teachers. Variations in district student achievement levels were accompanied by significant satisfaction differences on seven job satisfaction factor measures. For changes in teacher marital status, spouse employment, school building size, and teacher/student load, satisfaction differences occurred on one or fewer job satisfaction factor measures. These findings supported the conclusion that some characteristics exerted a greater effect on satisfaction levels than others.

In addition to student achievement levels, changes in the following characteristics were accompanied by significant satisfaction differences on four or more satisfaction factor measures: teacher sex, teacher age, career experience, second job, school grade level, district size, district geographic location, salary levels, per-pupil expenditures, minority enrollment, and student achievement levels. These characteristics appeared to be important in understanding how satisfaction levels varied between groups of teachers.

Summary of Conclusions

In summary, several important conclusions emerged from the present investigation. There was dimensionality to the job-facet satisfaction scores of teacher respondents in this study. In light of past investigations, this dimensionality suggested a seemingly stable set of job-facet clusters underlying the concept of teacher job satisfaction. Using these job-facet clusters to profile teacher satisfaction performance led to the conclusion that the average Michigan teacher was slightly more satisfied than dissatisfied. Two additional conclusions, however, were supported by this profile. First, Michigan teachers were dissatisfied with a sizable number of important aspects of their work. Second, a large number of Michigan teachers generally were dissatisfied with their jobs. Through additional analyses, it was concluded that the more influential sources of job satisfaction for teachers tended to be aspects of the work itself rather than aspects found in the environment of work. Teacher achievement and growth, teacher-student interaction, and teacher resources were found to be the

most influential factors in the prediction of overall job satisfaction within the present study. Findings from this study also supported the conclusion that importance weighting job-facet satisfaction scores has little efficacy for improving the prediction of overall job satisfaction from measures of facet satisfaction. Further, it was concluded that importance weighting adds little new information to an understanding of teacher job satisfaction that is not already present among the job-facet satisfaction scores alone. Finally, it was concluded that differences in levels of job satisfaction frequently accompanied differences in both personal and organizational characteristics of teachers and the schools in which they worked.

Recommendations for the Management of Schools

The primary interest motivating this investigation was to advance an understanding of teacher job satisfaction that can inform school management about directions to pursue in efforts to improve the quality of the teacher-work experience and bring about higher levels of teacher job satisfaction. The findings generated in this study resulted in a more thorough understanding of teacher job satisfaction, and a number of important recommendations for the management of schools are suggested.

Perhaps the most important recommendation stemming from the results of this study is that school management needs to recognize low teacher morale as a serious problem within our public schools. Fewer than half of the Michigan K-12 public school teachers sampled in this

study expressed feelings of overall satisfaction with their jobs. With substantial portions of the sample responding dissatisfied on a wide range of job facets, these results combine with suggestions from past studies that low levels of teacher job satisfaction result in serious problems. Some of these problems include an inability to retain beginning teachers (Butler, 1961), less effective teaching behaviors (Greenwood & Soar, 1973), higher levels of absenteeism and turnover (Lawler, 1979), increased levels of self-reported stress (Kyriacou & Sutcliffe, 1979), and the increased risk of heart disease and other stress-related illnesses (Friss, 1976; Jenkins, 1971; Sales & House, 1971). These serious consequences of sustained levels of teacher dissatisfaction establish the importance of management recognition of the teacher-satisfaction problem evident in Michigan public schools.

A second important recommendation to emerge from this investigation is that school management should select and structure job satisfaction improvement strategies on the basis of those variables identified as being influential predictors of overall job satisfaction. Management resources available for the improvement of teacher job satisfaction are limited in the public school setting. If resources are consumed on strategies aimed at improving job aspects that have little influence on levels of overall job satisfaction for teachers, it is likely that substantially higher levels of satisfaction will not be forthcoming.

The aspects of teacher work most influential as sources of overall job satisfaction were identified in this study and include

Factor 5: Teacher work achievement and growth, Factor 1: Teacher-student interaction, and Factor 2: Teacher resources. Job facets clustering to form these factors should guide the setting of satisfaction-improvement priorities. An example of how job-satisfaction-improvement strategies should be prioritized demonstrates the value of this recommendation.

Factor 7: Teacher status did not contribute significantly to the prediction of overall job satisfaction when combined with the six other factors determined in this study. Facet 56: Attitude of society towards education was a component facet of this factor. This particular facet exhibited the lowest mean satisfaction rating of all 58 job facets included in this study and was rated dissatisfying to 74% of the sample respondents. Clearly, this facet constituted an aspect of work teachers were dissatisfied with and should be of concern to management. In relation to other facets, however, attitude of society towards education did not exert as much influence on the overall job satisfaction of teachers.

The results of this study provided an improved understanding of the relationship between job-facet satisfaction scores and overall job satisfaction. This knowledge should inform management choice and leads to the suggestion that resources would be better spent on improving job facets such as intellectual stimulation in your work, your sense of achievement in work, recognition by others of your work, and attitudes of students toward learning. These facets clustered in the factors demonstrated to be influential predictors of overall satisfaction.

Improvements in these aspects of teacher work are more likely to improve perceptions of overall job satisfaction.

As improvements within these influential dimensions of satisfaction begin to occur, it becomes appropriate and necessary to commit management resources to the improvement of other job facets that tend to be perceived as sources of dissatisfaction by teachers. Sergiovanni (1967) explained that

> It does not appear likely that one can experience work satisfaction without the elimination or tempering of the dissatisfiers. Deriving satisfaction from work-centered activity assumes that one's energies and efforts are not taxed or depleted by unsatisfactory conditions of work. (p. 81)

Prioritizing the commitment of satisfaction-improvement resources on the basis of management knowing which facets of work influence overall job satisfaction levels for Michigan public school teachers was operationalized in the present study. The result of this process is the recommendation that teacher work achievement and growth, teacher-student interaction, and teacher resources become the priority focus for school-management commitments seeking satisfaction improvement.

Within each of these priority factors, a further ranking of improvement priorities was accomplished by examining the satisfaction levels associated with the various job facets that clustered to form these factors. Table 59 is a presentation of satisfaction levels associated with the various job facets clustering to form these priority factors. The facets generating the lowest levels of satisfaction among sample respondents were determined to be problematic and were

Table 59.--Satisfaction levels for the job facets clustering to form high-priority factors.

Job Facet	% of Sample Satisfied	% of Sample Dissatisfied	Mean Satisfaction
Priority I: Teacher Work Achievement and Growth			
Intellectual stimulation	62	24	4.69
Social relationships	67	9	5.21
Sense of achievement	75	20	5.12
Recognition of your work	57	22	4.62
Teaching as life-time career	63	27	4.86
Opportunities for study	58	20	4.80
Promotion opportunities	30	40	3.72
Relations with teachers	86	7	5.93
Priority II: Teacher-Student Interaction			
Student learning attitudes	51	46	4.04
Student behavior-school	54	41	4.23
Average achievement levels	59	35	4.42
Student behavior-class	73	25	5.06
Student ability levels	58	27	4.59
Relationships with students	94	4	6.16
Priority III: Teacher Resources			
Audio-visual resources	64	23	4.91
Library resources	62	25	4.84
Resource distribution	46	42	4.08
Useful advice	48	37	4.19
School decision-making	50	39	4.10
District decision-making	35	46	3.59
Conditions of staffrooms	53	37	4.32
Diagnostic services	50	35	4.21
Useful in-service	41	43	3.87
Conditions of classrooms	54	36	4.40
Community facilities	51	32	4.41

therefore designated as priorities for the commitment of management resources seeking satisfaction improvement. Using this process resulted in the formulation of the following satisfaction-improvement recommendations, presented in order of priority:

Recommendation 1: Opportunities should be structured for teachers to enable career growth within the teaching profession.

That only 30% of the teachers sampled in this study expressed satisfaction with promotion opportunities within teaching established the priority of this recommendation. Comments expressed by sample respondents suggested that "teaching is a dead-end situation" and that "the lack of opportunity to grow career-wise" affects morale negatively.

"Career ladder" plans may hold some promise in providing meaningful stages to a teacher's career. As a result of experience and training, outstanding teachers would have opportunities for promotion in recognition of their accomplishments in teaching. In commenting on career-ladder plans, Boyer (1983) concurred with remarks made by teachers in this study about the value of promotion opportunities:

> Two of the most troublesome aspects of the teaching profession are the lack of a career ladder and the leveling off of salaries. The irony is that to "get ahead" in teaching you must leave it. . . . The lack of opportunity for advancement in teaching is in sharp contrast to other professions. . . . Good teachers must be recognized and moved forward within the profession, not outside it. (p. 179)

Recommendation 2: Effective means for recognizing the work of teachers should be established.

A sizable proportion of the sample respondents expressed dissatisfaction regarding the recognition they receive in their work. In part, a career-ladder program may provide some of the recognition teachers in our schools deserve. More than additional pay and career stage is implied, however, by the kind of recognition sought here. According to Andrew, Parks, and Nelson (1985), "Recognition, both personal and public, is a powerful morale builder. When teachers are valued, they feel good about themselves, about their work, and about others" (p. 39).

Recommendation 3: Opportunities for further formal study (i.e., in university, college, or institute) should be provided to ensure the continued intellectual stimulation and growth of teachers.

Intellectual stimulation and opportunities for further formal study appear to be related aspects of teacher work that do not yield high levels of satisfaction. Engaging teachers in meaningful challenges that face their school district may provide additional intellectual stimulation. Helping teachers facilitate maximum achievement on the part of their students also may be intellectually stimulating. Most teachers, however, could benefit from the challenge provided by continued formal study.

> Healthy individuals seek opportunities for growth and development. Through these opportunities, teachers develop competence, confidence, self-esteem, and the feeling that they are fulfilling their potential. The result is satisfaction with self, work, and others. (Andrew et al., 1985, p. 47)

Reviving the concept of sabbatical leave may be a positive step toward the intellectual stimulation and renewal of school teachers.

The combined effect of career ladders, recognition programs, and study opportunities may contribute positively to the satisfaction teachers derive from the prospect of teaching as a life-time career. Each of the recommendations would help establish teacher achievement and growth as career foundations.

Recommendation 4: School and district-wide programs to foster improved student attitudes toward learning should be established.

A substantial proportion of the sample respondents (46%) reported levels of dissatisfaction with student attitudes toward learning. A sense of frustration was evident from teacher comments about student learning attitudes. For example, one teacher noted, "I often feel a high level of frustration when I have classes full of students who do not want to learn."

The management of schools, in cooperation with teachers, must be concerned with the development of serious-minded students who appreciate the value of learning. In each school, a climate of high expectation must be developed in order for positive learning attitudes to become normative. Reward and recognition for those students meeting expectations are essential. Careful guidance and counseling for those students who are less than enthusiastic about learning also are necessary. Additionally, support must be forthcoming from the management of schools that upholds the teachers' high standards and expectations for the academic achievement of students.

Recommendation 5: Policies and procedures resulting in improved general student behavior in the schools should be enacted.

Sample teachers expressed higher levels of satisfaction with the behavior of students in their classes than with the general behavior of students within the school. School management must take the lead in stimulating appropriate school behavior on the part of students. Clearly, school behavior of students has implications for both teacher satisfaction and school effectiveness.

> Order, discipline, and a business-like atmosphere are features of effective schools. . . . Rules are fairly enforced and discipline procedures are uniform throughout the school. The resulting sense of security and order builds responsibility and a sense of pride. (Corcoran & Hansen, 1983, p. 10)

Recommendation 6: Programs designed to boost student ability and academic achievement should be implemented.

More than one-third of the teachers sampled reported dissatisfaction with average achievement levels of students. Additionally, many teachers expressed dissatisfaction with ability levels of the students they taught.

Past programs designed to boost the academic performance of students have frequently been associated with improved levels of staff morale.

> There is a positive correlation between high student achievement and high teacher morale. However, one cannot assume direct cause-and-effect relationships from a positive correlation. Good morale may cause teachers to put more effort into their work, thereby producing high student achievement; or the high student achievement may cause teachers to feel good about themselves and their work, thereby producing high morale. Regardless of the direction of causality, administrators and teachers should strive to increase

> both student achievement and staff morale since both are highly desirable qualities in any school system. (Andrew et al., 1985, p. 42)

Recommendation 7: Decision-making procedures at both the district and school-building levels should incorporate meaningful teacher participation.

Fewer than half the teachers sampled in this study expressed levels of satisfaction with their involvement in decision making. Comments from teachers on this issue ranged from "Teachers are rarely asked for opinions or suggestions," to "Administrators do not consult or give authority to teachers . . . . I feel driven by our principal, as a machine." In their study of teacher morale in ten different school systems, Andrew et al. (1985) concluded that "in the better morale schools, there was greater involvement of teachers in decision making, particularly in those matters that affected them professionally: curriculum development, preparing policy and student handbooks, and planning staff development programs" (p. 27). In the present study, teacher decision-making involvement appeared particularly important when decisions concerned the distribution of resources within schools.

Recommendation 8: Provision for the effective support and guidance of classroom teaching should be established.

The availability of useful advice on teaching problems and opportunities for useful in-service education were resources that did not generate very high levels of teacher satisfaction. Perhaps some of the most negative comments from sample teachers had to do with their extreme dissatisfaction concerning opportunities for useful in-service

education. School districts must assume responsibility for the continuing education and development of their teachers. Furthermore, teachers must have a close, trusted, and expert source of advice on teaching if we expect the quality of instruction to improve.

Recommendation 9: Provision of appropriate resources required by the instructional process should take place.

Some teacher satisfaction with the availability of resources required by the instructional process was evident. However, a large enough proportion of the sample teachers expressed dissatisfaction in this area to suggest that improvement in the availability of teaching resources is a priority. Frustration and disenchantment are the logical consequences of asking teachers to do their work with outdated equipment, textbooks, and inadequate supplies.

Recommendation 10: Provision of properly maintained staff and classroom facilities necessary for effective teaching should take place.

Again, a substantial proportion of the sample teachers indicated dissatisfaction with conditions of classrooms and staffrooms. Teacher comments reflected the need for a continued commitment on the part of school management toward the maintenance of appropriate environments for the work of both students and teachers.

These ten recommendations constitute a priority agenda of satisfaction-improvement efforts for the management of schools. As Sergiovanni (1967) suggested, however, sources of teacher dissatisfaction tend to be related to the work environment and deserve attention. School management should seek to temper or eliminate any source of

teacher dissatisfaction identified within the present study as resources permit.

The improvement agenda suggested by findings in this study compares favorably to Corcoran and Hansen's (1983) description of an effective school. They wrote,

> The critical conditions that motivate and satisfy employees are met in effective schools. There is a sense of achievement, there is recognition, the work is not narrowly prescribed, and staff participate in decisions affecting their work. When teachers have such incentives, their productivity increases and student achievement rises. (p. 23)

A final recommendation stemming from the results of this study is that school management should develop sensitivity to varying levels of satisfaction that accompany certain individual and school-organization characteristics of teachers and the schools in which they work. For example, it was determined that beginning and late-career teachers reported significantly higher levels of overall satisfaction than mid-career teachers. To treat these three groups of teachers in an identical manner ignores important satisfaction differences that have been identified. Differential management strategies are suggested by the satisfaction profiles of groups of teachers who vary according to career experience. Other individual and school-organization characteristics are accompanied by significant differences in satisfaction levels and compel a variety of management strategies.

Recommendations for Future Research on Job Satisfaction

Recommendations for future research on teacher job satisfaction have been derived from several sources within the present investigation. First, recommendations concerning how to measure teacher job satisfaction are implied by findings within this study. Second, shortcomings within the present study lead to recommended improvements for similar research on teacher job satisfaction. Finally, results from the present study suggest several new and meaningful directions for future research on teacher job satisfaction.

Important recommendations concerning the measurement of teacher job satisfaction are implied by findings within the present study. The first recommendation is that researchers interested in measuring teacher job satisfaction should devise and use data-gathering instruments that are occupationally sensitive to teaching. This recommendation was initially offered by Lortie (1975) when he suggested that "other sources of satisfaction . . . pale in comparison with teachers' exchanges with students" (p. 104).

Lortie's suggestion was frequently confirmed by findings within the present study. Table 8 is a presentation of the seven-factor varimax rotated factor matrix of job-facet satisfaction scores. The first factor to emerge was teacher-student interaction, which accounted for the largest amount of variance within the job-facet satisfaction scores. Additionally, this factor is reported in Table 23 as the factor that accounts for the second largest amount of variance in overall job satisfaction scores.

A job-facet item within this factor was #47: Your relationship with students. Data in Table 14 indicate that this single facet generated the highest mean job-facet satisfaction rating (6.16) in comparison to all other job facets. Furthermore, this same job facet generated the highest percentage of sample satisfied (94%) of all the job facets (see Table 16).

Clearly, teacher-student interaction is an important element toward understanding teacher job satisfaction. Researchers investigating job attitudes of teachers will limit their understanding if they fail to use measures that consider teacher-student interaction.

The second recommendation for researchers interested in measuring teacher job satisfaction implied by findings within this study has to do with importance weighting job-facet satisfaction scores. On the basis of four separate analyses included in this study to determine the efficacy of importance weighting job satisfaction scores to improve the prediction of overall job satisfaction, it appears that weighting adds little to the prediction of overall satisfaction. Because job-facet satisfaction scores appear to already express the value an individual assigns to a particular facet, gathering data from importance measures and subsequently weighting facet scores by importance are not recommended practices in future research concerned with the measurement of teacher job satisfaction.

Several shortcomings within this study suggest recommended improvements for similar teacher job satisfaction research projects in the future. Although the usable return rate of 53.81% was determined

acceptable on the basis of sample criteria established in this study, other researchers may be able to improve the rate of return by surveying teachers at a different time during the school year. Admittedly, scheduling a survey for teachers to complete during the last five weeks of the school year was a shortcoming within the design of the present study. In several instances, responding teachers pointed out the inconvenience caused by this survey schedule.

From a female elementary school teacher:

> Gee, I can't tell you how many of these surveys (supposedly my name was chosen at random) I have filled out helping people like yourself. This is a terribly busy time of the year to send this to me. Bad timing!

From a female elementary school teacher:

> It would be a good idea to send these out earlier in the year. End of the year is bad news!

To avoid inconveniencing sample respondents and to increase the response rate, it is recommended that teachers be surveyed before the end of the school year.

The usable return rate in this study differed from the total return rate by only 31 surveys. The consistency in information missing from these surveys, however, leads to the suggestion that multipage surveys be assembled in booklet form rather than as several single pages. Twenty-five of the surveys missing data were incomplete in the same location (side 2 of page 2 of the survey, Items 52-71). The consistency of this error suggests that respondents simply missed seeing these questions. Perhaps if the survey had been assembled in booklet form, this particular section may have been more obvious.

The final shortcoming within the design of the present study has to do with the selection of the individual and school-organization characteristics used to determine groups of teachers for difference testing levels of satisfaction. Although the analyses of satisfaction differences between groups of teachers who varied on 17 different individual or school-organization characteristics were meaningful, it became evident that several characteristics functioned to describe the same group of teachers. For example, differences in satisfaction levels between groups of teachers who varied according to the geographic nature of their employing school district were determined. As it turned out, metropolitan core districts displayed the lowest levels of teacher job satisfaction. Additional analyses determined that medium-salary districts, districts with greater than 10% minority students, districts with low student achievement, and districts with large student enrollments all tended to have lower levels of teacher job satisfaction. Each of these characteristics describes metropolitan core districts, and therefore it is difficult to determine which characteristic is most influential on the low levels of satisfaction evident among teachers from these districts.

Rather than deciding that this problem resulted from a shortcoming within the present study, it seems more useful to suggest that this and other concerns that surfaced imply several meaningful possibilities for future research on teacher job satisfaction. Understanding what affects teacher job satisfaction in metropolitan core districts should receive a high priority in future research on

satisfaction. Metropolitan core districts were identified by findings in this study as the school systems facing the most severe levels of teacher dissatisfaction. Consequently, these systems deserve intensive intervention and assistance in developing work settings that are more conducive to teacher satisfaction. The role of research in such interventions should be prominent.

Additional research is implied by the finding that only 49.9% of the variance in job-facet satisfaction scores was accounted for by the factor-analysis procedure used in this study. It may be beneficial to continue to subject the Holdaway (1978) questionnaire to confirmatory factor-analysis procedures. By frequently introducing new job facets into the questionnaire, an improved accounting of job-facet satisfaction may occur, possibly leading to an improved understanding of teacher job satisfaction.

The administration of the survey during the last five weeks of the school year also suggests possibilities for future research. There is the concern that teacher job attitudes during this portion of the school year are systematically different from teacher attitudes during other portions of the school year. This possibility was suggested in comments from teachers in the present study.

From a male high school teacher:

> At this time of the school year as we approach summer vacation; students, teachers, and all other persons connected with school are tired. As a result of this, attitudes and performance levels are below any previous level of the school year. This may be reflected in my answers to questions stated here.

From a male high school teacher:

> I think my answers would have been different had I filled the survey out in the fall or winter. Spring is a bad time of year for teachers. Everyone is tired and it is hard to get students to work at the same level as earlier in the year. This obviously affects job satisfaction.

The proposition that levels of teacher job satisfaction vary significantly from one point during the school year to another certainly has implications for the management of schools and constitutes meaningful territory for additional research.

Finally, numerous research possibilities are evident from many aspects of the present investigation. Establishing an improved understanding of why mid-career teachers experience a satisfaction-low during this portion of their career may lead to differential treatment of this group of teachers. In Michigan, the average school teacher is in mid-career, and a study of this concern would be important. Quantifying the deleterious effects of sustained low levels of teacher job satisfaction on the health of teachers is imperative, owing to the suggestion that dissatisfaction and coronary and other health risks are related (Friis, 1976). Researching an improved understanding of the interaction between a teacher's work life and personal life; the effect that pre- and inservice training of teachers has on subsequent teacher career satisfaction; and the relationship between satisfaction, other variables, and teacher productivity all constitute meaningful areas of future research.

The necessity for continued inquiry into the nature and causes of teacher job satisfaction was best summarized by Gruneberg (1976):

What then can studies of job satisfaction offer the practitioner. . . ? There is no panacea, no magic wand which will transform alienated individuals into happy, contented, hardworking, high-quality, high-quantity producers.

Studies of job satisfaction . . . serve to emphasize that to tackle the problems of job satisfaction involves an understanding of what expectations and values individuals have, and an understanding that such expectations and values can vary from group to group, and between individuals within a group. (p. xi)

APPENDICES

APPENDIX A

SUMMARY REVIEWS OF 55 TEACHER JOB SATISFACTION STUDIES

Study: Hoppock, 1960

Subjects: 23 people engaged in a variety of occupations

Measure: Job Satisfaction Inquiry Blank No. 5 (Hoppock, 1935)

Purpose: The purpose of this research was to conduct a longitudinal study of the changes in reported levels of job satisfaction of a group of 40 individuals originally surveyed in 1935 and resurveyed in 1959.

Findings: Job satisfaction increased in 17 of 23 cases. The greatest increases in job satisfaction were achieved by those who changed jobs. For the only teacher in the sample, the holding power of his teaching position results from being able to have several "second jobs." "I think I have been content to stay because over the years I have developed a number of part-time activities which supplement my income considerably."

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Study: Butler, 1961

Subjects: 79 first-year teachers from the University of Illinois College of Education

Measure: University of Illinois Teacher Graduate Follow-Up Inquiry Form

Purpose: The purpose of this study was to determine the dissatisfactions that cause beginning teachers to leave the profession.

Findings: Butler found that "there is a direct relationship between job satisfaction and the retention of beginning teachers." The most significant causes of job satisfaction or lack of satisfaction for these teachers are (1) their feelings toward the administration of the school, (2) their feelings of freedom in the classroom or the lack of it, (3) whether or not they feel involved in school policy making, (4) feelings of freedom to try ideas or the lack of it, (5) feelings of being or not being heard with regard to school policy decisions affecting teachers.

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Study: Rudd and Wiseman, 1962

Subjects: 590 teacher graduates from the University of Manchester School of Education Class of 1955

Measure: A single-question measure was used, asking subjects to estimate their current level of professional satisfaction. In

addition, each subject was asked to list his/her chief sources of professional dissatisfaction.

Purpose: The purpose of this study was to investigate the relationship between qualifications of students on entry to University of Manchester training programs, their performance during training, and their subsequent success in the teaching profession.

Findings: Ninety-one and seven-tenths percent of the subjects had experienced a high measure of satisfaction in the profession. Men teachers in grammar schools appeared to derive the most satisfaction compared to female subjects teaching in infant schools. Major areas of dissatisfaction included salaries, poor human relations among staff, inadequate buildings and equipment, high teaching load, training inadequacies, large classes, expressions of personal inadequacy, lack of time for certain professional duties, and low status of the professional in society.

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Study: Bienenstok, 1964

Subjects: 1,349 junior high teachers in New York

Measure: A questionnaire was developed specifically for this study, seeking to identify the strains associated in junior high teaching.

Purpose: The purpose of this study was to determine why teacher turnover is so high at this level and why junior high teaching is relatively unattractive.

Findings: The holding power of the junior high is particularly weak among young teachers of both sexes, but more so among men. Forty-two percent of the subjects felt that beginning teachers received insufficient help and support from their superiors. More than 75% of the subjects considered maintaining discipline as a primary source of strain and dissatisfaction. Low career prestige/status, little leeway in making professional decisions, and limited opportunity to apply academic knowledge contribute to teacher dissatisfaction.

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Study: Gottlieb, 1964

Subjects: A total of 89 elementary school teachers from six public schools of a medium-sized industrial community in the Midwest were the subjects of this research.

Measure: Data on job satisfaction and other aspects of this study were obtained through interviews and a paper-and-pencil questionnaire.

Descriptions of the interview and questionnaire were not reported by the author.

Purpose: The primary purpose of this study was to ascertain differences in the attitudes of Negro and white elementary school teachers toward Negro and white pupils and toward their jobs.

Findings: The Negro teachers were more satisfied with their current teaching positions than were the white teachers. Among reasons for the job dissatisfaction, Negro teachers listed large classes, poor equipment, inadequate supplies, and the lack of proper curriculum, while white teachers emphasized the lack of ability of students, their poor motivation, discipline problems, and parents who were not concerned with the education of their children.

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Study: Trusty and Sergiovanni, 1966

Subjects: 233 public school teachers drawn from a suburban Rochester, New York, school district

Measure: A modified version of Porter's (1963) Needs Deficiency Survey was used by this study. The instrument examines Maslow's human needs categories and produces a score that represents the difference between the degree to which an individual perceives his/her needs being met on the job and how much the individual thinks he/she needs.

Purpose: The interest of this study was in determining differences in need deficiencies of teachers when grouped by age, years of experience, sex, and professional role.

Findings: It was found that female teachers perceived smaller need deficiencies than male teachers at all levels of the Maslow hierarchy of needs, with the exception of security. Need deficiencies tended to be greatest for the 25-35 age group with similar results for teachers with 5-12 years of experience. The largest need deficiencies also appeared among junior-senior high school teachers.

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Study: Sergiovanni, 1967

Subjects: 127 respondents were selected for interview from 3,382 teachers in Monroe County, New York, school districts.

Measure: This study replicated Herzberg's (1959) critical incidents approach in which teachers are asked to report incidents when they felt exceptionally good or bad about being a teacher and then tell what brought about these feelings.

Purpose: The purpose of this study was (1) to determine whether or not the factors reported by teachers would distribute themselves into mutually exclusive satisfaction and dissatisfaction categories and (2) to assess the distribution of factors in terms of variations resulting from subpopulations of teachers established on such factors as sex, tenure status, and school level.

Findings: The results of this study indicated that achievement, recognition, and responsibility were factors that contributed predominantly to teacher job satisfaction. Interpersonal relations with students and colleagues, supervision-technical, school policy and administration, personal life, and fairness-unfairness were factors that contributed predominantly to teacher job dissatisfaction. Other factors were bipolar.

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Study: Adair, 1968

Subjects: A random sample of secondary school teachers in a six-county area of upstate New York was chosen for this study. Sample size was not reported.

Measure: This study replicated Herzberg's (1959) critical incidents approach in which teachers are asked to report incidents when they felt exceptionally good or bad about being a teacher and then tell what brought about these feelings.

Purpose: The purpose of this study was to determine job factors that lead to either satisfaction or dissatisfaction for teachers.

Findings: The job factors that serve to motivate the individual were different factors entirely from those that promote dissatisfaction. Sense of achievement, successful job performance, finding solutions to problems, and seeing the results of one's own work were the job factors that resulted in the greatest number of reported good feelings. Inadequacy of school organization and management is the factor responsible for the greatest number of dissatisfied teachers.

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Study: Perkes, 1968

Subjects: Teachers within selected California school districts at the junior and senior high school levels were chosen to participate in this study. Sample size was not reported.

Measure: The Purdue Teacher Opinionnaire was used to sample teacher satisfaction with various dimensions of their work.

Purpose: The purpose of this study was to investigate junior high school teacher satisfaction in an effort to uncover information that might serve as a guide in taking steps to ameliorate the junior high staffing problem and to test some assumptions that pervade commentaries on junior high school teachers.

Findings: It was found that junior high school teachers expressed significantly higher levels of job dissatisfaction than their counterparts at the high school level. The major source of dissatisfaction at the junior high level focused on teacher-student interaction. Teachers who were younger and those with less experience indicated that student behavior was more troublesome.

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Study: Hornstein, Callahan, Fisch, and Benedict, 1968

Subjects: Data for this investigation were collected from 325 primary school teachers who worked in 14 different school buildings in each of two participating school systems.

Measure: Among other concepts measured, teacher job satisfaction was assessed in this study through the use of a survey modeled after Backman et al. (1966). The satisfaction portion of the survey considered the teachers' evaluation of the school system, their satisfaction with their principal, and their perception of student satisfaction with teacher performance.

Purpose: This study investigated the relationship between employees' satisfaction and the perceived degree of influence employees exert on organizational decision making in the public school setting.

Findings: The results indicated that higher within-building interpersonal influence for teachers and principals and a reliance on expert power, as opposed to reward, coercive or legitimate power, are associated with (1) more favorable evaluations of the school system, (2) greater satisfaction with the principal, and (3) a tendency to perceive students to be more satisfied with their teachers.

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Study: Haralick, 1968

Subjects: The data for this study were obtained from an analysis of the questionnaire responses of 1,250 teachers in 108 North Carolina elementary schools.

Measure: In addition to a six-item measure rating their principals and a three-item measure of principal autocracy, teachers also responded to a two-item index of overall work satisfaction.

Purpose: This study focused on the relationship between school principals and classroom teachers. Specifically, the study sought support for the argument that teachers' job satisfaction would be more positively influenced by the principal's positive compliance with the teachers' group norms than by a "democratic" style of leadership.

Findings: It appears from this study that a principal's compliance with specific work-related norms held by the teachers is more important to teacher satisfaction than is the degree of democratic behavior displayed by the principal.

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Study: Fraser, 1970

Subjects: 315 public school teachers from a stratified sample of subjects representing schools in Australia, New Zealand, and the United States

Measure: Among other tasks, subjects were asked to specify sources of satisfaction and dissatisfaction in their career as school teachers.

Purpose: The primary purpose of this study was to investigate the relationship between school characteristics and teacher reactions.

Findings: Each of 11 school characteristics was identified as having a significant effect on teacher job satisfaction and/or teacher commitment to the organization. These characteristics ranged from level of school through average years teaching experience of staff.

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Study: Check, 1971

Subjects: 119 veteran school teachers attending graduate coursework at the University of Wisconsin-Oshkosh

Measure: An 11-item questionnaire relating to classroom instruction and the consequent attitudes and impressions that persons in the profession have toward teaching

Purpose: The purpose of this study was to determine the most frequently mentioned sources of dissatisfaction and to rank order their seriousness according to teachers.

Findings: The most frequently mentioned and serious problem identified by subjects was "too much menial task unrelated to actual instruction." Second in order of dissatisfaction was "salary and benefits." "Poor administration of schools" was the third theme of dissatisfaction.

Study: Davison, 1971

Subjects: 230 public secondary school teachers in the metropolitan area of Buffalo, New York, who were beginning their second year of teaching service

Measure: Subjects were presented six value statements that represented satisfaction categories for teachers and were asked to rate the potential of their present job in terms of the job's ability to provide satisfaction in each category.

Purpose: To establish the extent to which job satisfaction was being realized in a teacher's initial teaching position and to identify organizational preferences that are viewed as providing greater opportunities for career fulfillment were the two objectives of this study.

Findings: It was found that few teachers with minimal work satisfaction expressed any strong desire in leaving their present position. When teachers described a preferred organizational setting, a perception of better students was the prevailing concern.

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Study: Coughlan, 1971

Subjects: A sample of 192 teachers from 11 middle-class matched suburban high schools was selected to obtain groups of similar-type teachers operating with comparable subcultural environments.

Measure: As one component of a multimeasure questionnaire, teacher job satisfaction in this study was determined by a 125-item, self-reporting inventory called the School Survey. Constructed to measure the teachers' attitudes toward specific aspects of their work environment, this instrument yielded a 13-factor solution to explain teacher satisfaction perceptions.

Purpose: The purpose of this study was to analyze the effects of organizational structure and work values on job satisfaction. Two questions focused the research: How do work values influence job satisfaction in the school? and In what ways does satisfaction vary in the relatively closed and open organizational systems?

Findings: The findings suggest that teachers are largely in agreement within their own group regarding their perceptions of key factors in their work environment irrespective of personal needs or goals. In the relatively open school system, (1) the teachers as a group were significantly more satisfied with their system administration, instructional program, and financial incentives; and (2) they were significantly divided among themselves according to work values with respect

to colleague relations. In the relatively closed system, the major concerns of the teacher groups were focused upwardly in vertical relations; staff members were concerned about aspects of the work relationship more directly under the influence and control of hierarchical superordinates.

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Study: Grassie and Carss, 1972

Subjects: 574 teachers from 14 metropolitan high schools in Brisbane, Australia

Measure: Among several measures comprising a comprehensive survey instrument, Aiden and Hage's Satisfaction Scale (1967) was used to collect data regarding teacher satisfaction with both work and colleagues.

Purpose: The purpose of this study was to examine the relationships that exist between school structure, i.e., formal administrative relationships, and leadership quality on the one hand, and, on the other, teachers' satisfaction with their work and with their colleagues, taking into consideration the orientations teachers have to teaching as an occupation.

Findings: In this study, it was revealed that teachers who have a high level of professional orientation toward teaching also will have levels of satisfaction that are responsive to organizational structure and leadership quality. These teachers are more likely to express satisfaction with work in a setting characterized by considerate and thrustful leadership and the opportunity to participate in decisions about policy and programs, and by the absence of a rigid hierarchy of authority and detailed organizational constraint.

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Study: Greenwood and Soar, 1973

Subjects: 39 female elementary teachers in kindergarten through second grade Follow-Through programs located in six different states

Measure: To assess teacher morale, subjects completed the Purdue Teacher Opinionnaire, a 100-item self-report teacher morale instrument (Bentley & Rempel, 1967). Satisfaction with teaching is one of ten factor dimensions assessed by the instrument. The Reciprocal Category System (Ober, Wood, & Roberts, 1968) was used to assess teacher communication.

Purpose: The purpose of this study was to explore relationships that might exist between teacher morale and certain verbal classroom behaviors recorded by systematic observation.

Findings: If smaller amounts of teacher talk, greater amounts of pupil-pupil talk, and greater teacher acceptance of pupils are seen as aspects of good teaching, the significant relationships revealed in this study could generally be summarized as an association between aspects of good teaching and aspects of higher morale.

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Study: Lacy, 1973

Subjects: The data base for this study comprised 240 randomly selected business education teachers (an 80.1% response rate) from Ohio city, county, and exempted village school districts.

Measure: A job satisfaction scale that related to teachers' satisfaction with their present teaching positions was devised for this study.

Purpose: The purposes of this study were to determine if selected factors affect the job satisfaction of business teachers in public high schools in Ohio and to determine whether teachers teaching in nontraditional business education programs are more satisfied with their jobs than teachers in traditional business education programs.

Findings: It was found that teacher job satisfaction is affected by a number of factors including the community, fringe benefits, school administrators, students in class, teaching load, financial support provided the business education department, helpful supervision, teaching experience, and others. There were no significant differences in satisfaction levels between traditional and nontraditional business education teachers.

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Study: Miskel and Gerhardt, 1974

Subjects: 642 Kansas public school teachers (a response rate of 80%) drawn from 311 of the state's school districts

Measure: A multimeasure survey was developed, including use of the Conflict Assessment Questionnaire (Corwin, 1963); the School Organization Inventory (Robinson, 1965); and a 12-item Satisfaction, Central Life Interests, and Voluntarism scale.

Purpose: The purpose of this study was to explore two hypothesized relationships: (1) that hierarchy of authority and rules and regulations in conjunction with selected demographic variables will be

significant predictors of the conflict intensity experienced by teachers and (2) that conflict intensity, as moderated by central life interests and voluntarism will be significant predictors of the teacher's job satisfaction level.

Findings: Generally, both hypothesized relationships (hierarchy of authority and rules and regulations) were found to be predictive of conflict intensity. It was found that conflict total, voluntarism, and central life interest were significant predictors of satisfaction.

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Study: Eubanks, 1974

Subjects: The sample for this study comprised 97 randomly selected teachers (an 80.8% response rate) from the de facto segregated high schools in a large midwestern city.

Measure: Data were obtained by using an adaptation of a questionnaire devised by Spillane (1966). The questionnaire encompassed a general range of concerns related to job satisfaction; teacher-student relations; school status; attributes essential for the success of a teacher; and behavioral, emotional, and social characteristics of students in schools.

Purpose: The purposes of this study were to determine if there were significant differences between (1) the perceptions of teachers in black high schools as compared to teachers in white high schools and (2) the perceptions of black teachers in black high schools as compared to white teachers in black high schools on several variables including job satisfaction.

Findings: In terms of job satisfaction, it was found that teachers in white high schools rated significantly higher on job satisfaction than teachers in black high schools. Further, black teachers in black high schools did not differ significantly from white teachers in black high schools on their ratings of job satisfaction.

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Study: National Education Association, 1975

Subjects: A nationwide sample of public school teachers (sample size not reported)

Measure: 1975 NEA Teacher Opinion Poll

Purpose: The NEA conducts periodic assessments of teachers' attitudes concerning the teaching profession and problems, challenges, and conditions confronting teachers.

Findings: In responding to the question, "If you could make one change that would improve your own morale or professional satisfaction as a teacher, what would the change be?" the following percentages of the sampled teachers answered: lower class size, 10.9%; improve curriculum, 9.9%; better/fewer administrators, 9.4%; higher salary, 8.6%; improved discipline, 7.4%; better relationships within school, 6.5%; greater voice in policy determination, 6.3%; professional improvement, 6.0%; more planning time, 5.3%; more time to teach, 5.2%; support from parents and community, 4.8%; and more status as a profession, 4.1%.

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Study: Miskel, Glasnapp, and Hatley, 1975

Subjects: A random sample of 3,331 Kansas public school teachers produced 2,224 usable returns (a response rate of 74.3%) for analysis in this study.

Measure: A three-part survey consisting of four instruments was administered in this study. Job satisfaction was measured with a series of six items similar to "I am somewhat dissatisfied with my job." A five-category Likert-type response set enabled subjects to rate their degree of agreement with each statement.

Purpose: The purposes of this study were to build a theoretical model for job satisfaction and to test its predictive efficacy using six educator groups.

Findings: The findings of the study tend to support the inequity hypothesis; however, the posited inequity relationships with job satisfaction achieved low beta weights, and the amounts of explained variance were low. The strongest support for the model was found in relation to the intervening status of the primary life interest variable. With the exception of the scores for central office administrators, this variable exhibited a significant beta weight for all groups, indicating that the greater the primary life interests were in the job, the higher was the level of satisfaction.

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Study: Holdaway, 1978

Subjects: Responses from 801 Alberta public school teachers (a 58% response rate) provided the data base for this study.

Measure: A new questionnaire was constructed for the study, asking teachers to rate their degree of satisfaction with 58 named facets related to their work and working conditions.

Purpose: The main purpose of this study was the examination of the relationship between overall and job-facet satisfaction of public school teachers in order to comment on the value of Herzberg's formulation concerning satisfaction/dissatisfaction and motivation/hygiene factors.

Findings: For both the free-response and scaled-response questions, the "intrinsic" facets were most closely related with overall satisfaction. Correlation analysis showed that overall satisfaction was most highly related to satisfaction with achievement, career orientation, recognition, and intellectual stimulation. Factor analysis revealed affiliation between overall satisfaction and societal attitudes, status, recognition, achievement, career orientations, and intellectual stimulation. "Working with students" was included most commonly in the free responses as the major source of overall satisfaction. The study provided general support for Herzberg's two-factor theory, but only in the sense that the theory relates to overall satisfaction, rather than to motivation.

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Study: Schackmuth, 1979

Subjects: 219 elementary school teachers (a response rate of 55%) from Valley View Community Unit District 365, Bolingbrook, Illinois

Measure: Measure not identified in the reporting of this study

Purpose: To examine the occupational role of the elementary school teacher in the organizational setting of the elementary school system.

Findings: In examining the bureaucratic atmosphere of schools, the study found that as the level of bureaucracy increases, no significant decrease in teachers' professional self-image can be expected. More important, the study presented strong evidence that as the professional self-images of teachers increased, the level of work satisfaction also increased. Finally, as the level of bureaucracy in the school increased, no significant decrease in teacher job satisfaction could be detected.

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Study: Miskel, Fevurly, and Stewart, 1979

Subjects: 1,619 teachers (a response rate of 93%) from one parochial and 11 public schools including schools from rural, suburban, and urban settings

Measure: A six-item instrument designed to assess teacher overall affective orientation toward the job (Miskel, Glasnapp, & Hatley, 1975) was used.

Purpose: The purpose of this study was to build on the literature dealing with school configurations, interpersonal processes, and performance indicators. Perceived organizational effectiveness, loyalty, and job satisfaction were employed as dependent variable outcomes approximating organizational performance.

Findings: It was found that more effective schools, as perceived by teachers, are characterized by more participative organizational processes, less centralized decision-making structures, more formalized general rules, and more professional activity. Four variables emerged as significant predictors of job satisfaction, including (1) high formalization on general rules for teachers, (2) low centralization on decision making for instruction and curriculum, (3) participative principal leadership, and (4) schools with more experienced principals.

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Study: Kyriacou and Sutcliffe, 1979

Subjects: 218 teachers in 16 medium-sized mixed comprehensive schools in England

Measure: A single-item self-report measure of overall job satisfaction asked: "Overall, how satisfied are you with teaching as a job?"

Purpose: To investigate the association between self-reported teacher stress and three response correlates of teacher stress: job satisfaction, absenteeism, and intention to leave teaching.

Findings: It was found in this study that 72.5% of the teachers were very satisfied or fairly satisfied with teaching. A negative association between self-reported teacher stress and job satisfaction emerged. Additionally, it was found that a positive association between self-reported teacher stress and intention to leave teaching existed. About 24% of the respondents indicated that it was fairly or very unlikely that they would still be a teacher in 10 years. It appears that conditions of work rather than the experience of teaching (the work itself) may provide the sources of stress that most strongly contribute to job dissatisfaction and intention to leave teaching.

Study: McGuire, 1979

Subjects: A random sample of public school teachers from across the United States (sample size not reported)

Measure: The National Education Association 1979 version of the Teacher Opinion Poll

Purpose: The National Education Association conducts periodic assessments of teachers' perceptions concerning the teaching profession and problems, challenges, and conditions confronting teachers.

Findings: The results of this study revealed that one-third of those teaching now would not go into teaching if they could go back to college and start again. Only 60% plan to remain in teaching until retirement. Physical assaults against teachers are up, with 1 in every 20 teachers having been assaulted on school property during 1978-79.

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Study: Bentzen, Williams, and Heckman, 1980

Subjects: 1,334 teachers from a wide variety of American public schools, including teachers from elementary, junior high/middle, and senior high schools

Measure: A three-question measure of overall satisfaction was devised for this study, including (1) "I usually look forward to each working day at this school (yes/no)? (2) "Looking back on your expectations before you started your career, were those expectations fulfilled (yes/no)?" (3) "If you had it to do over again, would you choose education as a profession (yes/no)?"

Purpose: To arrive at a better understanding of the adult experience in schools, including the experience of teachers, specialists, librarians, counselors, principals, and vice-principals.

Findings: Overall, it was found that 75% of the teachers agreed with statements that were considered indicative of job satisfaction. However, only 12% of all the sample teachers agreed strongly with those statements. A slight tendency for teachers in higher-income communities and in more suburban communities to express greater satisfaction was evident. Satisfaction variation between teachers grouped on the basis of school building level was more apparent. The spread of scores indicated that elementary were the best satisfied, followed by junior high and senior high, in that order.

Study: Bridges, 1980

Subjects: The sample for this study comprised 488 elementary teachers working in 36 schools.

Measure: The Job Descriptive Index developed by Smith, Kendall,and Hulin (1969) was used to measure job satisfaction.

Purpose: The major purpose of this study was to determine the relationship between job satisfaction and teacher absenteeism.

Findings: The relationship between job satisfaction and absenteeism among elementary school teachers is tenuous. In none of the 12 multiple regression analyses performed in this study did the shared variance exceed 7%, suggesting that job satisfaction is not a major factor in absenteeism.

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Study: Khan and Traub, 1980

Subjects: Eighty-seven teachers who staffed six schools of a southern Ontario, Canada, school district were respondents in this study.

Measure: The Attitude Toward Teaching Scale was adapted for this study from work done by Shaw and Wright (1967). This scale purports to measure teacher satisfaction in terms of work load, the teaching process, and the value of teaching as a career.

Purpose: The purpose of this study was to assess differences in teachers' attitudes toward education in general, teaching as a profession (job satisfaction), pupils, and educational innovations between schools that differed systematically in openness of educational program and openness of architecture.

Findings: It was concluded that those teachers who conducted a more open program and/or who taught in an architecturally open school had significantly more positive attitudes (including satisfaction) than those teachers who conducted a less open program and/or who taught in a school that was either architecturally closed or a mixture of open and closed architectures.

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Study: National Education Association, 1980

Subjects: 1,738 public school teachers participating in a random sample of teachers from across the United States

Measure: NEA's 1980 Nationwide Teacher Opinion Poll

Purpose: To continue the periodic assessment of teacher job sentiments

Findings: Thirty-five percent of the sampled public school teachers were dissatisfied with their current jobs as teachers. Forty-one percent would probably not become teachers again. A higher percentage of male teachers than female teachers were dissatisfied. Secondary teachers were more dissatisfied than elementary teachers. Teachers who taught in school systems with over 25,000 students were a little more likely than other teachers to be dissatisfied with their jobs. Public attitudes toward schools, media treatment of education, student attitudes toward learning, and salary exerted a negative effect on job satisfaction according to the majority of poll respondents.

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Study: Parkhouse and Holmen, 1980

Subjects: Forty-nine physical education faculty in three inner-city and three suburban Los Angeles area high schools made up the sample in this study.

Measure: The Job Descriptive Index (Smith, Kendall, & Hulin, 1969) was used in this study to measure job satisfaction.

Purpose: The purpose of this study was to determine whether faculty in suburban and inner-city schools differed with respect to job satisfaction.

Findings: The results of this study led to the suggestion that important differences exist between intrinsic and extrinsic job satisfaction. Suburban faculty were satisfied with intrinsic aspects (work, colleagues, and supervision) and dissatisfied with the extrinsic component of pay. Conversely, the inner-city subjects reported satisfaction with pay and dissatisfaction with work, co-workers, and supervision.

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Study: National Education Association, 1981

Subjects: Public school teachers from across the United States; sample size was not reported.

Measure: NEA's 1981 Nationwide Teacher Opinion Poll

Purpose: To continue the periodic assessment of teacher job sentiments.

Findings: More than one-third (37%) of the sampled teachers were dissatisfied with their jobs. A greater proportion of men (42%) than

women (33%) were dissatisfied, and teachers in large cities and suburbs were more dissatisfied than other teachers. Forty-five percent of the sampled teachers said they probably would not become a teacher if they could start over again.

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Study: Davis, 1981

Subjects: 246 public school physical education teachers in Fairfield County, Connecticut

Measure: A job satisfaction survey was used in this study entitled JOBSAT, which was developed at the University of Michigan Institute for Social Research by Quinn and Shepard (1974).

Purpose: The purpose of this study was to expand job satisfaction literature to include a description of the sources of variation in the overall job satisfaction of physical education teachers.

Findings: Dimensions found to predict job satisfaction included (1) esprit (morale) of the teacher's group; (2) professional commitment of the individual physical educator; (3) consideration leader behavior of the physical education program leader; and (4) disengagement (noninvolvement) behavior of the teacher's group (negative correlation). Seventy percent of the variance in job satisfaction could be explained by these four predictor variables.

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Study: Saville, 1981

Subjects: Responding to this study were 1,468 teachers in the Clark County (metropolitan Las Vegas) school districts.

Measure: A questionnaire developed by Saville listing 49 potential sources of stress for teachers was used.

Purpose: To ascertain how stressful teachers perceived their profession to be was the primary focus of this study.

Findings: Fifty-one percent of the sample reported experiencing stress-physical illness during the past four years. Twenty-four percent reported stress-related psychological illnesses. Sixty-five percent of the sample considered teaching a stressful occupation, and 58% indicated that they had seriously considered leaving the profession because of stress-related problems. The eight most important sources of stress to emerge from the study included overcrowded classrooms, threat of lawsuit, student violence, paperwork, disagreement with principals, involuntary transfers, discipline, and loss of personal time.

Study: Erlandson and Pastor, 1981

Subjects: 150 high school teachers drawn from ten high schools selected to represent different geographic regions of the United States

Measure: Higher Order Need Strength Measure B (Hackman & Oldham, 1974) was used as the measure in this study.

Purpose: To analyze the presence and fulfillment of higher-order need strengths among high school teachers.

Findings: About two-thirds of the sampled teachers possessed a predominance of higher-order need strengths (needs for participation in decision making, challenge, freedom and independence, etc.) over lower-order need strengths (high pay, fringe benefits, job security, etc.). The most strongly expressed need strength for teachers was the desire to take on responsibility for one's own goals and to see these goals through to completion. It was found that schools do a better job of satisfying lower-order needs than they do satisfying higher-order needs.

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Study: Greenfield and Blase, 1981

Subjects: Teachers in one division of a large, predominantly white, suburban high school in New York

Measure: 900 single-spaced typed pages of field study data collected during one academic year

Purpose: To identify and analyze some of the frustrations and difficulties faced by classroom teachers.

Findings: In terms of teacher job satisfaction, it was found that the following factors were the primary contributors toward teacher dissatisfaction: paperwork and preparation; student absences; interference from other teachers, parents, and supervisors; and emotional fatigue, stagnation, boredom, and loss of enthusiasm for their work. Student apathy and job repetition were the major contributors to loss of motivation and dissatisfaction.

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Study: Sweeney, 1981

Subjects: 1,295 teachers from 23 of the 33 Iowa high schools with a student population of 1,000 or more

Measure: A 13-item questionnaire using a seven-point Likert scale provided teachers with the opportunity to indicate the extent to which they desired and were receiving satisfaction in each of five Maslow-type categories. The categories included security, social, esteem, autonomy, and self-actualization.

Purpose: The study was designed to examine the needs of secondary school teachers and the events and conditions that relate to job satisfaction.

Findings: In terms of teacher satisfaction, the smaller the need deficiency, the greater the satisfaction. The areas of greatest dissatisfaction included esteem and self-actualization. Teachers felt a lack of prestige and accomplishment in their jobs. Additionally, teacher satisfaction did not appear to be related to gender and appeared to increase with age. Who teachers teach appeared to affect satisfaction (teachers working with high-ability-level students reported higher levels of satisfaction).

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Study: Metzger and Wangberg, 1981

Subjects: Respondents in this study were 257 female elementary school teachers from a large urban system in the South, a rural system in the Midwest, and two suburban systems in the West.

Measure: A job satisfaction measure was developed specifically for this study focusing on working conditions and female career options.

Purpose: The purpose of this study was to determine reasons why so many female elementary teachers are dissatisfied with their teaching careers.

Findings: Forty percent of the sampled teachers indicated that they would not choose elementary teaching if they had to make their career choice again. Two factors emerged as the primary sources of dissatisfaction, including unfavorable working conditions (low salary, minimal professional recognition, lack of adult contact, etc.) and changing perceptions of female career options.

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Study: Cooke, Kornbluh, and Abramis, 1982

Subjects: Two hundred randomly chosen K-12 southeastern Michigan public school teachers were sampled in this study.

Measure: Satisfaction was measured by a 90-minute interview similar to that used in the National Quality of Employment Survey (1977) and a

questionnaire focusing on the school districts in which respondents worked. An overall and a specific job-facet satisfaction measure were included.

Purpose: The purpose of this study was to compare the work lives of teachers with those of a national sample of workers surveyed in 1977 by the Institute for Social Research at the University of Michigan.

Findings: It was found that the general level of satisfaction for Michigan teachers was significantly lower than satisfaction levels reported by either the national sample as a whole or by college-educated workers in the national sample. This finding also was true for specific aspects of work life.

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Study: Medved, 1982

Subjects: Seventy teachers from a small midwestern suburban school district were sampled in this study.

Measure: A questionnaire was constructed specifically for this study and attempted to duplicate Herzberg's (1959) approach through a survey format.

Purpose: The purpose of this study was to ascertain if the factors important to job satisfaction are also important to dissatisfaction when absent.

Findings: The main finding of this study led to the conclusion that those factors that most often contribute to the satisfaction of teachers are also, if absent, most often the cause for teacher dissatisfaction.

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Study: Wangberg, Metzger, and Levitou, 1982

Subjects: A random sample of 255 female elementary school teachers (a 65% response rate) was drawn from four school systems representing varying national demographic, socioeconomic, and geographical characteristics.

Measure: A ten-item Likert-type questionnaire focusing on teacher job expectations, satisfactions, perceptions of working conditions, perceived career importance, and career options was used in this study.

Purpose: It was the purpose of this study to help determine the extent of female elementary teachers' job dissatisfaction and to investigate the factors related to this dissatisfaction.

Findings: The findings from this study led to the suggestion that female elementary school teachers are currently experiencing a significant amount of job dissatisfaction. This dissatisfaction appears to be a function of working conditions as well as general perceptions of career options.

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Study: Chapman and Lowther, 1982

Subjects: Respondents were 542 teaching certificate recipients from the University of Michigan between 1946 and 1976 who taught continuously since their graduation and who were currently employed full-time as a teacher.

Measure: The University of Michigan Survey of Graduates with Teaching Certificates (1980) was used as the primary survey instrument. Career satisfaction was defined as the mean response on a satisfaction scale composed of two items: (1) "How satisfied are you with your current employment?" and (2) "Overall, how satisfied are you with the progress you have made in your professional career?"

Purpose: The purpose of this study was to investigate the correlates of teachers' career satisfaction using a conceptual scheme of influences on career satisfaction derived in part from Holland (1973) and Super and Hall (1978).

Findings: The results were consistent with earlier research. Personal characteristics, skills and abilities, the value assigned to selected criteria of success, and the actual accomplishments in those areas were significantly related to the level of teachers' career satisfaction.

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Study: Chapman, 1983

Subjects: The sample comprised 289 elementary and 148 high school teachers who graduated from three Indiana public universities and who taught as a first job after graduation and who are currently employed as teachers.

Measure: The study used the College Alumni Questionnaire (Hutcheson & Chapman, 1978), which collects information on graduates' current employment, satisfaction with that employment, and ratings of their educational experience.

Purpose: The purpose of this study was to investigate the extent to which teachers' career satisfaction is related to selected skills, values, and professional accomplishments of those teachers.

Findings: After differences due to age, sex, and income had been removed, satisfaction of high school teachers was related significantly to their self-rated skills and abilities. For elementary teachers, career satisfaction was related significantly to the importance they assigned to selected criteria of professional success.

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Study: Haughey and Murphy, 1983

Subjects: Responding to this study were 528 rural school teachers (a 46% response rate) from 242 small, remote schools in British Columbia, Canada.

Measure: An adaptation of Holdaway's (1978) Satisfaction with Work and Employment Conditions Questionnaire was used in this study to gain teacher perceptions about satisfaction with various work facets. A single-item measure of overall satisfaction was used as part of the survey.

Purpose: The purpose of this investigation was to discover the extent to which rural teachers were satisfied with the quality of their work life.

Findings: Only 22% of the respondents indicated that they were moderately or highly satisfied with their jobs. A major source of dissatisfaction identified by the study was society's perception of teaching.

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Study: Smilansky, 1984

Subjects: Thirty-six female elementary school teachers were chosen from four schools in an urban setting in Israel.

Measure: A nine-item measure of satisfaction with various aspects of teacher work was used in this study. A single-item measure of overall job satisfaction also was used.

Purpose: The purpose of this study was to examine elementary school teachers' work satisfaction and reports of job-related stress, and to ascertain the relation of these two variables to both external factors (feelings of others about teachers) and internal factors (perceived general life satisfaction and self-efficacy).

Findings: Teachers in this sample indicated that their work involved a relatively high level of satisfaction and a medium level of stress. Both satisfaction and stress were associated with teachers' feelings about the process of teaching, including their interaction with pupils and the work load involved.

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Study: Farber, 1984

Subjects: Respondents were 365 public school teachers from districts in Westchester, Putnam, and Dutchess Counties in New York.

Measure: Teacher respondents completed a Likert-type Teacher Attitude Survey, which is a modified version of the Maslach Burnout Inventory (1981).

Purpose: The purpose of this study was to assess the sources and extent of satisfaction, stress, and burnout in suburban teachers.

Findings: Stresses were related to excessive paperwork, unsuccessful administrative meetings, and the lack of advancement opportunities in teaching. Although the majority of teachers surveyed had not lessened their involvement in their work and were still committed to teaching, 20-25% appeared vulnerable to burnout, and 10-15% appeared to be already burned out.

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Study: Sutton and Huberty, 1984

Subjects: Ten elementary, junior high, and high school teachers in a public school setting and ten teachers of the severely handicapped in a private school setting were surveyed.

Measure: Respondents completed the Wilson Stress Profile for Teachers (Wilson, 1979). All teachers were asked to indicate how satisfied they were with their jobs.

Purpose: The purpose of this study was to explore possible differences in stress between regular and special education teachers.

Findings: The results of this study indicated that there were no significant differences between the groups in sources of stress or in how they coped with stress. The special education teachers tended to show slightly more satisfaction with their jobs than did the regular education teachers.

Study: Lowther, Stark, and Chapman, 1984

Subjects: This study involved 302 full-time school teachers and 285 persons prepared as teachers but working full-time in other occupations, all of whom had graduated from the University of Michigan between 1946 and 1976.

Measure: Data came from a questionnaire developed by the authors to collect information about graduates' current employment, satisfaction with that employment, life satisfaction, and attitudes about various aspects of their educational and work experience.

Purpose: The purpose of this study was to compare perceptions of career school teachers with persons prepared as teachers but working in other occupations regarding selected aspects of their work life.

Findings: The results indicated that teachers can be differentiated from nonteachers on variables such as job lock-in, prospects for advancement, initial commitment to teaching, and job and life satisfaction.

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Study: Raschke, Dedrick, Strathe, and Hawkes, 1985

Subjects: Sampled in this study were 230 elementary teachers (a 76.7% response rate) from school districts of various sizes in the central Midwest.

Measure: The survey consisted of a five-part questionnaire initially developed by Dedrick, Hawkes, and Smith (1981) and addressed specific issues related to elementary teacher stress. A portion of the survey instructed respondents to rank 11 items according to how they contributed to job dissatisfaction. Additionally, open-ended survey questions allowed respondents further opportunity to express their levels of work satisfaction.

Purpose: This investigation was designed to identify specific factors that elementary teachers deemed most responsible for their job satisfaction and dissatisfaction.

Findings: Conditions making favorable contributions to job satisfaction included the intrinsic benefits that accrue from working with children, working with other professionals in their schools, summer vacations, student progress, and freedom to implement teaching strategies. Excessive paperwork and nonteaching duties were cited as the two major concerns of teachers.

Study: Litt and Turk, 1985

Subjects: Responding to the questionnaire in this study were 291 Connecticut public high school teachers (an 81% response rate) from rural, suburban, and urban school settings.

Measure: As part of a comprehensive questionnaire, job satisfaction was measured using the Job Diagnostic Survey developed by Hackman and Oldham (1974). A job satisfaction score was produced by summing the scores on all items.

Purpose: The purpose of this study was to identify sources of stress and dissatisfaction that may induce teachers to leave teaching.

Findings: Variables found to predict job stress and dissatisfaction included inadequate salary, low status of the teaching profession, and too much paperwork. Student behavior/discipline did not emerge as an important predictor of stress/dissatisfaction. Teacher-perceived role variables and perceptions of the principal also were found to be important sources of stress/dissatisfaction for teachers.

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Study: Galloway et al., 1985

Subjects: Respondents were 292 teachers (a response rate of 82%) from a portion of New Zealand's state primary schools.

Measure: An adaptation of Holdaway's (1978) Satisfaction with Teaching and Employment Questionnaire was used in this study.

Purpose: Three purposes focused this study: (1) to identify the sources of satisfaction and dissatisfaction in a sample of New Zealand primary school teachers, (2) to investigate the relationship between overall satisfaction and facet satisfaction, and (3) to compare both the overall satisfaction and facet satisfaction reported by selected groups of teachers.

Findings: In terms of overall satisfaction, 80% of the respondents reported themselves as very or fairly satisfied with their jobs. The results were broadly consistent with the two-factor theory of job satisfaction. Frequently rated sources of satisfaction seemed to come from intrinsic aspects of the job, while dissatisfaction arose when conditions of employment were seen as inadequate, or when external factors reduced the teacher's sense of self-esteem.

APPENDIX B

AUTHORIZATION TO USE THE MICHIGAN PROFESSIONAL REGISTER

STATE OF MICHIGAN

DEPARTMENT OF EDUCATION

Lansing, Michigan 48909

PHILLIP E. RUNKEL
Superintendent
of Public Instruction

March 22, 1985

Laurence W. MacQueen
Research Assistant
Michigan State University
517 Erickson Hall
East Lansing, MI 48824

Dear Mr. MacQueen:

This will acknowledge your recent letter regarding authorization to use the professional personnel register for research purposes.

Our staff has reviewed your request, and feel it would be appropriate to use the register tape for the research described in your letter.

Sincerely yours,

Thomas J. Schrauben, Consultant
Teacher Certification

TJS/dm

c: Dr. Fred Ignatovick

APPENDIX C

INITIAL QUESTIONNAIRE PACKAGE

MICHIGAN STATE UNIVERSITY

COLLEGE OF EDUCATION
DEPARTMENT OF EDUCATIONAL ADMINISTRATION
ERICKSON HALL

EAST LANSING • MICHIGAN • 48824-1034

April 26, 1985

Dear Michigan School Teacher:

The purpose of this letter is to encourage your participation in a very important research project. The focus of this dissertation research seeks to improve our understanding of the sources of satisfaction and dissatisfaction public school teachers experience with their jobs and I hope you can help with this study.

Enclosed, please find a questionnaire that consists of several sections. Each section contains questions vitally important to the purpose of this study and is accompanied by specific directions. It should take approximately 20 to 30 minutes to complete the entire questionnaire.

You will notice that the questionnaires are identified by code numbers. The code numbers are necessary so that questionnaires may be grouped for meaningful data analysis. You, as an individual, will not be identified. Neither you, your district, nor your school will be identified in the reporting of the results of this study.

This study is based on a carefully selected random sample of teachers such as you. Therefore, your returning the questionnaire is essential for the study. A prepaid postage return method has been included for your convenience.

You may rest assured that only the highest professional and ethical standards will be followed through this study.

With appreciation,

Larry MacQueen, Graduate Researcher
Michigan State University

IMPORTANT: *Please complete BOTH sides of sheets (1) and (2) of the questionnaire and list any comments you may have on sheet (3). Enclose all three questionnaire sheets for return in the accompanying postage-paid envelope. Thank you for your participation in this study.*

SATISFACTION WITH TEACHING AND EMPLOYMENT QUESTIONNAIRE

Return to: Larry MacQueen, 517 Erickson Hall, Michigan State University, East Lansing, Michigan 48824-1034

SHEET NUMBER
● 2 3 4
Do Not Write Here

— Please do not bend or fold SURVEY FORMS —

Survey Code
Do Not Write Here

SECTION A. PERSONAL DATA

Please mark all survey answers BY USING A NUMBER-TWO PENCIL. DO NOT USE ink, ballpoint or felt-tip pens. Avoid making stray marks on the answer sheets and reserve written comments for Section D. Thank you.

Print your age and number of years teaching experience you have (counting the present year as a full year) in the appropriate boxes below. Mark your age and years of teaching experience in the scanned area below the boxes.

1. Age

1a. Years of teaching experience

In order to answer the following questions, blacken the circle immediately to the left of the response you choose.

2. What is your sex?
   ○ Male ○ Female

3. What is your current marital status?
   ○ Married ○ Single

3a Does your spouse work full time?
   ○ Yes ○ No ○ Not married

3b. Are you a parent responsible for any dependent children?
   ○ Yes ○ No

4. Do you have a second job in addition to full time teaching?
   ○ Yes ○ No

5. Is your major teaching assignment consistent with your training and experience?
   ○ Yes ○ No

6. Which of the following best describes the predominant grade-level range of the students you teach in your current assignment?
   ○ Elementary students
   ○ Junior High·Middle School students
   ○ High School students

SECTION B. JOB FACET SATISFACTION

DIRECTIONS: This section asks you to report your feelings about the importance and satisfaction each of the following aspects of work hold for you. Using your number-two pencil, please blacken the number of the importance descriptor (left-hand side of the survey) and the number of the satisfaction descriptor (right-hand side of the survey) that best represent your answers to the following two questions: ***(Answer both questions for each aspect of work).***

Generally speaking how important are the following aspects of work to you?

4 = Very Important
3 = Important
2 = Slightly Important
1 = Not Important

— Please avoid making stray marks on the SURVEY SHEETS —

Given your present assignment, how satisfied or dissatisfied are you with these aspects?

7 = Highly Satisfied
6 = Moderately Satisfied
5 = Slightly Satisfied
4 = Neither Satisfied nor Dissatisfied
3 = Slightly Dissatisfied
2 = Moderately Dissatisfied
1 = Highly Dissatisfied

Very Important	Important	Slightly Important	Not Important		WORKING CONDITIONS		Highly Satisfied	Moderately Satisfied	Slightly Satisfied	Neither Satisfied nor Dissatisfied	Slightly Dissatisfied	Moderately Dissatisfied	Highly Dissatisfied
4	3	2	1	7.	The way in which teacher board collective bargaining is conducted in Michigan	7.	7	6	5	4	3	2	1
4	3	2	1	8	The way in which consultation between board and teachers concerning working conditions is conducted during the school year	8	7	6	5	4	3	2	1
4	3	2	1	9	Salary you receive	9.	7	6	5	4	3	2	1
4	3	2	1	10.	The use of level of education in partly determining salaries	10.	7	6	5	4	3	2	1
4	3	2	1	11.	The use of length of teaching experience in partly determining salaries	11	7	6	5	4	3	2	1
4	3	2	1	12	Retirement benefits provided by the Michigan Teachers Retirement Fund	12.	7	6	5	4	3	2	1
4	3	2	1	13.	Provisions for sabbatical leave	13	7	6	5	4	3	2	1
4	3	2	1	14	Provisions for sick leave	14	7	6	5	4	3	2	1
4	3	2	1	15	Provisions for maternity leave	15	7	6	5	4	3	2	1
4	3	2	1	16	Number of hours you teach per week	16	7	6	5	4	3	2	1
4	3	2	1	17.	Number of hours of non-teaching duties assigned to you per week	17.	7	6	5	4	3	2	1
4	3	2	1	18.	Preparation time available to you during the official school day	18.	7	6	5	4	3	2	1

TEACHING-RELATED MATTERS

4	3	2	1	19	Your opportunity for promotion	19.	7	6	5	4	3	2	1
4	3	2	1	20	Expectations of administrators for you as a teacher	20.	7	6	5	4	3	2	1
4	3	2	1	21	Methods used in promotion of teachers	21	7	6	5	4	3	2	1
4	3	2	1	22	The prospect of classroom teaching as your life-time career	22	7	6	5	4	3	2	1
4	3	2	1	23	Your long-term salary prospects in education	23	7	6	5	4	3	2	1

SHEET NUMBER
1 ● 2 3 4
Do Not Write Here

Survey Code
Do Not Write Here

Generally speaking, how important are the following aspects of work to you?

4 = Very Important
3 = Important
2 = Slightly Important
1 = Not Important

— Please reserve written comments for SECTION D —

Given your present assignment, how satisifed or dissatisfied are you with these aspects?

7 = Highly Satisfied
6 = Moderately Satisfied
5 = Slightly Satisfied
4 = Neither Satisfied nor Dissatisfied
3 = Slightly Dissatisfied
2 = Moderately Dissatisfied
1 = Highly Dissatisfied

Very Important	Important	Slightly Important	Not Important			Highly Satisfied	Moderately Satisfied	Slightly Satisfied	Neither Satisfied nor Dissatisfied	Slightly Dissatisfied	Moderately Dissatisfied	Highly Dissatisfied
4	3	2	1	24	Methods used to evaluate teachers	7	6	5	4	3	2	1
4	3	2	1	25	The distribution of resources within your school	7	6	5	4	3	2	1
4	3	2	1	26	Your relationships with school administrators	7	6	5	4	3	2	1
4	3	2	1	27	Your job security	7	6	5	4	3	2	1
4	3	2	1	28	Your relationships with other teachers	7	6	5	4	3	2	1
4	3	2	1	29	Physical conditions of staffrooms and staff offices	7	6	5	4	3	2	1
4	3	2	1	30	Availability of useful advice to assist you with problems you encounter in teaching	7	6	5	4	3	2	1
4	3	2	1	31	Your involvement in decision-making in your school	7	6	5	4	3	2	1
4	3	2	1	32	Your involvement in decision-making in your school district	7	6	5	4	3	2	1

TEACHING MATTERS

4	3	2	1	33	Your freedom to select subject matter for classes you teach	7	6	5	4	3	2	1
4	3	2	1	34	Your freedom to select teaching methods	7	6	5	4	3	2	1
4	3	2	1	35	Your freedom to select teaching materials within the constraint of available funds	7	6	5	4	3	2	1
4	3	2	1	36	Schedule of your teaching assignments	7	6	5	4	3	2	1
4	3	2	1	37	Your assignment to teach particular grade levels	7	6	5	4	3	2	1
4	3	2	1	38	Your assignment to teach particular subjects	7	6	5	4	3	2	1
4	3	2	1	39	Average size of classes you teach	7	6	5	4	3	2	1
4	3	2	1	40	Amount of preparation/correction required by your teaching assignment	7	6	5	4	3	2	1
4	3	2	1	41	Availability of library resources	7	6	5	4	3	2	1
4	3	2	1	42	Availability of audio visual resources	7	6	5	4	3	2	1
4	3	2	1	43	Availability of teachers' aides to assist you	7	6	5	4	3	2	1
4	3	2	1	44	Physical conditions of your classrooms	7	6	5	4	3	2	1
4	3	2	1	45	Availability of substitute teacher services when you wish to be absent for professional activities	7	6	5	4	3	2	1
4	3	2	1	46	Performance of on-call substitute teachers who teach your classes when you are absent	7	6	5	4	3	2	1

STUDENT-RELATED MATTERS

4	3	2	1	47	Your relationships with students	7	6	5	4	3	2	1
4	3	2	1	48	Attitudes of students towards learning	7	6	5	4	3	2	1
4	3	2	1	49	General behavior of students in the school	7	6	5	4	3	2	1
4	3	2	1	50	Average level of student achievement	7	6	5	4	3	2	1
4	3	2	1	51	Ability levels of students taking your classes	7	6	5	4	3	2	1

Generally speaking, how important are the following aspects of work to you?

4 = Very Important
3 = Important
2 = Slightly Important
1 = Not Important

— Please do not bend or fold SURVEY FORMS —

Given your present assignment, how satisfied or dissatisfied are you with these aspects?

7 = Highly Satisfied
6 = Moderately Satisfied
5 = Slightly Satisfied
4 = Neither Satisfied nor Dissatisfied
3 = Slightly Dissatisfied
2 = Moderately Dissatisfied
1 = Highly Dissatisfied

Very Important	Important	Slightly Important	Not Important				Highly Satisfied	Moderately Satisfied	Slightly Satisfied	Neither Satisfied nor Dissatisfied	Slightly Dissatisfied	Moderately Dissatisfied	Highly Dissatisfied
4	3	2	1	52	General behavior of students in your classes	52	7	6	5	4	3	2	1
4	3	2	1	53	Methods used in reporting pupils' attitudes and achievements to parents	53	7	6	5	4	3	2	1
4	3	2	1	54	Availability of diagnostic services	54	7	6	5	4	3	2	1

OCCUPATION-RELATED MATTERS

4	3	2	1	55	Status of teachers in society	55	7	6	5	4	3	2	1
4	3	2	1	56	Attitude of society towards education	56	7	6	5	4	3	2	1
4	3	2	1	57	Attitudes of parents towards education	57	7	6	5	4	3	2	1
4	3	2	1	58	Your sense of achievement in teaching	58	7	6	5	4	3	2	1
4	3	2	1	59	Recognition by others of your work	59	7	6	5	4	3	2	1
4	3	2	1	60	Social relationships in your work	60	7	6	5	4	3	2	1
4	3	2	1	61	Intellectual stimulation in your work	61	7	6	5	4	3	2	1
4	3	2	1	62	Opportunities for further formal study (i.e., in university, college or institute)	62	7	6	5	4	3	2	1
4	3	2	1	63	Opportunities for useful in-service education	63	7	6	5	4	3	2	1
4	3	2	1	64	Availability of facilities in your community for recreation, fine arts, etc.	64	7	6	5	4	3	2	1

SECTION C. OVERALL SATISFACTION

Directions: Please circle the number of the descriptor that best represents your feelings about the following statements.

5 = Strongly Agree 4 = Agree 3 = Neutral 2 = Disagree 1 = Strongly Disagree

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree		
5	4	3	2	1	65	As I evaluate my future as an educator, I feel my level of satisfaction will increase
5	4	3	2	1	66.	I am somewhat dissatisfied with my job.
5	4	3	2	1	67.	If I came into enough money so that I could live comfortably without working I would quit my job
5	4	3	2	1	68	I often think of changing jobs.
5	4	3	2	1	69	My job as an educator gives me a great deal of personal satisfaction.
5	4	3	2	1	70.	I am satisfied with my job
5	4	3	2	1	71.	Most other educators are more satisfied with their jobs than I am

SHEET NUMBER
1 2 ● 4
Do Not Write Here

SECTION D. COMMENTS

SURVEY CODE
☐☐☐☐

Do you have COMMENTS on any of the above matters?

_____ Check here if you would like to receive an abstract of the results of this research project when complete.

Please return this survey as soon as possible in the envelope provided for this purpose. Thank you very much for your participation.

APPENDIX D

FOLLOW-UP LETTER FOR NONRESPONDENTS

MICHIGAN STATE UNIVERSITY

COLLEGE OF EDUCATION
DEPARTMENT OF EDUCATIONAL ADMINISTRATION
ERICKSON HALL

EAST LANSING • MICHIGAN • 48824-1034

May 21, 1985

Dear Michigan School Teacher:

Two weeks ago, you were mailed a survey package inviting your participation in an important research project on teacher job satisfaction. To date, your completed survey has not been received and the purpose of this letter is to remind you how important your participation is to the success of this research. If your original survey materials are in return mail, please disregard this notice and dispose of these survey materials.

In the event that your survey materials did not reach you or that they have been misplaced, a second set of materials is included in this package. Enclosed, you will find a questionnaire consisting of several sections. Each section contains questions vitally important to the purpose of this study and is accompanied by specific directions. It should take approximately 20 to 30 minutes to complete the entire questionnaire.

You will notice that the questionnaires are identified by code numbers. The code numbers are necessary so that questionnaires may be grouped for meaningful data analysis. You, as an individual, will not be identified. Neither you, your district, nor your school will be identified in the reporting of the results of this study.

This study is based on a carefully selected random sample of teachers such as you. To be certain that your thoughts and feelings on teacher job satisfaction are part of this study, please return your completed questionnaire in the prepaid postage return envelope included in this package by June 4, 1985.

You may rest assured that only the highest professional and ethical standards will be followed throughout this study.

With appreciation,

Larry MacQueen, Graduate Researcher
Michigan State University

Important: *Please complete BOTH sides of sheets (1) and (2) of the questionnaire and list any comments you may have on sheet (3). Enclose all three questionnaire sheets for return in the accompanying postage-paid envelope. Thank you for your participation in this study.*

APPENDIX E

VARIABLE CODING SHEET

Sheet Number

Do Not Write Here

Survey Code

Section E. Variable Coding

72. Full-Time Students: District

FTS-D

73. Full-Time Students: Building

FTS-B

74. District Average Teacher Salary

DATS

75. District Staff Student Ratio

DPS SR

76. Current Op. Exp. Per Pupil

COEPP

77. Percent Minority Students

PMS-B

78. Building Grade-Level Structure

79. District Geographic Nature

80. District MEAP Status

81. Sex of Respondent

APPENDIX F

AUTHORIZATION TO USE HOLDAWAY'S QUESTIONNAIRE

THE UNIVERSITY OF ALBERTA

Department of Educational Administration
EDMONTON, ALBERTA, CANADA T6G 2G5 TELEPHONE 432-5241

27 September 1984

Mr. L. W. MacQueen
Research Assistant
Middle Cities Education Assoc.
517 Erickson Hall
Michigan State University
East Lansing, Michigan 48824
U.S.A.

Dear Mr. MacQueen:

Thank you for your letter of 18 September. I am pleased to read of your interest in the area of teacher satisfaction and to know that my questionnaire is still deemed to be useful. It has been used in a modified way in other studies in the U.S., Australia, and New Zealand, as well as Canada.

I have enclosed two copies of the questionnaire as well as a copy of the final report. Would you please send me a bank draft or money order for $10.00 in Canadian funds to cover expenses, payable to The University of Alberta.

I shall be pleased to receive a copy of any relevant material that you produce.

With best wishes for your project and studies.

Yours sincerely,

E. A. Holdaway

E. A. Holdaway
Professor

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