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A Study of the Relationship of Teacher Role Stress to Student Ratings of Teacher and Other Selected Variables

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A STUDY OF THE RELATIONSHIP OF TEACHER ROLE STRESS TO STUDENT RATINGS OF TEACHER AND OTHER SELECTED VARIABLES

by

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CHAPTER I

STATEMENT OF THE PROBLEM

Introduction

The literature constantly refers to the idea that we are living in an age of stress. In part this is due to the fact that the individual must assume more roles in an urban society than in primitive or peasant society. This is typified by an article entitled "Stress from 9 to 5" in which Kahn (1969) points out the many pressures of humans in the roles they have.

In the same vein, Toffler (1970) refers to the increasing pace of daily life that produces a sense of bewilderment because of its "temporariness." This pace gives genesis to a strange new society. Its conceptions of time, space, work, religion, sex are all incessantly changing, with resulting disorientation. To function effectively in this type of society, the individual must become infinitely more adaptable.

The aforementioned idea of "temporariness" is advanced by Reich (1970) when he says that current events are so overwhelming that we only see from day to day, merely responding to each crisis as it comes, only seeing immediate evils, and seeking inadequate solutions such as merely ending the war, or changing our domestic priorities. A longer-range view is necessary.

This increasing pace of daily life, according to McDavid and Harari (1968), results in conflicting positional demands; hence,

it poses the problem of finding the appropriate role or roles. They state, "there is evidence that many kinds of minor neurotic conflicts that occur in members of our society originate from such conflicts . . . situations, in which the demands of two kinds of positions are simultaneously imposed on him [p. 277]."

In a comprehensive study of role stress in organizations, Kahn, Wolfe, Quinn, Snoeck, and Rosenthal (1964) point out the magnitude and seriousness of the problem; they report that only one out of six men in the labor force of the United States reports being free of tension on the job. For some, of course, the tensions are relatively mild and can readily be taken in stride. But for many the tensions are sufficiently severe to impose heavy costs for the person and for the organization in which he works.

Expressing himself on the same topic, Reitman (1971a) concludes:

> Social science research demonstrates convincingly that school teachers, more than members of most other occupational groups today, are beset by serious role strain and that the extent and severity of this strain in American society is rapidly increasing. This should be evident to anyone who works with teachers or who reads newspaper accounts of teacher-pupil, teacher-parent, teacher-administrator, teacher-school board, or other reference-group-related teacher conflicts over discipline, grades, salary, tenure, curriculum, philosophy, etc. [p. 216].

Highlighting the critical need for reducing the degree of serious role stress among American teachers, Reitman points out that in a complex society so highly dependent upon its schools, the ultimate consequences of teacher-role stress could be disastrous to the very structural foundations of that society.

There is ordinarily agreement among researchers and practitioners that the teacher is a significant, if not the most

significant, factor in the educational process. In a conference at the U.S. Office of Education, Don Davies, Associate Commissioner of Educational Personnel Development, concluded from the papers (Do teachers make, 1970) presented by James Coleman and other eminent educators that, contrary to some earlier indications, schools can and do make a difference in the development of students. Beyond this, he states it is clear that teachers are the single most important element in the school--more important than the quality of facilities, the quantity of equipment and materials, or the level of financing.

In view of the fact that the teacher is a critical factor in the educational process, it is incumbent upon researchers to find means of improving his effectiveness. This is not always an easy task because teachers enter the profession with backgrounds of experience which are diverse. They have formulated concepts of reasonable expectations of the job, students, and the building principal based on the activities of those with whom they have been associated. Their approach to expectations of these variables is necessarily influenced by these experiences; these expectations contribute to teacher differences in their individual performance.

There is consensus among a large number of authorities in education (Combs, 1965; Jersild, 1955; Reitman, 1971) that the school, being a part of the larger social system, society, is influenced by and images to a large extent the stress of the larger system. Hence, efforts to improve understandings of the functions and relationships of persons within school systems have been of great concern to

researchers. This concern has grown in recent years because of the many changes in our society. These changes are reflected in increasing demands of parents, teachers and students in the degree of meaningful involvement in educational policies. These constant cries for more accountability for student achievement, coupled with minority groups' demands for equity in education, have caused educators to search for ways to improve understandings of the functions and relationships of persons within school systems.

One might ask himself the question: why should one be interested in teacher role stress? One cogent answer to this question could be that role stress is presumed to drive teachers out of teaching or to depress their level of effectiveness in the classroom. It is reasonable to presume, for example, that teacher role stress is a significant variable in the teaching-learning process and helps to determine teachers' classroom behavior (Biddle, 1969).

Authorities agree that role stress exists in school systems and that this stress impinges upon the effectiveness of teachers (Combs, 1965; Gross, 1958; McDavid et al., 1968). However, no studies are available that relate teacher role stress to teacher effectiveness as viewed by students.

There are many ways in which the teacher can be evaluated. One way, suggested by Brookover (1940), utilizes student ratings. He hypothesizes that it is doubtful that a teacher can be effective in the teaching process with a student if the student believes him to be a poor teacher. Upon this basis, proponents of student ratings

present their arguments for obtaining subjective as well as objective measurements of teacher effectiveness.

The need to investigate the relationship between teacher role stress and perceived teacher effectiveness as viewed by students, a significant variable in the learning process, is apparent. In both of these concepts, teacher role stress and students' ratings of teacher effectiveness, subjects' perceptions are key factors. As social psychologists have long emphasized, it is our perceptions or ideas about the world that influence us rather than objective reality (Biddle, 1969: Charters, 1963; Sarbin, 1954).

Recognition of the need for research criteria to cope with these problems has pointed up the necessity for attacking them through role perceptions, i.e., through deciding what they expect of themselves and what others expect of them. This concept of role perceptions stems from role theory, which is a widely accepted framework for the analysis of social systems by the various branches of behavioral science. This theory provides for the major variables in educational organizations (Fishburn, 1962).

Statement of Problem

It was the purpose of this study to examine some of the factors believed to be related to teacher role stress. Variables selected for examination included teacher effectiveness as viewed by students, socio-economic attendance district of elementary schools, class racial balance, sex of teacher, race of teacher, and teaching grade levels.

Overview

This investigation consisted of analyzing data obtained from a study reported by Coats (1970), Kalamazoo Desegregation Study--Phase I. The investigator was a member of the research team that conceptualized, planned, implemented, analyzed, and evaluated the overall study and a series of companion studies. Many components and relationships of variables were analyzed in the overall study by the team. In Phase I, baseline data were collected prior to desegregation, with plans for observing subsequent changes in data at various times after the desegregation plan had been implemented. The investigator's major responsibility was to work with the teacher role stress component of the study. This included rationale for looking at teacher role stress, selection instrument to ascertain teacher role stress, and procedures for obtaining data on teacher role stress. The investigator analyzed teacher role stress as related to student ratings and other variables thought to be related to teacher role stress in depth.

Phase I consisted of the collection of baseline data which placed emphasis on student performances and student perceptions in classrooms based on the neighborhood school concept. The specific variables measured in Phase I were: classroom verbal interaction patterns, student opinions, teacher perceptions, ratings of principals, teacher judgments of student leaders, and administrator ratings of teachers.

This study stemmed from the notion that the discrepancy between perceptions and expectations the teacher had regarding the job, the students, and the building principal influenced teacher effectiveness.

To ascertain teacher role stress the Job Description Index (JDI) (Smith, Kendall & Hulin, 1965) was modified by research assistants at Western Michigan University Educator Feedback Center. The revised form, Teacher Opinion Questionnaire (see Appendix A), measures teacher role stress in three areas: job, students, and the building principal. The TOQ was used to obtain specified information about role expectations, perceptions, and other individual information that role theory and previous studies indicated were pertinent to the understanding of certain variables that are believed to influence group operations.

Student perceptions regarding important teacher characteristics were determined by using a modification of the Teacher Image Questionnaire developed by the Educator Feedback Center at Western Michigan University for secondary students and a simplified version of this questionnaire for elementary students. Characteristics measured by this instrument included such variables as teacher knowledge of subject, ability to stimulate interest, fairness, control, sense of humor, and attitude toward student opinions. In addition, the modification consisted of some rewording to facilitate communication. The Student Opinion Questionnaire, the revised form (see Appendix A), was used to measure teacher effectiveness as viewed by students.

This study focused on teacher role stress; it was concerned with teacher perceived difficulties in describing significant components, the students, the principal, and teaching as a job, in his social system.

Definition of Terms

The following definitions were adopted to delineate terms used in the study.

Actual Situation

Theoretical: existing in fact or reality.

Operational: reflecting value judgments is defined as the teacher's estimate of the actual characteristics possessed by all components on the Teacher Opinion Questionnaire--job, students, and the building principal (Appendix A).

Reasonable Expectation

Theoretical: rules of conduct, or norms, are maintained because persons believe in their legitimacy.

Operational: teacher's estimate of the reasonableness is viewed as qualities expected in the job, students, and the building principal. This is reflected in the teacher's responses on the Teacher Opinion Questionnaire.

Role Stress

Theoretical: feeling of unease resulting from the existence or assumption of inconsistent standards.

Operational: the difference between the teacher's "reasonable expectations" and the teacher's perception of the "actual situation" when describing students, job, and the building principal on the Teacher Opinion Questionnaire. Specifically, this may be described as the discrepancy or arithmetic difference of responses between what the teacher says he reasonably expects and his perceptions of the actual situation. The resulting discrepancy score is a measure of the role stress referred to herein. A high discrepancy score would suggest a high state of tension and a low discrepancy score would suggest a low state of tension.

Whereas the term "role stress" is preferred in this study, the same concept is also thought of and referred to as role strain or role conflict, and these terms are used synonymously by many researchers.

Teacher Effectiveness

Theoretical: the quality of job being done by teachers.

Operational: perception students have of such variables as teacher's knowledge of subject, fairness, control, attitude toward student opinions, and teacher behavior as represented by the mean score obtained on the thirteen-item revised Teacher Image Questionnaire used by the Educator Feedback Center at Western Michigan University.

School Socio-economic Status

Theoretical: combination of social and financial factors descriptive of residents of a school district.

Operational: schools designated as low, middle, or high according to socio-economic status of the district served by the school. Rankings were based upon the socio-economic status ranking by schools as indicated by the 1971 Michigan Assessment Program (Michigan State Board, 1971).

Limitations of Study

It was necessary to take into consideration that the data were gathered from a field survey. Consequently, there was no experimental manipulation of variables. In a study of this nature, a great reliance was placed upon the questionnaire technique which is susceptible to numerous types of bias. Validity of results was dependent upon the extent to which respondents accurately reported their beliefs. Results may not reveal actual beliefs since they were inferred from reported cognitions.

To understand the dynamics of role stress, an intimate familiarity with specific details of the study is essential. However, important generalizations are possible without detracting from the unique qualities of individual cases.

Findings of the present study should be interpreted as reflecting an association between teacher role stress and other selected variables; however, this does not necessarily indicate a causal relationship.

Organization of the Report

Beyond the present chapter, the format for this report is organized in the following manner:

In Chapter II a review of pertinent research in the areas of teacher role stress and perceived teacher effectiveness is presented. A number of studies on role stress are included in order to depict that role stress, a relatively new concept, has been studied as it relates to teacher effectiveness but not in relationship to teacher effectiveness as viewed by students.

The research design and methodology are discussed in Chapter III. It contains a description of the research design including procedures, variables, instrumentation, sample, and method of data analysis.

In Chapter IV a description and analysis of data for specific questions and other relationships investigated are presented.

Conclusions, implications and recommendations are presented in Chapter V.

CHAPTER II

RATIONALE AND RELATED LITERATURE

Authorities hypothesize that role stress influences one's effectiveness in a social system; they contend that it is difficult for one to interact effectively with significant others in a stressful relationship. Review of the literature in these areas is summarized under the following headings: 1) Role Stress (theoretical nature and role stress in educational settings) and 2) Teacher Effectiveness.

Role Stress

Theoretical nature

Backman and Secord (1968) describe the heart of role theory--role strain:

> Central to role theory is the concept of role strain, the varying degrees of difficulty that persons experience in carrying out their occupational and other social roles. The concept of role strain is useful in understanding human interaction in many contexts; it facilitates the translation of abstract concepts of interaction into the daily experience of persons. It is when persons have difficulty in meeting role expectations that they become aware of the impact of these social processes on their lives. How well teachers perform and how satisfied they are in this role have important consequences for the achievement of the purposes or functions within the educational enterprise [p. 116].

Investigations in the area of role stress are few in number. Defining sources of role stress by those who have done some thinking and writing in this area are varied. However, many of the

investigators concur with the idea that role stress results not from the characteristics of the persons themselves, but from the characteristics of the relations among persons (Secord & Backman, 1964; Sarbin, 1954). Ruddock (1969) lends credence to this thesis when he says, "role is the point at which 'society' and 'individual' meet [p. v]."

When "society" and "individual" meet, role stress may result from the characteristics of the relations among individuals in a given social system. Because positions are interlocking and interdependent, any one role depends for its success upon the role behavior of a number of closely related roles (Goode, 1960; Eckel, 1969). A basic premise of role theory is that stress is a major element in these role relationships. The incumbent of any focal position often finds himself "in the middle" between members of his social system, or he experiences self-held expectations differing from those held by members of the particular system.

According to Secord and Backman (1964, pp. 487-93), strain may result in a number of ways:

1. Role strain may result when expectations are unclear and consensus is low.

2. A second source of role strain lies in the conflicting or competing expectations that make up a role.

3. Discontinuities in the successive positions occupied by an actor are a third source of strain.

4. The simultaneous occupation of two or more positions is a fourth source of role strain.

5. A fifth source of role strain results from certain organizational aspects of the social system.

6. Strain also occurs when roles are related in such a way that conformity to expectations of one role interferes with goal achievement by the role partner.

7. Finally, strains may develop when the system permits interpersonal maneuvering to block the goal achievement of one or more members of the system.

Charters (1963) has given similar interpretations. He says that role stress analysis nearly always entails a measure of the extent to which two sets of parallel data are somehow alike or different. While data comparisons assume many forms, the principal types include comparisons between 1) two sets of expectations on a status occupant, 2) expectations on and the actual (or perceived) behavior of a status occupant, and 3) expectations attributed to another and the expectations actually held by the other. If statements regarding the congruence in roles are to arise from such comparisons, the assembled sets of data must indeed be parallel.

The study previously cited (Kahn et al., 1964) dealing with similar ideas on parallel data concluded:

> 1) Conflicts about what a person should do typically generate conflicts in the person; contradictory pressures from the environment give rise to psychological conflicts in the person. 2) The needs and values and capabilities of the person contribute to the conflict just as do the environmental pressures. 3) The conflict is generated by pressures or forces toward change in the way the role is performed. The conflict arises because the status quo is unacceptable either to the role occupant or to some of his role senders . . . [p. 64].

Two models that have significant implications for enhancing insight into the nature of role stress are the ones proposed by Getzels (1963) and by Kahn et al. (1964). Kahn et al. have suggested a model of the role episode that seems to have great

potential for analyzing role stress between the two major components of role theory, role senders and the focal person. This model, shown as Figure 1, is built around the idea of a role episode; that is, a complete cycle of role sending response by the focal person, and the effects of that response to the role senders.

The four boxes represent events that are essential elements in a role episode. The arrows connecting them imply a causal sequence. Role pressures are assumed to begin in the expectations held by members of the role set or social system. Role senders have what they consider reasonable expectations in reference to the manner in which the focal role should be performed. Role senders also have perceptions regarding the manner in which the focal person is performing; they correlate the two, and ply pressures to make the focal role performance more congruent with their expectation. If there is a small degree of congruence with the role senders' expectations according to their perceptions, the role senders will experience role stress.

The other familiar model, Figure 2, that has meaningful implications for analyzing role stress is the well known Getzels Model.

This model places emphasis on interactions between the individual, ideographic dimension; and the organization, nomothetic dimension. It is not in the precise sense of the term a theory of roles but rather a theory of social system functioning in which role is one of the central concepts. When parallel data are perceived by the individual in the social system as not in a high

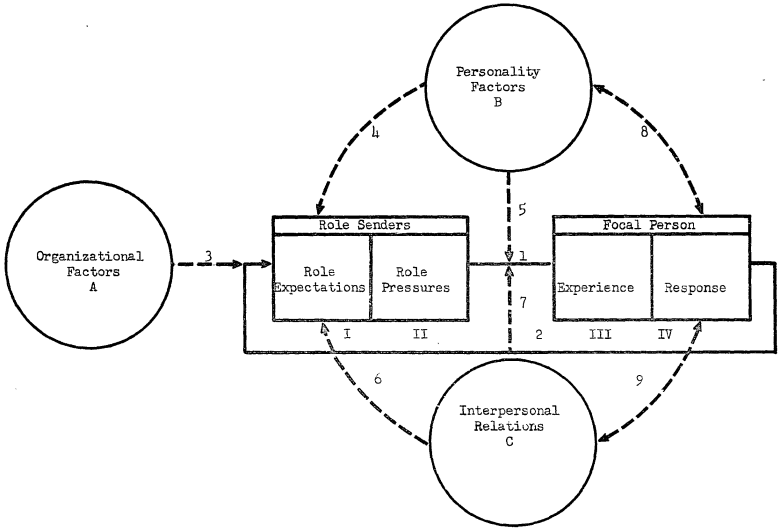

Figure 1

A Theoretical Model of Factors Involved in Adjustment to Role Conflict and Ambiguity

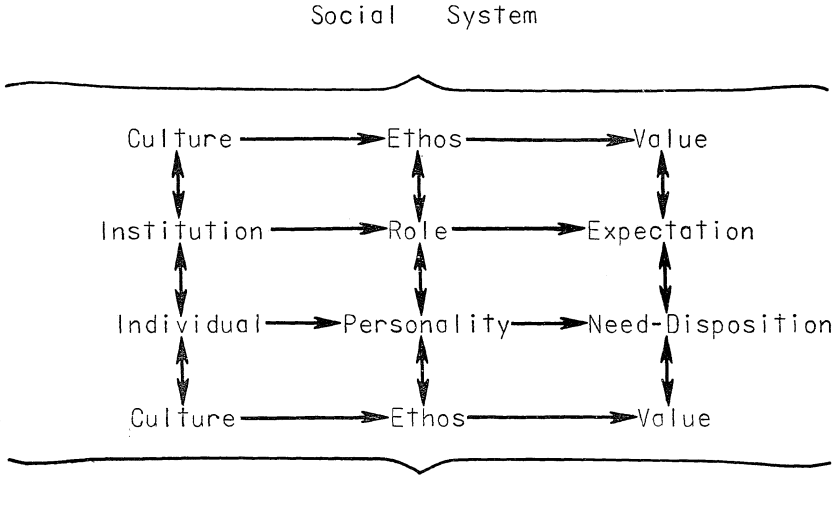

Figure 2

degree of congruence with what he reasonably expects, there is a high degree of role stress experienced by the individual (Charters, 1963).

There appears to be no significant differences in the two models. Getzels' model has been used in a number of teacher role stress studies. Nevertheless, in both models the role episode has genesis in the existence of a set of reasonable or legitimate expectations held by the individual or role sender about a focal person or organization functions in the social system. When there is not a high degree of congruence between reasonable expectations and perceptions of the actual situation of the individual or role sender, this often leads to a situation in which the incumbent of a position perceives that he is confronted with incompatible expectations or role stress.

These incompatible expectations result in emotional costs, role stress, for the focal person include low job satisfaction, low confidence in the organization, and a high degree of job-related tension. It claims a price in terms of individual well-being and organizational effectiveness. Likert (1962) has given a similar interpretation; he often reiterated that the morale of the social system and individuals that make up its human complement is properly regarded as an asset. The drain of such human assets, Likert has demonstrated, reduces the social system's effectiveness.

Kahn et al. (1964), in the same vein as Likert, have focused on the importance of the personal costs of excessive emotional stress. Evidence is cited that common reactions to conflict and its

associated tensions are often dysfunctional for the organization as an on going social system and self-defeating for the person in the long run. In addition, the effects of stress also carry over into one's interpersonal life. Social relations with one's work associates tend to deteriorate under the stress of conflict. In part, this reaction reflects the person's general dissatisfaction with the work situation. Attitudes toward those role senders who create the stress or conflict become worse, just as do those toward the job and the organization in general.

Although there is no simple calculus available for the personal side of the ledger, it is hard to avoid the impression that often the most telling costs are borne by the individual employee and his family. Kahn et al. (1964) cogently state:

> it is quite clear that role conflicts are costly for the person in emotional and interpersonal terms. They may also be costly to the organization, which depends on effective coordination and collaboration within and among its parts [p. 71].

Role stress in educational settings

Teaching is a complex process requiring a variety of high levels of cognitive and affective skills (Combs, 1965; Jersild, 1955; Silberman, 1970). Spence (1956) alluded to the effects of stress on certain tasks such as the teaching-learning process, when he pointed out that too high a level of psychological stress has repeatedly been shown to have a deleterious effect on the performance of complex tasks. Kahn et al. (1964) findings lend credence to this thesis when they state "it is clear that high job status

brings with it a high level of tension [p. 149]." Herein, it may be seen that role stress could have a significant effect on the teacher's performance and with the adjustment of the class as a whole.

Highlighting the critical need for reducing teacher role stress, Reitman (1971a) has called attention to the seriousness of the problem:

> The average American teacher today is neither personally content as a human being, satisfied with his performance occupationally nor clear as to what that occupation entails.
>
> Of course, this state of affairs is not confined to teachers as an occupational group in a society as replete with upheavals, changes, tensions, and disorganizational patterns as ours. Nonetheless, as an agent of society's transition from past through present to future, the teacher, more than others, will reflect society's ease or difficulty in growing and developing. The transition in American society has been far from smooth in recent years, and the disquieting effects of this condition have been especially evident in the case of the heavily burdened teacher [p. 543].

In another article Reitman (1971b) expressing himself on the same topic pointed out that sociologists have discovered various direct and indirect sources of teacher role strain; e.g., personality deviations, excessive and conflicting demands made upon teachers, misperception of reference group expectations, and institutional-cultural discrepancies and lags. Reitman is of the opinion that most social scientists believes that the basic source of the unusually high degree of teacher role strain in American society is the alterations the society is presently undergoing, accentuated by the naive tendency on the part of citizens to regard the school as a panacea for nearly all ills, while at the same time

failing to supply it or its teachers with any significant financial, intellectual, or moral support.

The few writings in the social psychology of education which speak at all of role stress in the teaching setting have primarily focused on conflict originating from disparate expectations. These two components, anticipatory nature of expectations and their normative quality, are reflected typically in the literature when discussing the importance and urgency of reducing teacher role stress.

The anticipatory nature of expectations and their normative quality, according to Backman et al. (1964), are important for understanding the concept of role stress. Usually, one expects that he will behave in a certain manner, and he has definite expectations concerning the behavior of persons with whom he interacts. From such information, one draws inferences concerning what the other person thinks about him and how he is likely to behave toward him. Each person in the social system shares expectations concerning his own and other's behavior. Such established expectations usually have an obligatory quality. The other person is not only expected to behave in a certain way; he should behave in that way. Failure on his part to meet expectations is likely to be met with surprise, disgust, anger or indignation. This normative quality or expectation stems from the fact that only when one is able to anticipate consistently the behaviors of others can one maximize one's reward-cost outcomes.

Most of the previous studies in roles in educational institutions have been based upon the theories of Getzels and Guba (1955b), Stogdill (1959), and Biddle and Twyman (1963), which have grown out of the thinking of persons such as Parsons (1951), Rommetveit (1954), Sarbin (1954), and Gross, Mason and McEachern (1957). Sweitzer (1963), in an examination of the research growing out of these theoreies, revealed a paucity of testing the reliability and consistency of data obtained through the application of role theory. Sweitzer concluded that findings are reported and generalizations are often made on the assumption that data about role expectations and perceptions that are obtained through one sampling of a given population tend to highlight characteristics that do not change radically over a period of time. Checks of reliability are usually made by replications and truthfulness items in the instruments by measures of congruity of consensus in the responses of all the members of a given status position, or by cross tabulating the responses obtained from the same sample at the same time on different instruments.

Sweitzer (1963) found that elementary teachers and secondary teachers as a group differed from one another regarding the expectations they held for their respective principals in terms of initiating and consideration behavior. His findings indicated that as a group the elementary and secondary principals held similar expectations regarding their own role, but differed from one another as individuals in terms of their expectations for task initiating and consideration. However, within the same school, the elementary

teachers and the elementary principal and the secondary teachers and the secondary principal held similar expectations regarding the principal's role.

Biddle and Twyman (1963) concluded that it is reasonable to presume that expectations have "some" effect on behavior; teachers report being aware of the expectations of others, and studies of role conflict or role stress in teachers are based on the assumption that disparities between expectations held by various groups (or attributed to various groups) lead to problems and unhappiness for teachers involved.

Working in a similar area, Gross et al. (1957) reported from a study conducted with school superintendents that members of school boards who have high consensus on their positions receive more gratification from their jobs. In addition, such boards are also evaluated more favorably by their superintendents.

Ferneau (1954) pointed out that school leaders and the persons with whom they work soon begin to have certain expectations of how they and others in the system should behave. From his findings he concluded that when the action of one is outside the "range of permissiveness" as related to expectations, the behavior tends to be rejected. This is in congruence with Griffiths' (1956) emphasis upon the importance of the validity of one's perceptions in all situations involving human relations.

A study (Moyer, 1955) conducted in four elementary and three secondary schools in four different school systems in Illinois in 1954 revealed that followers' attitudes and expectations in a

leadership situation are of crucial importance in determining the success of the activity and, in turn, in measuring the individual and group satisfaction derived by the persons interacting in the situation. In this study significant proof was found to support the theory that teachers do develop a particular expectancy as to how the principal or superintendent should feel and act toward them.

Research directed by Gross et al. (1957) and Getzels and Guba (1955b) is of significance in the area of incompatibility and stress between two or more general status expectations. Gross' studies are concerned with the conflicting status expectations and shed light on the analysis of the manner in which the conflicting expectations are mediated in the interactional behavior situation. Getzels and Guba have examined conflicting status expectations and relationships of these self-involvements.

Gross et al (1957) indicated that belief was a key element in a social system and suggested that dissimilarity in beliefs among individuals engaged in interaction has implications for subsequently reported tension. The findings indicated that dissimilarity in beliefs about the educative process among team members may represent varying expectations about performance of the role of teachers or the characteristics of the activities that are inherent in the role. His findings indicate a lack of consensus as to the role of the teacher, a significant variable for consideration in the educational system.

This finding is in keeping with (Shaplin, 1964) the idea that divergent beliefs about the teaching-learning process of teachers

who work together may culminate in interpersonal difficulties. Stogdill (1959) also is in agreement with Gross et al. (1953); he says role conflict occurs when contradictory expectations are made upon a position incumbent. Role conflict tends to be created when various persons and subgroups entertain different and incompatible expectations relative to the same role.

Getzels and Guba (1955) also are in accord with the idea of incompatibility in expectations of parallel data. In a study with teachers they compared parallel data only from the status occupant himself and then determined the presence of role stress. They confronted teachers in six Midwestern school systems with some 70 statements, each of which referred to a stressful or logically incompatible demand which community members could make on the teacher. Teachers were asked to rate the statement as to the percentage of teachers in their schools who would concur that such demands were prevalent and the degree to which the demands disturbed them personally. It was concluded that teachers with higher stress scores had relatively few friends in the community, felt their relations with the school administration were not satisfactory, perceived other teachers as having more influence with the administration than they, and felt that teaching was a wrong occupational choice for them.

Linton (1945) has given a similar interpretation when he emphasized the relation of roles to status and suggested the problem of conflicts within a person when roles and status are incompatible.

He also recognized the possibility of role conflict between individuals as they relate to each other.

In a study where teacher effectiveness and role stress were taken into consideration, Bible and McComas (1963) investigated how vocational agriculture teachers were rated on their effectiveness as teachers by the state supervisory staff of vocational agriculture. Thier study showed that teachers rated "high" in effectiveness had a greater degree of consensus on role expectations than did teachers rated "low" in effectiveness.

Getzels and Guba (1954) also studied role conflict and effectiveness in a project involving officer-instructors in the Air Command and Staff School of the Air University. Intensive two-hour interviews were held to determine items for the role conflict instrument. Teacher effectiveness was ascertained by having officer-instructors rate each other as either above average or below average in teaching effectiveness. This was in keeping with the Air University policy that all instructors systematically visit their peers' classes and try out all of their lectures in the presence of their colleagues. A significant feature of the methodology in this study is the teacher's rating of the effectiveness of his peers. The results showed that ineffectiveness in the performance of a role is directly related to the degree of personal involvement in role conflict.

If the school is going to be an effective agent in the educational process, it is essential that there is interaction between and among most members of the social system. Goode (1960), expressing

himself on this topic, hypothesized that role incumbents will seek to reduce strain through control of the role relationship and by endeavoring to establish interpersonal social contracts which are the least stressful. Organizational structure is such that while a member of the organization has only limited control over whether he will or will not enter into a role relationship, he does have certain techniques for determining the degree and extent to which he will enter into this relationship.

Eckel's findings (1969) in a study of school administrators support Goode's hypothesis. It was found that whenever possible the principal discontinues rather than promotes external relationships which are stressful. He continues to follow new or old patterns of "barriers" against intrusion. He maintains a "formality" which discourages intrusion; limits the span of control; assumes an "I am busy" attitude; and arranges appointments through secretaries. Whenever possible, the principal discontinues rather than promotes external relationships which are stressful.

The conclusion of Kahn et al. (1964), in studying organizations, aligns itself with Goode's idea. It was concluded that when relationships proved stressful, the stress was reduced by withdrawal from the persons causing the stress, by avoiding interaction with those who create the stress. Kahn et al. stated further:

> The strain experienced by those in conflict situations leads to various coping responses--social and psychological withdrawal (reduction in communication and attributed influence) among them. . . .
>
> The presence of conflict in one's role tends to undermine his relations with his role senders, to produce weaker bonds of trust, respect, and attraction [p. 71].

Lippitt and Jenkins (1951) have pointed up the importance of perceptions of members for effective interaction in the social system. They emphasized that a person cannot be indifferent to how others perceive him when he must interact with them in order to attain his goals. It is only in the reasonably predictable environment, interpersonal or otherwise, that the individual can effectively pursue his goals. To maximize the predictability of the environment, not only must he strive for accuracy in discerning how others view him and the situation but he must be willing to conform to some degree to the expectations that others have of him.

Teacher Effectiveness

Summary of reviews

The literature is replete with studies on teacher effectiveness. Investigators have looked at teacher training, traits, behaviors, attitudes, values, abilities, intelligence and many other variables. Teachers have been rated by supervisors, students, administrators, master teachers, and by their peers. A review of the literature of studies on teacher effectiveness would lead one to believe that a preponderance of research has been done in this area because a large number of the authorities (Combs, 1965; Do teachers make, 1970; Jersild, 1955) agree in part with Imhoff's idea (1966). She elaborated, whatever a teacher does is done in terms of his private view of what he ought to do, given the situation as he sees it. In his milieu of change, it is the teacher--as a person and as an instructor--who determines the quality of the teaching-learning

process. What he is, what he thinks, what he says, what he does and how he relates to others and communicates with them--all of these factors determine his effectiveness as a teacher.

In the same vein, a number of authorities have emphasized the fact that most members of communities have talked about the need for quality education. Modern buildings, fine equipment, and exciting bold programs of innovation, even though important, do not guarantee the attainment of quality education. The critical factors for quality lie in able teachers and effective instruction (Do teachers make, 1970; Riley & Ryan, 1950).

Davis (1964) alludes to the fact that the practice of evaluating teacher competence with rating forms dates back many years and finds its genesis in similar movements in government and industry. One is led to believe that because of the pressures for more accountability for student achievement there will continue to be a large number of investigators trying to find hard data on teacher competence in hopes that significant knowledge about the effectiveness of teachers will be found.

Extensive reviews of the research on teacher effectiveness have appeared in the literature through the years. For example, Domas and Tiedman (1950) did a 1006-item bibliography which was thought to be exhaustive up to 1950. In a comprehensive study funded by the Air Force, Morsch and Wilder (1952) summarized the literature in this area. Ryans (1963) reviewed the literature from 1958. Over the years the literature is replete with examples of similar inclusive reviews because investigators have thought teacher

effectiveness to be an area of great concern in general.

In a comprehensive review of the literature, Yamamoto (1964) concluded: 1) there is no single, simple pattern of characteristics of the "successful" teacher, 2) supervisor ratings of teacher effectiveness quite often do not agree with pupil or colleague ratings, and 3) there is some indication that those teachers who are well-adjusted themselves and who know something about mental hygiene principles are more effective than those who are less well adjusted and who do not know about these principles.

Kleinman's (1966) discussion of Ellena's summary (1961) of teacher effectiveness yielded a number of significant analyses. Kleinman said in part:

(1) There is only a low correlation between measures of on-the-job performance of teachers and earlier scholarship.

(2) There is no evidence that married teachers are in any way inferior to unmarried teachers.

(3) There is some evidence that more professional knowledge (National Teacher Examination scores) tends to be associated with more effective teaching.

(4) No particular differences in effectiveness between men and women teachers have been found.

(5) Teachers' rated effectiveness at first increases rather rapidly with experience and then levels off at five or beyond.

These reviews, for the most part, concur with findings of Biddle and Ellena (1964). It was concluded that research about the competence of teachers is inconclusive and piecemeal, and little is presently known for certain about teacher excellence. Results have been modest and often contradictory. Few, if any, facts are

now established about teacher effectiveness, and many former "findings" have been repudiated. Biddle and Ellena contend few results have been acceptable either to teachers or the evaluators and cite the following explanations for this disparity:

(1) No past research has been adequate in methodology.

(2) So many studies exist that usable and appropriate methods are lost among the welter of poor research results.

(3) Teacher behaviors are so complex that the behavioral sciences, in their present stage of development, cannot deal with the problem.

(4) Research on such a practical problem as teacher competence is bound to fail because only "basic research" produces real break-throughs.

(5) Teachers are constitutionally and professionally opposed to having their performances evaluated and refuse to cooperate with research in this field and do not allow a measurement of competence by established means.

(6) Attitude toward teachers and teaching shows small positive relationship to teacher success.

(7) There is no substantial evidence that cultural background is significantly related to teaching effectiveness.

(8) There is no evidence that married teachers are in any way inferior to unmarried teachers.

Yamamoto (1963) suggested that the problem of drawing any conclusions from the literature on teacher effectiveness lies in the fact that most studies are not comparable. This is, he stated, the chief difficulty with the whole area; this lack of comparability may be the result of a lack of basic definitions of terms.

A debate by Combs and Mitzel (1964) encompassed the significant thinking of two schools of thought on this very controversial concept of measuring teacher effectiveness. Combs suggested that

good teaching is impossible to measure objectively in that, by definition, it is a function of the uniqueness of the teacher and, consequently, unquantifiable. On the other hand, Mitzel contended that some progress had already been made regarding quantification of teacher effectiveness variables and that more was in progress. He pointed to the continued refinement of research tools and the systematic study of relationships and urged research which would be tied to behavioral variables.

Even though measurement of teacher effectiveness is debatable, extensive research has been conducted in this area. Rating scales are the most frequently used methodology for appraising teacher effectiveness.

Student ratings of teachers

The practice of obtaining student ratings of teacher effectiveness appears to be increasing. A large number of teachers and administrators oppose them because of their possible disruptive effects upon student and faculty morale. The investigator is cognizant that student ratings can be misued as a basis for advancement or separation of personnel. Consequently, student ratings may make instructors emotional, self-conscious, or resentful, and it is possible that attempts to cater to student opinion may give genesis to changes in undesirable directions. In addition, student ratings may be unreliable because of immaturity and prejudices of the raters who are influenced by grades, interest in specific subject matter or grade level, reputation of particular teachers, difficulty or ease of course material, and the like.

On the other hand, some educators have been quite voluble in advocating the use of student ratings in evaluating the effectiveness of teachers. It is argued that such ratings tend to raise standards of instruction. These ratings, it is believed, provide administrators with a means for securing dependable information which they should possess as to the opinions of students with respect to members of the teaching faculty. Extensive use of such ratings may be due to the ease with which they are administered and their nominal cost in terms of money and time. When compared with formal behavioral classification systems, a high level of reliability for student ratings is comparatively easily obtainable and does not entail the high cost involved in other behavioral classification systems.

Major opposition to the use of student ratings may be argued from the view of problems of reliability, validity, discriminatory power of students or "halo effect," and no positive effect on teaching behavior. Problems in these areas have been of deep concern to researchers (Coats, 1970; Flesher, 1952; Gage, 1960; Remmers, 1960).

Student ratings have been shown to be an accurate measurement as compared to the best of available standardized achievement tests when ratings are obtained from twenty or thirty students. The method most frequently used for determining reliability has consisted of chance half groups. Flesher (1952) suggests that student ratings, within the limits of their reliability, are valid measures of student opinion of instructors cannot be questioned. In evaluating

reliability of student ratings of teachers, Flesher reported that in three studies (Remmers & Brandenburg, 1927; Root, 1931; Smeltzer & Harter, 1934) the reliability coefficients show the consistency with which the same students rate a particular instructor, using either the same or different rating devices.

Remmers (1960), in extensive research with the Purdue Rating Scale for Instructors and its revision, lends support to Flesher's findings. He concluded that reliability of ratings of teachers by students is a function of the number of raters, in accordance with the Spearman-Brown prophecy formula. If 25 or more student ratings are averaged, they are as reliable as the better educational and mental tests at present available.

Alumni ten years after graduation agree substantially (rs ranging .40 to .68) with on-campus students in their average ratings of the same instructors. In addition, these alumni agree very closely (rank order rho = .92) with on-campus students on the relative importance of ten teacher characteristics (Drucker & Remmers, 1950).

Wilson (1971) reported that Bryan's Student Opinion Questionnaire has undergone constant modification, but as far back as 1939 it was shown to have a reliability approximating .85 for a class of fifteen high school students. Amatora's Diagnostic Teacher-Rating Scale and the Purdue Rating Scale possess reliability ratings for upper elementary and college age students comparable to those obtained on the Student Reaction Questionnaire.

Morsch and Wilder (1952) pointed out that fairly good

reliability could be obtained regarding supervisor judgment but that validity could not be demonstrated. Validity of such instruments seems to be inherent in their design. Significance of validity is not with the teacher characteristics actually possessed by the teacher, but with the student's perception of their presence or absence. To the degree that the student honestly and reliably responds to items, such instruments are also valid.

Validity of student's perception was investigated by the Educator Feedback Center at Western Michigan University (1969). This study supports the contention that students do honestly and reliably respond to student rating devices. Staff members from the Center conducted in-depth interviews with 75 students to determine the extent of agreement between the student's written rating of the teacher on the Teacher-Image Questionnaire and the student's oral appraisal of the teacher. Questions on the TIQ served as the structure for the oral interview. The sample consisted of five students randomly selected from each of fifteen classrooms.

Analysis of correlations for each item displayed written and oral responses of the same individuals to be significantly similar. Item four, classroom control, obtained the lowest reliability coefficient at a .62 level. Reliability for item ten, sense of humor, was the highest at a .92 level. The correlation between individual written and oral responses for an average of all items was .95. These high correlations would appear to add sustenance to the validity of student rating instruments.

The discriminatory power or "halo effect" of student rating

instruments has been a paramount concern of investigators for years. It has been thought that usually students do not respond directly to specific items on rating scales regarding teacher effectiveness. It is thought that there is a tendency for students to respond to teacher overall popularity. The popularity of the teacher is reflected in each item resulting in a "halo effect." The review of investigations of the "halo effect" has revealed a number of significant findings using intercorrelations of items.

Intercorrelations of all items of the Purdue Rating Scale were computed by Stalnaker and Remmers (1928). A mean intercorrelation factor of .43 was produced. Remmers (1934) indicated that the "halo effect," if present in ratings by such instruments as the Purdue Rating Scale for Instruction, is insufficient to raise the inter-trait correlations to unity when corrected for unreliability of the ratings. His findings indicated that students discriminate reliably among different aspects of the teacher's personality and of the course. However, Amatora (1950) reported a median intercorrelation factor of .19 for the Diagnostic Teacher Rating Scale.

An investigation of college teachers by Starrack (1934) indicated that the "halo effect" was operative; however, it did not prohibit the student from exercising considerable discrimination between different traits on the scale.

Coats (1970) found a mean intercorrelation of .57 for the Teacher Image Questionnaire. In a paper presented on teacher effectiveness, he gave a plausible explanation of the halo effect.

> Students do not respond directly to specific questions regarding teacher effectiveness. Rather, a kind of halo

> effect based on teacher charisma or popularity determines to a large extent how students react to questions about their teacher. This is not to say that student ratings of teachers are not important or meaningful. Teacher charisma is probably a function of teacher effectiveness. Furthermore, as indicated above, at least 40% of the variance in student ratings of teachers is independent of the charismatic factor and probably represents fairly objective student judgments [p. 8].

Student ratings have proved to be particularly useful in providing the teacher with confidential feedback about students' perceptions of his effectiveness. It has been shown that teachers do use this information to modify their behavior. These ratings give the teacher an opportunity to see himself as students see him, at least insofar as the ratings have relevant meaning for him.

Support for this idea is found in Gage's et al. (1960) well-designed experimental study of pupil-observed change in teacher behavior pointing to the fact that when teachers were apprised as to how their students perceived their "actual" teacher and their "ideal" teacher on 12 items, the following occurred: 1) teachers' behaviors changed (as indicated by subsequent pupil description of their actual teacher) in the direction of the pupils' initial descriptions of their ideal teacher; and 2) teachers became more accurate in predicting their pupils' descriptions of "their teacher." To restate this aspect of Gage's findings, this investigator concluded that the kind of feedback a teacher obtains from anonymous ratings by his students can affect the teacher's behavior.

Another study by Remmers (1960) lends credence to Gage's findings. Remmers found that students are more favorable than instructors to student ratings of instructors, but more instructors

than students have noticed improvement in their teaching as a result of student ratings.

Oliver's conclusions (1967) align themselves with Gage's findings:

1) Informational feedback from students is effective in changing teacher behavior.

2) The utilization of student feedback as a means of influencing teacher behavior should be used to a greater extent.

Of all the professions, teaching is one of the more difficult to evaluate. As Gage (1960) cited, not only is the literature on teacher competence overwhelming, but even bibliographies on the subject are becoming unmanageable. He concluded that no approved method of measuring competence has been accepted, and no methods of promoting teacher adequacy have been widely adopted.

The problem of evaluating teachers seems to be one that is still with us even though the results in general have been contradictory. In a national survey on the analysis of teacher rating scales responses were received from 53 of the 60 largest school districts in the country. Of these, 51 (or 96%) used rating scales to evaluate teacher performance (Queer, 1969). It was interesting to note the small percentage of these districts that were not using rating scales. With major emphasis placed on more student involvement in most school systems, it seems paradoxical, but real, to note that major responsibility for the rating of teachers in this study fell upon the principal in most of the districts responding, while others distribute the responsibility among the superintendent,

coordinator, supervisor, department head, and in some case to teachers in the form of self-evaluation.

Even though a large number of educators are not convinced as to the value of student ratings, the rationale for these ratings cannot be overlooked. Riley and Ryan (1950) elaborated the rationale for student ratings:

> It is not our intention to make any claim in support of the ability of any student body to make an objective and valid analysis of faculty. That, it must be re-emphasized, is not the point at issue. The real point, rather lies in the assumption that student judgements and evaluations, however immature, biased or prejudiced they may be, contribute to the complex of realities in any teaching situation. The professor is dealing with human beings and even in the classroom, where he exercises a high degree of control and authority, he cannot separate these "beings" from their prejudices and gratifications. The students' ideas of good teaching, of ideal instructional characteristics, are inevitably part and parcel of any teacher's daily routine. He may attempt to ignore their reality, he may consciously or subconsciously isolate himself, but it is nevertheless clear that his increased effectiveness as a teacher can only be gained through a critical recognition of this element in the educational process--an element which has too often been studiously overlooked and ignored [p. 32].

Paraskevopoulous' (1968) rationale for student ratings aligns itself with Riley's:

> Student ratings allow us to see how pupils perceive and interpret the behavior of teachers. This subjective perception, more than the independently and objectively assessed behavior by trained observers, supervisors, and other 'outsiders,' determines essentially the interpersonal relationships in the classroom and colors its social and emotional climate. The atmosphere of interpersonal relationships is crucially important in its effects on the child's learning and adjustment [p. 25].

Summary

The review of the literature indicates the nature of studies which have been undertaken related to teacher role stress and teacher effectiveness. A multitude of factors helps to determine teacher effectiveness as well as teacher role stress in a school system. An attempt has been made in the present chapter to report on a variety of studies which have dealt with these factors in one way or another as a preliminary step to focus on teacher role stress as it relates to teacher effectiveness as viewed by students. This review suggests the following:

Much writing in the area of role stress is of a theoretical nature. The specific study of teacher role stress as related to teacher effectiveness as viewed by students was not found to be a common problem for investigation.

Teacher role stress is a significant variable in inter-personal and intrapersonal relationships. Teachers who are involved in a social system depend in part on the nature of these relationships in order to reach the system's goals effectively and efficiently.

The teacher's involvement in the learning environment, an environment which is constantly modified by the "temporariness" that is innate to it, has important consequences for him and for his conduct in the teaching-learning process. Interaction is endemic to the teaching-learning environment. It is this circum-stance that teaching always operates in, an inter-personal setting,

that makes perceptions of students a crucial factor in the teaching process.

Finally, student judgment, however immature and biased, can be utilized to clarify potential areas of tension between student and teacher. It is the student who will largely determine the success or failure of the teaching-learning process. Student attitude toward the teacher is inherent in his evaluation of the teacher and impinges upon the success of the teaching-learning process.

CHAPTER III

DESIGN AND METHODOLOGY

Review of the Problem

The major task of the study was to obtain information about teacher role stress as it relates to student ratings of teacher and other selected variables thought to be associated with teacher role stress. The purpose of this chapter is to describe the selection and characteristics of the sample, variables and instrumentation, and procedures for collection and analyses of data.

The Sample

The nature of the overall procedure of the study imposed several requirements in the selection of the sample. The following criteria were used to select classrooms for the study: 1) the teacher had tenure, 2) students were heterogeneously assigned to classrooms with respect to ability, and 3) students were in a grade level which would be affected by the proposed desegregation plan. Given these criteria the sample exhausted all eligible classrooms at the second, fourth, seventh, and tenth grade levels. The sample consisted of 31 second grades, 32 fourth grades, 20 seventh grades, and 14 tenth grades which was a total of 97 classrooms. This sample consisted of 97 teachers and 2,353 students. All teachers who met these criteria agreed to participate in the study.

Table 1 shows a description of the classrooms used in this study.

Table 1

Description of Classrooms in Sample

Grade Level	Total # of Classrooms	Total # of TOQ Returned by Teachers	Total # of Students in Sample	Total # of Students Used w/ TOQ	% of Teachers Returning TOQ
2	31	24	669	529	79.3
4	32	24	765	569	75.0
7	20	19	457	438	95.0
10	14	10	462	367	71.4

Variables and Instrumentation

The variables studied were teacher role stress, the major dependent variable, and student perceptions of teachers, the major independent variable. In both cases modification of existing instruments were used. To ascertain teacher role stress the Job Description Index (JDI) by Smith, Kendall and Hulin (1965) was modified by the investigator in collaboration with research assistants at Western Michigan University Educator Feedback Center. The modified form, Teacher Opinion Questionnaire, was reviewed by ten school principals, twenty-five teachers, and thirteen doctoral candidates in the Educational Leadership Progran at Western Michigan University. As a result of their comments, the instrument underwent several minor changes. Student perceptions regarding important

characteristics were determined by minor modifications of the Teacher Image Questionnaire developed by the Educator Feedback Center at Western Michigan University for secondary students and a simplified version of this questionnaire for elementary students.

Job Description Index

No existing instrument was available to ascertain teacher role stress on three important and distinct components of the teacher's social system: principal, job, and students. Consequently, the JDI was modified for the present investigation. This instrument can be used with widely varying groups of individuals working under quite different kinds of employment situations to measure job satisfaction. This instrument attempts to measure job satisfaction in five areas: pay, promotion, supervision, type of work, and people on the job. Research related to job satisfaction suggests that these five areas constitute meaningful components for determining job satisfaction. The JDI grew out of the research on satisfaction, known as the "Cornell Studies of Satisfaction." The instrument consists of 72 items--18 in each of work, supervision, and people subscales and nine each in pay and promotion.

Norms for the five JDI scales are based on a sample of approximately 2,000 male and over 600 female workers. This sample was obtained by combining employees across a total of 21 plants, representing 19 different companies and 16 different communities or Standard Metropolitan Statistical Areas. Each of these 21 plants selected was the subject of a concentrated field study regarding

job satisfaction and other factors. The sampling procedures used were intended to maximize the heterogeneity of company and community characteristics represented in the sample (Smith, Kendall & Hulin, 1969).

Firms used for the normative data were obtained by stratified random sampling from the pool of firms described in the sampling distribution shown in Table 2.

Table 2*

Number of Employees in Reporting Units

	1-49	50-99	100-249	250-499	500 and over	Total
Sampling Ratio	0	1/15	1/8	1/12	1/1	
Number of Units Drawn	0	3,978	4,129	5,142	7,791	21,040

The check list format of the JDI permits its use across a wide variety of educational levels, ranging from no formal schooling to the Ph.D. degree, and to persons on jobs from custodian to top management. The JDI is widely applicable for heterogeneous groups and has been translated into French, German and Norwegian with no apparent difficulties (Smith et al., 1969).

The JDI is a relatively new instrument; consequently, there was not a wealth of published data from studies by researchers other than

*Table taken from Smith et al., 1969, p. 88.

the authors of the instrument. Studies cited in the present study using the JDI were those undertaken by the authors of the JDI.

Validity

Several cogent studies have been done to ascertain validity of the JDI. In each study, validity was assessed by a modification of the Campbell-Fiske (1959) model for establishing convergent and discriminant validity using cluster analysis or principal component analysis.

In Smith et al. (1969) modified procedure, a measure of job satisfaction in a particular area should be more highly related to a component or cluster representing what was common to all measures in that area than with any other component or cluster. If a distinct component or cluster emerged for that aspect of satisfaction, a trait had discriminant validity.

The second requirement for establishing validity and soundness of the appraisal instrument was that of convergent validity. In convergent validity the component was identified by the loading of different measures intended to cover the same aspect on the appropriate component.

Authors of the JDI were unwilling to accept the usual relationship between one measure of job satisfaction and one "criterion" measure, no matter how wisely each might have been chosen. Consequently, convergent and discriminant validity were used to test the validity of the JDI.

In small preliminary studies with groups of janitors, secretaries, and cafeteria workers at Cornell University (N = 58) it was revealed that the JDI scores correlated significantly with supervisory ratings and rankings of job satisfaction. These findings suggested that the authors were on a reasonable course of testing the validity of the instrument (Smith et al., 1969).

In a study with 148 Cornell undergraduates who had held a full-time job for at least two months, and 18 persons from the community who currently held full-time jobs, several scores were obtained from the item responses describing present, best, and worst jobs. In the initial analysis the sample was randomly divided for replication, and all variables were intercorrelated for each replication. Smith et al. (1969) reported using the clustering method (McQuitty, 1957) gave a unique, objective solution for a given matrix, placing a variable in a particular cluster if it correlated higher with some variable already in the cluster than with any other variable in the matrix. All correlations used for clustering were reported as significant at $p < .001$.

Another study was designed to test the generality of the results of the above mentioned study. The subjects were 80 randomly selected employees of a farmers' cooperative. Adequate convergent validity was found in each area of satisfaction at least for several methods of measurement. The areas of satisfaction with work, supervision, and co-workers depict good discriminant validity once again for most but not all methods of measurement (Smith et al., 1969).

In summary all methods of measurements show very good convergent and discriminant validity, with a single exception occurring for the negative co-workers measure.

In addition to the validation studies, Smith's et al. (1969) factor analysis of items gave stringent support to the claim that differentiation of job attitudes demonstrated in a number of situations results from discriminable response to specific aspects of job conditions, e.g., the tiresomeness of the work, promotion on ability, tactfulness of supervision.

Reliability

An instrument is reliable if it consistently yields the same results when repeated measurements are taken on the same subjects under the same conditions. A number of studies have been conducted to estimate the reliability of the JDI.

Smith et al. (1969) reported in preliminary studies of split-half estimates of internal consistency of both the direct and triadic JDI scales produce an average corrected reliability estimate of .79 for the JDI Direct scales and .74 for the JDI Triad scales using 168 Cornell students as subjects. These estimates were calculated by correlating the score for the half of the items in each scale which differentiated the best and worst jobs most adequately, with that for the remaining half of the items. These are likely to be underestimates of the internal consistencies of these scales because of the biased sampling of items for each half.

From a firm in the random sample of companies, the JDI was administered to 192 male employees randomly selected from two plants of an electronics firm. Forty questionnaires were drawn at random from each plant for further analysis. The scale with five faces ranging from unhappy to happy proven to have convergent and discriminant validity (Locke, Smith, Kendall, Hulen & Miller, 1964) was used as a basis for contrast.

All items within each area were intercorrelated and also correlated with the Faces scale for appropriate areas, i.e., supervision items with supervision items.

Tables 3 and 4 depict the correlational data for each set of items which indicate the quality of the instrument:

TABLE 3*

Item Intercorrelations and Item Validities of JDI Items
(N = 80 Males)

Scale	Total Items	Median Item Intercorrelation[a]	Range	Median Item Validity
Work	18	.25	-.16 to .63	.44
Pay	9	.29	-.08 to .58	.40
Promotions	9	.45	-.18 to .76	.52
Supervision	18	.29	-.16 to .78	.50
Co-workers	18	.30	-.10 to .66	.35

[a]Slight underestimates because of effects of restricted range on product moment correlation coefficient.

*Table taken from Smith et al., 1969, p. 73.

Table 3 depicts the median item validities for each area, the median item intercorrelations and the range of item intercorrelations.

Table 4*

Internal Consistencies of JDI Scales
(N = 80 Males)

Scale	Correlation of Random Split Halves	Correlations Corrected to Full Length by Spearman Brown Formula
Work	.73	.84
Pay	.67	.80
Promotions	.75	.86
Supervision	.77	.87
Co-workers	.78	.88

The estimate split-half internal consistencies for the final revised JDI scales, using a sample of 80 male employees from two electronics plants are depicted in Table 4. All corrected estimates are over .80.

Tables 5 and 6 show the intercorrelations of the JDI scales for large samples of men and women pooled across all companies tested in main studies. Only combined data are reported. The pattern of intercorrelations may fluctuate considerably for different samples, although these general relationships have been found in a number of subsequent studies. These tables can be considered representative for large heterogeneous samples such as we used.

*Table taken from Smith et al., 1969, p. 73.

It is evident that nearly all the scale intercorrelations are quite high. It has been proven, however, that the JDI scales measure discriminably different areas. The authors have chosen a method which produces discriminably different measures, but a method component is undoubtedly still present to some extent.

If the complex nature of a job is taken into consideration, it is probably true that different areas of a job affect one's feelings about other parts of his job, although there are likely to be wide individual differences in the degree to which people can discriminate among their feelings about different facets of their jobs. Most important of all, there are differences in the interdependence of certain job aspects from one setting to another. One can expect large intercorrelations between some areas of satisfaction to result from the nature of certain jobs rather than from artifacts of measurement. Good supervision is often associated with other desirable aspects of jobs. Good pay is often found in conjunction with clean working conditions and varied work, etc. (Smith et al., 1969).

Intercorrelations are shown in Tables 5 and 6 for large samples of men and women from all companies tested in the large sample.

The five subscales do not appear to be independent, judging from the magnitude of the correlations in Tables 5 and 6.

It was decided for the following reasons to retain all five of the JDI scales for subsequent use: (a) they represent discriminably different areas of satisfaction; (b) although the areas are

Table 5*

Intercorrelations of JDI Scales
(N = 980 Males Pooled Across 21 Plants)

Scale	Work	Pay	Promotion	Supervision
Work	--	--	--	--
Pay	.40	--	--	--
Promotions	.39	.42	--	--
Supervision	.39	.32	.42	--
Co-workers	.36	.28	.29	.41

Table 6**

Intercorrelations of JDI Scales
(N = 627 Females Pooled Across 21 Plants)

Scale	Work	Pay	Promotion	Supervision
Work	--			
Pay	.16	--		
Promotion	.33	.31	--	
Supervision	.43	.20	.34	--
Co-Workers	.38	.19	.28	.52

correlated, some areas may be more important to some people than to others; (c) different areas may be related quite differently in different personal background variables and individual characteristics such as age, education, and performance; (d) the intercorrelations

*Table taken from Smith et al., 1969, p. 77.

**Table taken from Smith et al., 1969, p. 78.

among different areas may be a function of a common measurement method and of specific job situations and employee samples, and thus they may vary widely from one company or situation to another, and (e) different areas may be affected differently by different situational variables (Smith et al., 1969).

Smith et al. (1969) summarized their findings of studies with the JDI:

> Various aspects of satisfaction can, and should be reported. We found that five areas of job satisfaction were discriminably different, both by rating methods and by the JDI scales. This discriminant validity was clearly demonstrated, despite the fact that the scales were positively intercorrelated. None of the scales could be replaced by a single global measure, although the global measure added information in its own right. Some areas were differentially related to "objective" situations, so that the separation of scales might have implications for establishing laws of behavior. As an obvious example, mean annual earnings correlate more closely with satisfaction with wages than with satisfaction with either supervision or co-workers across the 21 plants of the intensive studies ($p < .01$ sign test). [p. 151]

In a review of the JDI by staff members of the Institute of Social Research at the University of Michigan the following comments were made (Robinson & Athanasiou, 1969):

> In addition to the extensive high quality research done on JDI by the Cornell group there are several factors intrinsic to the scale which recommend its use. The verbal level of the items is quite low and does not require the respondent to understand complicated or vague abstractions.
>
> It seems quite evident from the numerous studies with the JDI that one's perception of his job is highly colored by his satisfaction with it. The JDI is a face valid instrument which can easily be administered and scored in a short time.
>
> There are a few characteristics of the JDI which do not add to its value, although they are not serious defects. The first of these is the problem of social desirability.

> While there is some relation between JDI scores and social desirability, the correlation is not high [p. 105].
>
> With the impressive background of research and the valuable scale characteristics which the instrument possesses, it is quite likely to expect that the JDI will become a widely used and valuable instrument [p. 106].

Teacher-Opinion Questionnaire

The JDI was selected because of two reasons; first, the quality and results of the research that it has undergone; second, it has a job-referent rather than a self-referent. The modified instrument, Teacher Opinion Questionnaire, ascertained role expectations viewed as qualities expected of three components of the teaching-learning environment. In turn, teacher role stress could be determined by comparing the difference between teacher reasonable expectations with their perceptions of the actual situation.

Role expectations may be viewed as actions or qualities expected of the occupant of a position. If viewed as qualities, role expectations are codified in adjectival terms; for example, the occupant is expected to be warm, friendly, outgoing, sincere, and cautious (Sills, 1968). Backman and Secord (1964) are of the opinion that individual attributes that facilitate or interfere with successful role performance may be either personal qualities such as the individual's physical characteristics, abilities, skills, or personality traits.

Role expectations may be analyzed in terms of actions and qualities. Analysis of the role expectations of mother, for instance, may reveal the potential action: mother provides food when child

cries. In addition, specific qualities of the person enacting the role are expected: concern, understanding, gentleness, etc. (Sarbin, 1954). Sarbin believes role expectations as qualities or attributes rather than as actions or performances may be studied empirically. He cites an investigation by Sullivan (1950) with the aid of a set of 49 pictures investigated conceptual properties governing the categorization of people. The subjects were asked to sort or categorize the persons.

In line with the thinking of the above-mentioned authors of viewing role expectations as qualities, the TOQ, in the same manner as the JDI, asked the respondent to describe his work component. The respondent, in describing his job, provides insight which may be used to infer his role stress.

The TOQ was designed to determine teacher role stress on three components: the building principal, teaching as a job, and the students. This instrument was based on the works of Smith et al. (1969), who developed the JDI; Swanson (1971), who used the basic technique with college students; and Coats and Nance (1971), who modified the JDI and used the technique of Swanson to measure role stress in a cross-section of citizens in an urban area.

The Teacher-Opinion Questionnaire consisted of substituting a limited number of items on each of the three major components. On the phase of supervision such items as bad, lazy, and up-to-date, were deleted for items that were thought to be more pertinent to the learning environment such as predictable, inclined to experiment, and follows through on his promises.

The modified instrument, like the original, has several advantages as a measure of role stress. It is directed toward specific areas of teacher role stress, rather than global or general stress.

There is also very general argument for the use of multiple measures (Humprheys, 1960; Miller, 1961). These writers have pointed out that if we have reason to believe that there is more than one aspect of some psychological process, the multiple measures should be used at the same time to reflect each aspect. Unless the investigator understands thoroughly in advance what factors are influencing a given measure, he is in danger of adding to the confusion of conflicting results in literature if he bases his conclusions on a single type of measure or estimate. This seems to be a cogent reason for measuring specific areas of role stress in order for substantial understanding to be achieved.

There is a very general argument that whatever conceptual propositions are at stake, the empirical operations in role analysis nearly always consist of parallel data respecting a single issue--data from two sets of respondents or two sets of data from the same respondents. The resulting comparison is a measure describing the degree of agreement or disagreement. With this idea in mind, the investigator with the assistance of the research team designed the TOQ so that each item called for two answers based on first, the teacher's "reasonable expectation" and second, the teacher's perception of the "actual situation."

For each item the respondent had five alternatives both under

"reasonable expectation" and "actual situation" from which to choose one that seemed to represent the most satisfactory answer. For purposes of analysis, the alternatives were on a frequency continuum: number 1 was assigned to a frequency of "never," 2 to "seldom," 3 to "occasionally," 4 to "frequently," and 5 to "always." An average score was computed for the "reasonable expectation" on each item and also for the "actual situation" on each item. Role stress on an item was then determined by computing the arithmetic difference between the average response for reasonable expectation and the average response for actual situation. Figure 3 is an illustration taken from the Teacher-Opinion Questionnaire:

FIGURE 3

	Reasonable Expectation					Actual Situation				
	Never	Seldom	Occasionally	Frequently	Always	Never	Seldom	Occasionally	Frequently	Always
My job is useful		X								X

Under "reasonable expectation" the teacher indicated with an "X" the frequency with which he expected his job to be useful, and in the "actual situation" the frequency with which the job actually was useful to him. In this manner the teacher's role stress was ascertained. When asked to relate the degree to which his teaching job is "frustrating" a teacher may respondd that it is quite frustrating but also that he would expect it to be so because

of the nature of the job. In this case, there would be no role stress on that phase even though the job was rated as quite frustrating. On the other hand, a teacher may respond that "the principal praises good work" seldom occurs and indicate that, in terms of reasonable expectations, such a practice should always occur. In this case one would find extreme role stress even though the absolute rating of "praises good work" was not as low as the rating on frustrating. No differentiation was made for the sign or direction of the stress, only the actual, total stress was considered.

Student Opinion Questionnaire

Teacher image was the major independent variable in this study. The instrument used to assess this variable was the Student Opinion Questionnaire, a modification of the Teacher-Image Questionnaire developed by the Educator Feedback Center at Western Michigan University.

Bryan pioneered in the development of an instrument designed to acquire student ratings of secondary school teachers. In the early 1950's his questionnaire and an accompanying feedback service was made available to and made use of for years by teachers in the Midwest under the auspices of Western Michigan University. The Questionnaire has been continuously improved and modified and is currently being used by the Educator Feedback Center at Western Michigan University to assist secondary teachers in obtaining student perceptions of their performance. Characteristics measured by this instrument include such variables as teacher knowledge of subject,

ability to stimulate interest, fairness, control, sense of humor, and attitude toward student opinions. Since the early fifties, the instrument has undergone constant modification and improvements from research conducted at the Educator Feedback Center. As a result of this research, the instrument has evolved into a 16-item form.

The validity and reliability of questionnaire items have been demonstrated by the Educator Feedback Center which has used the instrument in hundreds of classroom analyses. These analyses conducted by the Center on the TIQ have indicated that the image averages are stable and can be changed only with concerted and well-directed effort (Bryan, 1966). The instrument has been analyzed periodically for reliability and these results have played a major role in influencing its revisions.

Bryan (1967) reported impressive reliability coefficients with 50 randomly selected classes in grades 7-12. In this study, 24 to 32 students per class reacted to the TIQ. The scores were converted to those reported for the whole classes by means of the Spearman Brown formula for computing test reliability; the reliability coefficients obtained for the first 12 items were:

1) Knowledge of Subject	.87
2) Clarity of Explanation	.82
3) Fairness	.84
4) Control	.95
5) Attitude toward Students	.88
6) Ability to Stimulate Interest	.87
7) Attitude toward Subject	.90

8) Attitude toward Student-Opinion	.86
9) Variety in Teaching Procedures	.91
10) Encouragement of Student Participation	.77
11) Sense of Humor	.91
12) Planning and Preparation	.90

Coats (1970), in the factor analytic study cited earlier, concluded that one basic factor, a kind of halo effect based on "charisma" or "popularity," accounted for 61 percent of the variance in student reactions to teachers. Of the remaining variance, 39 percent, approximately 16 percent was attributed to two less clearly defined factors. Coats alluded to the fact that at least 39 percent of the variance in student ratings of teachers is independent of the charismatic factor and probably represents fairly objective student judgments.

The Student-Opinion Questionnaire contained 16 items designed to measure students' perceptions of teacher effectiveness. For the present study, three items on each questionnaire were not included in the data analysis. These items were not directly related to characteristics of teachers. The items deleted on both questionnaires were: Do you like your school? Are the children in your class friendly? Respectively for the elementary and secondary forms, items deleted were: Do you worry about other students picking on you? Do you like most of your teachers?

Procedures

After the sample of classrooms was selected, prior to the actual collection of data, officials at each of the 97 sample classrooms were initially contacted by a form letter sent from the Director of the Educator Feedback Center (see Appendix B). This letter briefly described the nature of the study and certified its legitimacy.

After students responded to the SOQ, these copies were returned to the Educator Feedback Center for analysis. Procedures for this study called for the investigator to code responses for information gathered and then to convert it to punched cards for analysis. Cards were proofed for accuracy by visual scanning of the print-out at the top of the card in comparison to coding sheets. Errors detected were corrected and a computer print-out generated. The remaining errors were corrected.

As a service to subjects, the Center made available the services of four research assistants for interpretations and discussions of any phase of the study teachers desired. In addition, teachers who participated in the investigation and expressed a desire for feedback were provided with a teacher-image profile with average group reactions to items believed to be in high correlation with teacher effectiveness. Along with the image profile were directions for interpretation.

During this same period, the Teacher-Opinion Questionnaire, used to determine teacher role stress, was hand distributed to each teacher in the sample by research assistants. All teachers were given the same instruction for reacting to this instrument (see Appendix A).

After a two-week period, teachers who did not return the TOQ by mail were sent a second copy of the TOQ and a follow-up letter asking them to react to and return the instrument (see Appendix B). Three weeks after the second contact, teachers who did not respond were contacted by telephone and asked to react to and return the TOQ.

After these efforts were made to fulfill the original intent to obtain reactions from the entire 97 classroom sample, 79 percent of the teachers in these classrooms returned the TOQ. For purposes of this study these teachers and their students were subjects.

Data Analysis

For purposes of this study the variables were partitioned in the following manner (see Appendix A):

Student Ratings (low, average and high)

Teacher Role Stress (low, medium and high)

Racial Balance of Class (majority white, majority black, and all white)

Race of Teacher (black and white)

Socio-economic Attendance District of Elementary School (low, middle and high)

Teaching Grade Level (2nd, 4th, 7th and 10th)

One-way analysis of variance was used for determining the nature and extent of relationships between the dependent and independent variables. This model of analysis of variance was particularly appropriate when the following questions were analyzed:

1. What is the relationship between student ratings of teacher and teacher role stress?

1a. What is the relationship between student ratings of teacher and teacher role stress on the principal component?

1b. What is the relationship between student ratings of teacher and teacher role stress on the job component?

1c. What is the relationship between student ratings of teacher and teacher role stress on the student component?

2. What is the relationship between class racial balance and teacher role stress?

2a. What is the relationship between class racial balance and teacher role stress on the principal component?

2b. What is the relationship between class racial balance and teacher role stress on the job component?

2c. What is the relationship between class racial balance and teacher role stress on the student component?

3. What is the relationship between sex of teacher and teacher role stress?

3a. What is the relationship between sex of teacher and teacher role stress on the principal component?

3b. What is the relationship between sex of teacher and teacher role stress on the job component?

3c. What is the relationship between sex of teacher and teacher role stress on the student component?

4. What is the relationship between socio-economic attendance district of elementary school and teacher role stress?

4a. What is the relationship between socio-economic attendance district of elementary school and teacher role stress on the principal component?

4b. What is the relationship between socio-economic attendance district of elementary school and teacher role stress on the job component?

4c. What is the relationship between socio-economic attendance district of elementary school and teacher role stress on the student component?

5. What is the relationship between race of teacher and teacher role stress?

5a. What is the relationship between race of teacher and teacher role stress on the principal component?

5b. What is the relationship between race of teacher and teacher role stress on the job component?

5c. What is the relationship between race of teacher and teacher role stress on the student component?

6. What is the relationship between teaching grade level and teacher role stress?

6a. What is the relationship between teaching grade level and teacher role stress on the principal component?

6b. What is the relationship between teaching grade level and teacher role stress on the job component?

6c. What is the relationship between teaching grade level and teacher role stress on the student component?

F and student t ratios were reported for differences among and between means respectively. The levels of confidence were reported as p, and the strength of association was reported as E^2. p levels consisted of reporting the level at which the null hypothesis may be rejected, rather than identifying levels of significance prior to the study as has been the custom. This technique affords the reader the option to reason by inspection if the results were significant or meaningful at levels which are of concern to him. This trend has gained support from the realization that the .05 and .01 levels of significance have little logical or scientific bases (Winer, 1962).

Consideration was given to the strength of relationships between variables by using E^2 (Kerlinger, 1964). This analysis was used to identify the amount of variance in one variable that can be attributed for by another variable. Hays (1963) suggests that the level of confidence at which one observes results reveals little unless attention is also given to the size of the sample and more particularly to the strength of the association between variables. Coats (1970) and Hays (1963) believe the strength of the association permits the investigator to make inferences about the ability to predict one variable from another.

In Chapter III the problem has been reviewed, sample delineated, independent and dependent variables discussed with regard to instrumentation, procedures reviewed, and the model for data analysis presented.

Research findings are presented and discussed in the following chapter.

CHAPTER IV

RESULTS

Results of analyses related to questions proposed in Chapter III are presented in this chapter. Presentation of the data consisted of reporting: F ratios; E^2, strength of association; and p, the level of probability of observing the relationships reported by chance. In each case the question is presented followed by the appropriate narrative.

The relationship of student ratings of teacher to teacher role stress was the core of questions 1, 1a, 1b, and 1c.

Question 1

What is the relationship between student ratings and teacher role stress?

The mean scores displayed in Table 7 did not indicate any consequential relationship between teacher role stress and student ratings of teacher. The level of confidence for these fidnings was .23. Results of the analysis of variance were such that 23 times in 100 would the results have been observed by chance if there were no differences in groups. The strength of association, E^2, was .040. This indicated that teacher role stress and student ratings shared four percent of variance.

Table 7

Summary Analysis of Variance Data for the Relationship Between Student Ratings and Teacher Role Stress

Student Ratings	n	m	SD	SEM
Low	25	22.520	12.254	2.501
Average	25	22.360	7.678	1.567
High	26	17.962	10.847	2.169

Source	ss	df	ms	F	p	E^2
Between Groups	343.394	2	171.697	1.512	.227	.040
Within Groups	8286.961	73	113.520			
Total	8630.355	75				

Question 1a

What is the relationship between student ratings of teacher and teacher role stress on the principal component?

The results of the analysis in Table 8 indicated that a difference as large as that noted in the analysis could be expected to occur by chance 81 in 100 times if there were no differences between groups. Very little of the variance in student ratings could be accounted for as common variance with teacher role stress on the principal component, six tenths of one percent.

Table 8

Summary Analysis of Variance Data for the Relationship Between Student Ratings of Teacher and Teacher Role Stress on the Principal Component

Student Ratings	n	m	SD	SEM
Low	24	9.917	5.123	1.068
Average	25	10.160	5.648	1.153
High	24	2.125	6.112	1.274

Source	ss	df	ms	F	p	E^2
Between Groups	14.237	2	7.118	.214	.808	.006
Within Groups	2323.817	70	33.197			
Total	2338.054	72				

Question 1b

What is the relationship between student ratings of teacher and teacher role stress on the job component?

The results of the analysis reported in Table 9 suggested that these findings were significant at the .29 level of confidence. Results of this nature could be anticipated 29 times out of 100 if there were no real differences between groups. Slightly more than three and one-half percent of the variance between the variables was shared.

Table 9

Summary Analysis of Variance Data for the Relationship Between Student Ratings of Teacher and Teacher Role Stress on the Job Component

Student Ratings	n	m	SD	SEM
Low	22	8.000	5.402	1.179
Average	23	6.043	2.941	.627
High	24	6.167	4.913	1.024

Source	ss	df	ms	F	p	E^2
Between Groups	53.913	2	26.957	1.253	.292	.037
Within Groups	1420.290	66	21.520			
Total	1474.203	68				

Question 1c

What is the relationship between student ratings and teacher role stress on the student component?

An examination of the data analysis in Table 10 revealed that there was a fairly strong relationship between student ratings of teacher and teacher role stress on the student component. Results of this nature could be anticipated only approximately five times in 100 if there were no real differences between the variables in question. Analysis of the strength of association for the variables suggested that nine percent of the variance was shared.

Table 10

Summary Analysis of Variance Data for the Relationship Between Student Ratings of Teacher and Teacher Role Stress on the Student Component

Student Ratings	n	m	SD	SEM
Low	23	6.478	4.363	.930
Average	24	6.917	3.213	.670
High	23	4.348	3.157	.673

Source	ss	df	ms	F	p	E^2
Between Groups	87.853	2	43.927	3.217	.046	.088
Within Groups	914.790	67				
Total	1002.643	69				

Mean scores in Table 10 showed teachers who possessed low student stress to be rated more favorably by students than teachers with high or average student stress scores. Further pair-wise comparisons based on *t*-ratios indicated the greatest significant difference in means, .0048, as that between teachers who were rated average and high by students. This difference could be anticipated to occur by chance only five times in 10,000 if there were no differences between groups. The difference reported between teachers who were rated low and high by students, based on *t*-ratios, was at a confidence level of .035. This difference could be expected to occur by chance only four times in 100 outcomes.

In summary, questions relating student ratings of teacher to the dependent variable of the study, teacher role stress, revealed virtually the same thing for questions 1, 1a, and 1b. That is, student ratings of teachers had little relationship to teacher role stress and on two components of the TOQ, job and principal. On the other hand, evidence for question 1c revealed a strong relationship between teacher role stress on the student component and student ratings of teacher.

The relationship of racial balance of class and teacher role stress was the subject of questions 2, 2a, 2b, and 2c.

Question 2

What is the relationship between racial balance of class and teacher role stress?

Mean scores in Table 11 revealed that teachers with majority white classes had more role stress than teachers with all white and majority black classes. Teachers with all white classes indicated the least amount of role stress. The level of confidence for analysis of variance for the reported data was .02. Differences as large as that noted in the analysis could be expected to occur by chance two times in 100 if there were no differences between groups. Additional pair-wise comparisons based on *t*-ratios indicated that the most significant difference in means was that reported between teachers with majority white and all white classes, .0021. Differences in means of teachers with majority black and all white classes, based on a *t*-ratio, was reported as .256. Ten percent of

Table 11

Summary Analysis of Variance Data for the Relationship Between Racial Balance of Class and Teacher Role Stress

Racial Balance of Class	n	m	SD	SEM
Majority White	37	24.297	11.277	1.880
Majority Black	5	20.000	11.754	5.877
All White	34	17.324	8.348	1.453

Source	ss	df	ms	F	p	E^2
Between Groups	864.385	2	432.192	4.063	.021	.100
Within Groups	7765.970	73	106.383			
Total	8630.355	75				

the variance in teacher role stress was shared variance with racial balance of class.

Question 2a

What is the relationship between racial balance of class and teacher role stress on the principal component?

The analysis of variance shown in the data in Table 12 indicated a level of confidence of .65. Results of this nature could be anticipated 65 times out of 100 if there were no real differences between groups. Teachers with majority white and all white classes mean scores were just about the same. Teachers with majority black

Table 12

Summary Analysis of Variance Data for the Relationship Between Racial Balance of Class and Teacher Role Stress on the Principal Component

Racial Balance of Class	n	m	SD	SEM
Majority White	35	9.971	5.593	.959
Majority Black	5	11.600	8.754	4.377
All White	33	9.212	5.020	.887

Source	ss	df	ms	F	p	E^2
Between Groups	28.369	2	14.184	.430	.652	.012
Within Groups	2309.687	70	33.000			
Total	2338.056	72				

classes mean scores were highest on role stress on the principal component. One percent of the variance in teacher role stress on the principal component was shared with class racial balance.

Question 2b

What is the relationship between racial balance of class and teacher role stress on the job component?

An inspection of the means in Table 13 showed that those teachers with all white classes indicated less job stress than teachers with majority white and majority black classes. This

Table 13

Summary Analysis of Variance Data for the Relationship Between Racial Balance of Class and Teacher Role Stress on the Job Component

Racial Balance of Class	n	m	SD	SEM
Majority White	36	8.222	5.355	.905
Majority Black	4	6.000	1.000	.577
All White	29	4.931	3.004	.568

Source	ss	df	ms	F	p	E^2
Between Groups	176.119	2	88.059	4.477	.015	.120
Within Groups	1298.084	66	19.668			
Total	1474.203	68				

difference between groups could be expected to occur by chance only one time out of 100 if there were no real differences between groups, p = .015. The strength of associatinn, E^2, was .120. That is, teacher role stress on the job component and class racial balance shared 12 percent of common variance. Additional pair-wise comparisons based on t-ratios showed that differences between the following pairs of groups were found to be at the confidence levels indicated: teachers with majority white and all white classes, .003; teachers with majority white and majority black classes, .212; and teachers with majority black and all white classes, .249.

Question 2c

What is the relationship between racial balance of class and teacher role stress on the student component?

Examination of Table 14 depicted the level of confidence for the reported relationship was .037. Results of this nature could be expected about four times in 100 if there were no real differences among groups. The strength of association, E^2, was .091. This indicated that the amount of shared variance between racial balance of class and teacher role stress on the student component was nine percent.

Table 14

Summary Analysis of Variance Data for the Relationship Between Racial Balance of Class and Teacher Role Stress on the Student Component

Racial Balance of Class	n	m	SD	SEM
Majority White	36	7.056	4.150	.701
Majority Black	4	4.750	1.090	.629
All White	30	4.733	3.076	.571

Source	ss	df	ms	F	p	E^2
Between Groups	94.137	2	47.069	3.471	.037	.091
Within Groups	908.505	67	13.560			
Total	1002.642	69				

Further pair-wise comparisons based on t-ratios showed that differences between the following pairs of groups were found to be at the confidence levels indicated: teachers with majority white and all white classes, .007; teachers with majority white and majority black classes, .143; and teachers with majority black and all white classes, .495.

Findings from analyses of the previous four questions relating racial balance of class to teacher role stress strongly suggested that teachers with majority white classes have more overall, job and student stress than teachers with majority black and all white classes. In these same areas teachers with all white classes indicated they had less stress than teachers with majority black classes.

The relationship of sex of teacher to teacher role stress was the core of questions 3, 3a, 3b, and 3c.

Question 3

What is the relationship between sex of teacher and teacher role stress?

It was evident in the analyzed data in Table 15 that male teachers in the study indicated more role stress than female teachers on a composite of all components of the TOQ. The analysis of variance shown in Table 15 indicated a high level of confidence, $p = .01$. This difference obtained could be expected to occur by chance one time in a hundred if there were no differences between groups. Analysis of the strength of association for the two variables suggests that eight percent of the variance was shared or common.

Table 15

Summary Analysis of Variance Data for the Relationship Between Sex of Teacher and Teacher Role Stress

Sex of Teacher	n	m	SD	SEM
Male	22	25.773	12.602	2.750
Female	54	18.926	9.030	1.240

Source	ss	df	ms	F	p	E^2
Between Groups	732.788	1	732.788	6.870	.010	.085
Within Groups	7897.567	74	106.724			
Total	8630.355	75				

Question 3a

What is the relationship between sex of teacher and teacher role stress on the principal component?

Mean scores reported in Table 16 indicated that the relationship between teacher role stress on the principal component and sex of teacher was significant at .127 level of confidence. Should there be no differences between groups, the probability of observing the reported differences would be approximately 13 times out of 100 outcomes if there were no real differences between groups. The strength of association, .033, suggested that three percent of the variance was shared in the relationship between sex of teacher and teacher role stress on the principal component.

Table 16

Summary Analysis of Variance Data for the Relationship Between Sex of Teacher and Teacher Role Stress on the Principal Component

Sex of Teacher	n	m	SD	SEM
Male	20	11.400	6.560	1.505
Female	53	9.113	5.142	.713

Source	ss	df	ms	F	p	E^2
Between Groups	75.934	1	75.934	2.383	.127	.033
Within Groups	2262.120	71	31.861			
Total	2338.054	72				

Question 3b

What is the relationship between sex of teacher and teacher role stress on the job component?

It was evident when the means were analyzed in Table 17 that male teachers indicated more job stress than female teachers. The level of confidence for this relationship was observed at .014. This suggested that the obtained difference could be expected to occur only one time in a hundred by chance if there were no real differences between groups. Nine percent of the variance on the teacher role stress component was shared with sex of teacher.

Table 17

Summary Analysis of Variance Data for the Relationship Between Sex of Teacher and Teacher Role Stress on the Job Component

Sex of Teacher	n	m	SD	SEM
Male	21	8.762	5.344	1.195
Female	48	5.813	3.946	.576

Source	ss	df	ms	F	p	E^2
Between Groups	127.080	1	127.081	6.320	.014	.086
Within Groups	1347.122	67	20.106			
Total	1474.202	68				

Question 3c

What is the relationship between sex of teacher and teacher role stress on the student component?

Mean scores in Table 18 indicated that male teachers had more stress on the student component than female teachers. This observed difference found in the data could be expected to be obtained approximately four times in a hundred if there were no differences between groups. Six percent of the variance of teacher role stress on the student component was accounted for as shared variance with sex of teacher.

The preceding four questions have related sex of teacher to teacher role stress. Examination of data revealed that male teachers

Table 18

Summary Analysis of Variance Data for the Relationship Between Sex of Teacher and Teacher Role Stress on the Student Component

Sex of Teacher	n	m	SD	SEM
Male	21	7.380	4.326	.967
Female	49	5.310	3.339	.482

Source	ss	df	ms	F	p	E^2
Between Groups	63.282	1	63.282	4.581	.036	.063
Within Groups	939.361	68	13.814			
Total	1002.643	69				

indicated more stress than female teachers on the three components examined in this study. The following confidence levels seem to be significant: overall stress, .01; principal component, .13; job component, .01; and student component, .04.

Questions 4, 4a, 4b, and 4c examined the relationship between socio-economic status of the district served by elementary school and teacher role stress. Secondary schools served a cross-section of all socio-economic levels. Therefore, these schools could not be categorized and included according to socio-economic level.

Question 4

What is the relationship between socio-economic attendance district of elementary school and teacher role stress?

Essentially mean scores were the same for the three groups in Table 19. Nevertheless, Table 19 depicted slightly higher stress scores for teachers who worked in high socio-economic attendance districts. The data served to illustrate that the probability of observing the differences obtained was about 63 times in 100 if there were no real differences between groups. Two percent was the proportion of variance shared between socio-economic attendance district of elementary school and teacher role stress.

Table 19

Summary Analysis of Variance Data for the Relationship Between Socio-Economic Attendance District of Elementary School and Teacher Role Stress

Socio-Economic Level	n	m	SD	SEM
Low	12	19.415	9.041	2.726
Middle	17	18.000	6.155	1.539
High	18	21.278	12.453	3.020

Source	ss	df	ms	F	p	E^2
Between Groups	94.579	2	47.289	.471	.627	.021
Within Groups	4416.527	44	100.376			
Total	4511.106	46				

Question 4a

What is the relationship between socio-economic attendance district of elementary school and teacher role stress on the principal component?

An inspection of the data in Table 20 indicated a level of confidence for the findings at .302 and strength of association, .054.

Table 20

Summary Analysis of Variance Data for the Relationship Between Socio-Economic Attendance District of Elementary School and Teacher Role Stress on the Principal Component

Socio-Economic Level	n	m	SD	SEM
Low	12	9.583	6.143	1.852
Middle	17	8.000	2.787	.697
High	17	11.000	6.660	1.664

Source	ss	df	ms	F	p	E^2
Between Groups	76.562	2	38.281	1.230	.302	.054
Within Groups	1338.917	43	31.138			
Total	1415.479	45				

Results of this nature could be anticipated 30 times out of 100 if there were no real differences between groups. The proportion of variance of teacher role stress on the principal component that was

shared with socio-economic attendance district of elementary school was five percent. Teachers from high socio-economic attendance districts reported a slightly higher mean stress score on the principal component than teachers from low and middle socio-economic levels.

Question 4b

What is the relationship between socio-economic attendance district of elementary school and teacher role stress on the job component?

Table 21

Summary Analysis of Variance Data for the Relationship Between Socio-Economic Attendance District of Elementary School and Teacher Role Stress on the Job Component

Socio-Economic Level	n	m	SD	SEM
Low	10	6.00	2.145	.715
Middle	16	4.94	4.938	.727
High	16	7.06	5.425	1.400

Source	ss	df	ms	F	p	E^2
Between Groups	36.125	2	18.062	1.094	.344	.053
Within Groups	643.875	39	16.510			
Total	680.000	41				

The summary of the results of data in Table 21 indicated the relationship between elementary teacher role stress on the job component and socio-economic attendance district of school. This analysis revealed the level of confidence that a difference as large as that noted in the analysis could be expected to occur by chance 34 times in 100 if there were no differences between groups. The amount of variance common to both variables was five percent.

Question 4c

What is the relationship between socio-economic attendance district of elementary school and teacher role stress on the student component?

Inspection of the data presented in Table 22 revealed an inconsequential relationship between elementary teacher student stress and socio-economic attendance district of school. This indicated none of the variance was shared in this relationship between variables with a p of .92. The difference reported in this analysis could be expected to occur by chance 92 times in 100 if there were no differences in groups. Shared variance was less than one percent.

The preceding four questions related socio-economic status of elementary school attendance district to teacher role stress. Analyses of the data reported indicated almost no relationship between overall role stress and the three components of stress as measured by the TOQ and socio-economic attendance district of elementary school.

Table 22

Summary Analysis of Variance Data for the Relationship Between Socio-Economic Attendance District of Elementary School and Teacher Role Stress on the Student Component

Socio-Economic Level	n	m	SD	SEM
Low	11	5.273	2.632	.832
Middle	16	5.688	3.820	.986
High	16	5.1875	3.575	.923

Source	ss	df	ms	F	p	E^2
Between Groups	2.222	2	1.111	.086	.919	.004
Within Groups	514.057	40	12.851			
Total	516.279	42				

The relationship between race of teacher and teacher role stress was the focus of questions 5, 5a, 5b, and 5c.

Question 5

What is the relationship between race of teacher and teacher role stress?

The data displayed in Table 23 indicated very little difference between mean scores of black and white teacher role stress. The analysis of variance shown indicated a low level of confidence, .825. Little or none of the variance reported in teacher role stress may

Table 23

Summary Analysis of Variance Data for the Relationship Between Race of Teacher and Teacher Role Stress

Race of Teacher	n	m	SD	SEM
Black	4	19.750	13.809	7.972
White	72	20.972	10.450	1.240

Source	ss	df	ms	F	p	E^2
Between Groups	5.661	1	5.661	.049	.825	.0007
Within Groups	8624.694	74	116.550			
Total	8630.355	75				

be accounted for as shared between role stress and race of teacher.

Question 5a

What is the relationship between race of teacher and teacher role stress on the principal component?

Analysis in Table 24 exhibited little relationship between race of teacher and teacher role stress on the principal component of the TOQ. A confidence level of .933 discloses that results of this nature could be anticipated 93 times out of 100 if there were no real differences between race of teacher and teacher role stress on the principal component. Strength of association analysis revealed that very little of the variance was shared.

Table 24

Summary Analysis of Variance Data for the Relationship Between Race of Teacher and Teacher Role Stress on the Principal Component

Race of Teacher	n	m	SD	SEM
Black	4	9.500	10.260	5.923
White	69	9.754	5.271	.639

Source	ss	df	ms	F	p	E^2
Between Groups	.243	1	.243	.007	.934	.0001
Within Groups	2337.811	71	32.927			
Total	2338.054	72				

Question 5b

What is the relationship between race of teacher and teacher role stress on the job component?

Analysis in Table 25 clearly symbolized that there were no differences in mean job stress scores of black and white teachers.

Table 25

Summary Analysis of Variance Data for the Relationship Between Race of Teacher and Teacher Role Stress on the Job Component

Race of Teacher	n	m	SD	SEM
Black	3	6.667	3.859	2.728
White	66	6.712	4.654	.577

Source	ss	df	ms	F	p	E^2
Between Groups	.006	1	.006	000		000
Within Groups	1474.196	67	22.003			
Total	1474.202	68				

Question 5c

What is the relationship between race of teacher and teacher role stress on the student component?

Mean scores reported in Table 26 showed that there was little difference in the teacher role stress on the student component when compared to race of teacher. The level of confidence for this relationship was .877, and the strength of association was very little.

In summary, analyses of findings for the four questions relating race of teacher to teacher role stress suggested there was little relationship between the two variables.

Table 26

Summary Analysis of Variance Data for the Relationship Between Race of Teacher and Teacher Role Stress on the Student Component

Race of Teacher	n	m	SD	SEM
Black	3	7.000	2.160	1.528
White	67	5.880	3.834	.472

Source	ss	df	ms	F	p	E^2
Between Groups	3.598	1	3.598	.245	.877	.004
Within Groups	999.045	68	14.692			
Total	1002.643	69				

The relationship between teaching grade levels and teacher role stress was the core of questions 6, 6a, 6b, and 6c.

Question 6

What is the relationship between teaching grade level and teacher role stress?

Mean scores in Table 27 disclosed that teachers of tenth grade had more role stress than the other grade levels. Teachers of second grade had less stress than teachers of fourth, seventh and tenth grades. Inspection of data revealed a level of confidence of .219. Differences in the size of those observed could be expected to come about by chance 22 times in 100 if there were no differences

Table 27

Summary Analysis of Variance Data for the Relationship Between Teaching Grade Level and Teacher Role Stress

Grade Level	n	m	SD	SEM
Second	24	17.333	9.797	2.042
Fourth	23	22.000	9.212	1.964
Seventh	19	22.052	11.641	2.744
Tenth	10	24.800	11.356	3.785

Source	ss	df	ms	F	p	E^2
Between Groups	510.475	3	170.158	1.509	.219	.059
Within Groups	8119.880	72	112.776			
Total	8630.355	75				

among groups. The strength of association, E^2, was .059. This implied that six percent of the variance in teacher role stress and teaching grade level was shared variance.

Question 6a

What is the relationship between teaching grade level and teacher role stress on the principal component?

Means reported in Table 28 showed teachers of tenth grade indicated more stress on the principal component of the TOQ than teachers of second, fourth and seventh grades. Teachers of second and seventh grade denoted less stress on this component than teachers of

Table 28

Summary Analysis of Variance Data for the Relationship Between Teaching Grade Level and Teacher Role Stress on the Principal Component

Grade Level	n	m	SD	SEM
Second	23	8.782	4.727	1.007
Fourth	23	10.260	6.173	1.316
Seventh	17	8.882	4.788	1.197
Tenth	10	12.200	6.765	2.255

Source	ss	df	ms	F	p	E^2
Between Groups	100.342	3	33.447	1.031	.384	.043
Within Groups	2237.713	69	32.431			
Total	2338.055	72				

fourth grade. Level of confidence was .384. This difference could be expected to occur by chance 38 times in 100. Approximately four percent of the variance was revealed to be shared between teacher role stress on the principal component and teaching grade level.

Question 6b

What is the relationship between teaching grade level and teacher role stress on the job component?

Means reported in Table 29 showed teachers of seventh grade reported more job stress than the other grade levels. Teachers of

Table 29

Summary Analysis of Variance Data for the Relationship Between Teaching Grade Level and Teacher Role Stress on the Job Component

Grade Level	n	m	SD	SEM
Second	21	6.143	5.074	1.134
Fourth	21	5.857	2.569	.574
Seventh	18	8.500	5.439	1.320
Tenth	9	6.444	4.500	1.591

Source	ss	df	ms	F	p	E^2
Between Groups	80.338	3	26.779	1.249	.290	.054
Within Groups	1393.865	65	21.444			
Total	1474.203	68				

fourth grade reported less job stress than the other three grade levels. Very little difference was observed in mean scores of teachers of second and tenth grades. The data revealed that these findings could be anticipated 29 times out of 100 if there were no real differences among groups. Strength of association for the variables suggest that five percent of the variance of teacher role stress on the job component was shared variance with teaching grade level.

Question 6c

What is the relationship between teaching grade level and teacher role stress on the student component?

Table 30

Summary Analysis of Variance Data for the Relationship Between Teaching Grade Level and Teacher Role Stress on the Student Component

Grade Level	n	m	SD	SEM
Second	21	4.048	2.699	.603
Fourth	22	6.681	3.623	.791
Seventh	18	6.389	3.832	.929
Tenth	9	7.556	4.500	1.591

Source	ss	df	ms	F	p	E^2
Between Groups	114.418	3	38.139	2.834	.043	.114
Within Groups	888.225	66	13.458			
Total	1002.643	69				

Analysis of variance in Table 30 clearly suggested a high level of confidence, .04, for the differences reported. Differences as large as that noted in the analysis could be expected to occur by chance four times in 100 outcomes if there were no differences between groups. The strength of association or common variance was eleven percent. Teachers of second grade had less teacher role

stress on the student component than the other grade levels in question. The highest teacher role stress score on the student component was exhibited by teachers of tenth grade. Pair-wise comparisons based on t-ratios disclosed the most significant difference in means as that between second and tenth grade teachers, .008 level of confidence. Mean differences between second and seventh grade teachers were significant at the .018 level of confidence. Differences in means between second and fourth grade teachers were significant at the .006 confidence level.

In summary, analyses of data for the four questions relating teacher role stress to teaching grade levels indicated a strong relationship between teacher role stress scores on the student component and teaching grade level, while the other two components were not related significantly to teaching grade level.

A summary of the relationships between teacher role stress and each independent variable investigated in the study was depicted in Table 31. Presentation of data in this table consisted of: F ratios; p, the level of probability of observing the relationship by chance; and E^2, the strength of association.

Table 31

F Values, Level of Confidence and Strength of Association for All Variables Investigated

	F	p	E^2
Student Ratings and Teacher's			
Overall stress	1.512	.227	.040
Principal stress	.214	.808	.006
Job stress	1.253	.292	.037
Student stress	3.217	.046	.088
Racial Balance of Class and Teacher's			
Overall stress	4.063	.021	.100
Principal stress	.430	.652	.012
Job stress	4.477	.015	.120
Student stress	3.471	.037	.093
Sex of Teacher and Teacher's			
Overall stress	6.870	.010	.085
Principal stress	2.383	.127	.033
Job stress	6.320	.014	.086
Student stress	4.581	.036	.063
Socio-Economic Attendance District of Elementary School and Teacher's			
Overall stress	.471	.627	.021
Principal stress	1.230	.302	.054
Job stress	1.094	.344	.053
Student stress	.086	.919	.004

Table 31 (continued)

	F	p	E^2
Race of Teacher and Teacher's			
Overall stress	.049	.825	.0007
Principal stress	.007	.934	.0001
Job stress	---	---	---
Student stress	.245	.877	.004
Teaching Grade Level and Teacher's			
Overall stress	1.509	.219	.059
Principal stress	1.031	.384	.043
Job stress	1.249	.290	.055
Student stress	2.834	.043	.114

In Chapter V, a summary, conclusions, and implications indicated by the results of the analyses are presented.

CHAPTER V

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

Summary

The public school teacher interacts with a greater cross-section of people than do most persons in our society. These persons with whom he has contact include not only pupils, parents, principal, and other school personnel, but also persons from all walks of life and levels of influence in the community served by the school. This interaction is necessary with a wide cross-section of persons because, for the most part, the community and teachers' purposes and achievements are interrelated. Furthermore, the complexity of the teacher's task is increased by the wide differences among people within each group. Students, for example, are not a homogeneous group; they differ greatly with respect to their personal value system.

In the process of working with students and other persons, the teacher is constantly making decisions based upon his concept of reasonable expectations and his perception of the actual situations. Of course other persons in the social system or role set in turn interpret these decisions and actions in terms of their reasonable expectations and their perception of the actual situations. In either case, if there is little congruency between teacher reasonable expectations and perception of the actual situation or between

the teacher and other members of the role set reasonable expectations and perception of the actual situations, role stress will occur.

Most authorities agree that whatever affects the teacher's satisfaction has some influence on the teaching-learning process. This intimately affects the community and children in their daily interaction and thinking. Consequently, many citizens have expressed deep concern about the effectiveness of teachers. Much has been said about how stress affects the teacher's effectiveness. However, there is a paucity of empirical research on this subject. A method that has merit for obtaining information about role stress in general is to obtain data on differences between what the teacher perceives as reasonable expectations and his perceptions of the actual situations.

The purpose of this study was to examine the manner in which teacher role stress varied with student ratings, race of teacher, class racial balance, sex of teacher, socio-economic attendance district of elementary school, and teaching grade level.

In order to achieve the objectives of the study, six major questions were investigated:

1. What is the relationship between student ratings of teacher and teacher role stress?
2. What is the relationship between racial balance of class and teacher role stress?
3. What is the relationship between sex of teacher and teacher role stress?

4. What is the relationship between socio-economic attendance district of elementary school and teacher role stress?
5. What is the relationship between race of teacher and teacher role stress?
6. What is the relationship between teaching grade level and teacher role stress?

The major instruments used in this study were the Teacher Opinion Questionnaire, to assess teacher role stress; and the Student Opinion Questionnaire, to obtain student perceptions of teacher behavior. Subjects responding to these instruments consisted of 77 classroom teachers and 2,023 students.

One-way analysis of variance was the statistical model used to investigate the relationships between teacher role stress, the dependent variable, and the independent variables. The probability of observing differences by chance and an estimate of the strength of association were reported.

The investigation centered on six major questions posed for this study. The six questions and a summary of the findings relative to each question follow.

Relationship between student ratings and teacher role stress

The data revealed little strength and low confidence levels in the relationships between teacher's overall, principal, and job stress when compared to student ratings of teacher. The relationship with student ratings was comparatively higher for overall stress than for either the principal or job component. The principal component

had the least relationship of the four components when compared to student ratings of teacher.

There was a high confidence level in the relationship between teacher role stress on the student component and student ratings. Analysis of the strength of association of the two variables indicated that nine percent of the variance was shared.

Relationship between racial balance of class and teacher role stress

The data indicated strong levels of confidence when racial balance of class was related to teacher's overall, job, and student stress. These p levels indicate significant relationships, .02, .01, and .07 respectively. When racial balance of class was compared to teacher role stress on the principal component, there was a significance level of only .65.

Teachers with majority white classes had higher mean stress scores than those with majority black classes on overall, job, and student stress. Teachers with racially mixed classes indicated more role stress than teachers with all white classes on overall stress and the three components of stress, job, principal, and student.

Relationship beteeen sex of teacher and teacher role stress

Sex of teacher was significantly related to teacher overall stress at the .01 level, job stress at .01 level, and student stress at the .04 level. These levels of confidence indicated high significant relationships. On the other hand, teacher role stress on the

principal component was found to have relatively little relationship (.13) to sex of teacher. However, on all components of the TOQ means stress scores for males were higher than those obtained by females.

Relationship between socio-economic attendance district of elementary school and teacher role stress

The data shown in Chapter IV indicated very little strength and low confidence levels in the data comparing relationships between socio-economic attendance district of elementary schools to teacher role stress. Very low confidence levels were found for overall and each of the three components of stress on the TOQ. When the mean stress scores were compared, even though not significant, there was a trend for teachers who worked in high socio-economic attendance districts to have more overall, principal and job stress than teachers who worked in low and middle socio-economic districts. This might indicate that there was a tendency of these findings to be in line with Henry's (1963) findings when he studied urban and suburban elementary school teachers and their classroom problems and concluded that role stress was especially great among suburban teachers.

Relationship between race of teacher and teacher role stress

Analyses of data revealed no significant relationships between race of teacher and overall, principal, job and student stress.

There were low confidence levels and little or no strength on overall stress or any of the three components, principal, job or student stress.

Relationship between teaching grade level and teacher role stress

There was evidence of low confidence levels of the data on overall, principal and job stress when compared to teaching grade level. There was a tendency for teachers of tenth grade to indicate more stress on each of the above-mentioned components of the TOQ than teachers on the other grade levels. On the other hand, there was a significant relationship between teaching grade level and teacher role stress on the student component. A p of .04 was obtained.

Results indicated that the following variables and teacher role stress or components of role stress were related at a high level of confidence and the independent variable accounted for a meaningful portion of the variance in the dependent variable of the stress component.

1. Student ratings and teacher role stress on the student component.
2. Sex of teacher and teacher role stress.
3. Sex of teacher and teacher role stress on the job component.
4. Sex of teacher and teacher role stress on the student component
5. Racial balance of class and teacher role stress.

6. Racial balance of class and teacher role stress on the job component.
7. Racial balance of class and teacher role stress on the student component.
8. Teaching grade level and teacher role stress on the student component.

The following major factors investigated which seemed relatively unrelated to teacher role stress included:

1. Questions relating to socio-economic attendance district of elementary school.
2. Questions relating to race of teacher.

The data did not reflect any significant relationships between teacher role stress on the principal component and any of the independent variables investigated. There appeared to be no teacher role stress when the teacher described the behavior of the principal.

Conclusions

The teaching process was viewed as involving interaction among three important variables--teaching as a job, students, and the building principal. These factors were considered significant in the formal learning process; they were thought to be in constant interaction. The study of teacher role stress inherent in these components could prove useful in analyzing their relationships to student ratings and other variables thought to be related to teacher role stress. As a result of the data presented in this study the

investigator feels warranted to draw certain conclusions.

Integration of school staffs, the exodus of white students from schools located in urban areas, the court order to enhance school integration by busing, the magnitude and rapidity of technological changes in the educational environment, coupled with accountability for academic achievement are changes that have caused great concern to educators when assigning or reassigning teachers to schools and even to classrooms. Each of these changes creates a demand on the school to change appropriately in response. Sometimes the responses introduce problems of stress and ambiguity at some levels in the total educational environment.

The school is dependent for its survival upon interactions of persons in the educational system. In order to foster a climate for quality education in the midst of these changing variables, it would be helpful if school administrators would take into consideration the effect and extent of teacher role stress. In view of the fact that if stress is excessive it may culminate in intrapersonal and interpersonal difficulties in the role set of the student, in the student's role set the teacher is a "significant other." Consequently, the teacher-student relationship is a crucial focal point determining the degree of success which may be accomplished by teachers and pupils in the learning environment.

The significant relationship between teacher role stress on the student component and student ratings could be interpreted as an indication that teachers with little or no role stress with respect to students were viewed differently by students as to the

degree of effectiveness. Although it is not possible to say that teacher low student stress scores caused the teacher to be perceived more positively, a significant relationship between the variables did exist. The teacher's image as seen through the students' eyes is rarely clear-cut. The teacher is well-liked by some students for some things and disliked by some students for other things. However, from the analysis of this study, one is led to believe that teacher role stress on the student component may have an important relationship with student perceptions of teachers.

It seems plausible to assume from these findings that teachers with high student mean stress scores are perceived by students as interacting less effectively than those teachers with low mean student stress scores. It is possible that those teachers with the low scores behave quite differently in the teaching-learning process as compared to those teachers who indicated a high degree of stress on the student component. The effects of this behavior were manifested in interpersonal relationships with students. It might be that the teacher was conveying to the students that he perceived them in a negative manner because of the lack of congruency between the teacher's reasonable expectation of them and perception of them. It would seem as if this lends credence to the self-fulfilling prophecy. In addition, this finding might imply a basic disagreement on the role of the student by those who help to create the educational climate and those who benefit most from the educational climate.

The above finding could be significant in that if the teacher indicated an excessive amount of teacher role stress on the student component it might indicate that the teacher needs to be transferred to a school where students are perceived differently by him. In turn students would perceive teachers who have less stress as more effective.

The data indicated a significant relationship between teacher role stress on the student component and teaching grade levels. Teachers of tenth grade mean stress scores were highest and teachers of second grade mean stress scores were the lowest on overall stress and the principal and student components. There was also a slight tendency for teachers of seventh grade to have mean stress scores that were higher than teachers of second grade. Overall there was a tendency for mean stress scores to increase as teaching grade levels increased. These findings could help educators to evaluate their present practices for assigning teachers to middle-schools, and advanced placement programs. This could enable administrators to take advantage of teachers' personal value systems as to what are reasonable expectations and perceptions of the actual situation. This could have significant implications for personnel practices of school districts in structuring questions for interviews and teacher transfer conferences within a school district.

When interviewing a teacher for a job questions could be couched in a manner that the applicant's reasonable expectation of students in a particular community could be looked at in terms of his perception of the actual situation. A high degree of differences

between the two could be taken into consideration when hiring the applicant for a particular position. If the degree of stress the teacher would experience could be minimized, then students might perceive the teacher more favorably.

The analysis of data clearly indicated that male teachers had more role stress than female teachers on overall, job and student components of the TOQ. This could be an important finding in that assigning teachers to situations that are difficult, and most other variables being comparable, there is a possibility that female teachers be assigned to situations thought to be more stressful. It is also well to note that as teaching grade levels increased stress increased. Usually, more male teachers are assigned to secondary school than to elementary schools; this might explain the reason why teaching level increased as stress increased. Seemingly, stress might have been influenced by sex of teacher or teaching grade level.

When consideration is given to the fact that data reflected significant findings in the relationships between racial balance of class and teacher's overall, job and student stress, it might be well to take a hard look at class racial balance when assigning teachers to classes. Teachers with majority white classes had the greatest mean stress scores on overall stress, job and student components of the TOQ. On the other hand, teachers with all white classes had the lowest mean stress scores on these same components.

It would seem reasonable in assigning teachers to classes that consideration be given to the racial balance of the class. In the

process of hiring or transferring teachers questions could be couched in a manner where the teacher role stress could be highlighted on the components of the job, and student stress. Teachers who indicated a high degree of stress, other variables being comparable, perhaps could be assigned to all white classes. Teachers who indicated a minimum amount of role stress, other variables being comparable, might be assigned or reassigned to majority white or majority black classes. The racial composition of the Kalamazoo School District did not produce any all black classes in the sample of the study for an additional important comparison.

One reason for teachers with majority white and majority black classes exhibiting more role stress might be that these classes are usually in transition or flux. That is, the number of black children is usually increasing in racially mixed classes, and the number of white children is usually decreasing in racially mixed classes. These transitions and adjustments that occur could be a factor responsible for the higher mean stress scores indicated by teachers of majority white and majority black classes. It might be that children in racially mixed classes were interacting meaningfully only in classroom situations. Consequently, stress was intrinsic in the process of trying to plumb and work with old stereotypes believed about races.

Implications

Teachers are being called upon for more accountability of student achievement. At the same time principals are expected to

facilitate this thrust for accountability by raising the academic standard of the school. An increased understanding of teacher stress that arouses surprise, disgust, anger or indignation will help the building principal to strengthen greatly the position of the school in his pursuit of insights to improve the educational system. In this quest, the findings of this study could be useful to the principal in helping him to meet the needs of teachers on his staff. If a school principal were able to take into consideration his reasonable expectations in relation to those of his faculty, he could thereby gain insights into more effective leadership procedures for these persons. If he has some understanding of the discrepancies of role expectations that exist between himself and each member of his group, he would be better able to understand these persons and to enhance their growth in the social system.

If the principal found his role to be highly incongruent with the group's reasonable expectations of it, perhaps some introspection on his part would provide new directions and would improve his relations in the social system. In addition, he could regroup teachers in ways which would help them to understand themselves and each other better. Finally, he could provide consultants and other resource persons with information as to where they might concentrate their time and efforts in working with teachers to help create a climate that is conducive for learning.

These findings could be used by members of Educational Leadership Departments to take a hard look at excessive teacher role stress areas and familiarize prospective educational leaders with

teacher perceptions of reasonable expectations with respect to teaching as a job, students, and the building principal. The excessive areas of stress could be inculcated as a phase in some existing course in the department or a course in the Sociology Department that would emphasize the rationale, emotional cost, and educational cost of excessive teacher role stress. The educational leader would be projected into and discussed in relationship to significant others in his role set.

Those persons charged with the trust for teacher education may wish to consider the strength and areas of teacher role stress examined in this study to enhance efforts to fulfill their responsibilities. A course in role theory with emphasis on role stress in the teaching-learning environment could be offered prior to the student teaching experience. Since the degree of role stress seems to increase when classes are racially mixed, students could be encouraged by persons in teacher education to student teach in schools that have racially mixed classes. This would provide the student with first hand experience in a situation that probably would have a high level of stress. However, under the supervision of his cooperating teacher, the student would have the opportunity to discuss and gain insight into procedures the supervising teacher uses to cope with and minimize excessive role stress.

Since teachers with racially mixed classes indicated more role stress, this could be a cogent reason for continuation and implementation of more funds for the Emergency School Assistance Program, ESAP. Programs of this nature provide funds to help plan, develop

and carry out relevant curriculum programs and teacher skill development programs designated to meet the needs of racially mixed student bodies.

Male teachers indicated higher mean stress scores than females on each component of stress. It might be advisable for persons in teacher education to look at the possibility of minor changes in the curriculum to assess what could be done to provide opportunities for male students to discuss, rethink, and recant their concepts of reasonable expectations.

From this study it appears that there is no reason to consider socio-economic attendance district of school and race of teacher when assigning or reassigning teachers to classrooms. There were no significant relationships between these variables and teacher role stress.

Finally, if the school is to be effective there is a necessity for some degree of consensus as to reasonable expectations and perceptions of the actual situation of members of the social system. The educational leader should cogitate on what can be done to reduce teacher role stress and to reduce the effects of teacher role stress, when it cannot be avoided, in order that it might be minimally damaging to all members of the learning environment.

It is hoped that the present study has helped to provide insight for further research in the area of role stress as it relates to the teacher in the learning environment. In view of the fact that

significant relationships between some variables and teacher role stress were found, it is recommended that further research be conducted to:

1. Investigate the cause and effect relationship between student ratings, class racial balance, teaching grade level, and teacher role stress. In addition, probe the following variables that may be hypothesized to have a relationship with teacher role stress: age of teacher, subject taught, and years of experience.
2. Investigate the role stress of the teacher in relationship to role stress of significant others in the teacher's role set: parents, principals, clerical workers, and students. It might prove beneficial to look at the degree of stress that will be experienced by both teachers and other members of the role set when they are paired according to congruency of role expectations.
3. Investigate teacher role stress in a case study approach to offer additional insights in this area. Examine how teachers adjust to problems of stress. Do they deal with objective situations so as to reduce or eliminate stressful characteristics? Do they master tension and negative emotion which the core problems arouse in them?
4. Investigate the relationship between teacher role stress and student achievement as measured on standardized achievement tests.

5. Investigate the possibility of providing in-service training experiences to overcome excessive stress and changing role expectations of a teacher when expectations are judged to be inappropriate.

6. Investigate the results obtained if this study were replicated. While the sample was representative, replication for purposes of verification is needed.

Most writers have dealt with teacher stress on a philosophical or hypothetical level. This study reported here was from an empirical position that dealt specifically with the effects of student ratings, class racial balance, sex of teacher, race of teacher, teaching grade levels, and socio-economic attendance district of elementary school as they relate to teacher role stress. It is hoped that these findings provide practicing educational leaders with some insights into the concept of teacher role stress in the teaching-learning environment. The researcher, it is hoped, might find helpful suggestions to explore more deeply the relationship of role stress among members of the educational role set.

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APPENDIXES

APPENDIX A

INSTRUMENTATION

Instructions for Monitors

Elementary Student Opinion Questionnaire

Secondary Student Opinion Questionnaire

Values for Levels of Variables

Teacher Opinion Questionnaire

STUDENT OPINION QUESTIONNAIRE

Instructions for Monitors

APPROACHING THE TEACHER:

1. Greet the teacher before class begins.

2. Present the teacher with the introductory letter from Dr. Coats.

3. If there are no objections by the teacher, request 15 minutes of class time to allow students to complete the questionnaire. Try to get the time immediately--otherwise schedule a convenient time.

4. Provide the teacher with a copy of the questionnaire if she requests one.

5. Indicate to the teacher that it is important that she not be present while the questionnaire is being administered.

ADMINISTERING THE QUESTIONNAIRE:

1. Read the following instructions, exactly as written, to the class: "Please answer the following questions honestly and frankly. Do not give your name. To encourage you to be frank, your regular teacher is absent from the classroom while these questions are being answered. Neither your teacher nor anyone else at your school will ever see your answers."

2. Make sure that students understand that they should answer the questions regarding their regular teacher and not concerning you, the temporary substitute in charge.

3. Be sure that students understand that they should think about the whole year when responding to the questions.

4. Be sure all students understand what they are to do--elementary students should complete the examples before proceeding to the actual questions.

5. When administering the questionnaire to elementary students, monitors should read each question and possible response slowly and clearly--repeat question and possible response. Check to make sure that the students are completing the questionnaire properly.

6. After the questionnaire is completed, collect the forms in such a way that black students and white students are separated. Place forms in the envelope provided and seal.

ELEMENTARY STUDENT OPINION QUESTIONNAIRE

This is not a test because there are no right or wrong answers. We want to find out how you feel about school. Think about the whole year when you mark your answer. No one from your school will see your answers.

DO NOT WRITE YOUR NAME. FOLLOW THE DIRECTIONS.

Code

N = NEVER
L = LITTLE OF THE TIME
S = SOMETIMES
M = MOST OF THE TIME
A = ALWAYS

EXAMPLES	Never	Little	Some	Most	Always
A. Do you think you should have school on Saturdays?	N	L	S	M	A
B. Boys talk more than girls.	N	L	S	M	A
QUESTIONS					
1. Do you understand what your teacher says when she talks to you? (Like when she explains things)	N	L	S	M	A
2. Is your teacher fair?	N	L	S	M	A
3. Do the kids in your class behave?	N	L	S	M	A
4. Does your teacher like you?	N	L	S	M	A
5. Is your class fun?	N	L	S	M	A
6. Does your teacher think what you say is important?	N	L	S	M	A
7. Does your teacher want you to ask questions and give your ideas in class?	N	L	S	M	A
8. Is it okay if your idea is different from your teacher's idea?	N	L	S	M	A
9. Does your teacher get angry when little problems come up in class?	N	L	S	M	A
10. Do you feel free to tell your ideas in class?	N	L	S	M	A

ELEMENTARY STUDENT OPINION QUESTIONNAIRE (continued)

		Never	Little	Some	Most	Always
11.	Do you like to be called on in this class?	N	L	S	M	A
12.	Do you feel like you learn a lot in your class?	N	L	S	M	A
13.	Do you worry about other students picking on you?	N	L	S	M	A
14.	Do you like your teacher?	N	L	S	M	A
15.	Do you like your school?	N	L	S	M	A
16.	Are the children in your class friendly?	N	L	S	M	A

SECONDARY STUDENT OPINION QUESTIONNAIRE

This is not a test because there are no right or wrong answers. We are interested in your opinion about this class and school based upon the whole year. No one in your school will see your answers. DO NOT WRITE YOUR NAME. Follow the directions.

Directions: Think about the entire school year. Using the code shown to the right, circle the letter that best tells how you feel about each question. After everyone is finished, the papers will be collected.

Code
N = Never
L = Little of the time
S = Sometimes
M = Most of the time
A = Always

	Never		Some		Always
		Little		Most	
1. Are the ideas presented at a level you can understand?	N	L	S	M	A
2. Is this teacher fair and impartial in his treatment of all students in the class?	N	L	S	M	A
3. Is this classroom orderly but also relaxed and friendly?	N	L	S	M	A
4. Do you feel that this teacher likes you?	N	L	S	M	A
5. Is this class interesting and challenging?	N	L	S	M	A
6. Does this teacher have respect for the things you have to say in class?	N	L	S	M	A
7. Does this teacher encourage you to raise questions and express ideas in class?	N	L	S	M	A
8. Is this teacher able to see things from your point of view?	N	L	S	M	A
9. Does this teacher become angry when little problems arise in the classroom?	N	L	S	M	A

SECONDARY STUDENT OPINION QUESTIONNAIRE (continued)

		Never		Some		Always
			Little		Most	
10.	Do you feel free to give your own ideas and express your own opinions in this class?	N	L	S	M	A
11.	Do you like to be called on in this class?	N	L	S	M	A
12.	Do you feel like you learn a lot in this class?	N	L	S	M	A
13.	Do you worry about other students picking on you?	N	L	S	M	A
14.	Do you like most of your teachers?	N	L	S	M	A
15.	Do you like this school?	N	L	S	M	A
16.	Are the students in this school friendly?	N	L	S	M	A

VALUES FOR LEVELS OF VARIABLES IN STUDY

Student Opinion Questionnaire

Low = 0 - 3.3
Average = 3.4 - 3.6
High = 3.7 - 5.0

Teacher Role Stress

	Overall	Principal	Job	Student
Low	0 - 16	0 - 6	0 - 3	0 - 3
Medium	17 - 24	7 - 10	4 - 7	4 - 7
High	25 - 99	11 - 99	8 - 99	8 - 99

Racial Balance of Class

Majority White - Classes with more than 50% white students
Majority Black - Classes with more than 50% black students
All White - Classes with all white students

Race of Teacher

Black
White

Socio-Economic Level

A combination of social and financial factors descriptive of residents--a group or school measure, not an individual pupil measure.

Low
Middle
High

Teaching Grade Level

Second
Fourth
Seventh
Tenth

Sex of Teacher

Male
Female

#_____

TEACHER OPINION QUESTIONNAIRE

Respond to each of the following questions from two different points of view. First indicate what you believe to be a "reasonable expectation" for your job and then rate the "actual situation."

(1) READ each item carefully.

(2) THINK about the item in terms of how much you could reasonably expect it to be present in your job (reasonable expectation) and in terms of how much it is actually present in your job (actual situation).

(3) DECIDE whether (N) Never, (S) Seldom, (O) Occasionally, (F) Frequently, or (A) Always represents your reaction to the question for "reasonable expectation" and whether N, S, O, F, or A represents your reaction to the question for "actual situation."

(4) DRAW A CIRCLE around one of the letters under the "reasonable expectation" column and also around one of the letters under the "actual situation" column which indicate your response to the statement.

Code

N = Never
S = Seldom
O = Occasionally
F = Frequently
A = Always

(5) MARK your answers as shown in the examples below.

		Reasonable Expectation	Actual Situation
EXAMPLE:	My job is fun	N S (O) F A	N (S) O F A
	My boss is nice	N S O (F) A	N (S) O F A

Note that we are asking for a "reasonable expectation" in terms of your job rather than a completely ideal situation. In the example it may be unreasonable to expect a particular job to be fun always because of the nature of the job. Likewise, you may not expect your boss to always be nice. The point is, "What is a reasonable expectation and what is the actual situation?" The actual situation may occur more often, about the same, or less often than a reasonable expectation.

Please describe your principal on the following factors:

		Reasonable Expectation					Actual Situation				
		Never	Seldom	Occasionally	Frequently	Always	Never	Seldom	Occasionally	Frequently	Always
1.	Asks my advice	N	S	O	F	A	N	S	O	F	A
2.	Hard to please	N	S	O	F	A	N	S	O	F	A
3.	Impolite	N	S	O	F	A	N	S	O	F	A
4.	Praises good work	N	S	O	F	A	N	S	O	F	A
5.	Tactful	N	S	O	F	A	N	S	O	F	A
6.	Doesn't supervise enough	N	S	O	F	A	N	S	O	F	A
7.	Quick temper	N	S	O	F	A	N	S	O	F	A
8.	Tells me where I stand	N	S	O	F	A	N	S	O	F	A
9.	Annoying	N	S	O	F	A	N	S	O	F	A
10.	Stubborn	N	S	O	F	A	N	S	O	F	A
11.	Knows job well	N	S	O	F	A	N	S	O	F	A
12.	Leaves teachers on their own	N	S	O	F	A	N	S	O	F	A
13.	Around when needed	N	S	O	F	A	N	S	O	F	A
14.	Follows through on his promises	N	S	O	F	A	N	S	O	F	A
15.	Predictable	N	S	O	F	A	N	S	O	F	A
16.	Inclined to experiment	N	S	O	F	A	N	S	O	F	A

Please describe your teaching job on the following factors:

	Reasonable Expectation					Actual Situation				
	Never	Seldom	Occasionally	Frequently	Always	Never	Seldom	Occasionally	Frequently	Always
1. Fascinating	N	S	O	F	A	N	S	O	F	A
2. Routine	N	S	O	F	A	N	S	O	F	A
3. Too demanding	N	S	O	F	A	N	S	O	F	A
4. Satisfying	N	S	O	F	A	N	S	O	F	A
5. Boring	N	S	O	F	A	N	S	O	F	A
6. Pleasant	N	S	O	F	A	N	S	O	F	A
7. Useful	N	S	O	F	A	N	S	O	F	A
8. Tiresome	N	S	O	F	A	N	S	O	F	A
9. Challenging	N	S	O	F	A	N	S	O	F	A
10. Frustrating	N	S	O	F	A	N	S	O	F	A
11. Simple	N	S	O	F	A	N	S	O	F	A
12. Endless	N	S	O	F	A	N	S	O	F	A
13. Gives sense of accomplishment	N	S	O	F	A	N	S	O	F	A

Please describe the students with whom you work on the following factors:

	Reasonable Expectation					Actual Situation				
	Never	Seldom	Occasionally	Frequently	Always	Never	Seldom	Occasionally	Frequently	Always
1. Stimulating	N	S	O	F	A	N	S	O	F	A
2. Slow	N	S	O	F	A	N	S	O	F	A
3. Ambitious	N	S	O	F	A	N	S	O	F	A
4. Responsible	N	S	O	F	A	N	S	O	F	A
5. Easy to make enemies	N	S	O	F	A	N	S	O	F	A
6. Talk too much	N	S	O	F	A	N	S	O	F	A
7. Lazy	N	S	O	F	A	N	S	O	F	A
8. Unpleasant	N	S	O	F	A	N	S	O	F	A
9. Narrow interests	N	S	O	F	A	N	S	O	F	A
10. Active	N	S	O	F	A	N	S	O	F	A
11. Perceptive	N	S	O	F	A	N	S	O	F	A
12. Hard to understand	N	S	O	F	A	N	S	O	F	A

List below the names of three or four students in your class(es) that you feel are seen as student leaders. Indicate after each name the letter B for Black and W for all others.

APPENDIX B

COMMUNICATIONS

Letters to Subjects

WESTERN MICHIGAN UNIVERSITY

Educator Feedback Center

(616) 383-6056
12 Bigelow Hall
Kalamazoo, Michigan 49001

Dear (Name of Teacher):

It is very important for purposes of the study in which your class is involved that we get feedback from students. We need to know how children feel about various components of the classroom. I, as director of this project, guarantee that no one in your school system will ever know how students in your class responded to the questionnaires which we are asking your permission to administer. As is true with the measures of verbal interaction patterns, I will share the feedback with you, and you alone, if you request it. Incidentally, thousands of teachers throughout the United States have found this type of feedback to be helpful as indicated by their use of services of the Educator Feedback Center which I direct at Western Michigan University.

Be assured that the items in the questionnaire are solid from a research point of view. Considerable experimentation regarding these items has been conducted in many different research settings over a period of several years, and we feel that reactions of students to the questionnaire are extremely valuable. Our primary purpose for administering the questionnaires is to determine if there is a relationship between verbal interaction patterns and student perceptions of the learning environment as these relate to racial composition of classrooms. The monitor administering the questionnaires in each classroom is competent to interpret and explain the questions so as to obtain student reactions based on the entire year of experience in your classroom rather than on just this particular day.

We appreciate your cooperation up to now and hope you find this request to be a reasonable one. If not, feel free to decline to participate. Again, thank you very much for your assistance, and if you have any questions, feel free to call me at 383-1998.

Sincerely,

William Coats, Ph.D.
Director

WDC/aeh

WESTERN MICHIGAN UNIVERSITY

Educator Feedback Center

(616) 383-6056
12 Bigelow Hall
Kalamazoo, Michigan 49001

Dear (Name of Teacher):

We hope that you have had an opportunity to complete the forms given to you just before the close of school. If not, enclosed is another packet. We have already received most of the packets from your fellow teachers, and hope to have the remainder within a week. Completing the forms takes less than fifteen minutes, and returning the items in the self-addressed, stamped envelopes takes only a moment.

No matter what action is finally taken regarding the busing program by the Board of Education, the data gathered in this study are extremely important for use in looking at any kind of changes that may develop. Much of the data has already been prepared for computer analysis. If you desire to have the feedback from your class(es), complete the form at the bottom of this letter and enclose in the return envelope with the completed forms. A profile of how all of your students viewed your class and an analysis of the verbal exchanges will be provided. Assistance in interpreting and using the data will be made available early in the fall at no cost to you.

Once again, we wish to assure you of the confidentiality of all individual responses. No one will ever be viewed as an individual, nor will any single group of teachers from one school, for example, be isolated. All analyses will be group based: e.g., all the students in a class will have their responses averaged and all of the elementary teachers in the entire study will have their responses averaged.

Please fill out the forms now and mail today. We want to have as complete data as possible. Thank you for your fine cooperation and assistance.

Sincerely,

Bill Coats

I would like to receive feedback from the study. Please mail to:

_____
(Your name)

_____
(Address)

WESTERN MICHIGAN UNIVERSITY

Educator Feedback Center

(616) 383-6056
12 Bigelow Hall
Kalamazoo, Michigan 49001

Dear (Name of Teacher):

We would like to thank you for your excellent cooperation in our study which, of necessity, has been conducted at a very difficult time of the school year. In concluding the study for this year, we are asking for your reactions to the enclosed instruments:

1. Teacher Opinion Questionnaire
2. Administrator Image Questionnaire
3. Student Opinion Questionnaire

It is interesting to note that most of the teachers have asked for confidential feedback on the data collected in their classrooms. Your reactions to the above instruments would be most helpful to us in interpreting all findings including your classroom verbal interaction patterns and student perceptions. As is true with all components of the study, your responses will be held in strict confidence. For your convenience, we have enclosed a stamped self-addressed envelope and would appreciate your responses as soon as possible.

Thank you for your assistance.

Sincerely,

William D. Coats, Director
Educator Feedback Center

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I would like to receive feedback from the study. Please mail to:

_____
(Your name)

_____
(Address)