Sex and Curriculum Differences in Conceptions of the Teacher Role: A Role Theoretical Analysis

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SEX AND CURRICULUM DIFFERENCES
IN CONCEPTIONS OF THE TEACHER ROLE:
A ROLE THEORETICAL ANALYSIS

by

Steven Michael Koning

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SEX AND CURRICULUM DIFFERENCES IN CONCEPTIONS OF THE TEACHER ROLE:
A ROLE THEORETICAL ANALYSIS

Steven Michael Koning, M.A.
Western Michigan University, 1975

This study is concerned with factors which influence the way individuals conceptualize and define their social roles. Role theory suggests that role conceptions, which are individual orientations to a role, are affected by expectations associated with the role and personality characteristics that an individual brings to the role. These suggestions are tested by examining sex and curriculum differences in conceptions of the teacher role among education students at a midwestern university. Conceptions of teacher control and nurturance are assessed by two scales developed by the author. Results indicate that factors associated with a student's curriculum influence orientations toward teacher control and that an individual's sex influences his orientation toward teacher nurturance. Results are discussed in a role theory framework and are interpreted as supporting the suggestion that role expectations and personality characteristics influence an individual's conception of his social role.
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Steven Michael Koning
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CHAPTER I
INTRODUCTION

Since the 1930's the concept of role has been the focus of considerable theoretical attention in cultural anthropology, sociology, and social psychology. Yet, despite its theoretical importance and presumed heuristic utility, the yield of theoretical hypotheses involving the concept of role has been slight. The resultant paucity of theoretical research concerning role has limited the accumulation of substantive findings necessary for the development and elaboration of role theory. While the exact reasons for this situation are not clear, several factors seem to have contributed to the paucity of role research.

First, many problems, the investigation of which is essential for the development of role theory, are precluded from investigation by certain assumptions concerning the role concept. For example, the assumption of consensus on role definition, characteristic of many formulations of the role concept, precludes the use of degree of consensus on role definition as a variable in theoretical hypotheses involving the concept role. Gross and his associates (Gross et al., 1958) questioned this assumption of role consensus in their study of the school superintendency role and clearly demonstrated that the questioning of this assumption permits the investigation of a large number of theoretically significant problems previously excluded from study (Gross et al., 1958:320-324). This study is briefly reviewed in Chapter II.

The wholistic manner in which role has been defined has also
hindered role research. As a general concept, role seems to include three aspects. The term role refers to a set of expectations for behavior, held by others, applied to any incumbent of a social position, the conception of role expectations held by the role incumbent himself, and the actual behavior of the role incumbent (Gross et al., 1958:11-8; Levinson, 1959:172-3). As a result of this general concept of role, it is often easy to assume that there is a high degree of correspondence between these aspects of role. Because of a failure to differentiate between these aspects of role, empirical investigation of the relationship between these aspects of role is precluded. Giving independent conceptual and empirical status to these and other aspects of the general role concept should aid in the formulation and testing of theoretical hypotheses involving the concept role (Levinson, 1959:173).

The purpose of this investigation is to explore the relationship between the role expectations held by others and the role conception held by the role incumbent. In addition we are interested in the relationship of personality and self-concept to role conceptions. Any assumption of high correspondence between the role expectations held by others and the role conception of incumbents seems to rest on an additional assumption that the expectations held by others provide an adequate guide for behavior. Levinson (1959:173-9) contends that role expectations are seldom defined with a degree of explicitness, clarity, and consensus which provides adequate guidance for behavior. To the extent that role expectations are not clearly specified, individuals have greater opportunity for the selection and creation of alternative
forms of behavior. Levinson contends that personality plays an important part in this process.

The relationship of personality to role has been the subject of considerable theoretical and empirical attention. Theoretically, it is often assumed that an individual selects a role which is congruent with his personality or self-concept. If this is not the case, it is usually assumed that the individual modifies his personality and self-concept over time to be congruent with the role (cf. Merton et. al., 1952:352-3). Empirical evidence for these propositions is reviewed in Chapter II. The possibility that personality affects the enactment of the role is also a theoretically acceptable assumption in role theory. However, empirical research on the determinants of role portrayal is scarce (cf. Seacord and Backman, 1974:417).

In the current investigation we explore the extent to which variation in role conception is a function of role expectations or of personality differences. The specific focus is on the conception of control and nurturance in the teacher role. The subjects of the current study are teacher education students at Western Michigan University. The conception of nurturance and control in teacher-pupil relations is assessed by subject responses to questionnaire items developed for the current study. It is hypothesized that variation in role conception is a function of curriculum (elementary/secondary) differences and sex differences. The exact derivation and statement of hypotheses is described in Chapter II.

Generally, the results were supportive of the hypotheses. The results were in the anticipated direction on three of four hypotheses;
only two, however, were supported by statistically significant results. A fourth hypothesis was not supported, but an unexpected interaction effect between sex and curriculum was found in the test for variation in the conception of control in the teacher role. Results of this investigation are presented in Chapter IV and the interpretation of these results is presented in Chapter V.

Chapter V also includes a discussion of the implications of the empirical findings for questions concerning the relationship of role expectations, role conception, and personality. Generally, the empirical results are supportive of the contention that personality and role expectations both affect role conceptions. The results, however, also suggest that the situation may be quite complex. Role expectations and personality may interact to affect the conception of how an individual anticipates acting in a particular position. In addition, the evidence derived from tests of hypotheses and from the construction of scales (described briefly below) suggests that role expectations and personality may interact to affect the very manner in which an individual conceives of the role.

Previous studies of the teacher role are reviewed in Chapter II. The review of these studies revealed conceptual and methodological inadequacies which necessitated the construction of new scales for the present investigation. In particular, previous studies of the teacher role have neglected the nurturance dimension of the teacher role. The development of questions used in the present analysis, the construction of two scales for the measurement of the conception of control and nurturance in the teacher role, and the analysis of these
scales is discussed in Chapter III. The results of this analysis support the contention made above that role expectations and personality may interact to affect how an individual conceives of the teacher role.

It is hoped that one of the eventual outcomes of the current study will be the development of two role conception scales which can be utilized in future research. The limited validity and reliability of the scales used in the current study indicates that considerable scale improvement is needed before the nurturance and control scales of the present study can be utilized in future research. Suggestions for the improvement of the scales and for future research are found in Chapter V.
CHAPTER II
THEORETICAL FRAMEWORK

The concept of role is most central to the social sciences. The role concept is involved in theoretical formulations in cultural anthropology, sociology, and social psychology. Yet, in spite of the importance of the concept, the term role has been rather imprecisely defined. One common definition of role describes role as a set of expectations for behavior which is ascribed by society to any and all occupants of a particular social position. Social position refers to a location in a set of social relations and role refers to the expectations for behavior applied to incumbents of a particular position. As the term "expectations" is used by many theorists, it refers to evaluative standards for behavior. In this sense then, role refers to how others feel an individual should act, not how they actually expect him to act (Gross et al., 1958:58-60). It is also usually assumed that the role associated with any given position is "shared" by all members of a given society — i.e., there is consensus on the evaluative standards or expectations associated with a given position (Gross et al., 1958:22-43).

In the usage described above, role is assumed to exist independently of the individual who occupies a position. In another sense, the term role is used to refer to the definition or conception of what an individual in a particular position is supposed to do and think which is held by the role incumbent himself (Gross et al., 1958:13-4; Levinson, 1959:172). In this sense, role is an integral part of the individual...
who actually occupies a given social position. In this usage, the term role stresses the anticipatory nature of the concept. Role serves as a guide for behavior, allowing the individual to anticipate how he and others are expected to act in a given situation. This anticipatory aspect of the role is strongly emphasized in the theoretical formulation of Sarbin (1954).

A final way in which the term role is used is to refer to the actual behavior of individuals in a position. In this sense, role does not refer to a set of expectations held by others or the conception of the role developed by role incumbents, but refers to the actual behavior of specific individuals or sets of individuals (Gross et al., 1958:14-5; Levinson, 1959:172).

Although it is possible to identify three relatively distinct ways in which the term role has been used, writers often use the term in a way which embraces all three meanings or shift frequently from one meaning to another. The result of such undifferentiated and unsystematic usage is a "unitary" or general concept of role. The failure to clearly and systematically differentiate between the three ways in which the term role is used restricts empirical investigation of the relationship between role expectations, role conception, and role behavior (Levinson, 1959:172-3).

One problem which has attracted considerable attention from role theorists has been the variability of behavior within a role. While most efforts to explain variability in behavior have focused on attitudes, values, needs and personality traits of position occupants, which are said to intervene between role expectations and role behavior, Gross
and his associates have taken a considerably different approach. Gross questions what he calls "the postulate of role consensus" and argues that roles — as expectations held by others — are not characterized by consensus at all and that variability in role behavior is a result of differential responses to competing role expectations (Gross et. al., 1958:22-43).

To test this idea Gross and his associates studied the school superintendency role. The investigation in fact reveals considerable variation in the role expectations applied to the school superintendent's role. There is no clear consensus on role expectations for the superintendent's role among different groups of role definers such as school boards, teachers, and parents. These different, competing expectations place the superintendent in a position of conflict. As part of their investigation, Gross and his colleagues develop and test a theory of role conflict resolution. Three major factors are involved in determining the manner in which superintendents resolve conflict between competing expectations. The perceived legitimacy or illegitimacy of the competing expectations, the perceived sanctions associated with non-conformity to each set of competing expectations, and an individual's orientation toward legitimacy and sanctions work together to influence the manner in which role conflict is resolved. The empirical data presented by Gross support the theory of role conflict resolution developed in the study (Gross et. al., 1958:281-318). The conclusion of Gross and his associates regarding explanations of variability in behavior is summed up well in the following statement:

Most students concerned with role phenomena, assuming consensus on role definition, have tried to account for
variability in behavior by invoking such variables as different motivations, attitudes, or personality characteristics. Our research experience suggests that the different expectations held for incumbents' behavior and attributes are crucial for an understanding of their different behaviors and characteristics. [Gross et. al., 1958:321].

In addition to the important role conflict resolution theory developed by the authors, the work of Gross and his associates clearly challenges the assumption of the "shared" or consensual nature of role and demonstrates the type of theoretically significant empirical research which can result from increased conceptual clarity of the term role. However, in spite of these valuable contributions, the work can be criticized for several limitations. Gross continues to assume a close relationship between role and role behavior -- role behavior is conformity to one set of expectations or another. While the empirical results of the study seem to indicate that this is a reasonable assumption, this apparently close relationship between behavior and role expectations may be a function of the specific aspects of the superintendent's role selected for study. Attention was focused primarily on several very important aspects of the superintendent's role such as the allocation of the budget and personnel decisions. It is very likely, considering the importance of these functions, that parents, teachers, and school board members will have strong opinions concerning these matters. The question which must be raised is, to what extent does the role behavior of school superintendents conform to expectations for less important aspects of the role? Traditional role theory has tended to assume a one to one correspondence, or at least a high degree of congruence, between role expectations and role behavior or role conceptions (Levinson, 1959:172-3). Although Gross and his colleagues...
question the existence of role consensus, they do not openly question the nature of the relationship between role expectations and role behavior. If we examine only aspects of a role for which there are explicit expectations, as Gross has done, we should not be surprised to find a very high correspondence between role expectations and role behavior. Actually, roles are seldom defined with such explicitness and clarity (Levinson, 1959:173-4) and an examination of less explicitly defined roles is likely to indicate a much lower degree of correspondence between role expectations and behavior.

A second limitation of the study by Gross and his associates is the relative neglect of role conception as an integral variable in the explanation of role conflict resolution. While the authors deal with an individual's "orientation toward sanctions and legitimacy," they neglect the relationship between the role conception of the school superintendent and various competing role definitions. The role conception of the superintendent could play an important function in the perception of the legitimacy of the various sets of expectations. Presumably, the set of expectations most similar to the superintendent's role conception would be perceived as the most legitimate set of expectations. It might be possible to assume that the role conception of the superintendent is determined in much the same way as his behavior -- again, a type of one to one correspondence assumption -- but this seems rather unlikely. Gross and his associates seem to have neglected role conceptions entirely. This assertion seems to be verified by the absence of a specific term relating to role conception in the revised set of role terminology developed by the authors (cf. Gross et. al., 1958:67).
We now turn our attention to a more detailed examination of the nature of role expectations and role conceptions.

Role Expectations

Role expectations are presumed to guide the role behavior of individuals. In all likelihood however, role behavior is seldom, if ever, completely prescribed by a set of role expectations. Either implicitly or explicitly, roles allow for a certain degree of latitude in behavior. In addition to variations in consensus (Gross et al., 1958), roles vary in a number of other ways. Roles vary considerably in the degree of prescriptiveness or proscriptiveness with which behavior is specified. In some cases it may be felt that individuals must always behave in certain ways. In other cases, individuals are usually expected to behave in certain ways (Gross et al., 1958:59-60; Levinson, 1959:174). Roles also vary in the level of generality for which expectations are held. For example, while there may be strict expectations concerning what functions an individual in a particular position should perform, there may be few if any expectations on how an individual should carry out such functions (Gross et al., 1958:74). Roles can also vary considerably in the completeness of the set of expectations associated with a position. For some roles, all aspects of behavior may be prescribed. For most roles however, only a small range of behavior is prescribed (See also Levinson, 1959:173-4; Sargent, 1951:360-2; Secord and Backman, 1974:422).

In most cases role expectations do not provide a very adequate guide for behavior. At best, role expectations provide very broad,
The expectations that comprise a "social role" in this sense are entirely too vague, incomplete, and poorly specified in most instances to serve as genuine guides to action. The expectations held toward fathers, for example, are too ill defined to allow one either to act the part of a father or to predict in any detail the behavior of a specific father. Rather, they serve principally as very broad limits on the sort of behavior by fathers that will be approved, accepted, or tolerated by other people [McCall and Simmons, 1966:66-7].

When a role offers inadequate guidelines for behavior, individuals who occupy the social position associated with the role often experience strain. Such strain often produces attempts to redefine or clarify roles (Secord and Backman, 1974:422-3). Schwartz (1957), in a study of the role of psychiatric ward nurses, found that hospital directives permitting extreme patient freedom created a situation in which nurses experienced considerable uncertainty concerning their behavior. The lack of clear guidelines for nurses' behavior resulted in considerable variation in the behavior of nurses and numerous complaints about the lack of clear guidelines. While in many circumstances such situations can be alleviated by the establishment of specific institutional role guidelines (Secord and Backman, 1974:423), it is possible that in situations where the development of official behavioral guidelines are not or cannot be established, individuals may reduce strain by developing individual role conceptions to guide their behavior.

Role Conceptions

Role conception refers to an internal cognitive representation of a role which is held by a role incumbent. A role conception not only includes a description of how any occupant of the same position...
should think and act, but also includes a description of how the individual himself anticipates thinking and acting as an occupant of the position. McCall and Simmons develop a concept called role identity, the definition of which seems to capture this aspect of a role conception. They define an individual's role identity as "an imaginative view of himself as he likes to think of himself being and acting as an occupant of that position" (McCall and Simmons, 1966:67; emphasis in original). In this sense, a role conception includes the individual's orientation toward his role or position (See also Sargent, 1951:359-61; Levinson, 1959:175-6).

Since a role conception includes the individual's orientation toward the role, we may assume that the role conception held by an individual serves as an important guide for behavior. In recent years, social scientists have become increasingly aware of the importance of an individual's "definition of a situation" for the explanation of individual behavior (Sargent, 1951:360; MacLeod, 1951:222; Psathas, 1973). The importance of role conceptions for directing behavior may be that they allow the individual to develop orientations toward aspects of his behavior for which there are few if any expectations.

While we can only speculate as to how role conceptions are formed, it seems fairly clear that role conceptions are not simply mirror images of the role as defined by others (Levinson, 1959:178). Role conceptions probably develop through a process in which an individual organizes the information available from various sources about the role into a coherent picture of the role and self in relationship to the role. When information conveyed by role expectations is inadequate,
the individual must "fill in" the role conception in order to make
it complete. Thus, role conceptions are likely to be quite individual-
istic in some respects. This idea is well summarized in the following:

Although the more or less autistic elaborations that
form part of the content of one's imaginative view of self
in a given social position are often somewhat bizarre,
perhaps fantastic, it is important to note that role-
identities are not at all purely idiosyncratic but
actually include many conventional standards and expecta-
tions that would be held toward any occupant of that
status. That is, among the contents of any role-identity
are included those vague and abstract expectations we
have discussed as social role. It is through these
conventional contents of one's role-identities, acquired
in the socialization process, that one is irrevocably
a member of his culture. Personal elaborations of
these conventional contents are exceedingly important,
yet they represent, in most cases, variations on
culturally established themes. The conventional
expectations provide the structural framework of a
role-identity, whereas the individual embellishments
put some human meat on these arid bones [McCall and
Simmons, 1966:70].

These so-called "individual embellishments" of conventional
standards are in large part determined by aspects of the individual
such as his self-concept and personality. Levinson (1959:176) indicates
that role conceptions are influenced by childhood experiences, values,
personality traits, education, and other factors. The less rigidly
prescribed the role is, the more such individual characteristics are
likely to influence the role conception held by the individual occupying
a particular position. The extent to which role conceptions are a
function of role expectations or individual characteristics is one of
the major questions to be explored in the current investigation.

The fact that role conceptions are considered to be rel. inden
individualistic makes the problem of measurement that much more dif-
ficult. As was stated earlier, a role conception is probab.
through a process by which available information about a role is
organized into a coherent picture of the role and of self in relation
to the role. If the information available from role expectations
is insufficient for the formulation of a complete picture of the role,
the individual has more latitude in organizing and supplementing
this information. The categories or dimensions around which an in-
dividual organizes his role conception may vary considerably from
the categories or dimensions around which the social scientist may
conceptualize the role when preparing an instrument for the measurement
of role conceptions. When attempting to measure the role conceptions
of others, the researcher must take into consideration the pos-
sibility that his respondents may organize their role conceptions in
ways very different than those of the researcher. (See McKinney
[1969] for a discussion of the problematic nature of the relationship
between personal and social science concepts and typologies.)

Related Studies

A number of studies of role phenomena have been concerned with
the problem of consensus on role conceptions and role prescriptions.
Hall (1955) studied the effect of social influence on the aircraft
commander's role. He hypothesized that consensus on role prescriptions
would increase with increases in aircraft crew cohesiveness and that
consensus on role prescriptions would influence the commander's be-
behavior. Hall's predictions held true on only one of the three dimen-
sions of the aircraft commander's role which he studied (Hall, 1955:299).
This finding supports the idea that role expectations are rather
imprecisely defined and that position incumbents do not simply conform to role expectations.

Davis (1954) studied the effect of congruence between the conception of air force leadership roles held by leaders and the conception of leadership roles held by other followers. Although he found considerable differences between the conceptions held by leaders and the conceptions held by followers, Davis did not find a relationship between such differences and various indices of "follower adjustment" (Davis, 1954:254). Henry and Borgatta (1953:669-671) found considerable differences between air force enlisted personnel and commissioned officers in their conceptions of how air force deserters should be punished. These differences between enlisted and commissioned personnel persisted even when commissioned and enlisted men in the same command were compared. Although the data do not allow clear conclusions, the authors argue that these differences within a single command may be a function of the status differences between enlisted and commissioned personnel. This study seems to suggest that differences in role conception may occur in the same role as a result of factors other than role expectations.

The study of the relationship of role and personality has also received considerable attention, much of it speculative. One assumption found in sociological and occupational theory is that an individual selects, although perhaps not consciously, a role which is congruent with his personality and self-concept. A second closely related assumption is that over time the personality or self-concept of an individual in an incongruent role is modified to be more congruent with the role associated with the position he is occupying (Super, 1963;
Levinson, 1959:171; Osipow, 1973:11). Inspite of the prevalence of these assumptions, they were not supported by adequate data at the time they were first stated (cf. Merton et. al., 1952:352-3).

More data have since become available. Backman and Secord (1968:292-3) studied the relationship between self-descriptions and traits attributed to persons in preferred occupations of the respondents and found considerable evidence to support the idea that individuals prefer occupations which they perceive to be congruent with their self-description. Similarly, a strong relationship was found between traits attributed to self and traits attributed to individuals in occupational roles corresponding to the college major of the subjects (Backman and Secord, 1968:293-295). A comparison of self-occupation congruence among upper- and lower-classmen indicated that congruence was higher among upperclassmen. Backman and Secord (1968:295-6) suggest two possible explanations for this difference. First, the lowerclassmen group may include individuals who will subsequently change college majors as a result of the incongruency between their self-description and the traits of individuals in occupation roles related to their major. It is also possible that the self-concepts of upperclassmen have been modified to be congruent with their selected role as a result of their educational training. While both processes may be involved, Warren's (1961) finding that a change in college major is partially a function of a discrepancy between self-concept and expected occupational role would seem to support change of major as the better explanation of higher congruency among upperclassmen.

Englander (1960) found that elementary education majors
perceived the elementary teacher role as a means of implementing their self-concepts. Non-elementary education majors and non-education majors perceived much less congruency between their self-concepts and the perceived personal characteristics of elementary teachers. Importantly, the elementary and non-elementary education majors did not differ significantly in their perception of the elementary teacher role. This fact may indicate the importance of self-occupation congruence for narrowing career choices within a somewhat larger occupational field (Englander, 1960:262-3).

Blocher and Schutz (1961) examined the relationship between self-descriptions, occupational stereotypes, and vocational preference among 12th grade boys. The authors found considerable congruence between the self-descriptions of the boys and their descriptions of their most preferred occupation. The results of the study are interpreted within a framework of individual career selection allowing implementation of a self-concept (Blocher and Schutz, 1961:318-9).

Several facts seem to emerge from these studies. First, comparisons of differences in degrees of self-occupation congruence and other similar types of congruence were made between groups rather than within a single group. The finding of differences within a single command by Henry and Borgatta (1953) seems to be the exception among the studies reviewed here. More importantly however, researchers do not provide any data concerning the degree of similarity of occupational stereotypes among those individuals who show a preference for a particular occupation. If, as had been argued, congruence between self-descriptions and occupational stereotypes is a function of "selecting"
an occupation which is congruent with self, we would expect individuals who select a particular occupation to have similar self-concepts and descriptions of occupational stereotypes. While Englander's (1960) finding that all education majors perceived the elementary teacher role in a similar fashion would seem to provide some support for this idea, an alternative explanation is available for other studies. It is possible that an individual "modifies" his occupational stereotype to be congruent with his self-concept.

Another important fact which seems to emerge from the review of previous studies is that most of the studies have focused on congruence between self-descriptions and perceived role requirements or characteristics of role occupants. Brophy (1959) stresses the importance of this relationship. In his study of job satisfaction among nurses he found that satisfaction was positively related to similarity between self-concept and perceived occupational role requirements. In his conclusion he writes:

The study provides evidence of the importance of compatibility of personal phenomenal concepts [the self-concept] and environmentally focused phenomenal concepts [perceived role expectations] as a correlate of satisfaction . . . [Brophy, 1959:300].

Super (1963:7) supports this notion. He indicates that the psychologically significant variable for occupational selection and satisfaction may be the relationship between self-concept and perceived role requirements rather than the relationship between self-concept and actual role requirements. Additional support for this idea comes from a study of nursing school drop-outs by Kibrick and Tiedeman (1961). The authors did not find a significant relationship between
dropping out of nursing school and the degree of congruence between the self-concept of the nursing student and her superior's conception of the ideal nursing student.

If we think of role conceptions and role behavior as individual adaptations to role expectations (Levinson, 1959:175), evidence concerning variation in role behavior as a function of personality and self-concept differences would provide additional support for the idea that an individual may modify role conceptions (occupational stereotypes) to be congruent with his self-concept.

Theoretically the idea of personality or self-concept affecting role behavior is well accepted. According to Secord and Backman (1974:413-8), role portrayal is affected by personality traits, needs, values, attitudes and aptitudes. These authors also indicate that role portrayal may be affected by "intruding roles." For example, the fact that an engineer is a female may affect the manner in which the engineering role is enacted. Although research on determinants of role portrayal is scarce (cf. Secord and Backman, 1974:417), Robin's (1963) study of engineering students provides evidence to support the idea that role portrayal is affected by intruding roles. Female engineering students envisioned a different role for themselves as engineers than did male engineering students. Backman and Secord (1968:290-2) found evidence that college females express a preference for the type of marital role (wife-mother, companion, or partner) which has a trait profile similar to their own trait profile. The authors interpret these findings to indicate that individuals choose a role portrayal which is congruent with their self-description (Backman and Secord, 1968:292).
The Teacher Role

The teacher role includes relationships with different social positions. In the present study we will focus on the teacher-student relationship. The term teacher role as it is used in this paper refers only to the teacher-student aspect of a more inclusive role. The study of teacher-student relations has been the subject of a considerable number of studies (Kerlinger, 1956; Leeds, 1950; Kreitlow and Dreier, 1955; Foskett, n.d.; Ryans, 1960; Masling and Stern, 1966).

Foskett (n.d.) found considerable disagreement among elementary teachers concerning norms associated with their role as it relates to students, administrators, parents, and the community. Although there was little consensus concerning any of these four aspects of the teacher role, the elementary teachers in Foskett's study were least in agreement concerning norms for teacher-pupil relations (Foskett, n.d.:22-4).

Any precise definition of the teacher role as it relates to students is impossible. Intuitively however, the central aspect of the teacher role is the organization of student activities in both the learning and behavioral spheres (cf. Ryans, 1960:15). One can affirm this notion simply by observing activities in any public school classroom. Given the degree of dissensus found among teachers concerning the teacher role (Foskett, h.d.:22-4), it is unlikely that the teacher role can be defined with much more precision. Foskett (n.d.:24-5) points out the tendency of social scientists to assume universality of norms and argues that in actuality norms allow a considerable range of permissible behavior. The teacher role seems to be
a role for which there are no universal norms or expectations.

**Progressive and traditional teacher attitudes**

One variation concerning the teacher role which has received considerable attention has been the "permissive/restrictive" or "progressive/traditional" attitudes studied by Kerlinger (1956; 1958; 1966; Kerlinger and Kaya, 1959a, 1959b). These attitudes represent basic orientations to or conceptions of the teacher role. Kerlinger (1956, 1958) predicted that people in similar occupational and professional positions would have similar attitudes toward significant cognitive objects associated with the position. Specifically he predicted that professors of education would have progressive educational attitudes and laymen would have traditional attitudes toward education. The existence of progressive and traditional attitudes and the specific predictions were supported by Kerlinger's data (1956, 1958). Subsequent research (Kerlinger, 1966; Kerlinger and Kaya, 1959a, 1959b) provided support for these and other research hypotheses. Several other studies (Ryans, 1960; Masling and Stern, 1966; Cortis, 1974) can be interpreted as providing additional support for Kerlinger's hypotheses.

An exact definition or conceptualization of either progressivism or traditionalism is difficult to discern from Kerlinger's work. Basically, however, the distinction seems to refer to the degree of self-determination allowed students. Kerlinger (1956:296) equates his traditional dimension with student dependence (heteronomy) and his progressive dimension with student independence (autonomy). A
progressive attitude toward education is represented in the following scale item from Kerlinger's study:

The goals of education should be dictated by children's interests and needs, as well as by the larger demands of society [Kerlinger and Kaya, 1959a:24].

A traditional attitude is expressed in the following scale item:

The pupil-teacher relationship is the relationship between a child who needs direction, guidance, and control and a teacher who is an expert supplying direction, guidance, and control [Kerlinger and Kaya, 1959a:25].

Although Kerlinger thinks of these two types of attitudes as separate dimensions -- i.e., a traditionalist is not an anti-progressivist -- it is probably more useful to think of these attitudes as ends of an attitude continuum concerned with the amount of control exercised over student activities by the teacher. The fact that Kerlinger views progressive and traditional attitudes as separate dimensions may be a result of his use of a small biased sample of subjects who were selected for their known attitudes toward education (Kerlinger, 1958:87).

The basic attitudes identified by Kerlinger may be related to democratic and autocratic styles of leadership (Kerlinger, 1958:80; Anderson, 1959:201). In a review of the effectiveness of democratic and autocratic styles of classroom management, Anderson criticizes the democratic-autocratic construct itself. He argues that the construct has falsely reduced the variables involved in leadership to a single dimension (Anderson, 1959:209). He then reviews factor analytic studies of leadership style and identifies three basic dimensions of leadership. One dimension, the effectiveness dimension, is related to the particular focus of Anderson's study and will not be considered.
Anderson identifies a procedural dimension which refers to the amount of structure and organization characteristic of a particular style of leadership. A third dimension identified by Anderson is an affective dimension. This dimension refers to the amount of interpersonal warmth or coolness associated with leadership (Anderson, 1959: 210). The procedural dimension identified by Anderson seems to correspond to the control dimension which we have asserted is similar to Kerlinger's progressive-traditional attitude dichotomy.

Anderson argues that clear distinctions have not been made between the procedural and affective dimensions of leadership and the tendency has been to associate emotional warmth with democratic leadership and emotional coolness, even harshness, with autocratic leadership. This tendency makes it very difficult to imagine "the possibility of a leader who maintains complete control of the decisions of the group and yet is friendly and personal" (Anderson, 1959:210).

If we apply Anderson's distinctions to the teacher role in general, we would have to identify two dimensions of the teacher role rather than the one which was identified in Kerlinger's study. Kerlinger does not specifically mention affective aspects of the teacher role and a review of 80 scale items used in his studies reveals only 6 items which seem to be concerned with affective aspects of the role (cf. Kerlinger, 1956:323-8). For the purposes of this study we will identify and attempt to measure conceptions of two dimensions of the teacher role. These dimensions will be called the control dimension and the nurturance dimension.
Dimensions of the teacher role

Teacher control has been partially discussed above and refers to the amount of control exercised over student activities. High control refers to teacher behavior which attempts to regulate most activities of students. For example, high controlling teachers are concerned with specific rules for student behavior and carefully prepared lesson plans for the control of student learning activities. Low controlling teachers, on the other hand, are flexible, allowing students to regulate their own behavior and to organize their own learning activities.

Clinically the term nurturance refers to the warmth generally associated with a mother-child relationship. Demonstrating love and warmth and ministering to others' needs are traits associated with nurturance (Yarrow and Scott, 1972:261). Nurturant teachers are warm and loving in their relationships with students and readily willing to devote their attention to student problems. Nonnurturant teachers are more businesslike, retaining a certain emotional distance between self and students and avoiding concern with student problems (Masling and Stern, 1966:1-2).

A study of the teacher role which seems to capture the distinctions we have been making particularly well is a study of career motivation in teachers conducted by Masling and Stern (1966). In their report, the authors present surface descriptions of ten teacher roles which they label as follows:

1. Practical
2. Status-striving
*3. Nurturant
*4. Non-directive
5. Critical
The five roles marked with an asterisk are most directly related to the teacher-student relationship in the more comprehensive teacher role; the other five roles refer to aspects of the teacher role not related to teacher-student relations (Masling and Stern, 1966:I-2 - I-3). We will concern ourselves only with the roles marked with an asterisk. These terms are relatively self explanatory except for pre-adult fixated which refers to an enjoyment of the company of children.

Cluster analysis of the intercorrelations among scale scores associated with these five roles reveals the following clusters:

I. Nurturant, Pre-adult, Non-directive

II. Dominant, Orderly

Masling and Stern characterize cluster I as a "pupil-centered" cluster and cluster II as a pragmatic, manipulative cluster. According to the authors, these clusters represent major differences in teachers' orientations toward students. These clusters seem to capture the distinctions made above concerning the control dimension and the nurturance dimension of the teacher role. Cluster I includes nurturance and liking children and a low degree (non-directive) of control. Cluster II, however seems more exclusively concerned with control and a nurturance aspect is not apparent (Masling and Stern, 1966:II-1 - II-2).

Masling and Stern examined differences in the scores on these scales. According to their findings, females scored higher (i.e., were more non-directive) on the three student-centered scales than did
males. With teaching experience, however, females continued to out-score males on the nurturance and non-directive scales, but also surpassed males on the orderly scale -- the scale which is the least directive or control oriented of the two manipulative scales (Masling and Stern, 1966:III-3). Elementary teachers and teacher education students scored higher on the three pupil-centered scales than did their secondary counterparts. Secondary teachers and teacher education students scored higher on dominance than the elementary respondents (Masling and Stern, 1966:III-4).

The elementary/secondary differences may represent sex differences more than differences due to teaching level. In the total sample used by Masling and Stern there were 523 females and only 106 males. No indication is given that the authors took this into consideration when comparing the scores of elementary and secondary subjects.

Sex Differences

Regardless of how one feels about sex differences in American society, two facts seem apparent. First, clear stereotypes concerning differences between males and females exist in our culture, and second, evidence indicates that in many respects these stereotypes are reasonably accurate. Males and females do differ in a number of ways which are expected by stereotype. Males in our culture are seen as and expected to be more aggressive, dominant, logical, emotionally unexpressive, non-sensitive to the feelings of others, ambitious, and independent than females. Females, on the other hand, are seen as and expected to be non-aggressive, less dominant, less logical, emotionally expressive,
sensitive to the feelings of others, less ambitious, and more dependent (Rosenkrantz et. al., 1968; Broverman et. al., 1970, 1972; Ellis and Bentler, 1973; Steinman et. al., 1964).

In a study of sex-role stereotypes and self-concepts among college students Rosenkrantz and his associates found three things. First, despite considerable historical changes in the status of women, sex role stereotypes such as those described above continue to exist. Second, a greater number of male stereotypic traits than female traits are socially valued by both sexes. Finally, and perhaps most importantly, the authors found that the self-concepts of men and women college students were very similar to their respective sex-role stereotypes (Rosenkrantz, et. al., 1968:293).

The explanation for the existence of sex-role stereotypes and actual sex differences is the subject of considerable attention at the present time. Perhaps, as some would argue, sex differences are the result of inevitable biological differences between males and females. Or, as others would argue, differences between the sexes may result from variation in the socialization of the sexes. Male and female children are socialized to behave in different ways (Bee, 1974:3-4). The recent work of Maccoby and Jacklin (1974) provides the best review of evidence concerning sex differences and their causes. While it is tempting to say that sex differences result from an interaction between biological and environmental forces, the answer may not be so simple. Instead, as Bee (1974:18) suggests, some of the observed sex differences are biologically caused, others are environmentally caused, and others are caused by an interaction between biological and
environmental factors.

Nurturance

One apparent sex difference which concerns us here is the presumed difference in the nurturance characteristics of males and females. Females, throughout the world and time, have been perceived to be and expected to be the more nurturant sex. Maccoby and Jacklin (1974: 214-220) review the available evidence concerning differences in nurturance and "maternal behavior" in animals. On the basis of this review, they conclude that maternal behavior and nurturance are controlled to some degree by hormones, with maternal behavior being aroused most easily in female animals who have been hormonally primed as a result of pregnancy. Hormones are not necessary, however, since with sufficient exposure to newborns, virgin females and males do show parental behavior. In some cases, however, male aggression interferes with responsiveness to the young. In general, evidence from animal studies argues for biological causation of differences in nurturance, a conclusion with which Bee (1974:18) is in agreement.

The evidence for nurturance among humans is not clear cut. For one thing, there is little evidence and most of the evidence which is available is subject to different interpretations. The fact that young girls show "spontaneous" nurturance when playing with dolls may simply indicate more frequent elicitation of such behavior rather than a difference in the "potential" for nurturant behavior. Several studies of nurturant reactions toward animals and children reveal either no sex differences or indicate slightly greater nurturance on
the part of males (Maccoby and Jacklin, 1974:220-1). Generally, however, the amount of evidence we have concerning differences in nurturant behavior between the sexes is woefully inadequate (Maccoby and Jacklin, 1974:225). The fact that the female is perceived to be and expected to be the more nurturant sex is probably a reflection of the greater amount of nurturant behavior usually associated with female roles, particularly the role of mother. Regardless of the cause of differences in nurturance, we must for the time being assume that females are the more nurturant sex.

Dominance

It is somewhat difficult to identify an aspect of sex differences which may be related to differences in the degree of control over others, but dominance seems to be the best trait for which we have information. Ethological studies of primates have shown that fairly stable dominance hierarchies exist among the males of certain species, although dominance hierarchies also exist among females. In studies of young children, in which dominance was defined as toughness, males demonstrated more stable dominance hierarchies than females. In other studies using various other measures of dominance, boys clearly dominated girls when in mixed sex pairs. Although ethological studies and studies with young children seem to indicate greater dominance among males, studies of other relationships provide contradictory or mixed evidence. For example, attempts to measure dominance in marital relationships produce different results depending on the type of measure used (Maccoby and Jacklin, 1974:254-62).
Perhaps more pertinent to this study is evidence from studies of leadership, especially among adolescents and adults. Evidence reviewed by Maccoby and Jacklin (1974:262-3) indicates that sex role stereotypes affect leadership in initial group formation. Males, for example, are more frequently chosen to be jury foremen than are females. Among college students there is evidence to indicate that males use more authoritarian methods of leadership and control than females, but the evidence is rather weak.

Maccoby and Jacklin (1974) present no information concerning sex differences in attempts to control or dominate young children. The fact that we may intuitively and stereotypically expect males to be more dominant than females may be a function of the social roles assigned to males. Whether sex differences in dominance are a function of assigned roles or are related to patterns of aggression in males which seem to have a biological base is not important. Without more adequate evidence, especially concerning adults' relations with children, we must conclude that males are the more controlling sex.

Elementary and Secondary Teacher Roles

While it would be parsimonious to be able to treat the secondary and elementary teacher roles as a single role, there seems to be a difference between the two roles. This difference was experienced very strongly during the construction of items to measure the role conception of teachers, where questions appropriate to elementary teaching might be inappropriate for secondary teaching and vice versa.

The elementary teaching role may be considered the more nurturant
of the two teaching roles. This may be due to the young age of the children being taught and the fact that most elementary teachers are in charge of the same students for the entire school day. The elementary role is also overwhelmingly associated with the more nurturant sex. Only 18.6% of the elementary education majors enrolled at Western Michigan University during the Winter term of 1975 were male.\(^1\) This association of the elementary role with females may make the role seem more nurturant than the secondary role. Evidence from the study of career motivation among teachers discussed above seems to support the contention that the elementary role is more nurturant than the secondary role (Masling and Stern, 1966). Differences in the degree of control associated with the elementary and secondary teaching roles are less clear cut than seems to be the case with nurturance. In light of the evidence of higher scores among secondary teachers and secondary teacher education students on the dominance scale in the study of teacher career motivation (Masling and Stern, 1966), however, we can tentatively hypothesize that the secondary teaching role is more controlling.

**Research Objectives and Statement of Hypotheses**

Perhaps one of the greatest oversights in role theory and research has been the failure to empirically investigate the relationship between role expectations and individual adaptations to such expectations.

\(^{1}\)Information provided by Dr. Owen Middleton, Department of Teacher Education, WMU.
The implicit assumption has been that role behavior and role conceptions bear a one-to-one relationship to the expectations held for the incumbents of a particular position. Considering the imprecise nature of role expectations, however, it is rather unlikely that role behavior and role conceptions will be mirror images of role expectations. It has become increasingly apparent that individuals may be guided by their subjective definitions of situations. These subjective definitions do not simply reflect role expectations and for this reason it seems important to study individual role conceptions. While questions concerning the exact function of role conceptions in determining or guiding individual behavior can only be answered by additional study, it is important to investigate other questions concerning the nature of role conceptions. Are, in fact, role conceptions reflections of role expectations? Or, as we have tried to argue earlier, are role conceptions partially a function of personal characteristics not directly related to the expectations for the particular role for which the role conception is developed?

In order to answer these questions, the conceptions of the teacher role held by teacher education students were selected as an object of study. A review of previous studies of the teacher role revealed both conceptual and methodological inadequacies. Because of the conceptual and methodological problems presented by previous research studies, it was felt necessary to develop two new scales to measure the nurturance and control aspects of the teacher role. Thus, a second, although prior, objective of this investigation is the construction and validation of such scales. While the two dimensions of the teacher role
identified by the author seem to be clear and distinct, it is not possible to assume a priori that they represent scalable dimensions. One problem with any research involving a phenomenal field is the difficulty of assuming that respondents organize their phenomenal field in the same manner as the researcher. Travers (1975:424-5) indicates that teacher education students have difficulty in analyzing the teacher role. Travers contends that while students have little difficulty perceiving the authoritarian aspects of the teacher role, other aspects of the role may not be so easily perceived. For these reasons it was felt necessary to determine the extent to which respondents organize their conceptions of the teacher role in the same manner as the current author. Accomplishment of this second objective is necessary before any empirical questions concerning differences in conceptions of the teacher role can be tested.

Based on the empirical evidence and theoretical distinctions made earlier, the following specific hypotheses were generated:

1. Elementary teacher education students have more nurturant role conceptions than secondary education students.
2. Female teacher education students have more nurturant role conceptions than male teacher education students.
3. Elementary teacher education students have less controlling role conceptions than secondary teacher education students.
4. Female teacher education students have less controlling role conceptions than male teacher education students.

These hypotheses will be empirically tested using a sample of teacher education students at Western Michigan University. In tests of elementary-secondary (curriculum) differences, sex will be held constant. In tests of sex differences, curriculum differences will be
The empirical evidence considered in testing these specific hypotheses will be related to the theoretical questions raised earlier. If role conceptions are a function of role expectations alone, we will expect to find significant curriculum differences, but non-significant sex differences. If, however, characteristics of individuals not directly related to the teacher role affect role conceptions, we will expect to find significant sex differences also. While there is the possibility of an interaction between the specific teaching role chosen by an individual and the sex of an individual, no specific predictions of such an interaction have been made. Evidence of an interaction between role and sex may provide valuable theoretical insights and offer suggestions for future research.
CHAPTER III

METHODOLOGY

Sample

Students enrolled in three teacher education courses at Western Michigan University during the winter semester and spring term of 1975 were asked to fill out a questionnaire and to return it to the researcher. Completion of the questionnaire was voluntary and the students were assured that their responses would be treated on a statistical basis only and that data obtained from the study would not be used by the author or any member of the teacher education faculty for evaluation purposes. Altogether, 456 students accepted questionnaires and 247 returned the questionnaires to the researcher. The response rate was 54.2%. Because some of the data returned was unuseable, the number of subjects upon which any statistical analysis is based will be noted in this report when appropriate. Because subjects for this study were obtained from only three courses in the teacher education curriculum and because of the low response rate, assumptions of random sampling are not valid. This fact should be taken into consideration when interpreting the results of this study.

Respondents were selected from the following teacher education courses:

- TEED 355: Learning Experiences for Young Children
- TEED 301: Teaching and Learning: Secondary
- TEED 300: Teaching and Learning: Elementary

These courses are equivalent courses for elementary and secondary teacher education students. TEED 355 is specifically designed for
elementary education students who are interested in nursery school education. Enrollment in any of these three courses is limited to teacher education students. Thus, all students in these courses can be considered to have made a decision to prepare for teaching as a career.

The present sample consists of 177 females and 70 males. A total of 133 respondents, 109 females and 24 males, were enrolled in elementary education. A total of 114 respondents, 68 females and 46 males, were enrolled in secondary education. The percentage of males in the elementary group (22%) compares closely with the percentage of all males enrolled in the elementary education curriculum during the winter semester of 1975 (18.6%). The percentage of males in the secondary education portion of the total sample (40.3%) compares less closely with the overall enrollment figure for the winter semester of 1975 (49%). Thus, the secondary sample may overrepresent females.

The university classifications of the respondents are: 1 freshman, 31 sophomores, 107 juniors, 98 seniors and 10 unclassified students. For the total sample the mean age of the respondents is 22.14 years of age. The mean age for males is 23.07 years and the mean age for females is 21.77 years. Elementary females have an average age of 21.59 years and secondary females have an average age of 22.07 years. Elementary males average 23.50 years of age and secondary males average 22.84 years of age. These age differences and possible female overrepresentation should be considered in the interpretation of findings.
Scales for the Measurement of Teacher Role Conceptions

For the purposes of this research it was necessary to construct new scales for the measurement of role conceptions associated with the teacher role. The control scale is designed to measure an individual's conception of the degree of control teachers should exercise over various student activities. The nurturance scale is designed to measure an individual's conception of the degree of emotional closeness which should characterize the teacher-student relationship. Originally, 21 items were developed by the author and presented to the respondents of this study as part of a larger questionnaire. These 21 items and the response instructions are found in Appendix A. Analysis of item scalability and the selection of final scale items is described below.

Construction of items

Questionnaire items used in previous studies (Kerlinger, 1956; Kreitlow and Dreier, 1955; Leeds, 1950; Foskett, n.d.; Masling and Stern, 1966) were reviewed in preparing the present role conception questionnaire. The items used in this study, are either modifications of items used in previous studies or items constructed specifically for this study. All of the previous studies, except Kerlinger's, presented statements concerning various aspects of the teacher role to the respondents and asked them to indicate their agreement on a five or six choice Likert scale. Response alternatives ranged from strongly agree to strongly disagree or similar alternatives (Kreitlow and Dreier, 1955: 326; Masling and Stern, 1966; Foskett, n.d.:13; Leeds, 1950:7). The Q methodology used by Kerlinger was quite different than that of the
other authors. Q methodology is a type of rank-order methodology. Subjects are presented with a large number of statements, usually printed on cards, and are asked to arrange the cards in groups. The number of groups into which the statements are arranged and the number of statements in any group is specified for the respondent by the researcher. Each group represents a certain degree of agreement or disagreement. For example, the researcher may instruct the respondent to place the three statements he is most strongly in agreement with in the first pile. The respondent may then be instructed to place 5 statements in a second group. These are statements with which the respondent strongly agrees but not as strongly as with the first three statements. All statements are placed in such rank-ordered groups, but statements within each group are not rank ordered (cf. Kerlinger, 1966:162).

Both types of scaling procedures have their strengths and weaknesses. Q methodology provides richly descriptive data, but the difficulty of its administration limits its utility with large samples. The Likert scale, while relatively easy to administer, is subject to bias produced by individual response styles. Acquiescence, the tendency to respond "yes" or to agree with an item or a series of items, has often been found on Likert type scales. Such a response style makes it difficult to determine whether responses actually represent the feelings of the respondents or simply reflect a stylized response pattern (Nunnally, 1967:510-1; Cronbach, 1950:450-2, 512-6).

The limitations of both Q methodology and the Likert scale led the author to choose another type of scaling procedure for the current
study. One alternative which seems to minimize the problem of acquiescence and still provides relatively descriptive data is the forced choice scale. In forced choice scales respondents are asked to choose between two or more alternatives. The data obtained by this procedure is especially descriptive if respondents can indicate their relative agreement to or feeling about the alternatives presented rather than simply choosing one alternative or another. However, the reliability of a forced choice scale is reduced by the difficulty of choice and the reduction of response bias characteristic of such scales (Cronbach, 1960:450-2).

The forced choice format developed for the current study presents the respondent with two statements about some aspect of the teacher role. The following example is presented as it appears on the questionnaire:

A. In order to be effective, lessons should be centered around student interests.

   +A   A   -A   -B   B   +B

B. In order to be effective, lessons should be organized around the logical structure of an established curriculum.

The respondent is asked to indicate his agreement between the two responses. If he agrees very strongly with A and disagrees strongly with B he is instructed to circle +A. Strong agreement with B and strong disagreement with A is indicated by circling +B. The other alternatives allow for intermediate amounts of agreement and disagreement. The instructions for the questionnaire are presented in their entirety in Appendix A.
Item pairs were designed so that each pair represents two different degrees of either control or nurturance. For example, in the item presented above statement A represents low teacher control and statement B represents high teacher control. Centering lesson plans around the interests of students requires more flexibility and responsiveness on the part of the teacher than does sticking to a carefully structured curriculum. Nurturant pairs present the respondent with a choice between a high nurturance statement and a low nurturance alternative. The failure of some items to be scalable, as discussed below, often seems to be a result of matching a control statement with a nurturance alternative within a single pair. Thus, each scale item was designed to present alternatives along a single dimension of either nurturance or control. The order in which the high or low alternatives are presented within an item was varied so that alternative A was not always representative of a high or low degree of either dimension. This reversal reduces the problem of acquiescent agreement to the first alternative presented. Individual questionnaire items were scored on a 0-5 basis. Zero was assigned to low nurturance and low control responses. Five was assigned to high nurturance and high control responses. The exact manner in which values were assigned to individual items is indicated in Appendix A.

Although the forced choice nature of the items used in this study might reduce the reliability of the scale due to the reduction of response bias, it was felt that the forced choice format would provide good descriptive data concerning individual differences in orientations to various aspects of the teacher role. But since the
questionnaire items and response format used in the current study have not been used in previous studies, it is necessary to examine the scalability of questionnaire items into a nurturance scale and a control scale.

**Scale construction**

Psychological measurement always concerns the measurement of attributes. An attribute is a characteristic of an individual that is inferred from a number of responses made by an individual. For example, nurturance is a psychological attribute inferred from a number of specific behaviors of an individual. Psychological scaling methods are procedures for the construction of scales to measure psychological attributes. Scales are measures on which individuals can be rated in relationship to a specific attribute (Nunnally, 1967; Torgerson, 1958).

A basic assumption underlying the theory of psychological measurement is that "items within a measure are useful only to the extent that they share a common core -- the attribute which is to be measured" (Nunnally, 1967:254). A common method of scaling involves the summation of item scores to obtain a total or composite scale score. The assumption of such a scaling procedure is that each item adds something to the other items. However, unless items share a common core, i.e., measure the same attribute, it is meaningless to obtain a composite score (Nunnally, 1967:254-5). The extent to which items measure a common attribute can not be assumed a priori, but must be determined empirically. One important means for determining the extent to which

Factor analysis is a multivariate statistical technique used to delineate independent sources of variation in a set of data. Factor analysis aids in the process of scale construction by identifying the common variance among a set of items in terms of a mathematically constructed set of factors. Factors are linear combinations of variables in a data matrix that are maximally capable of reproducing the correlations among the variables in the data (cf. Nunnally, 1967). A detailed description of the mathematics of factor analysis is beyond the scope of this paper and for this the reader is referred to Nunnally (1967) or Rummel (1970).

The first step in the construction of a scale is the development of questionnaire items. Individual items are designed to measure responses thought to be related to a specific attribute. After these items have been developed, the scores on the items are intercorrelated. These correlations are then analyzed to determine whether individual items measure specific attributes, or several common attributes. It is in this process of determining if items share common attributes that factor analysis plays an important role. The first step in factor analysis is to obtain factors. Different types of factor analysis are defined in terms of the manner in which weights for obtaining linear combinations of items are derived. The correlation matrix of variables is utilized in determining the size and sign of the weights used in obtaining linear combinations (factors). After a factor has been obtained, the variables which make up the linear
combination are correlated with the factor. These factor-variable correlation coefficients are called factor loadings. After the variance of variables explained by the first factor has been partialled out of the correlation matrix, a new linear combination is produced. The factor-variable correlation coefficients are then calculated for the second factor. Successive factors are then obtained in a similar fashion. While a factor can be any linear combination of variables, in the case of principal components factor analysis which is used in this study, the first factor is the linear combination which explains the most variance in the data matrix. Successive factors explain the most variance left in the data after the variance explained by previous factors has been partialled out. By statistical derivation, factors are independent linear combinations, i.e., factors are uncorrelated with each other (Nunnally, 1967).

The results of factor analysis are usually presented in terms of a matrix of factor loadings. An understanding of the properties of a factor loading matrix are essential for the interpretation of results. The factor loading has the same interpretation as any correlation coefficient. The square of any factor loading gives the proportion of variance explained in a particular variable by a factor. The sum of squared factor loadings in any column of a factor loading matrix indicates the total amount of variance explained by a factor. The average of the squared loadings on any factor \( (V_f) \) is the proportion of variance of the variables as a group that is explained by the factor. The average of the squared loadings on a factor is an indication of the strength of the factor, the extent to which the variables
share a common element (Nunnally, 1967:293-4).

In most research, the investigator is not interested in completely explaining the correlations among variables. The researcher is interested in the prominent factors in the data which serve as measures of theoretically important attributes. Mathematically, prominent factors are factors which have at least some moderate-sized factor loadings (e.g., 30 or greater). Factor loadings indicate the extent to which variables share a common core or measure the same attribute. Items designed to measure the same psychological attribute should have substantial loadings on the same factor. Although a factor is the linear combination of all variables in the data set, the interpretation of a factor is based on the meaning of variables which load highly on that factor (Nunnally, 1967).

While it is possible to interpret factor loadings derived in the manner described above, most researchers prefer to "rotate" factors. This is done to obtain a more interpretable set of factor loadings or to maximize the "simple structure" of the factors. Although there are no agreed upon criteria for rotating factors, one generally seeks a rotation where there are some relatively pure (highly loaded) variables on each factor. Ideally, a variable should load highly on one and only one factor. Under orthogonal rotation, the type used here, the rotated factors are uncorrelated. Thus, orthogonal rotation does not change the statistical properties of the factors -- e.g., the proportion of variance explained by n factors -- obtained by principle axes factor analysis or other types of factor analysis (Nunnally, 1967: 321-33).
Scalability of items

As was indicated earlier, the scalability of items used in this study can not be assumed a priori. It was expected that the items could be divided into two scales: nurturance and control. In the discussion of scale determination presented below, item numbers refer to the number of the item as presented to the respondents. These items are presented in Appendix A and are numbered as presented to the respondents. The mean scores for all questionnaire items are found in Appendix B.

As a first step in scale analysis, the original 21 items were intercorrelated. Table I, on page 47, presents the correlation matrix for all items. The correlation coefficients range from -.32 to .47, with most coefficients being rather low. The low correlations may be due in part to the decreased reliability of the forced choice item format used in this research. Although scale reliability may be a factor, the low correlations may be an indication that many items do not share a common core with other items.

In order to determine which items do share a common core, the scores on the questionnaire items were factor analyzed.\footnote{Items were factor analyzed using the BMDX72 factor analysis program from the UCLA biomedical computer series (Dixon, 1972).} In the analysis, squared multiple correlations of items were used as estimates of item communalities. Because of the expectation that items could be divided into two scales, two orthogonal (varimax) factors were rotated.
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The purpose of factor rotation is to produce a more interpretable set of factor loadings. A rotated factor matrix is usually easier to interpret than an unrotated factor matrix and for this reason it is often said that one "rotates to a simple structure." Although there is no exact agreement as to what constitutes a "simple structure," ideally, a factor should include some variables with high loadings and other variables with near-zero loadings. Ideally, variables should also load on only one factor. The exact mathematical criterion for determining what constitutes a reasonable factor loading is unclear, although a criterion of .30 has been suggested (cf. Nunnally, 1967).

Based on the rough criteria described above for simple structure, a moderate-sized factor loading on one and only one factor would seem to be necessary in order for an item to be considered part of a scale. Although it would seem sufficient that an item meet such criteria for the entire sample, there are theoretical reasons for requiring items to meet additional criteria for selection as scale items. In this study, sex and curriculum differences in conceptions of nurturance and control in the teacher role have been hypothesized. Underlying these hypotheses is a basic assumption that individuals conceive of the teacher role in a similar fashion. To ensure the comparability of scales across subsamples, items were factor analyzed separately for the four sex-curriculum groups in the current sample. For inclusion in the final scales used in this study an item had to meet all four criteria described below.

Items were factor analyzed for the entire sample (N=239). In
order to be considered for the subsequent subgroup analyses, items had to meet the following criteria:

1. An item must have a factor loading greater than or equal to .20 on one of two factors.

2. The difference between the absolute values of the factor loadings on the first and second factors must be greater than or equal to .20.

The results of this analysis are shown in Table II on page 50. As can be seen from the table, on the basis of the above criteria, five items were eliminated from the subsequent subsample analyses. Items 2, 4, 10, 16, and 17 failed to load highly enough on a single factor to consider these items as measures of a common attribute.

The remaining 16 items were then factor analyzed for the entire sample and the following four sex-curriculum groups:

1. Elementary females (N=107)
2. Secondary females (N=65)
3. Elementary males (N=23)
4. Secondary males (N=45)

In order for an item to be included in the scales developed here, an item had to meet the following criteria:

1. An item must have its highest loading on the same factor for three of the four groups. In addition, this factor loading must be greater than or equal to .20.

2. The difference between the absolute values of the factor loadings on the first and second factors must be greater than or equal to .20 for three of the four groups.

The results of this analysis are shown in Table III on page 51. The items in Table III are arranged so that Factor A (control) items are presented first and Factor B (nurturance) items are presented second.
### TABLE II

MATRIX OF ROTATED FACTOR LOADINGS FOR ALL 21 TEACHER ROLE CONCEPTION QUESTIONNAIRE ITEMS: ENTIRE SAMPLE

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TABLE III

ROTATED FACTOR LOADINGS FOR 16
TEACHER ROLE CONCEPTION QUESTIONNAIRE ITEMS:
SEX-CURRICULUM SUBGROUPS

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<tr>
<td>3</td>
<td>A</td>
<td>.41</td>
<td>B</td>
<td>-.03</td>
<td>A</td>
<td>.22</td>
</tr>
<tr>
<td>6</td>
<td>A</td>
<td>.19</td>
<td>B</td>
<td>.05</td>
<td>A</td>
<td>.26</td>
</tr>
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<td>A</td>
<td>.37</td>
<td>B</td>
<td>-.06</td>
<td>A</td>
<td>.37</td>
</tr>
<tr>
<td>20</td>
<td>A</td>
<td>.47</td>
<td>B</td>
<td>.24</td>
<td>A</td>
<td>.32</td>
</tr>
<tr>
<td>9</td>
<td>A</td>
<td>-.12</td>
<td>B</td>
<td>.52</td>
<td>A</td>
<td>.03</td>
</tr>
<tr>
<td>13</td>
<td>A</td>
<td>.03</td>
<td>B</td>
<td>.50</td>
<td>A</td>
<td>.11</td>
</tr>
<tr>
<td>11</td>
<td>A</td>
<td>-.01</td>
<td>B</td>
<td>.59</td>
<td>A</td>
<td>.07</td>
</tr>
<tr>
<td>19</td>
<td>A</td>
<td>.29</td>
<td>B</td>
<td>.57</td>
<td>A</td>
<td>.12</td>
</tr>
</tbody>
</table>
The items that meet the criteria above are presented first in each group in Table IV. The control scale (Factor A) consists of items 1, 5, 7, 8, 12, 15, 18, and 21. The nurturance scale (Factor B) consists of only items 9 and 13.

Graphic representations of these 10 scale items are presented for the total sample and all four sex-curriculum groups in figures 1-5 on pages 53 to 57. These figures also include items 11 and 19 which will be discussed in detail below.

The strength of the factors is rather low. The two factors combined only account for 23.7% of the variance in the total sample. Factor A (control) accounts for 17.8% of the variance and Factor B (nurturance) only accounts for an additional 5.9% of the variance for the total sample. The cumulative percentage of variance accounted for by Factors A and B varies from subgroup to subgroup, but in no case does the cumulative percentage of variance explained exceed 42.1%.

The relatively low proportion of variance explained by the factors may be partially due to the low reliability of the forced choice items used in this research, but the low explained variance may also indicate that scale items do not share a very large common core. That is, scale items only measure the same attribute to a low degree.

Description of factors

Factor A has been called the control factor. An examination of some of the items which load highly on Factor A should reveal why this factor is the control scale. Take, for example, item 1:
Figure 1.— Plot of the rotated factor loadings of nurturance scale and control scale items (plus items 11 and 19) for the entire sample.
Figure 2.— Plot of the rotated factor loadings of nurturance scale and control scale items (plus items 11 and 19) for elementary females.
Figure 3.— Plot of the rotated factor loadings of nurturance scale and control scale items (plus items 11 and 19) for secondary females.
Figure 4.— Plot of the rotated factor loadings of nurturance scale and control scale items (plus items 11 and 19) for elementary males.
Figure 5.— Plot of the rotated factor loadings of nurturance scale and control scale items (plus items 11 and 19) for secondary males.
A. Assignments given to students should be stated flexibly, enabling the student to be creative even to the point of changing the assignment.

B. Assignments given to students should specify exactly what they are to do and how they are to do it.

This item is concerned with the amount of control that teachers exercise over student learning activities. Alternative A (low control) allows the student considerable control of his learning activities. According to alternative B (high control), teachers specify exactly what students are to do. Items 5, 18, and 21 are similar to item 1 and are concerned with the amount of control teachers should exercise over behavioral objectives and the extent to which lesson plans should be centered around student interests as opposed to the logic of an established curriculum or around teacher determined interests.

Items 8 and 15 are concerned with the effect of teacher control on students. For example, item 8:

A. Students who are not told what to do by their teachers lose direction and fail to develop good work habits.

B. Students who are told what to do by their teachers lose the capacity to think for themselves.

Alternative A is a high control alternative because it predicts a negative outcome for lack of teacher control. Alternative B, the low control alternative, predicts a negative outcome for too much teacher control.

Item 12 is concerned with who has responsibility for the determination of school and classroom rules. The final item which appears on the control scale is item 7. This item is difficult to score because it seems to mix two dimensions of the teacher role. Item 7 presents the teacher with a choice of being concerned with students who are
having learning difficulties or with students who are having emotional problems. Because of statistical criteria, item 7 was included in the control scale (Factor A), but the item seems to have mixed dimensions in a manner similar to a number of items eliminated from the scales. Item 7 is scored so that concern with academic problems represents high control.

Factor B is also relatively easy to describe. Take, for example, item 9:

A. A teacher should try to comfort a student who seems upset about school.

B. A teacher should not approach a student who seems upset about school unless specifically asked for help.

Alternative A represents a high nurturance item. The lack of spontaneous concern for helping students indicated in alternative B is a low nurturance response. Item 13 also represents a nurturance item. Alternative B, the low nurturance alternative on item 13 expresses concern that teachers who have warm, friendly relations with students will be taken advantage of. Alternative A expresses no such concern with being taken advantage of.

The major problem with the nurturance scale lies in the fact that only two items meet the statistical criteria necessary to be included on a particular factor. On the basis of their content, however, items 11 and 19 also seem to belong on the nurturance scale. In fact, for the total sample, item 11 has a .47 factor loading and item 19 has a .63 factor loading on Factor B. These substantial loadings tend to strengthen the interpretation of Factor B as the nurturance factor. Although these two items did not meet the statistical criteria set
in this study, they seem very similar in content to items 9 and 13. Take, for example, item 19:

A. A teacher should try to maintain a relationship of distance and respect with students.

B. A teacher should try to maintain a warm, friendly relationship with students.

This item is very similar to item 13. On the basis of content it is difficult to explain why items 11 and 19 did not meet the statistical criteria for inclusion in a scale.

While items 11 and 19 load strongly on Factor B for the entire sample, the subgroup analyses reveal a different pattern. For the two female groups the pattern is similar to that found for the total sample. For the male groups, however, both items load on Factor A rather than Factor B. For example, for the elementary males, item 11 has a factor loading of .50 on Factor A and item 19 has a .80 factor loading on Factor A. The pattern of factor loadings for the four sex-curriculum groups is revealed graphically in figures 2-5 on pages 54-57.

The sex difference on items 11 and 19 can also be seen by examining the correlations between these items and items 9 and 13. Items 9 and 13 are positively correlated for all four groups with the correlations being higher among the males. A correlation of .53 between items 9 and 13 among the elementary males is among the highest correlations found between variables in any of the four subgroups. On the other hand, the correlations between 11 and 13 are positive for females, but negative or very low among the males. The same situation seems to hold for the correlation of item 13 with item 9.
This lack of correlation between a rejected nurturance item (11) and the two nurturance scale items may explain why item 11 does not appear on the nurturant factor for males. The pattern for variable 19 is less clear-cut. Item 19 correlates well with item 13 for all four sub-groups, but correlates poorly with item 9 for the two male subgroups.

An interpretation of this difficulty with nurturance items is difficult, but several factors may be involved. The small sample size among the subgroups may affect the factor analysis. Nunnally (1967: 257) suggests that there be at least ten subjects for every item when items are factor analyzed. The total sample is greater than the 210 subjects required by this criteria, but the subsamples are smaller. The male groups are even smaller than the female groups, with the elementary group being critically small. While this explanation is plausible, not all researchers suggest this criteria (cf. Rummel, 1970).

In light of the small percentage of variance accounted for by the nurturance factor, it is possible that the nurturance factor is simply a weak factor. The fact that a clear nurturance factor has not emerged in most previous studies of the teacher role (e.g., Kerlinger, 1956) may indicate support for this explanation. A clear nurturance factor did however emerge in another study (Masling and Stern, 1966) which suggests that a clear nurturance dimension of the teacher role does exist, but that this dimension was not adequately measured by items in the current study. Additional study using larger samples, new items, and perhaps a different response format is needed to evaluate these explanations.

A third explanation, and one which can not be easily evaluated,
is that males and females conceive of the teacher role in different ways. The basic assumption that individuals conceive of the teacher role in the same manner may not be supported by the results presented here. While females in the current study seem to organize their conceptions of the teacher role along the same dimensions as the researcher, the males do not. Males either do not clearly differentiate the nurturance and control aspects of the teacher role, or they organize the role in another manner which was not uncovered by the factor analysis used in the current study. This explanation of the difficulties surrounding the nurturance scale can only be evaluated by studying the phenomenology of teacher education students in relationship to the teacher role. Such a study would undoubtedly entail research strategies considerably different than those employed here.

The different patterns of factor loadings, particularly for items 11 and 19, among the various sex-curriculum groups may be an indication that the factors found in this study may have different meanings for the various subgroups. Thus, although consistent criteria were used for the selection of scale items, it is a simplifying assumption to treat the various factors among the subgroups as if they are measures of the same dimensions. Inspite of this limitation, the author feels that the scales used here are more accurate than would have been the case had the data been factor analyzed for only the total sample.

**Explanation for item elimination**

Although items were eliminated from consideration on the basis of the statistical criteria described earlier, it may be instructive to
examine the items which were eliminated. Examination of a number of items reveals that the dimensions of the teacher role may have been combined in the same item. Such items did not provide clear choices along a single dimension of the teacher role. Take, for example, item 2:

A. The most important characteristic of a good teacher is the ability to establish close, understanding relationships with students.

B. The most important characteristic of a good teacher is an adequate mastery of the subject matter being taught.

While alternative A is clearly a nurturant choice, B is not necessarily a non-nurturant choice. This item loaded on Factor B at .32, but also loaded on Factor A at .21.

Another general problem with the eliminated items is revealed in item 6:

A. A classroom runs most effectively when explicit rules for behavior are established only if problems arise during the course of a semester.

B. A class runs most effectively when all rules for classroom behavior are clearly specified at the beginning of the semester.

The problem here is that the degree of teacher control is not clearly specified. There is no indication in either alternative concerning the amount of student participation allowed in determining rules.

These items suggest that future items measuring nurturance and control in the teacher role should clearly specify degrees of control or nurturance along a single dimension.

Scale validity

After a scale has been constructed it is necessary to determine whether or not the scale measures what it was intended to measure.
The process of determining if a scale measures the psychological attribute it is intended to measure is called construct validation. A common means of investigating construct validity is to see if the measures developed correlate with other measures in expected ways (cf. Nunnally, 1967; Cronbach, 1960).

It may be possible to think of the role conception as a vocational or occupational self-concept. If this is the case, we may expect the role conception to be related to expressed preferences for certain stereotypic occupations (Super, 1963; Englander, 1960; Blocher and Schutz, 1961). In order to test this hypothesis, nurturance scores and control scores were correlated with scores on two occupational scales. Respondents were asked to indicate their preference for 16 occupations on a short scale designed after the Strong Vocational Interest Blank (Campbell, 1971). The scale was designed to measure a number of occupational interest areas including mechanical, supervisory, academic, and social service. For the purposes of construct validation it was expected that preference for supervisory occupations would be positively related to high control and that preference for social service occupations would be positively related to high nurturance.

Factor analysis of the occupational scale revealed only one social service occupation - social worker. Other items which were identified as social service items in previous use of the SVIB (Campbell, 1971) failed to load on the same factor with social worker. Five supervisory occupations were identified. They are:

1. Assistant president of a manufacturing firm.
2. President of a manufacturing firm.
3. Superintendent in a large school district.
4. School principal.
5. Office supervisor.

A cluster analysis of the correlations among these items is presented below in Table IV. Item numbers refer to the occupations as numbered above.

TABLE IV
CLUSTER ANALYSIS OF CORRELATIONS AMONG SUPERVISORY OCCUPATIONS

<table>
<thead>
<tr>
<th>Item</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-</td>
<td>.809</td>
<td>.399</td>
<td>.329</td>
<td>.468</td>
</tr>
<tr>
<td>2</td>
<td>-</td>
<td>.432</td>
<td>.364</td>
<td>.435</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>-</td>
<td></td>
<td>.643</td>
<td>.246</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>.237</td>
<td></td>
</tr>
</tbody>
</table>

The correlation between the supervisory scale (average of summed scores on the five occupations) and social worker was -.10 for the entire sample (N=231).

For the total sample, the correlation between social worker and the nurturance scale was -.007. The correlation between the supervisory scale and the control scale was .09. Low or negative correlations are also found between these scales for the various subgroups. Only among the secondary males do the correlations become sizeable. Among secondary males the supervisory-control correlation coefficient is .31.
and the social worker-nurturance coefficient is .22.

Based on the scales used here for construct validation of the nurturance and control measures developed in the current study, we must conclude that the nurturance and control scales have low construct validity. The problems of validation and possible explanations for the low validity are discussed in the final chapter of this report.

Scale reliability

A major source of measurement error within a scale is due to the sampling of items. The domain-sampling model of measurement conceives of "any particular measure as being composed of a random sample of items from a hypothetical domain of items" (Nunnally, 1967:175). Measurement error is present to the extent that items are from different domains -- i.e., the scale is not homogeneous -- or the sample of items is limited in size. Based on the assumptions of the domain-sampling model, it is possible to develop estimates of reliability based on the average correlation among items within a scale. Such estimates of reliability are said to concern "internal consistency." Internal consistency refers to the extent to which measurement of an attribute is repeatable using different items in a scale. An internal consistency coefficient is a measure of reliability, not validity or dimensionality in the factor analytic sense (cf. Nunnally, 1967; Cronbach, 1960).

Coefficient alpha is the basic measure of internal consistency reliability. The size of the coefficient is based on both the average correlation among scale items (internal consistency) and the number of
items. Coefficient alpha establishes an upper limit of reliability. A low alpha coefficient indicates that the scale is either too short or that the items have little in common. It has been suggested that researchers reconsider their measurement if the alpha reliability of a scale is low (Nunnally, 1967:210).

In the current study, alpha coefficients were calculated for the control scale and the nurturance scale. An alpha coefficient of .64 was obtained for the control scale. Although this figure is not as high as might be desired, it does indicate that the control scale has reasonable internal consistency. The reader is reminded that the alpha coefficient is not an indication of dimensionality in the factor analytic sense. For the nurturance scale a .40 alpha coefficient was obtained. Considering the fact that the nurturance scale consists of only two items, the alpha coefficient is reasonably high, but the internal consistency of the nurturance scale is not as high as for the control scale. Increasing the number of items on the nurturance scale should improve the internal consistency of the scale. The alpha coefficients indicate that both scales need improvement.

Scale scores

In spite of the limitations concerning the scales developed in the present study, scores on the nurturance scale and the control scale have been used to test the hypotheses presented in Chapter II. Scale scores were derived by adding the scores on the individual items and dividing by the number of items to which an individual responded. In the case of the control scale, scoreable responses on 6 of the 8 items
were required before a scale score was computed. Scoreable responses were needed on both nurturance items for a score to be calculated. A correlation of -.106 between the nurturance and control scores indicates that the two scales are relatively independent of each other.

Scale scores are interpreted as follows:

1. On the control scale a high score indicates high control.

2. On the nurturance scale a high score indicates high nurturance.

Statistical Tests of Hypotheses

The respondents in this study were compared on the previously described scales in order to test the research hypotheses stated in Chapter II. A two-way analysis of variance was used to test for differences in mean scale scores for the various groups for which differences were hypothesized. Analysis of variance is a multivariate statistical technique used to test the relationship between one or more nominal scales and an interval scale. Analysis of variance is based on a comparison of estimates of explained and unexplained variance on the interval scale. An F ratio, defined as the ratio of explained to unexplained variance, is calculated. The obtained value of F is compared with a sampling distribution of F to determine the F value needed to reject a null hypothesis at a given level of significance. In the current study, three null hypotheses can be stated:

1. Curriculum means are equal.

2. Sex means are equal.

3. There is no sex-curriculum interaction.
Three separate F ratios are calculated to test these null hypotheses. An .05 level of significance for a two-tailed test was selected for use in the current study. For a complete mathematical description of analysis of variance the reader should see Blalock (1972:319-59).

Two-way analysis of variance involves a control procedure in which the relationship between the interval scale and a nominal scale is examined while holding the other nominal scale constant. This control procedure involves the adjustment of the interval scale scores to take the effect of the control variable into account (cf. Blalock, 1967:335-6).

A necessary assumption for the computation of two-way analysis of variance is that cell sizes (subgroups) be equal. Since this assumption is violated in the current study, a specially designed analysis of variance procedure designed to compensate for unequal cell sizes was used in the statistical tests. The analyses described below are based on a total sample of 231: 100 elementary females, 65 secondary females, 22 elementary males, and 44 secondary males.

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1 For a brief description of the computing routine used in this research see Library Program #1.9.2 prepared by the WMU Computer Center.
CHAPTER IV
RESULTS

In general, the data support two hypotheses and provide partial support for a third. As expected, the results indicate that females have more nurturant conceptions of the teacher role than males. The data lend partial support to the hypothesis that elementary teacher education students have more nurturant conceptions than secondary students. The data also indicate that secondary teacher education students have a more controlling orientation toward the teacher role than elementary students. The prediction that females have less controlling conceptions of the teacher role than males was not supported by the results. An unexpected interaction between sex and curriculum was found in the analysis of variance test for differences in mean control scores.

The Nurturance Hypotheses

Hypotheses 1 and 2 were concerned with differences in the conception of nurturance in the teacher role. The results of hypothesis 1 are presented in Table V and Table VI on page 72. Table V indicates that elementary students score higher (3.79) on the nurturance scale than secondary students (3.53). The scores of both curriculum groups are high, indicating that respondents in both groups generally have quite nurturant conceptions of the teacher role, although elementary respondents seem to have a slightly more nurturant conception of the role. Although these results are in the anticipated direction, the
results of the analysis of variance indicates that this difference is not significant. The least squares analysis of variance, summarized in Table VI, produces an F ratio of 2.04, a value which is not significant at the .05 level. Thus, although the results of hypothesis 1 are in the anticipated direction, we are unable to reject the null hypothesis of no curriculum differences in mean nurturance scores. The results for hypothesis 1 provide only partial support for the predictions of hypothesis 1.

The results of hypothesis 2 are presented in Tables V and VI on page 72. Table V presents the mean scores on the nurturance scale and Table VI presents a summary of the analysis of variance test used for hypothesis 2. As indicated in Table V, the mean score for females is 3.79 and the mean score for males is 3.36. Again, the relatively high scores indicate that both males and females have quite nurturant conceptions of the role. However, females clearly have a more nurturant orientation toward the teacher role as indicated by their higher mean score on the nurturance scale. The least squares analysis of variance, summarized in Table VI, reveals an F ratio of 8.99 which is significant at the .05 level. The F value for the test of sex differences in the mean score on the nurturance scale allows us to reject the null hypothesis. The results support the hypothesis that females have more nurturant conceptions of the teacher role than males.

The failure of the data to support hypothesis 1 may be partially due to the small difference in mean nurturance scores between the elementary and secondary female group. While the elementary males scored .25 higher on the nurturance scale than secondary males, the
### TABLE V

NURTURANCE SCALE MEAN SCORES
BY CURRICULUM AND SEX

<table>
<thead>
<tr>
<th>Sex</th>
<th>Curriculum</th>
<th>Elementary</th>
<th>Secondary</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>3.79</td>
<td>3.53</td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td>3.79</td>
<td>3.83</td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td>3.36</td>
<td>3.59</td>
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</tbody>
</table>

### TABLE VI

NURTURANCE SCALE: LEAST-SQUARES ANALYSIS OF VARIANCE WITH TEST FOR INTERACTION

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>Degrees of Freedom</th>
<th>Sum of Squares</th>
<th>Estimate of Variance</th>
<th>F</th>
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</thead>
<tbody>
<tr>
<td>Total</td>
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<td>180.33</td>
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<td></td>
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<tr>
<td>Between Subclass</td>
<td>3</td>
<td>11.12</td>
<td></td>
<td></td>
</tr>
<tr>
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<td>1</td>
<td>6.70</td>
<td>6.70</td>
<td>8.99*</td>
</tr>
<tr>
<td>Curriculum</td>
<td>1</td>
<td>1.52</td>
<td>1.52</td>
<td>2.04</td>
</tr>
<tr>
<td>Interaction</td>
<td>1</td>
<td>0.68</td>
<td>0.68</td>
<td>0.92</td>
</tr>
<tr>
<td>Error</td>
<td>227</td>
<td>169.21</td>
<td>0.75</td>
<td></td>
</tr>
</tbody>
</table>

*p < .05
elementary females scored only .10 higher than the secondary females. Curriculum differences are in the anticipated direction for both females and males, but the magnitude of the difference is relatively low for females. These data strongly suggest that curriculum effects on the conception of nurturance in the teacher role are stronger among males than females.

The Control Hypotheses

Hypotheses 3 and 4 were concerned with differences in the conception of the control dimension of the teacher role. Hypothesis 3 predicted that elementary students would have less controlling conceptions of the teacher role than secondary students. The results for hypothesis 3 are presented in Tables VII and VIII on page 75. Table VII presents the mean scores on the control scale. The mean score for the elementary group is 1.58 and the mean score for the secondary group is 1.87. The difference in curriculum means is in the same direction for both males and females. These data indicate that both elementary and secondary teacher education students have low control orientations toward the teacher role. However, the elementary group has a less controlling orientation as was predicted in hypothesis 3. The data from the analysis of variance also support hypothesis 3. Due to the presence of interaction in the least squares analysis of variance, a weighted means analysis of variance was used to test hypothesis 3. The results of this weighted means analysis are presented in Table VIII. The F ratio of 12.56 for curriculum effects is significant at the .05 level and this allows us to reject the null hypothesis of no difference in
curriculum means on the control scale. Thus, the data indicate that there are curriculum differences in the conception of the control dimension of the teacher role.

Hypothesis 4 predicted that females would have less controlling conceptions of the teacher role than males. The results of this hypothesis are presented in Tables VII and VIII on page 75. The mean scores, as presented in Table VII, indicate that females have a lower mean control score (1.66) than males (1.86). However, the results are not the same in the elementary and secondary groups. In the secondary group, the females scored lower than the males, but in the elementary group the males scored lower than the females. This result is not anticipated on the basis of the hypotheses presented in this study. The analysis of variance, described in Table VIII, reveals an F ratio of .47, a value which is not significant at the .05 level. Thus, although the overall means for males and females indicates that females score lower than males on the control scale, the results of the analysis of variance do not allow rejection of the null hypothesis of no sex differences in control score means.

The analysis of variance presented in Table VIII indicates an interaction effect for sex and curriculum. An inspection of means in Table VII indicates an unexpectedly low control score for the elementary males. While we fully expect the elementary male mean score to be lower than the secondary male mean score on the control scale, we do not expect the elementary males to score lower than the elementary females. Thus, among elementary respondents the prediction of hypothesis 4 is not supported; in fact, the data is exactly
### TABLE VII
CONTROL SCALE MEAN SCORES
BY CURRICULUM AND SEX

<table>
<thead>
<tr>
<th>Sex</th>
<th>Curriculum</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Elementary</td>
<td>Secondary</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>1.66</td>
<td></td>
<td>1.73</td>
</tr>
<tr>
<td>Male</td>
<td>1.86</td>
<td></td>
<td>2.09</td>
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</table>

### TABLE VIII
CONTROL SCALE: WEIGHTED MEANS ANALYSIS OF VARIANCE WITH TEST FOR INTERACTION

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>Degrees of Freedom</th>
<th>Sum of Squares</th>
<th>Estimate of Variance</th>
<th>F</th>
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</thead>
<tbody>
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<td>Total</td>
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<td>131.53</td>
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</tr>
<tr>
<td>Between Subclass</td>
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<td>1</td>
<td>0.25</td>
<td>0.25</td>
<td>0.47</td>
</tr>
<tr>
<td>Curriculum</td>
<td>1</td>
<td>6.76</td>
<td>6.76</td>
<td>12.56*</td>
</tr>
<tr>
<td>Interaction</td>
<td>1</td>
<td>3.51</td>
<td>3.51</td>
<td>6.51*</td>
</tr>
<tr>
<td>Error</td>
<td>227</td>
<td>122.24</td>
<td>0.54</td>
<td></td>
</tr>
</tbody>
</table>

*p < .05
opposite of our expectations. For the secondary groups, the prediction of a sex difference in conceptions of the control dimension seems to be supported. The overall mean scores for males and females seem to support hypothesis 4, but data from the elementary and the secondary subsamples provide contradictory evidence. Possible interpretations of this unexpected interaction are discussed in the next chapter.

Conclusions

The evidence presented here supports two of the four hypotheses presented earlier in this report. In addition, partial support was found for a third hypothesis. The data for a fourth hypothesis provided confusing and contradictory evidence. This confusing evidence and the rest of the results of this study are discussed in the next chapter.
CHAPTER V
DISCUSSION AND CONCLUSIONS

Due to the nature of the present study, it is necessary to discuss the results at both the empirical and theoretical level. An interpretation of specific results concerning sex and curriculum differences in role conceptions will be followed by a discussion of the results in relationship to theoretical issues concerning the relationship between role expectations, role conceptions, and personality. Limitations of the current study and suggestions for future research are discussed at the conclusion of the chapter.

Sex and Curriculum Differences in Role Conceptions

The empirical evidence presented above supports two of the four hypotheses tested in the current study. Hypothesis 2, which predicted that females have more nurturant conceptions of the teacher role than males, was supported by the data. Although the results were in the anticipated direction, hypothesis 1, which predicted that elementary teacher education students would have more nurturant role conceptions than secondary teacher education students, was not supported by the data. The statistically significant sex difference in nurturance scores and the small (.10) difference in the mean nurturance scores of elementary females and secondary females may be a function of actual sex differences in nurturance. Females, as was discussed above, may be more nurturant than males. Although this interpretation is consistent with sex-role stereotypes, an alternative explanation of the
current findings is available.

The sex difference in nurturance scores may be a function of misrepresentation of the sexes in the current sample or among teachers in general. Among teachers and teacher education students, females may be overrepresented by nurturant individuals and males may be overrepresented by non-nurturant individuals. This interpretation is plausible in light of the fact that the selection of teaching as a career may be different for males and females. For females, teaching may be a temporary career. A teaching career may be interrupted by marriage and child rearing for many females. Bradwick (1971:217) suggests that some women may experience fulfillment in transferring interpersonal, empathic, and nurturant skills to relationships outside the family and may not desire achievement in an occupational-professional sphere. The selection of teaching as a career by many females may follow the pattern suggested by Bardwick. For males, however, teaching often represents a preliminary step to administration and may not represent a situation for the expression of nurturance outside the family relationship as may be the case for females. Without data concerning the motivation for selecting teaching as a career and data concerning future occupational plans this interpretation of the current findings can not be tested. Comparisons of male and female teachers and teacher education students who have similar career plans and similar motives for teaching might well reveal no significant sex difference in nurturance in the teacher role.

The findings concerning the control dimension of the teacher role are essentially the opposite of those for nurturance. There were no
statistically significant sex differences in mean control scores, but curriculum differences were significant. The findings support the hypothesis that elementary teacher education students have less controlling role conceptions than secondary students. These findings are consistent with the findings of previous studies (Masling and Stern, 1966; Ryans, 1960).

The exact reason for curriculum differences in conceptions of teacher control are not clear. One factor involved may be the nature of the teacher-student relationship. While elementary teachers usually teach the same children for the entire day, secondary teachers usually teach different groups of students throughout the day. For secondary teachers, dealing with students in a systematic, controlling way may be easier than trying to deal with students and groups of students on an individual basis. Pressures for fairness in evaluation and the logical demands of the curriculum, especially in math and science, may also be factors influencing secondary teachers to be more controlling than elementary teachers. Although factors in the secondary teacher role may influence the control orientations of secondary teacher education students, it is also possible that individuals who select the secondary teaching role are more controlling than individuals who select the elementary teaching role. It is likely that aspects of the role and role selection are involved in making the secondary role more controlling than the elementary role.

Perhaps the most interesting finding of the current study is the unexpected sex-curriculum interaction on the control dimension. While it was expected that males would score higher than females on the
control scale, the elementary male respondents scored lower on the control scale than any of the other groups in the study. While it is possible that males who select the elementary teaching role are less dominant, less controlling than males who choose to teach at the secondary level, it also seems likely that elementary males may be responding very strongly to perceived role expectations that elementary teachers should be less controlling than secondary teachers. The fact that elementary males are selecting a stereotypically inappropriate role may make them more aware of the expectations associated with the elementary teacher role and they may over react to the expectations for control in the role.

Another explanation for the low control scores of the elementary male respondents is suggested by the difficulties associated with scale construction. The analysis of item scalability described earlier in this report suggests that males do not conceive of the role in the same fashion as females. The strong factor loadings of two nurturant items on the control scale for both male groups may indicate that males do not clearly differentiate between control and nurturance in the teacher role. Males may not conceive of nurturance strictly in terms of "warmth" as seems to be the case with females, but may conceive of low control as nurturance. For the elementary males in the current study the low control scale may actually be perceived by the respondents to represent a high nurturance orientation toward the teacher role.

So far, we have treated the sex-curriculum interaction in terms of the low elementary male score. A somewhat similar situation may
exist for the secondary female group. The mean control score for this group is lower than the control score for the secondary male group. While secondary females are nearly as nurturant as elementary females in their role conceptions, they may perceive differences in the opportunities for the expression of nurturance in the secondary school setting. While touching and holding might be permissible nurturant behaviors for elementary teachers, such behavior is not likely to be acceptable at the secondary level. Secondary females may compensate for this restriction of the expression of nurturance by indicating personal regard for students through allowing them to control their own activities. The fact that a clear nurturance dimension was found in the scale analysis for the secondary female group suggests that low control scores for females in secondary education are not a result of inadequate differentiation between aspects of the role as may be the case with the elementary males.

While these interpretations of low control scores among elementary males and secondary females are speculative, they do suggest avenues for future research. Additional study into phenomenological differences in conception of the teacher role is needed. Also, research is needed on the perception of opportunities for the expression of certain behaviors in the elementary and secondary teacher roles.

Implications for Role Theory

The general finding of differences in the conception of the teacher role is consistent with the findings of other studies (Gross et al., 1958; Foskett, n.d.). However, the results provide somewhat confusing evidence concerning the relationship between role expectations,
Earlier we argued that role conceptions may be a function of personality traits and self-conceptions. The finding of significant sex differences in conceptions of nurturance in the teacher role supports this contention. The small difference in the nurturance scale scores for elementary and secondary females indicates that different expectations associated with the respective roles do not exert a major influence on conceptions of nurturance. On the other hand, a clear curriculum difference in the conception of control in the teacher role suggests a strong relationship between role expectations and role conceptions. Although these results seem contradictory at first, they indicate that both role expectations and personality affect role conceptions. Role conceptions are not purely determined by either role expectations or personality.

We might expect role expectations to play a more important role in conceptions of control in the teacher role since the control dimension of the teacher role is probably most clearly defined. Although we can not be sure of the exact content of the teacher education courses in which the current respondents were enrolled, the titles of the courses suggest an emphasis on teaching and the direction of learning. Control aspects of the teacher role may be more clearly defined for teacher education students than nurturant aspects of the role. If this is the case, the findings of the current study would support Levinson's contention concerning the relationship of role expectations, role conceptions, and personality. Levinson (1959) contends that personality comes to play a larger part in the formation of role conceptions as the expectations for the role become less
explicit and clearly defined.

The unexpected sex-curriculum interaction found in the data analysis seems to complicate the picture somewhat. In certain cases, role expectations and personality may interact to influence the manner in which an individual conceives of himself acting in a particular role. Although we offered the interpretation speculatively, the possibility that certain restrictions associated with the secondary teacher role may influence the manner in which secondary female teacher education students conceive of performing the role seems to indicate an interaction between role expectations and personality. The extent to which individuals actually perceive such restrictions and compensate for such restrictions should be the subject of future research.

While the possibility of an interaction between role expectations and personality affecting the conception of how one expects to behave in a particular role seems acceptable, the possibility that personality and role expectations may interact to affect the very manner in which a role is conceived is a less recognized possibility. While the interpretation of evidence from the scale analysis and the sex-curriculum interaction in the current study would seem to indicate that this is the case for males, especially for elementary males, additional research into the conception of the role is needed.
Research Limitations and Suggestions for Future Research

Most of the major limitations of the current study are concerned with the teacher role conception scales developed in this study. Limitations of the scales are both methodological and theoretical. Theoretically we contended that a role conception consists not only of a general view of a role, but also includes a personal orientation toward the role. A basic assumption underlying the scales used in this study is that responses are representative of the way in which an individual conceives of himself as acting in a role. It is possible, however, that role conceptions, as measured by the scales in the current study, represent general ideological orientations toward the teacher role rather than a conception of self-in-role. Data from the tests of hypotheses described earlier in this report lend partial support to the idea of role conceptions as ideological views of the teacher role. Although there are statistically significant differences in mean scale scores, the data indicate that, in general, respondents in all four sex-curriculum subgroups have low control and high nurturance scores. Using a scale score of 2.5 as a dividing point between low and high on either scale, few individuals can be classified as having high control or low nurturance orientations. It seems likely that the generally progressive philosophy of teacher education may be partially responsible for the generally similar role conceptions held by teacher education students.

Whether a role conception represents a general ideological view or a view of self-in-role has important implications for role behavior. Psychologists are becoming increasingly aware of the importance of a
personal definition of the situation for individual behavior. To the extent that role conceptions are a reflection of an ideology, which may be presumed to exist independently of the individual, one would expect to find a reasonable amount of discrepancy between an individual's role conception and his behavior. If a role conception is a personal orientation to specific aspects of a role, one would expect to find less discrepancy between role conceptions and behavior.

If the instruments in the current study are measures of a general ideology rather than individual orientations as they were designed to be, the validity of the current scales must be seriously questioned. Although the data, as discussed above, provides some support for this idea, the fact that the expected curriculum and sex differences were generally observed to occur indicates some scale validity. Even if the present scales are valid measures of self-in-role, the validity of the scales on measures of the way in which an individual will actually behave is still problematic because of institutional demands and other factors which may intervene during individual attempts to implement role conceptions. In any research involving verbal or written responses the relationship of such measures to behavior is problematic. Part of the difficulty may be that scales used in such studies are measures of general ideology rather than specific orientations.

Additional research should provide valuable information concerning these possible problems. A study of the relationship between the role conceptions and actual behavior of individuals currently teaching in the schools could provide useful data concerning the extent to which
role conceptions are related to behavior in a particular institutional setting. A longitudinal study of individuals during various times in their preparation for teaching and during their actual teaching experiences should be undertaken. Particularly important, would be data on initial attempts (e.g., directed teaching, first year of teaching) to implement role conceptions. Studies of systematic changes in role conceptions as a result of the educational process should help determine the extent to which role conceptions may be ideological in nature.

The validity data presented in Chapter III seems to indicate low scale validity. Although this may be the case, a number of additional factors may be involved. First, given the relatively small differences on the control and nurturance scales, it is possible that the expressed differences in occupational preferences would not be related to such subtle role orientation differences. Second, the occupation scales themselves may have limited reliability due to response styles. For example, some individuals may express dislike for any occupations for which they do not have a strong preference while others may express indifference to such occupations. Third, respondents may not be responding to the same aspects of the role. For example, even though social work can be conceived of as a nurturant role, individuals who have very nurturant orientations toward the teacher role may express a disliking for social work on the basis of the tangle of bureaucratic paper work which has become associated with the role. Fourth, the control and nurturance dimensions represented in the occupation choices on the current occupational scales may be different than those involved in the teacher role. These occupations mostly involve contact
with adults and may not be the same as the teacher role which is more clearly involved with children. In light of these limitations and the contention of the current study that individuals may project their own self-concepts and personality into their perception of roles, there is reason to suspect the accuracy of the reliability data presented above. Additional validation data is needed. In this regard, an examination of the relationship between role conceptions and self-concepts would seem to be particularly important.

Another limitation of the current scales concerns their reliability. The rather low reliability in the current study may be partially due to the reduction of response style due to the forced choice format used for questionnaire items. Future research should experiment with different response formats and additional items (particularly nurturance items) in an effort to improve reliability.

An additional limitation of this study lies in the sampling procedure. In addition to the fact that the current sample is not random, it may also be non-representative. Most respondents were in only their second education course and their limited exposure to teacher education could be a factor in the study. The relative weakness of the control and nurturance factors, as indicated by the small cumulative percentage of variance accounted for by the factors, may indicate that respondents have not yet developed a consistent view of the teacher role. Studies involving students at other points in the teacher training process (e.g., directed teaching), current teachers, and students over time should provide information about the development of consistent role conceptions. If these factors remain
weak it may indicate that teachers do not have consistent views of
the teacher role. Travers (1975) indicates that students do not seem
to easily perceive all aspects of the teacher role. This may be an
indication that many teachers do not develop consistent conceptions
of the teacher role but develop orientations to selected individual
aspects of the role. However, before research into the development
of consistent role conceptions can be undertaken scale improvements
are needed.

Although there are other limitations in this research, those
mentioned above seem to be most important. In addition to the re­
search suggested above, research into the phenomenology of the teacher
role is needed. The suggestion of the data that individuals may
conceive of the same role in very different manners should be examined.
Such research would seem to be in keeping with the current trend toward
phenomenological research (cf. Psathas, 1973) and could have important
implications for social psychology in general and role theory in par­
ticular.
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APPENDIX A

All of the items used in the questionnaire for this study are shown below and are arranged in the order in which they were presented to the respondents. Item 1 is shown in the exact format used in the study. The instructions to the respondents are also shown below exactly as presented in the questionnaire. For the purposes of data analysis, numerical values were assigned to the responses on a five-point scale ranging from zero to five. The high value (5) was assigned to strong agreement to response A (+A) or to response B (+B) as indicated by the asterisk in front of one of the responses in each questionnaire item. Items 2, 4, 9, 11, 13, and 19 were constructed as nurturance items and a high score indicates high nurturance. All other items in the questionnaire were constructed as control items and a high score on these items indicates high control. The item numbers shown below are used to reference questionnaire items in the body of this report.

Instructions

In each of the following questions you will be presented with a pair of statements labeled A and B. You are to select from each pair the statement with which you most agree. Consider the example shown below.

A. People are fundamentally good  
B. People are fundamentally bad

If you agree strongly with A and disagree with B, circle the response "+A". If you agree moderately with A and not B, circle "A". If you are only in slight agreement with A, circle "-A". If you favor statement B slightly over A, circle "-B". Circle "B" if you are moderately in agreement with B over A. If you are in strong agreement with
statement B and disagree with A, circle "+B". It may sometimes be difficult to choose between the statements, but in those cases try to select the one which you agree with most on the whole. Please make sure that you answer every question. The alternatives to be circled appear between part A and part B of each question.

PLEASE READ BOTH STATEMENTS CAREFULLY BEFORE ANSWERING

Questionnaire items

1A. Assignments given to students should be stated flexibly, enabling the student to be creative even to the point of changing the assignment.

+ A  A  -A  -B  B  +B

*1B. Assignments given to students should specify exactly what they are to do and how they are to do it.

*2A. The most important characteristic of a good teacher is the ability to establish close, understanding relationships with students.

2B. The most important characteristic of a good teachers is an adequate mastery of the subject matter being taught.

*3A. It is often necessary to use strong disciplinary measures to maintain classroom order.

3B. Strong disciplinary measures usually create more problems than they solve.

*4A. As a teacher, I would be most concerned about working with students who are shy and withdrawn.

4B. As a teacher, I would be most concerned about working with students who exhibit anti-social behavior.

*5A. A teacher should establish clear behavioral objectives (specifications of outcome) and the means by which a student can achieve these objectives.

5B. A teacher should allow students to work toward their own goals and allow them to work toward these goals in their own ways.

6A. A classroom runs most effectively when explicit rules for behavior are established only if problems arise during the course of a semester.

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6B. A class runs most effectively when all rules for classroom behavior are clearly specified at the beginning of the semester.

7A. A teacher should pay special attention to students who are having difficulties with academic work.

7B. A teacher should pay special attention to students who lack emotional support and self-confidence.

8A. Students who are not told what to do by their teachers lose direction and fail to develop good work habits.

8B. Students who are told what to do by their teachers lose the capacity to think for themselves.

9A. A teacher should try to comfort a student who seems upset about school.

9B. A teacher should not approach a student who seems upset about school unless specifically asked for help.

10A. A student's academic work should be evaluated relative to his or her previous performance.

10B. A student's academic work should be evaluated relative to the performance of other students in the class.

11A. A teacher should strive to establish warm, understanding relations with students which will make them feel secure in approaching their teacher to discuss personal problems.

11B. While teachers should show interest and concern for students, they should not encourage students to approach them with personal problems.

12A. Students should play a major role in determining the rules that are applied to classroom and school conduct.

12B. Teachers and administrators should be responsible for establishing the rules that are applied to classroom and school conduct.

13A. A teacher who establishes close, friendly relations with students will usually be taken advantage of.

13B. A teacher who establishes close, friendly relations with students will seldom be taken advantage of.

14A. A teacher should allow students to express themselves freely, even if it sometimes means that the classroom is noisy and disorganized.
*14B. A teacher should usually attempt to maintain a quiet, orderly classroom.

*15A. Students often fail to learn basic skills because they are not given sustained, disciplined exposure to the material.

15B. Students often fail to learn basic skills because the teacher does not make these skills relevant to students' interests.

*16A. Verbal reprimands are usually ineffective in curbing student misbehavior.

16B. Student misbehavior can usually be controlled by verbal requests to discontinue the behavior.

*17A. A teacher has a responsibility to see that students develop firm moral values.

17B. A teacher should not attempt to influence the moral values that a student acquires.

18A. Teachers should pursue student questions, even if this leads to marked deviation from the lesson plan.

*18B. Teachers should follow lesson plans in order to insure organization, even if this means that not all student questions can be answered.

19A. A teacher should try to maintain a relationship of distance and respect with students.

*19B. A teacher should try to maintain a warm, friendly relationship with students.

*20A. It is impossible for a teacher to manage a classroom without setting up a detailed system of rules.

20B. A detailed system of rules limits the teacher's ability to be flexible and to exert informal influence on the class.

21A. In order to be effective, lessons should be centered around student interests.

*21B. In order to be effective, lessons should be organized around the logical structure of an established curriculum.
APPENDIX B

The mean score and standard deviation of each item on the questionnaire are shown below. The sample size for each item is also shown below.

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