

AN ABSTRACT OF THE THESIS OF

THANITTHAR POBSOOK RUDER for the degree of DOCTOR OF PHILOSOPHY
in HUMAN DEVELOPMENT AND FAMILY STUDIES presented on April 22,
1993.

Title: Contributions of Selected Personal and Social Perceptual Factors to the
Teaching Performance of Female Early Childhood Student Teachers in a
Multicultural Preschool Setting

Abstract approved: _

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Contributions of selected personal and social perceptual factors to the teaching performance of 67 female, undergraduate, Caucasian students, enrolled as student teachers in a multicultural preschool setting associated with a teacher preparation program, were examined. The multicultural preschool setting enrolled children from both International and U.S. cultures. Student teachers were classified into five teacher preparation levels. Personal perceptual factors included student teachers' self-esteem and personal teaching efficacy (motivation). Social perceptual factors included family, peer, and supervisor support, as well as work environment autonomy. Students' teaching performance included both competency ratings by supervisors and observed teacher behaviors with children in unstructured and structured small group activities.

Regression analysis involving the criterion variable of student teachers' competency ratings revealed the overall model to be significant, with the variable of

teacher preparation level to be the only significant positive predictor. Application of a 5-way MANOVA on all observed student teacher behavior scores revealed that (a) International children had significantly lower frequency and quality of positive behaviors and significantly higher frequency and quality of negative behaviors displayed toward them than American children, (b) girls had significantly lower frequency and quality of positive and negative behaviors displayed toward them than boys, and (c) children had significantly higher frequency of negative behaviors displayed toward them during structured rather than unstructured activities. In addition, regression analyses involving the criterion variable of student teacher behaviors during unstructured activities revealed only 2 of the 16 models tested to be significant. These included those associated with (a) the frequency of negative student teacher behaviors displayed toward International boys, in which none of the personal and social perceptual factors occurred as significant predictors, and (b) the quality of negative student teacher behaviors displayed toward American boys, in which work environment autonomy occurred as the significant negative predictor. Furthermore, regression analyses involving the criterion variable of student teacher behaviors during structured activities revealed only 3 of the 16 models tested to be significant. These included those associated with (a) both the frequency and quality of student teacher behaviors displayed toward International girls, in which personal teaching efficacy occurred as the significant positive predictor, and (b) the frequency of negative student teacher behaviors displayed toward American girls, in which personal teaching efficacy and work environment autonomy occurred as the significant negative and positive predictors, respectively.

Contributions of Selected Personal and Social
Perceptual Factors to the Teaching Performance of Female
Early Childhood Student Teachers in a Multicultural Preschool Setting

by

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A THESIS

Submitted to

Oregon State University

in partial fulfillment of
the requirements for the
degree of

Doctor of Philosophy

Completed April 22, 1993

Commencement June 1993

APPROVED:

Redacted for privacy

Professor of Human Development and Family Sciences in charge of major

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Date thesis is presented April 22, 1993

Typed by researcher for Thanitthar Pobsook Ruder

ACKNOWLEDGEMENTS

There are many people I wish to acknowledge who have supported me both in my years of study in the United States and in the completion of this research project.

I deeply appreciate my major advisor, Dr. Alan Sugawara, who not only gave guidance and academic opportunity, but also supported and encouraged me to achieve my academic goal. I would like to thank him for his time for editing, suggesting and contributing for the study. The words "Thank You" are not adequate to express my gratitude for him. His consideration will always remain in my mind.

I greatly appreciate the valuable suggestions made by my committee members: Dr. Charles Langford, Dr. Glenn Klein, Dr. Chris Southers, and Dr. Arlene Holyoak; special thanks are also given to Dr. Alexis Walker, professor-in-charge of Graduate Program in Human Development and Family Sciences. I am grateful for their careful reading of and suggestions they made on various parts of this dissertation. I also would like to thank my two former committee members: Dr. Eileen Baumann and Dr. Phil O'Neil, who gave me support and suggestions every time I needed them.

This study would never been accomplished without the enormous help given by my friend and colleague, Linda Burt. She gave her time to help collect all data and shared suggestions. Also, I would like to express an appreciation to all participants in this study including the head teachers, assistant teachers, children and their parents, student teachers, and coders. Their contributions will go a long way toward improving the quality of the student teaching experiences in our profession.

I would also like to give special thanks to the friends I have made in the United States from a variety of cultures. Their friendship and encouragement have made me feel at home here.

This project is dedicated to my father and mother who care, understand and believe in me. To my father, Major General Thongterm Pobsook, who supported me throughout my student life. To my mother, Ms. Ratanaporn Pobsook, who encouraged and believed in me. Also, to all my sisters, brothers, cousins, in-laws, nieces and nephew who generously supported and cared for me.

Finally, I would like to express my gratitude to my dearest husband, Dan, who sacrificed his time for me. His support and understanding helped me to complete this study. I'm so grateful for the inspiration he gave me to achieve my academic goals.

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CONTRIBUTIONS OF SELECTED PERSONAL AND SOCIAL PERCEPTUAL FACTORS TO THE TEACHING PERFORMANCE OF FEMALE EARLY CHILDHOOD STUDENT TEACHERS IN A MULTICULTURAL PRESCHOOL SETTING

INTRODUCTION

Perceptual theorists (Combs, 1965; Combs, Richards, & Richards, 1976; Hamachek, 1978) propose that all behavior displayed by individuals is a direct result of their field of perceptions at the moment of behaving. These perceptions are used by individuals to interpret present situations and circumstances, which ultimately influence their behavioral functioning. Some of these perceptual variables include personal factors such as self-esteem and motivation, and social factors such as family, peer, and supervisor support, as well as work environment autonomy. According to Hawkins (1983), these personal and social perceptual factors are quite evident in a teacher preparation environment. As such, they are important in contributing to a student teacher's performance within that environment. A limited amount of research is available indicating positive relationships between the personal perceptual factors of self-esteem and motivation, and teacher performance (Doherty, 1980; Eicher, Wood, & Gullickson, 1986; Gibson & Dembo, 1984; Manning & Payne, 1984, 1987; Noad, 1979; Okech, 1987; Rosen, 1975; Wolf & Schultz, 1981). Likewise, such social perceptual factors as family, peer, and supervisor support, as well as work environment autonomy have been implicated in affecting a student's teaching performance within a teacher preparation environment (Ashton, Webb, & Doda, 1983; Brown, Alpert, Lent, Hunt, & Brady, 1988; Cummins, 1989; Dunn, Putallaz, Sheppard, & Lindstrom, 1987; McNairy, 1988; Pigge & Marso, 1987;

Saracho, 1990; Veale, 1989). While all these perceptual variables have been shown to be individually or in limited combinations related to a student-teacher's teaching performance, no studies available focused on examining how all of these factors might together contribute to a student teacher's teaching performance within a teacher preparation environment.

Furthermore, the studies summarized above have focused on a student teacher's performance toward children in general, rather than toward children from various cultural or ethnic groups. Studies in this specific area among student teachers are presently non-existent.

Purpose of Study

The primary purpose of this study, therefore, was to examine the relative contributions of selected personal and social perceptual factors to a student teacher's teaching performance in an early childhood teacher preparation environment.

Personal perceptual factors include a student teacher's self-esteem and motivation, while social perceptual factors include a student teacher's family, peer, and supervisor support, as well as work environment autonomy. The dimension of a student teacher's teaching performance includes both teacher competency ratings by supervisors and observed teacher behaviors. The early childhood teacher preparation environment includes a multicultural preschool setting in which children from both U.S. and International cultures are enrolled. Therefore, a secondary purpose of this study was to examine the relative contributions of selected personal and social

perceptual factors to a student teacher's teaching behavior toward children from both U.S. and International cultures.

Definitions

The following definitions were used in this study.

1. Perception - the process through which individuals attach personal meanings to their experiences (Combs, 1965; Hamachek, 1978).
2. Personal Perceptual Factors - an individual's perception of self-esteem and motivation (Hawkins, 1983).
3. Self-esteem - an individual's general sense of self-worth; an overall positive or negative evaluation of the self (Rosenberg, 1965).
4. Motivation - that aspect of personality which energizes, directs, and/or sustains an individual to perform goal-directed behaviors (Randolph, 1988, p. 157).
In this study, it was associated with personal teaching efficacy or the degree to which teachers believe they have the requisite skills and abilities necessary to facilitate positive learning among young children (Gibson & Dembo, 1984).
5. Social Perceptual Factors - an individual's perception of family, peer, and supervisor support, as well as work environment autonomy within a teacher preparation environment.
6. Family Support - the degree to which student teachers perceive their family environment as supportive and caring (Fleming, Baum, Gisreil, & Catchel, 1982).

7. Peer Support - the degree to which student teachers perceive their student teaching peers as supportive of them during their teacher preparation experiences (Moos, 1986).

8. Supervisor Support - the degree to which student teachers perceive their supervisors as supportive of them in their teacher preparation experiences (Moos, 1986).

9. Work Environment Autonomy - the degree to which student teachers perceive they are encouraged to be self-sufficient and to make their own decisions in their student teaching experiences (Moos, 1986).

10. Teacher Performance - student teachers' competency ratings received from supervisors (Sugawara & Cramer, 1980), and the behavior they display in interacting with children in various classroom activities (Caldwell & Honig, 1971).

11. Teacher Competency - the degree to which student teachers display behaviors that are facilitative of children's development in a teacher preparation environment, as rated by their supervisors (Sugawara & Cramer, 1980).

12. Teacher Behavior - the degree to which student teachers display positive and negative teacher behaviors obtained via observations when interacting with children in small group activities (Caldwell & Honig, 1971).

13. Positive Teacher Behaviors - the frequency and quality of positive behaviors (i.e., ego boosting, teaching, questioning, and attending) displayed by student teachers toward children in small group activities.

14. Negative Teacher Behaviors - the frequency and quality of negative behaviors (i.e., commanding, negatively responding, ignoring, and physical control) displayed by student teachers toward children in small group activities.

15. Multicultural Preschool Setting - an early childhood setting in which children from both International and U.S. cultures are enrolled.

16. International children - children who come from China, Korea, Japan, India, Mexico, and France.

17. American children - Caucasian children who are born and raised in the U.S.

18. Student Teaching or Teacher Preparation Environment - an early childhood setting in which student teachers learn to develop competencies and behaviors which facilitate the positive development of children.

Assumptions

1. Rosenberg's (1965) Self-Esteem Scale is an effective measure of student teachers' global sense of self-worth.

2. Gibson and Dembo's (1984) Personal Teaching Efficacy Scale is an adequate measure of student teachers' efficacy as teachers.

3. Fleming et al.'s (1982) Family Support Scale can be used to assess student teachers' perceptions of their support from family members within their home environments.

4. Moos's (1986) Work Environment Scale can be modified to assess effectively student teachers' perceptions of peer and supervisor support, and their work environment autonomy in an early childhood teacher preparation environment.

5. Sugawara and Cramer's (1980) Preschool Teacher Competency Rating Scale is an adequate measure of student teachers' competency as teachers in facilitating children's positive development in an early childhood teacher preparation environment.

6. Caldwell and Honig's (1971) Teacher-Behavior Coding Categories can be effectively used to assess the frequency and quality of positive and negative behaviors displayed by student teachers during small group activity situations associated with their early childhood teacher preparation experiences.

Hypotheses

The following general hypotheses were tested in this study:

Teacher Competency

1. There are significant positive relationships between the personal perceptual factors of self-esteem and personal self-efficacy (motivation), and teacher competency ratings of student teachers.

2. There are significant positive relationships between the social perceptual factors of family, peer, and supervisor support, as well as work environment autonomy, and the teacher competency ratings of student teachers.

Teacher Behaviors

1. There are significant positive relationships between the personal perceptual factors of self-esteem and personal teaching efficacy (motivation), and the frequency and quality of positive behaviors displayed by student teachers toward International and American children during small group activity situations.
2. There are significant negative relationships between the personal perceptual factors of self-esteem and personal teaching efficacy (motivation), and the frequency and quality of negative behaviors displayed by student teachers toward International and American children during small group activity situations.
3. There are significant positive relationships between the social perceptual factors of family, peer, and supervisor support, as well as work environment autonomy, and the frequency and quality of positive behaviors displayed by student teachers toward International and American children during small group activity situations.
4. There are significant negative relationships between the social perceptual factors of family, peer, and supervisor support, as well as work environment autonomy, and the frequency and quality of negative behaviors displayed by student teachers toward International and American children during small group activity situations.

REVIEW OF LITERATURE

The review of theoretical and research literature related to this dissertation is organized into four sections. In Section I, the theoretical background of this dissertation is briefly delineated. It focuses upon explaining the importance of an individual's perceptions in influencing behavior. The concept of perception is treated as a significant construct in understanding a student-teacher's world.

In Section II, Hawkins's (1983) Student-Teacher-Curriculum Triad and its modifications are specified with the purpose of explaining how student teachers' perceptions of selected personal and social factors can affect their teaching performances. These personal factors include student teachers' perceptions of their general self-esteem and motivation, while social factors include student teachers' perceptions of their family, peer, and supervisor support, and work environment autonomy.

Section III, summarizes research associated with how student teachers' perceptions of selected personal and social factors might be related to their teaching performance. Teaching performance covers two dimensions including teacher competency ratings received from supervisors, and observed teacher behaviors displayed by student teachers with children in various small group activities.

Finally, Section IV, describes the limited research available focused on student teachers' interactions with children from different ethnic and cultural backgrounds, enrolled in multicultural preschool programs, involving an early childhood teacher preparation program.

Perceptual Theory

According to perceptual theory (Combs, 1965; Combs et al., 1976; Hamachek, 1978), all behaviors displayed by an individual are a direct result of his or her field of perceptions at the moment of behaving. These perceptions are the consequence of an individual's past and present knowledge and experiences that have personal meaning to that individual. These perceptions are used by that individual to interpret present situations and circumstances, and in behavioral functioning (Kalimo, Batawi, & Cooper, 1987). Perceptions, therefore, determine an individual's overall personality. In order to understand an individual's behavior, then, one must attempt to understand how that individual sees things from his or her perspective (Lafrancios, 1988; Mitman, 1985).

One means of understanding an individual's unique perspective is to ask the individual directly about the meaning of various experiences and circumstances encountered in life. It is these perceptions, and the personal meanings attached to them, that ultimately determine behavior. According to perceptual theory, therefore, it is not the situation or circumstance per se that is important in predicting behavior, but rather the way a particular individual perceives that situation or circumstance that is most important (Rotter & Hochreich, 1975 p. 97).

The present study focuses upon student teachers and their teaching performances in an early childhood teacher preparation environment. If perceptual theory is correct, then, it is the student teachers' perceptions of certain circumstances in their lives that will be crucial in predicting their teaching performances in an early

childhood teacher preparation environment. This study, therefore, focuses upon understanding how student teachers' perceptions of selected circumstances in their lives might contribute to their teaching performances in an early childhood teacher preparation environment.

Hawkins's Teacher-Student-Curriculum Triad

In 1983, Hawkins proposed a model, identified as the "teacher-student-curriculum triad," in describing an educational environment in which effective learning among young children would likely occur (see Figure 1). Each element in this triad was said to represent an important foundation for children's learning, and a balance between them was viewed as critical.

The first element in this triad focused upon teachers and their feelings of self-esteem, perceptions of autonomy in teaching, and support from supervisors. Positive self-esteem, a sense of autonomy in their teaching environment, and feelings of support from supervisors were thought to be crucial in a teacher's effectiveness in facilitating children's learning.

The second element in this triad focused upon students and their perceptions of support from family members and peers, as well as their own motivation as individuals. Perceptions of positive support from family members and peers as well as the child's own motivation to succeed within an academic environment were viewed as significant contributors to a child's educational performance.

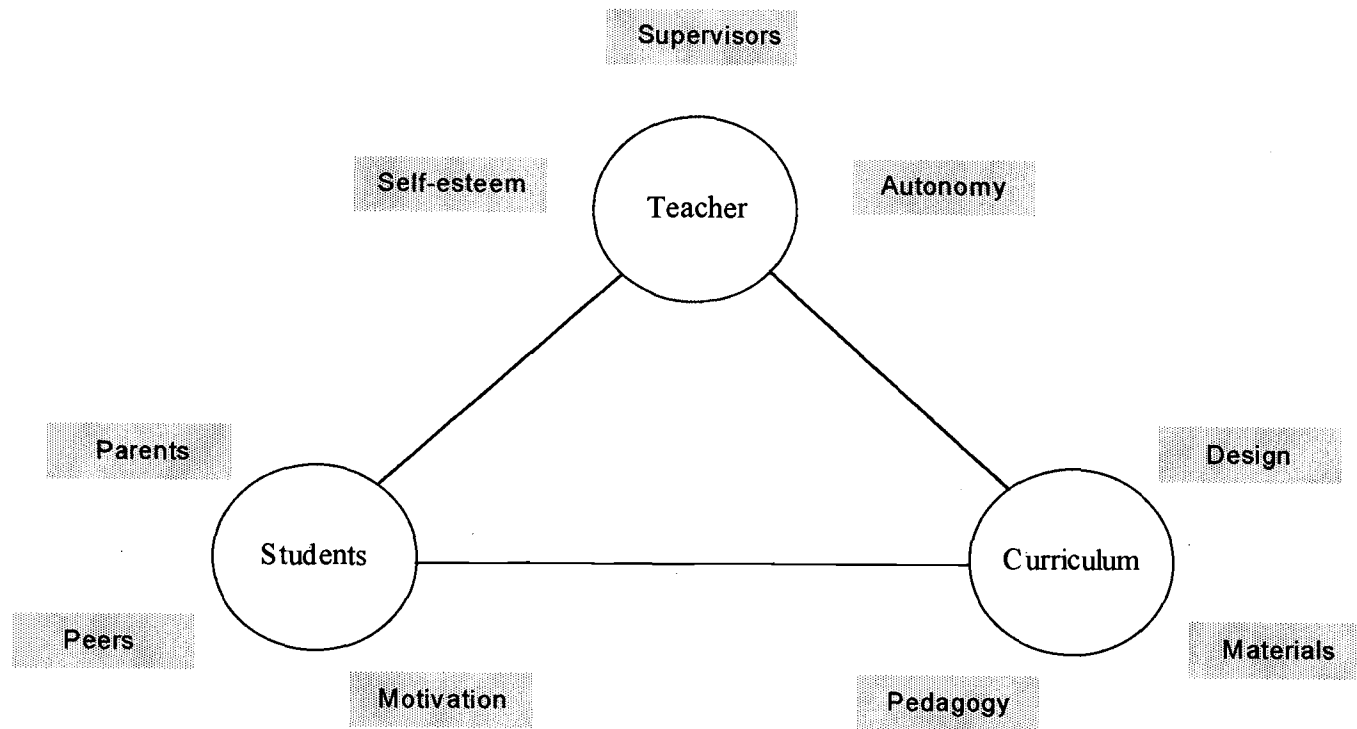


Figure 1. Hawkins's Teacher-Student-Curriculum Triad Model

Finally, the third element in this triad focused upon the curriculum and its characteristics of design, materials, and pedagogy. A curriculum that was flexible, sensitive to societal trends as well as the characteristics of the learner were some of the essential qualities proposed in an ideal curriculum.

While the above model appears reasonable as an approach to facilitating primary children's learning, evaluation of its adequacy in describing learning which occurs among student teachers in an early childhood teacher preparation environment suggests that this model is problematic and needs to be modified. Since student teachers are at once both teachers and students in a teacher preparation environment, the combination of characteristics associated with both students and teachers described in Hawkins's (1983) original model may be a more accurate way of conceptualizing their teacher preparation experiences. The characteristics of student teachers' self-esteem, autonomy, and supervisor's support would certainly affect their performance within a given teacher preparation environment. Likewise the characteristics of a student-teacher's family support, peer support, and motivation would also contribute to a student-teacher's performance in that same environment. Recognizing the importance of these characteristics, and focusing upon how they might contribute to a student teacher's performance within a teacher preparation environment, therefore, would lead to the emergence of concepts such as personal and social factors, around which these characteristics can be organized (see Figure 2). The personal factors would include such characteristics as self-esteem and motivation, while the social factors would include such characteristics as family,

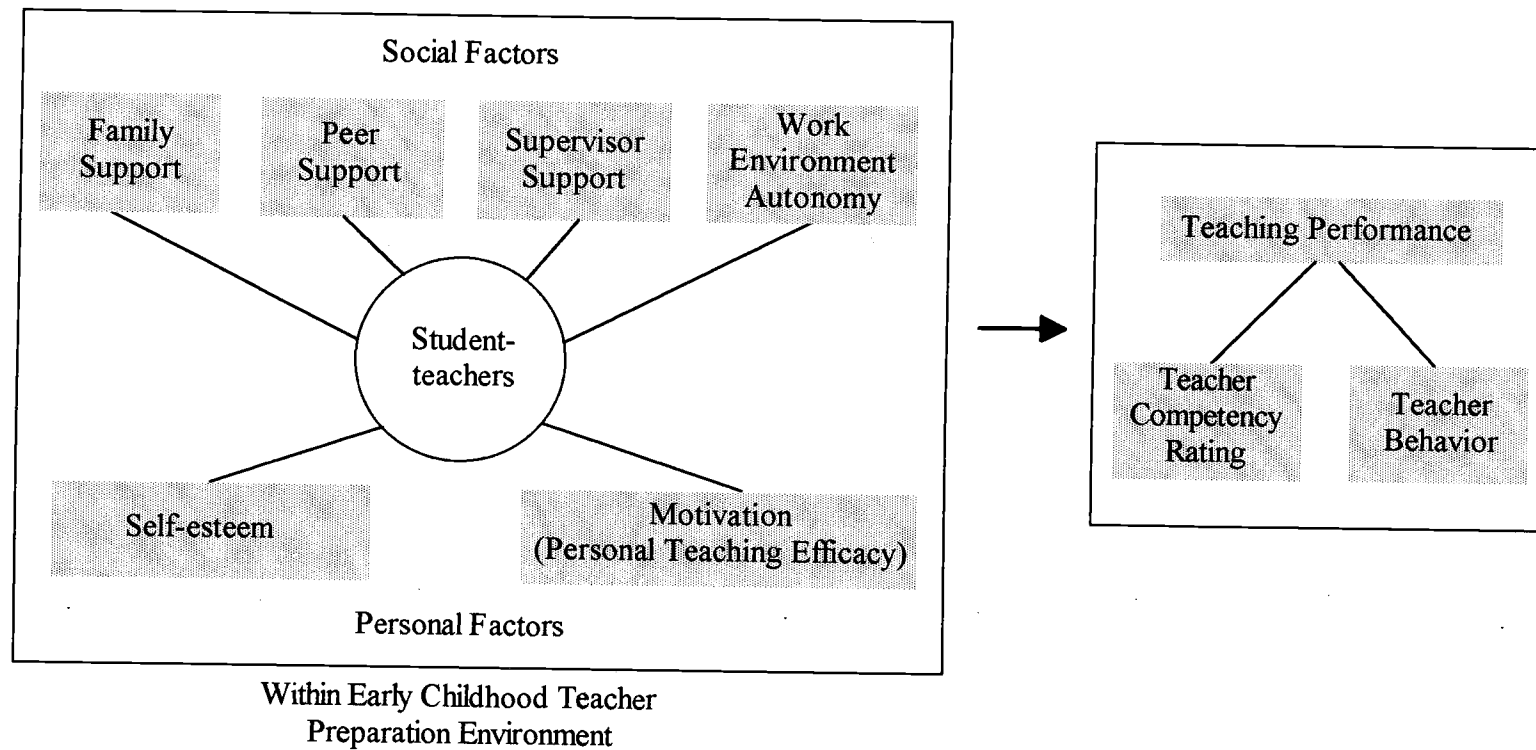


Figure 2. Modified Hawkins's Student Teacher Model

peer, and supervisor support, and work environment autonomy. However, as previously suggested by perceptual theorists, it is the student teacher's perceptions of these selected personal and social factors that are crucial in contributing to a student teacher's performance. This study, therefore, focuses upon understanding how student teachers' perceptions of selected personal and social factors might contribute to their teaching performances in an early childhood teacher preparation environment. In this study, the teacher preparation environment was controlled. The curriculum and pedagogy used in this environment was based on developmentally appropriate practices defined by the National Association for the Education of Young Children (Bredekamp, 1987).

Contributions of Personal and Social Perceptual Factors

To reiterate, according to perceptual theory (Combs, 1965; Combs et al., 1976; Hamachek, 1978) and Hawkins's (1983) modified model of the student-teaching environment, there are selected personal and social perceptual factors associated with student teachers that might contribute to their teaching performances. Some of these personal perceptual factors include such student teacher characteristics as self-esteem and motivation. Self-esteem refers to student teachers' general self-worth as individuals (Rosenberg, 1965), while motivation refers to their efficacy as teachers (Bandura, 1977). Some of the social perceptual factors include such characteristics as family, peer, and supervisor support, and work environment autonomy. Family support refers to the degree to which student teachers perceive

their family environments as supportive and caring (Fleming et al., 1982), peer support refers to the degree to which student teachers perceive their student teaching peers as supportive of them during their teacher preparation experiences (Moos, 1986), and supervisor support refers to the degree to which student teachers perceive their supervisors as supportive of them in their teacher preparation environment (Moos, 1986). Work environment autonomy, however, refers to the degree to which student teachers perceive they are encouraged to be self-sufficient and to make their own decisions in their student teaching experiences (Moos, 1986).

Finally, the variable of teacher performance is twofold in nature. First, it refers to student teachers' competency ratings as teachers made by supervisors during their teacher preparation experiences (Sugawara & Cramer, 1980), and second, the student teachers' manner of interacting with children in a variety of small group activities obtained through observations (Caldwell & Honig, 1971).

Research on Personal Perceptual Factors

Research on the impact of self-esteem and motivation on an individual's behavior is numerous (Jussim, Coleman, & Nassau, 1987; McLaughlin, Pfeifer, Swanson-Owens, & Yee, 1986; Noad, 1979; Rosenberg, 1986; Schwalbe, 1985; Smilansky, 1984; Wylie, 1961; Wolf & Schultz, 1981). Self-esteem refers to global self-worth or an individual's overall positive or negative attitudes toward the self, or an evaluation that an individual generally makes or customarily maintains with regard to the self (Rosenberg, 1965). It expresses an attitude of general approval or

disapproval of the self. While studies in the general area of self-esteem and behavior are numerous, those specifically related to the area of student teachers and their performance are quite limited. Those that are available provide contradictory results.

Among elementary school student teachers, self-esteem has been shown to be positively related to their teaching competencies (Doherty, 1980; Eicher et al., 1986; Manning & Payne, 1984, 1987; McNergney & Satterstrom, 1984; Noad, 1979; Okech, 1987; Payne & Manning, 1987; Rosen, 1975). With respect to teacher behaviors, however, no research study among early childhood student teachers could be found. A number of studies were available relating the self-esteem of elementary school teachers and their teaching behaviors (Manning & Payne, 1987; Purkey, 1978; Schultz & Wolfe, 1973; Wolfe & Schultz, 1981), indicating that effective and successful teachers were positive in their perception of self.

While results of the few studies done with elementary school student teachers and teachers appear consistent, those with early childhood (preschool) student teachers are not. Both Dematteis (1975) and Harris (1981) found no significant relationships between self-esteem and teacher competency among early childhood student teachers, although, in Dematteis's (1975) study, the correlations were in a positive direction. Sugawara, Harris, and O'Neill (1988), however, in replicating previous studies, found self-esteem among early childhood student teachers to be positively related to the teacher competency ratings they received from supervisors. These relationships occurred on a total teacher competency rating scale, as well as six of its nine subscales, including understanding behavior, guidance, relating to staff,

children, the program, and parents. Self-esteem, however, was found not to be significantly related to the teacher competency dimensions of self-evaluation, staff evaluation, and program evaluation. No studies were found relating self-esteem to the actual teaching behaviors of early childhood student teachers and teachers.

With respect to the variable of motivation, research studies related to teaching performance are available, but limited (Ames & Ames, 1990; Ashton et al., 1983; Denham & Michael, 1981; McLaughlin, 1984; Sadowski & Blackwell, 1985; Trentham, Silvern, & Brogdon, 1985). Motivation in this study refers to what Bandura (1977) calls "self-efficacy" or, in the context of this dissertation, "efficacy as a teacher" or "personal teaching efficacy" (Gibson & Dembo, 1984). Generally, motivation is defined as that aspect of a person's personality which energizes, directs, and/or sustains an individual to perform goal-directed actions (Randolph, 1988). Personal teaching efficacy is defined as the degree to which a teacher believes she or he has the requisite skills and abilities necessary to facilitate positive learning among young children (Dembo & Gibson, 1985; Gibson & Dembo, 1984). These beliefs are crucial in energizing, directing, and/or sustaining a teacher to behave in ways that enhance performance (Bandura, 1986; Schunk, 1990). Indeed, according to Bandura (1977), it is this efficacy, rather than past experiences or expectancy outcomes (i.e., belief that a specific teacher behavior will lead to a specific behavioral outcome) that is most predictive of a person's behavior. As such, personal teaching efficacy is a motivational construct that energizes, directs, and sustains student teachers in performing behaviors they believe they are skilled in and capable of competently performing.

Studies are available suggesting important relationships between personal teaching efficacy and teacher effectiveness, classroom behavior, instructional techniques, student feedback, parent-teacher relations, pupil control ideology, and bureaucratic orientation among elementary through high school teachers (Ashton et al., 1983; Ashton & Webb, 1986; Brophy & Rohrkemper, 1981; Dembo & Gibson, 1985; Denham & Michael, 1981; Fuller, Wood, Rapoport, & Dornbusch, 1982; Gibson & Dembo, 1984; Guskey, 1987, 1988; Safran, Safran, & Barcikowski, 1990; Saklofske, Michayluk, & Randhawa, 1988; Woolfolk & Hoy, 1990). Both Safran et al. (1990) and Saklofske et al. (1988) reported that there were significant correlations between personal teaching efficacy and such teacher classroom behaviors as lesson presenting, questioning, and classroom management. Housego (1990) also asserted that self-efficacy with regard to teaching led to improved teacher behaviors.

Such research confirms the notion that highly effective teachers tend to be very positive in their feelings about teaching and are generally confident about their teaching abilities. However, research with student teachers, particularly at the early childhood level, is lacking. Only two studies were found (Lortie, 1975; Trentham et al., 1985), suggesting that self-efficacy does play a role in elementary school student teachers' teaching competencies.

At this point, it should be noted that the two concepts of self-esteem and personal teaching efficacy, as previously described, while related, are different. The concept of self-esteem refers to global feelings of self-worth, while personal teaching efficacy refers to self-perceptions that are domain-specific (i.e., teacher related).

According to Bandura (1989), domain-specific measures of self-efficacy are more powerful predictors of behavior than generalized measures. Generalized measures include a fixed set of items, many of which may have little relevance to the domain being studied in a particular research investigation. Although there is some generality to perceived self-efficacy, suggesting that similar functions and subskills are required across a wide range of behaviors, one cannot expect generalized measures to predict with high accuracy how people will function in a different domain. On the basis of these theoretical concerns, therefore, we would predict that the contributions of personal teaching efficacy to teacher performance would be greater than for global self-esteem (Gorrell, 1990; Lent, Brown, & Larkin, 1986).

Research on Social Perceptual Factors

Research on the impact of family, peer, and supervisor support, and work environment autonomy on an individual's behavior is also numerous (Ashton et al., 1983; Brown et al., 1988; Cummins, 1989; Dunn et al., 1987; Kalimo et al., 1987; McLaughlin et al., 1986; Lieberman & Miller, 1978; Pigge & Marso, 1987). However, those specifically related to the student-teaching environment are quite limited.

In this study, family support refers to the degree to which student teachers perceive their family environments to be supportive and caring (Fleming et al., 1982). Overall, research suggests that the presence of family support is likely to provide an individual with personal security and skills, that will facilitate their

achievement and competence (Brown et al., 1988; Cohen & Wills, 1985). For example, studies relating family support to such psychological attributes as self-esteem, self-direction, self-efficacy, autonomy, and intimacy are numerous (Armsden & Greenberg, 1987; Crandall & Crandall, 1983; Felson & Zielinski, 1989; Gecas, 1972; Gecas & Schwalbe, 1986; Gecas & Seff, 1990; Hovestadt, Anderson, Piercy, Cochran, & Fine, 1985; Mortimer & Lorence, 1980; Rosenberg, 1965). Likewise, studies of college students abound relating family support and educational achievement (Bank, Slavings, & Biddle, 1990; Kenny, 1987, 1990; Lopez, Campbell, & Walkins, 1989; Ma, 1983; Mortimer, Lorence, & Kumka, 1986) as well as vocational achievement (Bank et al., 1990; Ma, 1983; Dillman, 1989; Mortimer et al., 1986; Schulenberg, Vondracek, & Crouter, 1984; Sewell & Hauser, 1980).

While studies in the general area of family support and behaviors are numerous, those specifically related to the area of student teachers and their performance are quite limited. Among elementary school student teachers, Rosen (1975) found teacher competence and family support to be positively related. Student teachers rated outstanding in their teaching competency viewed their families as warm, close-knit, seldom punishing, and as having the fewest limits placed upon their behavior. Furthermore, those rated as most competent in working with the youngest children viewed their parents as more understanding, supportive, offering good advice, and setting the fewest limits. Student teachers rated as poor or fair in their teaching competency, however, viewed themselves as least loved by their parents. No studies were found relating family support to the actual teaching behaviors of early childhood student teachers.

With respect to the variable of peer support, research studies related to the teaching performance of teachers and student teachers are available (Ashton et al., 1983; Doyle, 1988; Goldman & Manburg, 1985; Jordell, 1987; Lawrence & Branch, 1978; Lieberman & Miller, 1978; McLaughlin et al., 1986). This is not unusual since peer support or "teaching team" is a fundamental characteristic evident in most early childhood settings.

In this study, peer support refers to the degree to which student teachers perceive their student-teaching peers as supportive of them during their student teaching experiences (Moos, 1986). Overall, supportive peer relations among student teachers as well as teachers within their respective teacher preparation or work environments are related to higher competency ratings among them. These studies, however, focused primarily on elementary school teachers and student teachers rather than those in early childhood settings.

Some research is available relating peer support and teacher behaviors among early childhood teachers. Data from observational studies indicate that the presence of other staff members in the teaching environment influences the quality of interactions between teachers and children (Tizard, Cooperman, Joseph, & Tizard, 1972; Veale, 1989). Staff relations based on trust and communication have been shown to be related to successful team teaching experiences, that ultimately benefitted children (Thornton, 1990; Veale, 1989). Furthermore, perceptions of early childhood co-teachers about their teacher peers regarding interpersonal relations, territorial ownership, status characteristics, and leadership styles affected their

behaviors in the classroom and led to the display of differential behaviors in the presence and absence of their co-teachers (McNairy, 1988).

In addition, other studies have indicated that peer (co-worker, colleague) support is related to teachers' and student teachers' job satisfaction, burnout, and stress which are likely to be related to their competency as teachers (Brissie, Hoover-Dempsey, & Bassler, 1988; Greenberg, Lewis, & Johnson, 1985; Jorde-Bloom, 1988; Kalimo et al., 1987; Schwab, Jackson, & Schuler, 1986; Smilansky, 1984; Townley, Thornberg, & Crompton, 1991; Zins, Maher, Murphy, & Weiss, 1988). It is apparent that peer support is a valuable and effective source of support among teachers and student teachers. One study was found, however, indicating that interactions between teacher peers at the elementary grade level did not play a critical role in the work life of these teachers (Lortie, 1975).

In reference to the variables of supervisor support and teaching performance, only a few studies were found. Supervisor support, in this study, refers to the degree to which student teachers perceive their supervisors as supportive of them during their student teaching experiences (Moos, 1986). Early childhood educators have long advocated that student teachers need support (both affective and instrumental), understanding, encouragement, and reassurance, particularly during the first stage of teacher preparation, identified as the "survival stage" (Brand, 1990; Fuller & Brown, 1975; Katz, 1972; Maroufi, 1988; Pigge & Marso, 1987). Studies are available indicating that supervisors act as role models, information resources, and feedback personnel, who can enhance the probability of successful teacher behaviors and

growth among student teachers (Caruso & Fawcett, 1986; Eicher et al., 1986; Hegland, 1984; McLaughlin, 1984; Queen & Gretes, 1982; Shapiro, Cohen, Wright, & Pollock, 1984; Weller, 1983). However, some contradictory evidence is also present, indicating that the supervisor's role is not related to any perceived difficulties of the student teachers in their teacher preparation experiences (Kagan & Grandgenett, 1987). No studies were found relating supervisor support to the teaching competency ratings of teachers and student teachers.

Finally, the variable of work environment autonomy has been studied in relation to a teacher's performance in a few investigations. Work environment autonomy, in this study, refers to the degree to which student teachers perceive they are encouraged to be self-sufficient and to make their own decisions in their student teaching experiences (Moos, 1986). Early childhood educators have argued that effective early childhood teachers should be able to plan and carry out their own programs and meet the diverse needs of children in a consistent, positive, and independent manner (Spodek, Saracho, & Peters, 1988; Saracho, 1988, 1990). Studies are presented suggesting a positive relationship between work environment autonomy among teachers and teacher effectiveness, behavior, and satisfaction (Brodinsky, 1984; Kreis & Brockopp, 1986; Olson, 1991; Reyes, 1989; Saracho, 1990). Of these studies, only one was found which focused on work environment autonomy among early childhood student teachers and their actual teaching behaviors (Saracho, 1990). This observational study found that the degree to which early childhood student teachers were involved in decision making was related to their behavioral effectiveness as teachers in the classroom.

Studies focused on the relationship between work environment autonomy and teacher competency ratings among early childhood student teachers and teachers are non-existent. However, a group of studies is available suggesting work environment autonomy is positively related to self-esteem and self-efficacy, which in turn are related to competency ratings among individuals (Ashton et al., 1983; Kohn & Schooler, 1973; Schawlbbe, 1985). From these studies, it appears that work environment autonomy may be related to a student teacher's competency ratings indirectly via self-esteem and self-efficacy.

Research with Student Teachers in Multicultural Preschool Settings

While the perceptual factors described above have been studied among early childhood student teachers in a variety of U.S. cultural group settings, these research studies have primarily focused on a student teacher's interactions with children in general, rather than their interactions with children from different ethnic or cultural backgrounds. This lack has recently emerged as a major concern among early childhood educators, since early childhood teacher graduates are likely to encounter greater frequencies of new immigrants and visiting foreign children from Pacific Asian and Central American countries in their classrooms as they launch their teaching careers (Boyan, 1983). This ethnic trend supports the global perspective that has emerged in recent decades, due, in part, to a highly mobile world, including numerous traveling and migrating international groups who move for a variety of economic, political, religious, and/or entertainment reasons (McKee, 1985).

With the infusion of an increasing proportion of ethnically diverse children in classrooms nationwide, new teachers have felt unprepared to interact adequately with international group values, traditions, behavioral patterns, and native languages (Kleifgen, 1988; Ogilvy, Boath, Cheyne, Jahoda, & Schaffer, 1990; Rashid, 1990). Their lack of knowledge of various cultural behavior patterns and traditions as well as their stereotypical notions about what children from different cultures are like, may lead them to interact with these children in different ways. In response to this dilemma, administrators, principals, and university faculty of teacher preparation programs have attempted to provide solutions. The trend of early childhood education is toward encouraging early childhood educators to deal with cultural diversity (DiMartino, 1989; Morrow, 1989; Wardle, 1990; Wieseman, 1986). The National Association for the Education of Young Children recently endorsed the recommendation that teachers encourage equity and cross-cultural perspectives into their classrooms (Bredekamp, 1987; Phillips, 1988).

Presently, however, there is a lack of research focused on assessing the effectiveness of teacher preparation programs in adequately preparing student teachers to deal with such cultural diversity. A few curriculum intervention programs have been developed, for example, the Anti-Bias Curriculum Approach (Derman-Sparks & The A.B.C. Task Force, 1989), but their theoretical and research foundations have not been well-documented. This void is not surprising since little data have been gathered to describe or explain how a teacher's perceptual beliefs might contribute to their behavior toward ethnically diverse children in the

classroom. The present study, therefore, also attempts to examine how selected personal and social perceptual variables might contribute to the teaching behavior of student teachers toward children from both U.S. and International cultures enrolled in a multicultural preschool setting associated with an early childhood teacher preparation program.

Summary

On the basis of this review of theoretical and research literature, perceptions were found to be an important antecedent of behavior. Within a teacher preparation environment, student teachers perceived a variety of personal and social factors that might contribute to their teaching performances. Some of these personal perceptual factors are self-esteem and motivation (personal teaching efficacy), while some of these social perceptual factors are family support, peer support, supervisor support, and work environment autonomy.

Studies focused on the relationships between these perceptual factors and teaching performance are limited, but available. Most have focused on assessing these relationships by selecting individual perceptual factors or limited combinations of them and relating them to teaching performance. The relative contributions of all these perceptual factors together to teaching performance, therefore, have not been fully explored. Thus, this study focuses upon the relative contributions of these selected personal and social perceptual factors on the teaching performances of student teachers in an early childhood teacher preparation program using a regression framework.

Furthermore, since the teaching performance of student teachers also includes information on their behavior toward children from both U.S. and International cultures, this study also focuses upon examining the relative contributions of these same personal and social perceptual factors to the teacher behavior of student teachers toward children from these diverse cultural groups.

METHODS

In this chapter, a description of the subjects, instruments, and procedures used in gathering the data for this study is presented.

Subjects

Subjects for this study included 67 female, undergraduate, Caucasian (U.S. Citizens) students, enrolled as student teachers in one of three multicultural preschool programs, associated with two practicum courses of an early childhood teacher preparation program offered by the Department of Human Development and Family Sciences in the College of Home Economics at Oregon State University.

The multicultural preschool programs enrolled 20 children each, ages three to five years, approximately half of whom were children from International cultures, with the remainder from the U.S. An equal number of boys and girls were part of each preschool program, which was coordinated by a head and an assistant teacher. These teachers were responsible for developing educational programs for the children and their parents as well as for implementing a teacher preparation program for the subjects in this study. Head and assistant teachers were graduate students with either undergraduate or graduate degrees in child development/early childhood education.

Two of the educational programs for children occurred in the mornings from 9:00 to 11:30 am each day, four days a week (Tuesday through Friday). One educational program occurred in the afternoons from 1:00 to 3:30 pm on the same days. The curriculum and pedagogy of the preschool programs were based on

developmentally appropriate practices as defined by the National Association for the Education of Young Children (Bredekamp, 1987).

The student teacher subjects of this study were enrolled in two teacher preparation level courses associated with the preschool programs, including a beginning level (HDFS 313 Directed Experience in Early Childhood Development, $n = 57$ or 85.1%) and a more advanced level (HDFS 430 Supervised Experience in Early Childhood Development, $n = 10$ or 14.9%). Table 1 provides a description of these student teachers by teacher preparation level.

Courses taken in preparation for the beginning level teacher preparation experience (HDFS 313) included introductory child development, family relations, and parenting courses. Coursework at this level included preschool observation and application of academic knowledge. Generally, students at this level can be identified in terms of their past teaching experiences based on previous enrollment patterns observed by staff and documented by previous researchers associated with the preschool programs (Arroyo, 1985; Cunningham, 1986). These students can be grouped as follows, representing increasing levels of experience and training with preschool children in various early childhood settings:

- I: No previous informal or formal teaching experience.
- II: Informal teaching experiences only, such as youth camp counselor, baby sitting, playground supervisor, etc.

Table 1. Teacher Preparation Levels of Student Teachers

Teacher preparation levels	Percentage	<u>n</u>
Coursework		
HDFS 313 (Beginning practicum)	85.1	57
HDFS 430 (Advanced practicum)	14.9	10
Teacher preparation level (TPL)		
Level I: No previous experience	16.4	11
Level II: Informal teaching experiences	44.8	30
Level III: Formal teaching experiences	23.9	16
Level IV: Experiences gained from HDFS 313	4.5	3
Level V: Experiences gained from HDFS 313 and any former experiences	10.4	7

- III: Formal teaching experiences such as teaching employment or internship training in formal early childhood settings.

Courses taken in preparation for the more advanced level teacher preparation experience (HDFS 430) included additional coursework in child development, family relations, and parenting, with a more extensive, specialized focus. Generally, students enrolled at this level have three unique types of experiences based on previous enrollment patterns observed by staff and researchers (Arroyo, 1985; Cunningham, 1986). These students can be grouped as follows, representing increasing levels of experience and training with preschool children in various early childhood settings:

- IV: Preschool teacher preparation experiences gained from HDFS 313.
- V: Preschool teacher preparation experiences gained from HDFS 313 and any previous informal teaching experiences.
- VI: Preschool teacher preparation experiences gained from HDFS 313 and any former formal teaching employment or training in an early childhood settings.

Because of the small number of student teachers at Levels V and VI, students in these two latter categories were combined to create one category identified as

Level V. As noted in Table 1, a large majority ($\underline{n} = 57$ or 85.1%) were classified at Teacher Preparation Levels I ($\underline{n} = 11$ or 16.4%), II ($\underline{n} = 30$ or 44.8%), and III ($\underline{n} = 16$ or 23.9%), with the remainder ($\underline{n} = 10$ or 14.9%) classified at Teacher Preparation Levels IV ($\underline{n} = 3$ or 4.5%) and V ($\underline{n} = 7$ or 10.4%).

In addition to information on subjects' teacher preparation level (TPL), a variety of other information was collected via a Demographic Questionnaire (Appendix A). This information included subjects' birthdate, gender, ethnicity, college major, class standing, grade point average, parents' (mothers' and fathers') occupations, income, educational level, marital status, and subjects' family size and composition. Data collected on parents' occupations and educational levels, as well as their income were used to determine the socioeconomic status of the families from which the subjects came. Hollingshead's (1975) Four Factor Index of Social Position was used as one measure of socioeconomic status, while parents' income was another. Tables 2 and 3 describe the sample relative to these demographic characteristics.

As summarized in Table 2, the average age of student teachers was 21.58 years ($\underline{SD} = 2.71$), who had an average grade point average of 2.96 ($\underline{SD} = .41$). A majority were college seniors ($\underline{n} = 36$ or 53.7%), with the remaining being juniors ($\underline{n} = 24$ or 35.8%), sophomores ($\underline{n} = 6$ or 9%), and freshmen ($\underline{n} = 1$ or 1.5%). In addition, a sizable majority ($\underline{n} = 62$ or 92.5%) were early childhood education majors (ECE), the remainder with majors from the liberal arts fields. Of those student teachers who indicated their marital status ($\underline{n} = 45$), a large majority ($\underline{n} = 37$ or 82.2%) were single, with the remainder ($\underline{n} = 8$ or 17.8%) being married.

Table 2. Characteristics of Student Teachers

Variables	Percentage	<u>n</u>	Mean	<u>SD</u>
Age			21.58	2.71
Grade point average			2.96	.41
Class standing			3.41	.72
Freshmen	1.5	1		
Sophomores	9.0	6		
Juniors	35.8	24		
Seniors	53.7	36		
College major				
Early childhood education (ECE)	92.5	62		
Other (Liberal Arts)	7.5	5		
Marital status (<u>n</u> = 45)				
Single	82.2	37		
Married	17.8	8		

Table 3. Family Background Characteristics of Student Teachers (%)

Variables	Mother	Father	
Marital status			
Married	82.4		86.3
Not married	17.6		13.7
Educational level			
None	0.0		0.0
1 - 6 grade	0.0		0.0
7 - 9 grade	0.0		1.5
10 - 11 grade	4.5		0.0
12 grade	33.3		13.6
Some college	25.8		25.8
Undergraduate degree	28.8		27.3
Graduate degree	7.6		31.3
Income			
Under \$8,000	26.8		1.6
\$8,000 - \$20,000	26.8		1.6
\$20,001 - \$30,000	23.2		19.7
\$30,001 - \$40,000	14.3		23.0
\$40,001 - \$50,000	1.8		16.4
\$50,001 - \$60,000	5.4		13.1
\$60,001 and up	1.8		24.6
Occupational status	Both Mother and Father		
Unskilled laborers		0.0	
Semiskilled workers		0.0	
Skilled workers		19.4	
Medium business, minor professional, technical career ^a		50.7	
Major business and professional career ^b		29.9	
Siblings	Female	Both	Male
Mean number	1.21	2.45	1.24
SD	1.18	1.51	0.92
Range	0 - 5	0 - 7	0 - 3

Note. ^aInclude owners of businesses and/or farms valued at 50,000 to 250,000, administrative officers, commissioned officers in the military (e.g., lieutenants and below), minor professionals (e.g., accountants, librarians, teachers), and technicians.

^bInclude owners of businesses and/or farms valued at 250,000 and more, higher executives (e.g., chairpersons, presidents), commissioned officers in the military (e.g., lieutenant commanders and above), and major professionals (e.g., engineers, physicians, college professors).

With respect to the student teachers' family background characteristics, Table 3 indicates that a sizable portion of their parents were married (mother = 82.4%; father = 86.3%), whether first married or remarried after divorce or death, while the remainder were not married due to divorce or widowhood (mothers = 17.6%; fathers = 13.7%). Their educational level ranged from 10-11th grades to graduate degrees. Although a majority of mothers (54.6%) and fathers (53.1%) had some college or an undergraduate degree, more mothers (37.8%) than fathers (13.6%) had only 10th to 12th grade education, while more fathers (31.3%) than mothers (7.6%) had graduate degrees. A large majority of mothers (91.1%) had incomes from under \$8,000 to \$40,000 a year, while a large majority of fathers (96.8%) had incomes of \$20,000 to beyond \$60,000 a year. The occupations of their parents included skilled workers (19.4%), medium business, minor professional, and technical careers (50.7%), and major business and professional careers (29.9%). According to Hollingshead's (1975) Four Factor Index of Social Position, this places families of student teachers predominantly within the middle- and upper-middle socioeconomic classes. The number of siblings found within these families ranged from zero to 7 ($M = 2.45$, $SD = 1.51$). The average number of female siblings in these families was 1.21 ($SD = 1.18$, range = 0 - 5), while those for males was 1.24 ($SD = .92$, range = 0 - 3).

Instruments

Several instruments were used to measure the variables associated with the major dimensions of this study. These dimensions include selected personal and social perceptual factors and teaching performance.

Personal Perceptual Factors

In this study, personal perceptual factors referred to two aspects: (a) self-esteem and (b) personal teaching efficacy.

Self-esteem. Rosenberg's (1965) Self-Esteem Inventory (SEI) was used to assess the subjects' general sense of self-worth (see Appendix B). It consists of 10-items describing the self which subjects are asked to rate on a 4-point scale from strongly agree to strongly disagree. The ratings on each item in the scale are summed, creating a range of possible scores from 10 to 40 points. Higher scores represented more positive self-esteem.

Internal consistency estimates for the scale have been moderately high to high, with a coefficient of reproducibility of .92 and alpha coefficients ranging from .72 to .82. Test-retest reliability coefficients have also been adequate, ranging from .85 to .88 for college students (Rosenberg, 1986; Silber & Tippet, 1965; Wylie, 1989).

Construct validity estimates have been calculated and examined in two ways, including conformity of the measure to theoretical expectations and relationships with other variables such as depressive effect, anxiety, peer reputation, and clinical

diagnoses (Wylie, 1989). Factor analyses also indicated the scale to be relatively unidimensional, and a variety of convergent validity studies have been conducted, relating the scale to other measures of self-esteem (Crandall, 1973; Coopersmith, 1967; Demo, 1985; Silber & Tippet, 1965; Wylie, 1989).

Personal teaching efficacy. Gibson and Dembo's (1984) Personal Teaching Efficacy Scale (PTES) was used to assess subjects' efficacy as teachers (see Appendix C). Personal teaching efficacy referred to the degree to which student teachers believe they have the requisite skills and abilities necessary to facilitate positive learning among young children. These beliefs are fundamental in motivating an individual to behave in a particular way.

The PTES consists of 9 items to which subjects are asked to respond using a 6-point scale from strongly agree to strongly disagree. The sum of ratings across items in the scale yields scores ranging from 9 to 54 points, which represent a subject's personal teaching efficacy score.

Internal consistency estimates for the scale have yielded alpha coefficients ranging from .74 to .88 (Gibson & Dembo, 1984; Mumaw, Sugawara, & Pestle, 1991; Saklofske et al., 1988; Woolfolk & Hoy, 1990). Factor analyses have revealed the scale to be fairly unidimensional (Gibson & Dembo, 1984; Saklofske et al., 1988; Woolfolk & Hoy, 1990), and scores on the scale have been related to such teacher behaviors as lesson presentation, questioning, and classroom management behaviors (Saklofske et al., 1988). In the present study, the PTES was slightly modified for use with teachers in an early childhood education setting.

Social Perceptual Factors

In the present study, social perceptual factors referred to four aspects, including family support, peer support, supervisor support, and work environment autonomy. Two instruments were used to assess these variables: (a) a family support scale, and (b) a work environment scale.

Family support. Fleming et al.'s (1983) Family Support Scale (FSS) was used to assess subjects' perception of support in the family (see Appendix D). Family support is essentially defined as the degree to which a student teacher perceives an emotional support system within the family. The scale consists of seven items to which subjects are asked to respond using a 4-point rating scale from strongly agree to strongly disagree. The ratings of subjects are summed across all items, yielding scores ranging from 7 to 28 points. Higher scores represented more family support perceived by student teachers.

Internal consistency estimates for the scale have yielded alpha coefficients ranging from .82 to .87 (Dunn et al., 1987; Fleming et al., 1982). A test-retest reliability coefficient of .70 has been obtained for the scale. A few construct validity studies have been undertaken, indicating scores on the scale to be related to the distance subjects live from their families (Fleming et al., 1982) and adjustment among gifted adolescents (Dunn et al., 1987). In the present study, the FSS was slightly modified to fit the present sample of early childhood student teachers. In addition, separate ratings for mothers and fathers were not solicited, since previous studies found no significant differences between the ratings assigned to mothers and

fathers (Bell, Avery, Jenkins, Feld, & Schoenrock, 1975). Instead, as suggested by Bell et al. (1975), the term "family" was used to refer to all members of a family to obtain subjects' assessment of their overall family support. This modification also allowed the researcher to deal with problems associated with subjects living in various family structures.

Peer and supervisor support, and work environment autonomy. Three subscales of Moos's (1986) Work Environment Scale (WES) were used to assess subjects' perception of peer support, supervisor support, and work environment autonomy within their student teacher preparation environment (see Appendix E). Each of these subscales consists of nine items using a 4-point scale from strongly agree to strongly disagree to which subjects respond. The sum of ratings across items within each subscale represented a subjects' peer support, supervisor support, or work environment autonomy score, which could range from 9 to 36 points. Higher scores indicated more peer support, supervisor support, or work environment autonomy perceived by student teachers.

Internal consistency estimates for these subscales have yielded alpha coefficients ranging from .69 to .71 for peer support, .77 to .82 for supervisor support, and .73 to .77 for work environment autonomy, with a one-month interval between testings. Numerous construct validity studies have been conducted for the scale, including empirical support for theoretical expectations, group differentiation studies, and correlation with other relevant variables (Moos, 1986). The scale has been applied to a wide variety of work settings, including cross-cultural applications.

In this study, the scale was slightly modified to fit the early childhood student teacher preparation environment. In addition, its original "true/false" format was replaced by a 4-point rating scale from strongly agree to strongly disagree.

Teaching Performance

The dimension of teaching performance in this study consisted of two aspects: (a) teacher competency, and (b) teacher behavior.

Teacher competency. Sugawara and Cramer's (1980) Preschool Teacher Competency Rating Scale (PTCRS) was used to assess subjects' teacher competency (see Appendix F). Teacher competency is defined as a student teacher's ability to perform behaviors which support and guide young children's development in an early childhood setting effectively.

The PTCRS consists of 65 items known as teacher-behavior performance statements representing teacher behaviors that are easily observed in an early childhood setting. These teacher performance statements are organized into one major scale and nine subscales covering four competency areas: (a) Understanding Behavior (4 items); (b) Guidance (14 items); (c) Relationships, including Relating to Children (9 items), Relating to the Program (11 items), Relating to the Staff (4 items), and Relating to Parents (8 items); and (d) Evaluation, including Program Evaluation (4 items), Staff Evaluation (5 items), and Self-Evaluation (6 items). After student teachers had been in their teacher preparation environments for five or more weeks, head and/or assistant teachers were asked to rate the competency of student

teachers with the PTCRS using a 6-point scale from "the student has not worked on this" (zero point) to "the student does this easily" (5 points). The sum of ratings across all items in the total scale and its subscales represented a subject's teacher competency score for the total scale and its subscales. For the total scale, scores could range from zero to 325 points, while subscale scores vary depending upon the number of items present within each subscale. Higher scores represented more competent teacher behaviors among subjects on the total PTCRS and/or its subscales. In this study, total PTCRS scores were used in data analyses.

Inter-rater reliability estimates for the PTCRS, using two independent observers, have been relatively high. A reliability coefficient of .90 was obtained for the total PTCRS. However, coefficients obtained for different subscales ranged from .41 to .96. High-level reliability coefficients ranging from .84 to .96 have been obtained for the Guidance, Program Evaluation, Staff Evaluation, and Self-Evaluation subscales. Medium-level coefficients ranging from .65 to .67 have been obtained for the Understanding Behavior and Relating to the Program subscales. However, lower-level coefficients ranging from .41 to .59 have been obtained for the Relating to Children, Staff, and Parents subscales (Sugawara & Cramer, 1980).

Content validity studies involving the work of child development experts with advanced educational training and considerable experience in the administration of early childhood programs and the training of teachers have been conducted (Sugawara & Cramer, 1980). In addition, items in the PTCRS have been related to developmentally appropriate practices defined by the National Association for the

Education of Young Children (Bredekamp, 1987) and have been found to overlap in many areas (Sugawara, Doescher, & Peterson, 1988). Furthermore, construct validity studies have been conducted indicating that the scale successfully discriminates between subjects at various teacher preparation levels in predicted directions (Sugawara & Cramer, 1980), and is related to the self-concept of student teachers proposed on the basis of theoretical expectations (Sugawara et al., 1988).

Teacher behavior. The frequency and quality of selected teacher behaviors (both positive and negative) were coded during student teacher interactions with young children in small group activities within their early childhood teacher preparation experiences. Caldwell and Honig's (1971) Teacher Behavior Coding Categories (TBCC) was modified and used to assess the frequency and quality of selected teacher behaviors (both positive and negative) displayed by student teachers in interactions with young children in small group activities. In order to accomplish this task, subjects were videotaped for 40 minutes during four observation periods of 10 minutes each while they were interacting with children in small group activities (refer to the "Procedures for Videotaping" section). These small group activities consisted of four children from the preschool programs representing each gender: two American and two International children. Two types of activities were used in these small group sessions. They included two unstructured table activities with spontaneous, open-goal expectations, such as playdough and blocks with various play accessories. The other two types of small group activities were structured story time activities, involving teacher facilitation of

sequenced information and encouragement of children's cognitive receptive and expressive language skills, such as picture stories, and demonstration discussions.

Once videotaping of subjects' interactions with children in small group activities was completed, three early childhood specialists with advanced degrees in child development/early childhood education and two seniors majoring in early childhood education were used to code the frequency and quality of teacher behaviors displayed by subjects in the videotapes employing the TBCC. Using the TBCC videotape coding format, these observers were first asked to code the frequency of teacher behaviors displayed by subjects into various positive and negative, mutually exclusive categories. In spite of this fact, only the total frequency of positive and negative behaviors displayed by the subjects was used in data analyses. The positive and negative teacher behavior categories and their descriptions are described following:

Positive Behavior Categories - any verbal or nonverbal behavior by the teacher that promotes a child's involvement in an unstructured table or structured story time activity in an affirmative manner:

EB (1) Ego Boosting - any positive verbal behavior by the teacher that encourages the child's actions in an affirmative manner.

For example, the teacher may say, "I really like the way you listened." May also include statements describing the child's actions in an affirmative manner, such as "You made a blue line."

- T** (2) **Teaching** - any positive verbal behavior by the teacher that informs or directs the child in the learning or acquisition of additional information. For example, the teacher may say, "Here is your doll," or "Look at the red Lego."
- Q** (3) **Questioning** - any positive verbal behavior by the teacher that asks for a response by a child. Questions may be of two types: closed or open. Closed questions encourage a child to give a specific or limited response, such as "yes" or "no," or one specific answer. For example, "Do you want some playdough?" or "Is this ball red or white?" Open questions encourage a child to provide extended or variable responses, such as "What colors can a ball be?," "Why do you think Susie is so sad?"
- A** (4) **Attending** - any positive nonverbal behavior by a teacher toward a child that is not solicited by the child (e.g., looking, smiling, gesturing, touching, holding, or helping).

Negative Behavior Categories - any verbal or nonverbal behavior by the teacher that does not promote a child's involvement in an unstructured table or structured story time activity in an affirmative manner:

- COMM** (1) **Commanding** - any negative verbal behavior by the teacher that directs a child to behave in a particular manner. For

example, the teacher may say, "Sit down" or "Be quiet."

May also include such statements by the teacher as "Sit down James, so Sarah can see."

NR (2) Negatively Responding - any verbal negative behavior by the teacher that forbids, restricts, criticizes, or threatens a child. For example, a teacher may say, "Don't take Sarah's lion," "No, that is not a rectangle," or "If you don't sit down, I won't read the story." May also include such statements by the teacher as "Please, don't do that."

IG (3) Ignoring - any negative nonverbal behavior by the teacher that fails to respond to a child's solicitations. When this occurs the teacher intentionally or unintentionally does not respond to a child's statements, questions, or actions. The child may say, "I'm drawing a horse," but teacher does not look at the child.

PC (4) Physical Control - any negative nonverbal behavior by the teacher that restrains the child's actions by physical means.

The total number of behaviors coded across all positive and negative behavior categories represented the total frequency of positive and negative teacher behaviors scores, respectively. Higher scores represented a higher frequency of positive or negative behaviors displayed by subjects toward children during small group activities.

In addition to coding the frequency of positive and negative teacher behaviors displayed by student teachers, coders were also asked to rate the overall quality of positive and negative behaviors displayed by subjects in interacting with young children in small group activities. A 7-point scale from virtually no positiveness (or negativeness) to very high positiveness (or negativeness) was used in the rating.

More specifically, the following scale was used in the rating:

- 1 point = **Virtually No Positiveness (Negativeness)** - use this rating if you experienced no positive (negative) feelings about the teacher's behavior toward this child.
- 2 points = **Low Positiveness (Negativeness)** - use this rating if you experienced only minimal positive (negative) feelings about the teacher's behavior toward this child.
- 3 points = **Some Positiveness (Negativeness)** - use this rating if you experienced slightly more than minimal positive (negative) feelings about the teacher's behavior toward this child.
- 4 points = **Moderate Positiveness (Negativeness)** - use this rating if you experienced a fair level of positive (negative) feelings about the teacher's behavior toward this child.

- 5 points = **More Than Moderate Positiveness (Negativeness)** - use this rating if you experienced slightly more than a fair level of positive (negative) feelings about the teacher's behavior toward this child.
- 6 points = **High Positiveness (Negativeness)** - use this rating if you experienced an elevated level of positive (negative) feelings about the teacher's behavior toward this child.
- 7 points = **Very High Positiveness (Negativeness)** - use this rating if you experienced an extremely elevated level of positive (negative) feelings about the teacher's behavior toward this child.

A higher rating on the 7-point scale represented a higher quality of positive or negative behaviors displayed by subjects toward young children in small group activities.

As described previously, the final data for this study included 40 minutes of videotaped observations of subjects' interactions with children in small group activities in four 10-minute observation units. Two of these 10-minute observation units were of subjects interacting with children in unstructured small group table activities (i.e., blocks, playdough), while the remaining two 10-minute observation units were of subjects interacting with children in structured small group story time activities (i.e., picture stories and demonstration discussions). These 40 minutes of

videotaped observations for each subject were established based on a gleaning of observational studies reported in the journals, Child Development and Education, over the last five years (Borick & Klinzing, 1984; Fassnacht, 1982). In these studies, total observational times ranged from 15 minutes to one hour. Therefore, the present study chose an observation time somewhere in the middle of these two. In addition, the 10-minute observation units of subjects interacting with children in small group activities was chosen on the basis of classroom practices relative to the length of time children spent in small group activity settings, a pilot study utilizing sample videotapes of student teachers interactions with children in such settings, and observation strategies recommended by the research literature (Borick & Klinzing, 1984; Fassnacht, 1982; Martin & Bateson, 1990).

In coding the data found in these 10-minute videotaped observation units, the method of continuous coding, using the positive and negative behavior found in TBCC, was used. In this manner, the actual frequency of all positive and all negative behaviors displayed by student teachers toward children were coded then summed. As indicated previously, only the total frequency of positive and negative behaviors displayed by student teachers toward children was used in data analyses. Following the coding of the 10-minute videotaped sessions for the frequency of positive and negative behaviors displayed by student teachers toward children, coders were also asked to rate the overall quality of positive and negative behaviors displayed by student teachers in these sessions. As a result of this coding and rating procedures used with 67 student-teacher subjects, each involved in four, 10-minute

observation units, interacting with two International and two American children of each gender in each 10-minute observation units, a total of 1,072 minutes of teacher behavior were coded and rated for the frequency and quality of positive and negative behaviors displayed, respectively (that is, 536 minutes each for International and American children over four, 10-minute small group activity sessions participated in by 67 student-teacher subjects of this study).

In order to ensure reliability for the coding of student-teacher behaviors found in the 10-minute observation units, three early childhood specialists with advanced degrees in child development/early childhood education and two seniors majoring in early childhood education were used as coders. These coders were trained to use the TBCC with two videotaped activity sessions, including both an unstructured table and a structured story time activity session, similar to those collected in the study sample. Training with these sample videotapes continued until coders achieved intercoder reliability coefficients for their frequency codings and quality ratings of both positive and negative teacher behaviors of .72 or above with all other coders, watching the same two 10-minute sample videotaped sessions.

Once the intercoder reliability standard was established at training, the 10-minute videotaped activity sessions collected from subjects in this study were randomly assigned to individual coders for coding. Reliability checks were conducted at the conclusion of every 12 consecutive subjects coded or after 120 minutes of coding. As a result, four intercoder reliability checks, in addition to the initial training reliability, were conducted in this study. The 10-minute videotaped

activity sessions (i.e., always including one unstructured table and one structured story time activity) used to establish intercoder reliability checks among coders were randomly selected from among all the 10-minute videotaped activity sessions collected for this study. During intercoder reliability checks among coders, if reliability coefficients fell below the standard coefficient of .72, training with the initial training reliability tape was pursued until the reliability standard was again achieved on the reliability check videotapes.

Table 4 summarizes the Pearson product-moment intercoder reliability coefficients calculated for coding the two 10-minute videotaped sessions at initial training and at four reliability checks for the frequency and quality of positive and negative behaviors displayed by student teachers toward children. The reliability coefficients included in the table consists of (a) an average coefficient for each coder calculated from the coefficients obtained by correlating the codings of each coder with two other coders, (b) the range of coefficients calculated among five sets of three coders, and (c) the average coefficients calculated across all five sets of three coders. Please note that the reliability coefficients included in Table 4 after 240 minutes did not involve Coder 2, and those after 360 and 480 minutes did not include Coder 1 or 2. These coders dropped out of the study due to other work and study commitments.

Overall, the intercoder reliability coefficients computed were satisfactory, with coefficients ranging from .72 to 1.00. The mean coefficients across all five sets of three coders were relatively high, ranging from .78 to .94. The similarity of

Table 4. Intercoder Reliability Coefficient for Frequency and Quality of Positive and Negative Behaviors in Videotaped Small Group Activity Sessions

Reliability check	FP	QP	FN	QN
1. Initial training				
Coder 1 mean \bar{r}	.91	.80	.92	.87
Coder 2 mean \bar{r}	.92	.87	.79	.91
Coder 3 mean \bar{r}	.91	.80	.92	.87
Coder 4 mean \bar{r}	.84	.85	.91	.86
Coder 5 mean \bar{r}	.91	.80	.92	.87
RANGE \bar{r}	.79-.96	.74-.94	.76-.97	.77-.95
MEAN \bar{r}	.90	.82	.89	.88
2. After 120 mins. or 12 subjects (one-10 min. ses. each)				
Coder 1 mean \bar{r}	.87	.89	.79	.73
Coder 2 mean \bar{r}	.92	.87	.79	.91
Coder 3 mean \bar{r}	.87	.89	.79	.73
Coder 4 mean \bar{r}	.90	.91	.84	.82
Coder 5 mean \bar{r}	.87	.89	.79	.73
RANGE \bar{r}	.76-.95	.80-.94	.73-.86	.72-.92
MEAN \bar{r}	.88	.89	.80	.78
3. After 240 mins. or two sets of 12 subjects (one-ten min. ses. each).				
Coder 1 mean \bar{r}	.94	.88	.82	.94
Coder 2 mean \bar{r}	-	-	-	-
Coder 3 mean \bar{r}	.94	.88	.82	.94
Coder 4 mean \bar{r}	.90	.87	.94	.85
Coder 5 mean \bar{r}	.94	.88	.82	.94
RANGE \bar{r}	.85-.99	.82-.95	.75-.96	.72-.95
MEAN \bar{r}	.93	.88	.85	.91

Table 4 continued on next page

Table 4, continued

Reliability checks	FP	QP	FN	QN
4. After 360 mins. or 3 sets of 12 subjects (one- 10 mins ses. each.				
Coder 1 mean \bar{r}	-	-	-	-
Coder 2 mean \bar{r}	-	-	-	-
Coder 3 mean \bar{r}	.90	.87	.94	.85
Coder 4 mean \bar{r}	.90	.87	.94	.85
Coder 5 mean \bar{r}	.90	.87	.94	.85
RANGE \bar{r}	.85-1.00	.82-.91	.91-.96	.72-.92
MEAN \bar{r}	.90	.87	.94	.85
5. After 480 mins. or 4 sets of 12 subjects (one- 10 min. ses. each).				
Coder 1 mean \bar{r}	-	-	-	-
Coder 2 mean \bar{r}	-	-	-	-
Coder 3 mean \bar{r}	.86	.91	.84	.86
Coder 4 mean \bar{r}	.86	.91	.84	.86
Coder 5 mean \bar{r}	.86	.91	.84	.86
RANGE \bar{r}	.76-1.00	.74-.96	.73-.97	.72-1.00
MEAN \bar{r}	.86	.91	.84	.86
6. Summary				
RANGE \bar{r}	.76-1.00	.74-.96	.73-.97	.72-1.00
MEAN \bar{r}	.89	.87	.86	.86
$N = 20$ checks				

Note. Observed Teacher Behaviors (OTB):
 FP = Frequency of Positive Behaviors
 QP = Quality of Positive Behaviors
 FN = Frequency of Negative Behaviors
 QN = Quality of Negative Behaviors

average coefficients among coders 3, 4, and 5 at reliability checks after 360 and 480 minutes are due to the fact that only these three coders were used to compute reliability estimates at this time.

The coding sheet that was used to code the videotaped activity sessions is located in Appendix G. In addition to the TBCC categories, the coding sheet included spaces to fill in the observation coder's number; student teacher's code number (i.e., a previously assigned subject number); child's code number; numbers for the child's gender, ethnicity, age, and socioeconomic status; the child's video position; program code number; room code number; observation number; video tape number; video log start and stop; activity type; and activity name (i.e., S = Structured, U = Unstructured). A section for summing the types of positive and/or negative behaviors displayed (total frequency) and a scale for rating the positive and negative quality of teacher behaviors displayed were also included.

Procedures

Since this study involved the administration of both survey instruments and videotaping subjects' interactions with children in small group activities, standardized procedures for conducting the survey and videotaping were followed.

Procedures for Conducting the Survey

The Self-Esteem Inventory (SEI), Personal Teaching Efficacy Scale (PTES), Family Support Scale (FSS), Work Environment Scale (WES), and Demographic

Questionnaire were compiled in the form of a booklet for administration to subjects. A cover letter was attached to each booklet explaining the purpose and significance of the study, asking subjects for their cooperation in the research project, and assuring them of the confidentiality of all responses given by them on the instruments. The order of the SEI, PTES, FSS, and WES in the booklet was counterbalanced to control for order effects. The Demographic Questionnaire was attached at the end of the booklet, followed by blank spaces for subjects to make additional comments about the research project. A note of appreciation to subjects for their participation marked the end of the survey. This survey portion of the research was administered to the subjects at approximately the sixth week of their teacher preparation experiences.

In addition to the instruments administered to subjects, the Preschool Teacher Competency Rating Scale (PTCRS) was also compiled in the form of a booklet for head and assistant teachers to complete on each subject they supervised in their teacher preparation experiences. This scale was also administered to head and assistant teachers at approximately the sixth week of their students' teacher preparation experiences.

Procedures for Videotaping

As indicated previously, each subject was videotaped for 40 minutes during four observation periods of 10 minutes each as they interacted with children in small group activities. Two of these 10-minute observation periods occurred during

unstructured table activities, while the other two occurred during structured story time activities. These videotapings took place during the third through the sixth week of subjects' student teaching experiences during Fall, Winter, and Spring terms of the academic year 1991-1992. A total of approximately six subjects was videotaped each day, representing about two teachers from three separate (two morning and one afternoon) preschool programs. Each subject was videotaped only once for each type of activity in a single day.

Two small classrooms used as a part of the preschool program for small group activities were employed to videotape subjects interacting with children in small group activities. These two rooms were separated by an observation area that included one-way mirrors into each room and two videocameras to record activities in each room. Videotaping occurred during free play and small group story time of each preschool program. The unstructured table and structured story time activities were set up at different times of the preschool day, reflecting the schedule of daily activities. Both classrooms were set up identically, with the same type of activity. One room was called the Zoo Room, while the other was called the Circus Room.

Subjects were randomly selected from the pool of student teachers within each preschool program for videotaping on a particular day by the researcher. The researcher brought the subjects to one of the classrooms, and gave them instructions, following a standard format, including where to sit, the nature of the activity, and a short time to ask questions. Videotaping began when the subject sat at the table, waiting for instructions.

Meanwhile, another researcher randomly selected four children from the preschool programs on that particular day, including two American and two International child-pairs of each gender. The children from International cultures included those from Korea, Japan, China, India, Mexico, and France. Once selected, both the American and International children were directed to the small observation classrooms by the researcher, who told them that it was their turn to play in the Zoo or the Circus Room. When the last child was seated or standing at the small group activity table with the student teacher, the timing for the 10-minute observation period commenced. When the small group activity period was completed, the researcher slipped a construction paper under the classroom door, informing the student teacher that the children had three minutes left to play. This procedure was systematically followed for all subjects and groups of children in this study.

RESULTS

The primary purpose of this study was to examine the relative contributions of selected personal and social perceptual factors to the teaching performance of 67 female, undergraduate, Caucasian (U.S. citizens) students, enrolled as student teachers in an early childhood teacher preparation program. These student teachers were classified into five teacher preparation levels (TPL), from beginning (TPL I) to advanced (TPL V), based on their coursework as well as past informal and formal teaching and training experiences. The personal perceptual factors included the student teachers' self-esteem (SE) and motivation (PTE = personal teaching efficacy), while the social perceptual factors included their family (FS), peer (PS), and supervisor (SS) support, as well as their work environment autonomy (WA). The dimensions of student teacher performance included both teacher competency ratings by supervisors (PTCRS) and observed teacher behaviors (OTB) in small group activity settings. These observed teacher behaviors consisted of the frequency of positive behaviors (FP), quality of positive behaviors (QP), frequency of negative behaviors (FN), and quality of negative behaviors (QN) displayed by student teachers toward preschool children in these small group activities. Finally, the early childhood teacher preparation environment represented a multicultural preschool setting in which children from both International and U.S. cultures were enrolled. Therefore, this study also examined the relative contributions of selected personal and social perceptual factors to the student teachers' frequency and quality of

positive and negative behaviors displayed toward children from both International and U.S. cultures.

The results of this study are presented in three major sections. Section I focuses upon results relative to the teacher competency ratings (PTCRS) of student teachers. In this section, means, standard deviations and ranges of all predictors (i.e., all personal and social perceptual factors plus teacher preparation level) and the criterion variables are presented, followed by Pearson correlation coefficients expressing the relationships among these variables. Finally, results obtained through application of a non-hierarchical multiple regression analysis computed to determine the relative contributions of the predictor variables to the criterion variable of teacher competency (PTCRS) are presented.

Section II focuses upon results associated with preliminary analyses of data involving the application of a five-way MANOVA to all observed teacher behavior scores of student teachers to determine the main and interaction effects of children's ethnicity (CE = International vs. American), gender (CG = boys vs. girls), age (CAGE = older vs. younger), socioeconomic status (CSES = higher vs. lower), and type of activity (ACT = unstructured table vs. structured story time) on aspects of observed teacher behavior scores. The sample of children used in this analysis included 37 International and 43 American children, 47 were boys and 33 girls, randomly assigned to interact with student teachers in small group activities. The age ranges (in months) of these children were 39.00 to 67.00 for boys (\bar{M} = 51.15), and 38.00 to 68.00 for girls (\bar{M} = 50.77). The socioeconomic status of families from

which these children came ranged from 14.00 to 66.00 (\bar{M} = 54.55), based on Hollingshead's (1977) Four Factor Index of Social Position. The mean age (\bar{M} = 50.96) and socioeconomic status (\bar{M} = 54.55) scores of these children were used to divide the sample into older and younger, and higher and lower socioeconomic groups, respectively. The two types of small group activities in which they participated included an unstructured table activity and a structured story time. As previously indicated, the variable of observed teacher behaviors included frequency of positive (FP), quality of positive (QP), frequency of negative (FN), and quality of negative (QN) behaviors displayed by student teachers toward children. Means and standard deviations relative to all variables used in this analysis were computed for interpretation purposes. Results obtained were employed to determine the manner in which all observed teacher behavior scores of student teachers would be further analyzed.

Finally, in Section III, results obtained relative to all observed behavior scores of student teachers are presented in a manner suggested by the preliminary analyses of data undertaken in Section II. First, means and standard deviations for all predictor and criterion variables are presented by ethnicity (CE), gender (CG), and activity type (ACT). Second, Pearson correlation coefficients expressing the relationship between the predictor and criterion variables by ethnicity and gender for unstructured table activities are presented. Third, results of a series of regression analyses applied to the data to determine the relative contributions of all predictor variables to aspects of the observed behavior scores of student teachers during

unstructured table activities by ethnicity (CE) and gender (CG) are presented.

Fourth, Pearson correlation coefficients expressing the relationships between the predictor and criterion variables by ethnicity (CE) and gender (CG) for structured story time are presented. Finally, results of a series of regression analyses applied to the data to determine the relative contributions of all predictor variables to aspects of the observed behavior scores of student teachers during structured story time by ethnicity (CE) and gender (CG) are presented.

The SPSS-PC Program (version 3.0) was used in all data analyses. The probability level of $p < .05$ or below was used as the criterion level for statistical significance.

Section I: Teacher Competency Ratings (PTCRS)

Table 5 summarizes the means, standard deviations, and ranges of all predictor and criterion variables used in the present analyses. The predictor variables included personal perceptual factors such as a student teacher's self-esteem (SE) and personal teaching efficacy (PTE), social perceptual factors such as family support (FS), peer support (PS), supervisor support (SS), and work environment autonomy (WA), and teacher preparation level (TPL). The criterion variable included the teacher competency ratings (PTCRS) of student teachers given by their supervisors. Preliminary analysis of data revealed a significant difference between the teacher competency scores of student teachers at the five teacher preparation levels, $F(4,62) = 4.04$, $p < .01$, therefore, this variable was added for analyses in this study.

Table 5. Means, Standard Deviations, and Ranges of Predictor Variables and Teacher Competency

Variables	Total		
	Mean	<u>SD</u>	Range
<u>Predictor variables</u>			
Personal perceptual factors			
Self-esteem (SE)	26.04	2.02	21 - 31
Personal teaching efficacy (PTE)	40.88	5.02	30 - 53
Social perceptual factors			
Family support (FS)	25.66	2.34	19 - 28
Peer support (PS)	21.96	1.88	18 - 29
Supervisor support (SS)	23.13	2.05	17 - 27
Work environment autonomy (WA)	24.21	2.40	18 - 29
Teacher preparation level (TPL)	2.48	1.15	1 - 5
<u>Criterion variable</u>			
Teacher competency (PTCRS)	227.92	46.64	84 - 306

Note. Analysis for preschool teacher competency ratings: $n = 67$

Relationships Between Predictor Variables and Teacher Competency Variable

Table 6 summarizes the correlation coefficients expressing the relationships between all of the predictor and criterion variables used in this section for data analyses. Results of these analyses will be presented in three parts: (a) within predictor variable relationships, (b) between predictor variable relationships, and (c) between predictor and criterion variables relationships.

Within predictor variable relationships. With respect to the relationship between the personal perceptual factors of self-esteem (SE) and personal teaching efficacy (PTE), no significant relationship was found. However, in reference to relationships between the social perceptual factors, two of significant relationships were found. Supervisor support (SS) was found to be significantly and positively related to peer support (PS; $r = .26, p < .05$), and work environment autonomy (WA) was found to be significantly and positively related to family support (FS; $r = .23, p < .05$).

Between predictor variable relationships. Regarding relationships between predictor variables, results indicated significant and positive relationships between personal teaching efficacy (PTE) and work environment autonomy (WA; $r = .41, p < .001$), and teacher preparation level (TPL; $r = .27, p < .01$). Teacher preparation level (TPL) was also found to be significantly and positively related to peer support (PS; $r = .24, p < .05$).

Table 6. Correlations among Predictor Variables and Teacher Competency

Categories	SE	PTE	FS	PS	SS	WA	TPL
Predictor variables							
Personal perceptual factors							
Self-esteem (SE)							
Personal teaching efficacy (PTE)	.10						
Social perceptual factors							
Family support (FS)	-.02	-.03					
Peer support (PS)	.16	.12	.09				
Supervisor support (SS)	.18	-.04	-.03	.26 *			
Work environment autonomy (WA)	.06	.41 ***	.23 *	.14	.10		
Teacher preparation level (TPL)	.00	.27 **	.10	.24 *	-.07	.06	
Criterion variable							
Teacher competency (PTCRS)	-.16	.26 *	.25 *	.11	-.01	.29 **	.33 **

* $p < .05$. ** $p < .01$. *** $p < .001$.

Between predictor and criterion variable relationships. Finally, in terms of the relationships between predictor and criterion variables, several significant relationships were found. The teacher competency ratings (PTCRS) of student teachers were significantly and positively related to personal teaching efficacy (PTE, $r = .26, p < .05$), family support (FS; $r = .25, p < .05$), work environment autonomy (WA; $r = .29, p < .01$), and teacher preparation level (TPL; $r = .33, p < .01$).

Summary

Overall, therefore, the following generalizations can be made from the above findings:

1. The personal perceptual factors of self-esteem and personal teaching efficacy were not related.
2. The social perceptual factors of family support, peer support, supervisor support, and work environment autonomy showed significant relationships, but in unique ways. Family support was positively related to work environment autonomy, while peer support was positively related to supervisor support.
3. The personal perceptual factor of personal teaching efficacy, the social perceptual factor of work environment autonomy, and the criterion variable of teacher competency were all positively related to each other. In addition, the social perceptual factor of family support was positively related to teacher competency.
4. The variable of teacher preparation level was positively related to the personal perceptual factor of personal teaching efficacy, the social perceptual factor

of peer support, and the criterion variable of teacher competency.

However, caution must be made relative to the interpretation of these results, since the correlation coefficients computed, though significant, were relatively low.

Regression Analysis

Finally, in order to determine the relative contributions of all predictor variables in this study to the criterion variable of teacher competency, a non-hierarchical regression analysis was applied to the data. As shown in Table 7, results revealed the overall regression model to be significant, $R^2 = .25$, $F(7,59) = 2.84$, $p < .01$. However, among the predictor variables, only teacher preparation level (TPL) contributed significantly and positively to the teacher competency ratings (PTCRS) of student teachers. None of the personal and social perceptual factors contributed significantly to teacher competency ratings (PTCRS).

Table 7. Non-hierarchical Regression Analysis for Teacher Competency Scores (PTCRS)

Predictor	R ²	Standardized regression coefficients	df	F-ratio	p <
<u>Model</u>	.25		7, 59	2.84**	.01
Personal perceptual factors					
Self-esteem (SE)		-.186			ns
Personal teaching efficacy (PTE)		.136			ns
Social perceptual factors					
Family support (FS)		.190			ns
Peer support (PS)		.008			ns
Supervisor support (SS)		.030			ns
Work environment autonomy (WA)		.180			ns
Teacher preparation level (TPL)		.264*			.03

* p < .05. ** p < .01.

Section II: Preliminary Analyses: Observed Teacher Behaviors

Results of a 2 (ethnicity: International vs. American), x 2 (gender: boys vs. girls), x 2 (age: older vs. younger), x 2 (socioeconomic status: higher vs. lower) x 2 (activity type: unstructured table vs. structured story time) MANOVA applied to all observed teacher behavior scores are summarized in Table 8. As previously described, the observed teacher behavior scores included student teachers' frequency of positive (FP), quality of positive (QP), frequency of negative (FN), and quality of negative (QN) behaviors displayed by student teachers toward children used in this study. Only first-order interaction effects were explored due to the limited number of children ($n = 80$) employed as subjects in this study.

Findings related to the multivariate- F indicate significant main effects for ethnicity, multivariate- $F(4,1037) = 21.58, p < .001$, gender, multivariate- $F(4,1037) = 3.82, p < .01$, and activity type, multivariate- $F(4,1037) = 2.34, p < .05$. No significant first-order interaction effects among the child's ethnicity, gender, age, socioeconomic status, and activity type were found.

Inspection of the univariate- F s associated with these significant findings found in Table 8 and their related means found in Table 9, revealed that International children had significantly lower frequency of positive, $F(1,1040) = 18.21, p < .001$, quality of positive, $F(1,1040) = 32.55, p < .001$, and significantly higher frequency of negative, $F(1,1040) = 43.46, p < .001$, and quality of negative, $F(1,1040) = 58.02, p < .001$, behaviors displayed toward them by student teachers than American children. In addition, girls had significantly lower frequency of

Table 8. MANOVA Applied to Four Teacher Behavior Scores of Student Teachers by Child's Ethnicity, Gender, Age, Socioeconomic Status, and Activity Type

Cell	Approx. F	FP	QP	FN	QN
		Univar. F-test	Univar. F-test	Univar. F-test	Univar. F-test
CE (Ethnicity)	21.58 ***	18.21 ***	32.55 ***	43.46 ***	58.02 ***
CG (Gender)	3.82 **	5.23 *	6.50 **	5.61 *	4.08 *
CAGE (Age)	.20	.23	.33	.45	.19
CSES (Socioeconomic status)	.94	1.98	1.91	1.82	.69
ACT (Activity type)	2.34 *	2.50	2.43	7.31 **	3.59
CE X CG	1.34	.91	.91	3.89 *	1.42
CE X CAGE	1.38	.05	.19	.08	.74
CE X CSES	2.27	1.52	1.17	7.68 **	8.36 **
CE X ACT	1.76	.78	1.74	.96	.003
CG X CAGE	.77	.78	.36	0.04	.27
CG X CSES	.66	2.52	2.14	.002	.00
CG X ACT	.47	.11	.34	1.004	.40
CAGE X CSES	.99	.03	.14	.03	.46
CAGE X ACT	.72	1.16	.81	.47	.002
CSES X ACT	.75	.30	.01	.86	1.06

Note. Observed teacher behaviors:

FP = Frequency of positive behaviors

FN = Frequency of negative behaviors

QP = Quality of positive behaviors

QN = Quality of negative behaviors

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 9. Mean Associated With Findings for MANOVA Applied to Four Teacher Behavior Scores of Student Teachers

Variables		FP	QP	FN	QN
CE	International	33.26	3.11	28.12	5.07
	American	41.47	3.97	16.53	3.43
CG	Girls	35.85	3.42	20.55	4.04
	Boys	38.88	3.67	24.10	4.45
CAGE ^a	Younger (below mean)	36.17	3.44	24.35	4.54
	Older (above mean)	38.67	3.66	20.12	3.93
CSES ^b	Lower (below mean)	40.75	3.89	17.76	3.64
	Higher (above mean)	35.83	3.39	24.39	4.52
ACT	Unstructured table	38.19	3.62	20.14	4.01
	Structured story time	36.54	3.46	24.51	4.49
CE by CG	International girls	32.34	3.07	25.06	4.75
	International boys	34.19	3.16	31.17	5.38
	American girls	39.37	3.77	16.04	3.33
	American boys	43.56	4.17	17.03	3.52
CE by CAGE	International by younger age	33.43	3.13	28.69	5.16
	International by older age	32.93	3.08	27.02	4.90
	American by younger age	40.81	3.96	16.97	3.50
	American by older age	41.88	3.98	16.26	3.38
CE by CSES	International by lower SES	35.64	3.32	21.49	4.30
	International by higher SES	33.03	3.09	28.75	5.14
	American by lower SES	41.59	3.98	17.15	3.54
	American by higher SES	41.33	3.96	15.82	3.30
CE by ACT	International by unstructured	33.73	3.15	24.87	4.78
	International by structured	32.79	3.08	31.37	5.35
	American by unstructured	42.66	4.09	15.42	3.24
	American by structured	40.28	3.85	17.65	3.62

Table 9 continued on next page

Table 9, Continued

Variables	FP	QP	FN	QN
CG by CAGE				
Girls by younger age	35.57	3.23	22.79	4.38
Girls by older age	38.08	3.60	18.36	3.71
Boys by younger age	38.50	3.62	25.76	4.69
Boys by older age	39.33	3.72	22.09	4.17
CG by CSES				
Girls by lower SES	37.39	3.62	17.04	3.53
Girls by higher SES	35.15	3.33	22.17	4.28
Boys by lower SES	44.19	4.16	18.50	3.76
Boys by higher SES	36.51	3.45	26.59	4.76
CG by ACT				
Girls by unstructured	35.78	3.42	17.73	3.71
Girls by structured	35.93	3.42	23.37	4.37
Boys by unstructured	40.61	3.82	22.56	4.31
Boys by structured	37.14	3.51	25.64	4.60
CAGE by CSES				
Younger age by lower SES	40.75	3.88	18.57	3.80
Younger age by higher SES	35.37	3.36	25.36	4.67
Older age by lower SES	40.75	3.89	17.49	3.59
Older age by higher SES	36.68	3.44	22.63	4.24
CAGE by ACT				
Younger age by unstructured	37.03	3.53	21.67	4.28
Younger age by structured	35.37	3.36	26.84	4.79
Older age by unstructured	39.37	3.72	18.61	3.74
Older age by structured	37.91	3.59	21.76	4.13
CSES by ACT				
Lower SES by unstructured	41.89	3.97	17.08	3.51
Lower SES by structured	39.54	3.80	18.48	3.78
Higher SES by unstructured	36.45	3.46	21.59	4.24
Higher SES by structured	35.23	3.32	27.12	4.79

Note. Observed teacher behaviors:

FP = Frequency of positive behaviors

FN = Frequency of negative behaviors

QP = Quality of positive behaviors

QN = Quality of negative behaviors

^aChild's age mean scores = 50.96

^bChild's SES mean scores = 54.55

positive, $F(1,1040) = 5.23, p < .01$, quality of positive, $F(1,1040) = 6.50, p < .01$, frequency of negative, $F(1,1040) = 5.61, p < .05$, and quality of negative, $F(1,1040) = 4.08, p < .05$, behaviors displayed by student teachers toward them than toward boys. Furthermore, more frequency of negative behaviors were displayed toward children during structured story time than during unstructured table activities, $F(1,1040) = 7.31, p < .01$.

A few other significant univariate-Fs were found relative to first-order interaction effects associated with ethnicity x gender (frequency of negative behaviors), $F(1,1040) = 3.89, p < .05$, and ethnicity x socioeconomic status (frequency and quality of negative behaviors), $F(1,1040) = 7.68, p < .01$ and $F(1,1040) = 8.36, p < .001$, respectively. However, none of the multivariate-Fs related to these interaction effects were significant, therefore, they were not considered in data interpretation. The fact that significant main effects were found in the MANOVA for ethnicity (CE), gender (CG), and activity type (ACT), however, suggested that further analyses of the observed teacher behavior data should consider these variables in analyses.

Section III: Final Analyses: Observed Teacher Behaviors

Table 10 summarizes the means and standard deviations of the predictor and criterion variables associated with analyses of data by ethnicity (International vs. American), gender (boys vs. girls), and activity type (unstructured table vs. structured story time). Again, the predictor variables included the personal perceptual factors

Table 10. Means and Standard Deviations for Predictor Variables and Observed Teacher Behaviors by Ethnicity, Gender, and Activity Type

Variables		Mean			SD		
Predictor variables							
Personal perceptual factors							
Self-esteem (SE)		26			2.02		
Personal teaching efficacy (PTE)		40.88			5.02		
Social perceptual factors							
Family support (FS)		25.66			2.34		
Peer support (PS)		21.96			1.88		
Supervisor support (SS)		23.13			2.05		
Work environment autonomy (WA)		24.21			2.40		
Teacher preparation level (TPL)		2.48			1.14		
Criterion variables (OTB)		International			American		
		Girls	Boys	Total	Girls	Boys	Total
FP							
Unstructured table	Mean	33.03	34.43	33.73	38.52	46.80	42.66
	SD	13.65	15.52	14.61	14.01	16.41	15.78
Structured story time	Mean	31.64	33.95	32.79	40.22	40.33	40.28
	SD	14.76	16.22	15.52	17.76	16.74	17.23
QP							
Unstructured table	Mean	3.10	3.19	3.15	3.73	4.46	4.09
	SD	1.11	1.22	1.16	1.25	1.40	1.37
Structured story time	Mean	3.03	3.13	3.08	3.81	3.89	3.85
	SD	1.23	1.38	1.30	1.51	1.41	1.46
FN							
Unstructured table	Mean	21.22	28.51	24.87	14.23	16.60	15.42
	SD	11.02	15.76	14.05	9.71	10.16	9.99
Structured story time	Mean	28.90	33.84	31.37	17.84	17.45	17.65
	SD	15.95	18.42	17.37	13.42	11.47	12.46
QN							
Unstructured table	Mean	4.37	5.19	4.78	3.05	3.42	3.24
	SD	1.74	1.70	1.76	1.60	1.51	1.57
Structured story time	Mean	5.13	5.57	5.35	3.61	3.62	3.62
	SD	1.75	1.71	1.75	1.88	1.82	1.85

Note. Analysis for observed teacher behavior scores: $n = 1,072$

Observed Teacher Behaviors (OTB):

FP = Frequency of Positive Behaviors

FN = Frequency of Negative Behaviors

QP = Quality of Positive Behaviors

QN = Quality of Negative Behaviors

of self-esteem (SE), and personal teaching efficacy (PTE), the social perceptual factors of family support (FS), peer support (PS), supervisor support (SS), and work environment autonomy (WA), and teacher preparation level (TPL). The criterion variable included all observed teacher behaviors such as frequency of positive (FP), quality of positive (QP), frequency of negative (FN), and quality of negative (QN) behaviors displayed by student teachers toward International and American girls and boys during unstructured table and structured story time activities.

Observed Teacher Behaviors During Unstructured Table Activities

Table 11 summarizes the correlation coefficients computed expressing the relationships among all predictor and criterion variables, including all aspects of observed teacher behaviors displayed toward children during unstructured table activities. Results from these analyses are presented in four parts: (a) relationships among predictor variables and positive teacher behaviors, (b) relationships among predictor variables and negative teacher behaviors, (c) relationships within positive and within negative teacher behaviors, and (d) relationships among positive and negative teacher behaviors.

Relationships Between Predictor Variables and Positive Teacher Behaviors During Unstructured Table Activities

Findings associated with the positive behaviors displayed by student teachers toward International girls and boys during unstructured table activities will be presented first, followed by those for American girls and boys.

Table 11. Correlations Among Predictor Variables and Observed Teacher Behaviors by Ethnicity and Gender During Unstructured Table Activities

Children	OTB	Personal perceptual factors		Social perceptual factors				TPL	FP	QP	FN
		SE	PTE	FS	PS	SS	WA				
International											
Girls	FP	-.16 *	.16 *	.05	.02	-.01	.07	.07			
	QP	-.11	.11	.08	.04	.03	.13	.03	.92 ***		
Boys	FP	.02	.05	.10	.01	.19 **	-.05	.15 *			
	QP	.06	-.03	.14 *	.01	.21 **	-.03	.12	.93 ***		
American											
Girls	FP	-.24 **	-.04	-.02	-.12	-.11	-.05	-.03			
	QP	-.25 **	-.04	-.02	-.10	-.10	.02	-.004	.95 ***		
Boys	FP	.02	-.09	-.004	-.07	.04	-.10	.001			
	QP	.01	-.05	.04	-.06	.01	-.06	.05	.93 ***		
International											
Girls	FN	.03	.12	.05	.04	.08	-.09	-.06	-.19 **	-.20 **	
	QN	-.01	.09	.08	.04	.07	-.10	-.03	-.18 *	-.19 **	.94 ***
Boys	FN	.09	-.18 *	.06	-.09	.14 *	-.16 *	-.18 *	-.15 *	-.11	
	QN	.03	-.11	.06	-.08	.10	-.13	-.07	-.21 **	-.15 *	.82 ***
American											
Girls	FN	-.04	.04	.02	-.004	.05	-.08	-.12	-.20 **	-.18 *	
	QN	-.04	.04	.04	-.01	.01	-.12	-.08	-.12	-.11	.95 ***
Boys	FN	-.002	.05	-.13	.07	.21 **	-.12	-.08	-.20 **	-.22 **	
	QN	.05	.02	-.19 **	.04	.16 *	-.19 **	-.13	-.12	-.13	.87 ***

Note.

SE = Self-esteem

PTE = Personal teaching efficacy

FS = Family support

PS = Peer support

SS = Supervisor support

WA = Work environment autonomy

TPL = Teacher preparation level

Observed teacher behaviors (OTB):

FP = Frequency of positive behaviors

QP = Quality of positive behaviors

FN = Frequency of negative behaviors

QN = Quality of negative behaviors

* $p < .05$. ** $p < .01$. *** $p < .001$.

International girls and boys. Among International girls, the personal perceptual factors of self-esteem (SE) and personal teaching efficacy (PTE) were negatively ($r = -.16, p < .05$) and positively ($r = .16, p < .05$) related to the frequency of positive behaviors (FP) displayed by student teachers toward them during unstructured table activities, respectively. However, none of the social perceptual factors was related to student teachers' frequency of positive behaviors (FP) displayed toward International girls during unstructured table activities. Furthermore, none of the personal and social perceptual factors was related to the quality of positive behaviors (QP) displayed by student teachers toward International girls.

Among International boys, none of the personal perceptual factors was significantly related to the frequency (FP) and quality (QP) of positive behaviors displayed by student teachers toward them during unstructured table activities. Only the social perceptual factors of supervisor support (SS) was found to be related to the frequency of positive behaviors (FP; $r = .19, p < .01$) displayed by student teachers toward International boys. In addition, the social perceptual factors of family support (FS; $r = .14, p < .05$) and supervisor support (SS; $r = .21, p < .01$) were found to be positively related to the quality of positive behaviors (QP) displayed by student teachers toward International boys during unstructured table activities. Finally, the variable of teacher preparation level (TPL; $r = .15, p < .05$) was found to be positively related to the frequency of positive behaviors (FP) displayed by student teachers toward only International boys.

American girls and boys. Among American girls, only the personal perceptual factor of self-esteem (SE) was found to be negatively related to the frequency (FP; $r = -.24$, $p < .01$) and quality (QP; $r = -.25$, $p < .01$) of positive behaviors displayed by student teachers toward them during unstructured table activities. None of the other personal and social perceptual factors were found to be significantly related to the frequency (FP) and quality (QP) of positive behaviors displayed by student teachers toward American girls during unstructured table activities.

Among American boys, none of the significant personal and social perceptual factors were found to be significantly related to either the frequency (FP) or quality (QP) of positive behaviors displayed student teachers toward them during unstructured table activities. Furthermore, the variables of teacher preparation level (TPL) was not found to be significantly related to the frequency (FP) and quality (QP) of positive behaviors displayed by student teachers toward American boys and girls during unstructured table activities.

Relationships Between Predictor Variables and Negative Teacher Behaviors During Unstructured Table Activities

Findings associated with the negative behaviors displayed by student teachers toward International girls and boys during unstructured table activities will be presented first, followed by those for American girls and boys.

International girls and boys. Among International girls, none of the personal and social perceptual factors were found to be significantly related to the frequency (FN) and quality (QN) of negative behaviors displayed by student teachers toward them during unstructured table activities. Among International boys, however, only the personal perceptual factor of personal teaching efficacy (PTE) was found to be negatively related to the frequency of negative behaviors (FN; $r = -.18, p < .05$) displayed by student teachers toward them. In addition, only the social perceptual factors of supervisor support (SS; $r = .14, p < .05$) and work environment autonomy (WA; $r = -.16, p < .05$) were found respectively to be positively and negatively related to the frequency of negative behaviors (FN) displayed by student teachers toward International boys during unstructured table activities. Furthermore, none of the personal and social perceptual factors was found to be related to the quality of negative behaviors (QN) displayed by student teachers toward International boys. Finally, the variable of teacher preparation level (TPL; $r = -.18, p < .05$) was found to be negatively related to the frequency of negative behaviors (FN) displayed by student teachers toward only International boys during unstructured table activities.

American girls and boys. Among American girls, none of the personal and social perceptual factors was found to be significantly related to the frequency (FN) and quality (QN) of negative behaviors displayed by student teachers toward them during unstructured table activities. In addition, among American boys, none of the personal perceptual factors was found to be significantly related to the frequency (FN) and quality (QN) of negative behaviors displayed by student teachers toward

them during unstructured table activities. On the other hand, the social perceptual factor of supervisor support (SS; $r = .21$, $p < .01$) was found to be positively related to the frequency of negative behaviors (FN) displayed by student teachers toward American boys. Furthermore, while the social perceptual factors of family support (FS; $r = -.19$, $p < .01$) and work environment autonomy (WA; $r = -.19$, $p < .01$) were found to be negatively related to the quality of negative behaviors (QN) displayed by student teachers toward American boys during unstructured table activities, the social perceptual factors of supervisor support (SS; $r = .16$, $p < .05$) was found to be positively related to the quality of negative behaviors (QN) displayed by student teachers toward American boys. Finally, the variable of teacher preparation level (TPL) was not found to be significantly related to the frequency (FN) and quality (QN) of negative behaviors displayed by student teachers toward American boys during unstructured table activities.

Relationships Within Positive and Within Negative Teacher Behaviors During Unstructured Table Activities

Also summarized in Table 11 are the correlation coefficients expressing the relationships among positive aspects and among negative aspects of teacher behaviors for both International and American girls and boys. Findings revealed that the frequency of positive behaviors (FP) was positively related to the quality of positive behaviors (QP) displayed by student teachers toward International girls ($r = .92$, $p < .001$), International boys ($r = .93$, $p < .001$), American girls ($r = .95$, $p < .001$), American boys ($r = .96$, $p < .001$), International girls and boys ($r = .94$, $p < .001$), and American girls and boys ($r = .97$, $p < .001$).

.001) and American boys ($r = .93, p < .001$). In addition, findings indicated that the frequency of negative behaviors (FN) was positively related to the quality of negative behaviors (QN) displayed by student teachers toward International girls ($r = .94, p < .001$), International boys ($r = .82, p < .001$), American girls ($r = .95, p < .001$), and American boys ($r = .87, p < .001$).

Relationships Between Positive and Negative Teacher Behaviors During Unstructured Table Activities

Findings associated with the relationships between aspects of positive teacher behaviors (i.e., FP and QP) and aspects of negative teacher behaviors (i.e., FN and QN) among International and American girls and boys are also found in Table 11. Findings revealed that among International girls and boys, the correlation coefficients obtained between variables indicated that they were all negatively related to each other. Of the 16 correlation coefficients calculated among these variables, 11 were statistically significant ($p \leq .05$).

Summary

In summary, on the basis of the results described above regarding the relationships among all predictor variables and the criterion variable of observed behaviors of student teachers displayed toward International and American girls and boys during unstructured table activities, the following generalizations can be made:

1. Among International and American girls, personal perceptual factors were more significantly related to the positive behaviors displayed by student teachers toward them during unstructured table activities than were social perceptual factors. This was particularly true of the personal perceptual factor of self-esteem (SE), which was negatively related to the frequency of positive behaviors (FP) displayed by student teachers toward International and American girls, and the quality of positive behaviors (QP) displayed toward American girls. The personal perceptual factor of personal teaching efficacy (PTE) was positively related to the frequency of positive behaviors (FP) displayed by student teachers toward International girls. The one exception to this generalization had to do with International boys, in which the personal perceptual factor of personal teaching efficacy (PTE) was negatively related to the frequency of negative behaviors (FN) displayed by student teachers toward them.

2. Among International and American boys, the social perceptual factors were more strongly related to both positive and negative behaviors displayed by student teachers during unstructured table activities than the personal perceptual factors. This was primarily true among International boys relative to the frequency (FP) and quality (QP) of positive behaviors displayed by student teachers toward them during unstructured table activities. It was also true among International boys relative to the frequency (FN) of negative behaviors displayed toward them by student teachers, and among American boys relative to the frequency (FN) and quality (QN) of negative behaviors displayed toward them by student teachers. The

social perceptual factors of significance included those associated with supervisor support (SS), family support (FS), and work environment autonomy (WA).

Supervisor support (SS) was positively related to International boys' frequency (FP) and quality (QP) of positive behaviors, International boys' frequency (FN) of negative behaviors, and American boys' frequency (FN) and quality (QN) of negative behaviors displayed by student teachers toward them. Family support (FS) was positively related to International boys' quality of positive behaviors (QP) displayed toward them by student teachers, and negatively related to American boys' quality of negative behaviors (QN) displayed toward them by student teachers. Work environment autonomy (WA) was negatively related to International boys' frequency of negative behaviors (FN) displayed toward them by student teachers, and American boys' quality of negative behaviors (QN) displayed toward them by student teachers.

3. The variable of teacher preparation level (TPL) was significantly and positively related to International boys' frequency of positive behaviors (FP), and significantly and negatively related to frequency of negative behaviors (FN) displayed by student teachers toward them during unstructured table activities.

4. The frequency (FP) and quality (QP) of positive behaviors displayed by student teachers toward International and American boys and girls during unstructured table activities were positively related.

5. The frequency (FN) and quality (QN) of negative behaviors displayed by student teachers toward International and American boys and girls during unstructured table activities were positively related.

6. Aspects of positive behaviors (i.e., FP and QP) and aspects of negative behaviors (i.e., FN and QN) displayed by student teachers toward International and American boys and girls during unstructured table activities were negatively related, with a large majority of them statistically significant ($n = 11$ of 16).

Caution must be made in interpreting the results obtained in this portion of the analyses, since all significant correlation coefficients were relatively low, with the exception of the relationships within positive and negative behaviors displayed by student teachers toward International and American children.

Regression Analyses

Table 12 summarizes the series of 16 separate non-hierarchical multiple regression analyses applied to the data to determine the relative contributions of all predictor variables to the criterion variable, which included aspects of observed positive and negative behaviors displayed by student teachers toward International and American girls and boys during unstructured table activities. Findings revealed only 2 of the 16 regression models tested were significant. One of these included the model involving the frequency of negative behaviors (FN) displayed by student teachers toward International boys ($R^2 = .11$, $F(7,126) = 2.18$, $p < .05$). Although this model was significant, none of the predictor variables including the personal and social perceptual factors as well as teacher preparation level contributed significantly to student teachers' frequency of negative behaviors displayed toward International boys during unstructured table activities.

Table 12. Non-hierarchical Multiple Regression Analyses for Observed Teacher Behaviors toward International and American Girls and Boys During Unstructured Table Activities

Children	OTB	Model				Standardized regression coefficients for predictors						
		R ²	F	df	p <	Personal perceptual factors		Social perceptual factors				TPL
						SE	PTE	FS	PS	SS	WA	
International	Girls	FP	.06	1.16	7,126	ns	-.18 *					
		QP	.04	.78	7,126	ns						
	Boys	FP	.10	1.89	7,126	ns						
		QP	.10	1.93	7,126	ns						
American	Girls	FP	.07	1.35	7,126	ns	-.22 **					
		QP	.07	1.45	7,126	ns						
	Boys	FP	.02	.43	7,126	ns						
		QP	.02	.31	7,126	ns						
International	Girls	FN	.07	1.38	7,126	ns						
		QN	.06	1.24	7,126	ns						
	Boys	FN	.11	2.18 *	7,126	.04						
		QN	.05	.96	7,126	ns						
American	Girls	FN	.05	.92	7,126	ns						
		QN	.05	.86	7,126	ns						
	Boys	FN	.10	2.00	7,126	ns						
		QN	.12	2.50 *	7,126	.02						

Note.

SE = Self-esteem

PTE = Personal teaching efficacy

FS = Family support

PS = Peer support

SS = Supervisor support

WA = Work environment autonomy

TPL = Teacher preparation level

Observed teacher behaviors (OTB):

FP = Frequency of positive behaviors

QP = Quality of positive behaviors

FN = Frequency of negative behaviors

QN = Quality of negative behaviors

* $p < .05$. ** $p < .01$.

The other regression model that was significant involved the quality of negative behaviors (QN) displayed by student teachers toward American boys ($R^2 = .12$, $F(7,126) = 2.50$, $p < .05$). In this model, only the social perceptual factor of work environment autonomy (WA) contributed negatively toward the quality of negative behaviors displayed by student teachers toward American boys during unstructured table activities.

In spite of the fact that all other regression models tested were not significant, several of these models produced variables that were significant predictors of student teachers' behaviors. Examination of Table 12 revealed that the personal perceptual factors of self-esteem (SE) and personal teaching efficacy (PTE) were significant predictors of International and American girls' frequency (FP, FN) and quality (QP, QN) of positive and negative behaviors displayed by student teachers toward them during unstructured table activities in unique ways. Self-esteem (SE) was a negative predictor of International and American girls' frequency of positive behaviors (FP) displayed toward them by student teachers, and American girls' quality of positive behaviors (QP) displayed toward them by student teachers. Personal teaching efficacy (PTE) was a positive predictor of International girls' frequency (FN) and quality (QN) of negative behaviors displayed toward them by student teachers.

In addition, the social perceptual factors of supervisor support (SS) and work environment autonomy (WA) were significant predictors of the frequency and quality of positive (i.e., FP and QP) and negative (i.e., FN and QN) behaviors displayed by student teachers toward International and American children during unstructured

table activities in unique ways. Supervisor support (SS) was a positive predictor of the International boys' frequency (FP) and quality (QP) of positive behaviors displayed toward them by student teachers, and American boys' frequency of negative behaviors (FN) displayed toward them by student teachers. Work environment autonomy (WA) was a negative predictor of the frequency of negative behaviors (FN) displayed by student teachers toward International girls and American boys, as well as the quality of negative behaviors (QN) displayed by student teachers toward International girls, American girls, and American boys.

Overall, therefore, we can tentatively conclude, as with the correlation coefficients, that the personal perceptual factors of self-esteem (SE) and personal teaching efficacy (PTE) were stronger predictors of American and International girls' positive and negative behaviors displayed toward them by student teachers during unstructured table activities. Self-esteem (SE) was a negative predictor of International and American girls' frequency of positive behaviors (FP) and American girls' quality of positive behaviors (QP) displayed toward them by student teachers. Personal teaching efficacy (PTE), however, was a significant positive predictor of the frequency (FN) and quality (QN) of negative behaviors displayed by student teachers toward International girls.

On the other hand, the social perceptual factors of supervisor support (SS) and work environment autonomy (WA) were significant predictors of International and American boys' positive and negative behaviors displayed by student teachers during unstructured table activities. Supervisor support (SS) was a positive predictor

of International boys' frequency (FP) and quality (QP) of positive behaviors and American boys' frequency (FN) of negative behaviors displayed toward them by student teachers, while work environment autonomy was a negative predictor of American boys' frequency (FN) and quality (QN) of negative behaviors displayed toward them by student teachers.

However, caution must be made relative to these generalizations, since most of the regression models tested were not significant. In addition, the manner in which the personal and social perceptual factors contributed to the observed teacher behaviors of student teachers varied according to which aspect of behaviors was being considered (i.e., frequency or quality of behavior; positive or negative behavior), which aspect of the perceptual factors (i.e., various personal or social factors) was being studied, whether the child was a boy or a girl, and whether the child came from an International or the U.S. culture. Still also, there were a few exceptions to the above generalizations, since the social perceptual factor of work environment autonomy (WA) was also a negative predictor of International girls' frequency (FN) and quality (QN) of negative behaviors and American girls' quality of negative behaviors (QN) displayed toward them by student teachers during unstructured table activities.

Observed Teacher Behaviors During Structured Story Time

Table 13 summarizes the correlation coefficients between predictor and criterion variables including all aspects of observed teacher behaviors displayed

Table 13. Correlations Among Predictor Variables and Observed Teacher Behaviors by Ethnicity and Gender During Structured Story Time

		Personal perceptual factors		Social perceptual factors				TPL	FP	QP	FN	
Children	OTB	SE	PTE	FS	PS	SS	WA					
International												
	Girls	FP	.06	.07	.08	-.004	.06	.11	.004			
		QP	.06	.05	.14	.03	.04	.13	.03	.95 ***		
	Boys	FP	.002	-.05	.05	-.13	-.08	-.02	-.13			
	QP	-.02	.01	.04	-.09	-.08	.003	-.08	.96 ***			
American												
	Girls	FP	-.02	.04	-.17 *	-.02	.05	.06	-.02			
		QP	-.09	.03	-.19 *	.002	.02	.04	-.02	.95 ***		
	Boys	FP	-.17 *	-.0003	.11	.01	.002	.14	.02			
	QP	-.15 *	-.03	.10	.01	.02	.12	.02	.95 ***			
International												
	Girls	FN	.02	-.24 **	.03	-.16 *	-.08	.01	-.08	-.10	-.13	
		QN	.09	-.27 ***	-.01	-.11	-.03	-.02	-.09	-.18 *	-.22 *	.89 ***
	Boys	FN	-.01	.05	.06	-.15 *	-.13	.15 *	-.05	-.18 *	-.16 *	
	QN	-.02	.09	-.01	-.13	-.08	.12	-.01	-.16 *	-.16 *	.81 ***	
American												
	Girls	FN	-.11	-.15 *	-.03	-.15 *	-.12	.10	-.02	-.43 *	-.43 ***	
		QN	-.10	-.12	.01	-.11	-.14	.08	.03	-.43 *	-.45 *	.92 ***
	Boys	FN	.17 *	.09	-.03	.14	.02	.21 *	.07	-.21 *	-.23 **	
	QN	.18 *	.10	-.04	.12	-.02	.17 *	.07	-.22 *	-.25 *	.95 ***	
Note SE = Self-esteem SS = Self-stress												

Note.

SE = Self-esteem
PTE = Personal teaching efficacy
FS = Family support
PS = Peer support

SS = Supervisor support
WA = Work environment autonomy
TPL = Teacher preparation level

Observed teacher behaviors (OTB):
FP = Frequency of positive behaviors
QP = Quality of positive behaviors
FN = Frequency of negative behaviors
QN = Quality of negative behaviors

* $p < .05$. ** $p < .01$. *** $p < .001$.

toward children during structured story time. Results from these analyses are presented in four parts: (a) relationships among predictor variables and positive teacher behaviors, (b) relationships among predictor variables and negative teacher behaviors, (c) relationships within positive and within negative teacher behaviors, and (d) relationships among positive and negative teacher behaviors.

Relationships Between Predictor Variables and Positive Teacher Behaviors During Structured Story Time

Findings associated with the positive behaviors displayed by student teachers toward International girls and boys during structured story time will be presented first, followed by those for American girls and boys.

International girls and boys. Among International girls and boys, none of the personal and social perceptual factors was found to be significantly related to the frequency (FP) and quality (QP) of positive behaviors displayed by student teachers toward them during structured story time. In addition, the variable of teacher preparation level (TPL) was not found to be significantly related to the frequency (FP) and quality (QP) of positive behaviors displayed by student teachers toward International girls and boys during structured story time.

American girls and boys. Among American girls, none of the personal perceptual factors were found to be related to the frequency (FP) and quality (QP) of positive behaviors displayed by student teachers toward them during structured story time. Only the social perceptual factor of family support (FS) was found to be

negatively related to the frequency (FP; $r = -.17$, $p < .05$) and quality (QP; $r = -.19$, $p < .05$) of positive behaviors displayed by student teachers toward American girls.

Among American boys, the personal perceptual factor of self-esteem (SE) was found to be negatively related to the frequency (FP; $r = -.17$, $p < .05$) and quality (QP; $r = -.15$, $p < .05$) of positive behaviors displayed by student teachers toward them during structured story time. However, none of the social perceptual factors was found to be related to the frequency (FP) and quality (QP) of positive behaviors displayed by student teachers toward American boys during structured story time. In addition, teacher preparation level (TPL) was not found to be related to the frequency (FP) and quality (QP) of positive behaviors displayed by student teachers toward American girls and boys during structured story time.

Relationships Between Predictor Variables and Negative Teacher Behaviors During Structured Story Time

Findings associated with the negative behaviors displayed by student teachers toward International girls and boys during structured story time will be presented first, followed by those for American girls and boys.

International girls and boys. Among International girls, only the personal perceptual factor of personal teaching efficacy (PTE) was found to be negatively related to the frequency (FN; $r = -.24$, $p < .01$) and quality (QN; $r = -.27$, $p < .001$) of negative behaviors displayed by student teachers toward them during structured story time. In addition, the social perceptual factor of peer support (PS) was

negatively related to the frequency (FN; $r = -.16, p < .05$) of negative behaviors displayed by student teachers toward International girls during structured story time. However, the variable of teacher preparation level (TPL) was not found to be related to the frequency (FN) and quality (QN) of negative behaviors displayed by student teachers toward International girls.

Among International boys, none of the personal perceptual factors were found to be significantly related to the frequency (FN) and quality (QN) of negative behaviors displayed by student teachers toward them during structured story time. However, the social perceptual factors of peer support (PS; $r = -.15, p < .05$) and work environment autonomy (WA; $r = .15, p < .05$) were, respectively, negatively and positively related to the frequency of negative behaviors (FN) displayed by student teachers toward International boys during structured story time. None of the social perceptual factors was found to be significantly related to the quality of negative behaviors (QN) displayed by student teachers toward International boys during structured story time. The variable of teacher preparation level (TPL) was not found to be significantly related to the frequency (FN) and quality (QN) of negative behaviors displayed by student teachers toward International boys.

American girls and boys. Among American girls, only the personal perceptual factor of personal teaching efficacy (PTE) was negatively related to the frequency of negative behaviors (FN; $r = -.15, p < .05$) displayed by student teachers toward them during structured story time. In addition, only the social perceptual factor of peer support (PS) was negatively related to the frequency of negative

behaviors (FN; $r = -.15$, $p < .05$) displayed by student teachers toward American girls during structured story time. None of the personal and social perceptual factors was found to be significantly related to the quality of negative behaviors (QN) displayed by student teachers toward American girls. Furthermore, the variable of teacher preparation level (TPL) was not found to be significantly related to the frequency (FN) and quality (QN) of negative behaviors displayed by student teachers toward American girls.

Among American boys, only the personal perceptual factor of self-esteem (SE) was positively related to the frequency (FN; $r = .17$, $p < .05$) and quality (QN; $r = .18$, $p < .05$) of negative behaviors displayed by student teachers toward them during structured story time. In addition, among the social perceptual factors, only work environment autonomy (WA) was found to be positively related to the frequency (FN; $r = .21$, $p < .01$) and quality (QN; $r = .17$, $p < .05$) of negative behaviors displayed by student teachers toward American boys. The variable of teacher preparation level (TPL) was not found to be significantly related to the frequency (FN) and quality (QN) of negative behaviors displayed by student teachers toward American boys during structured story time.

Relationships Within Positive and Within Negative Teacher Behaviors During Structured Story Time

Also summarized in Table 13 are the correlation coefficients expressing the relationships among positive and among negative aspects of teacher behaviors for

both International and American girls and boys. Findings revealed that the frequency of positive behaviors (FP) was positively related to the quality of positive behaviors (QP) displayed by student teachers toward International girls ($r = .95, p < .001$), International boys ($r = .96, p < .001$), American girls ($r = .95, p < .001$), and American boys ($r = .95, p < .001$). In addition, findings indicated that the frequency of negative behaviors (FN) was positively related to the quality of negative behaviors (QN) displayed by student teachers toward International girls ($r = .89, p < .001$), International boys ($r = .81, p < .001$); American girls ($r = .92, p < .001$), and American boys ($r = .95, p < .001$).

Relationships Between Positive and Negative Teacher Behaviors During Structured Story Time

Findings associated with the relationships among aspects of positive (i.e., FP and QP) and aspects of negative teacher behaviors (i.e., FN and QN) among International and American girls and boys are also found in Table 13. Findings revealed that among International girls and boys, the correlation coefficients were all in the negative direction. Of the 16 correlation coefficients, 14 were statistically significant ($p \leq .05$), particularly among American girls.

Summary

In summary, on the basis of results described above regarding the relationships among all predictor variables and the criterion variable of observed

behaviors of student teachers displayed toward International and American girls and boys during structured story time, the following generalizations can be made:

1. Among International boys and girls, none of the personal and social perceptual factors were related to the frequency (FP) and quality (QP) of positive behaviors displayed toward them by student teachers during structured story time.
2. Among American girls, the social perceptual factor of family support (FS) was negatively related to the frequency (FP) and quality (QP) of positive behaviors displayed toward them by student teachers during structured story time, while among American boys, it was the personal perceptual factor of self-esteem (SE) that was negatively related to the frequency (FP) and quality (QP) of positive behaviors displayed by student teachers toward them.
3. Among American boys, the personal perceptual factor of self-esteem (SE) was negatively related to the frequency (FP) and quality (QP) of positive behaviors displayed by student teachers toward them, but positively related to the frequency (FN) and quality (QN) of negative behaviors displayed by student teachers toward them during structured story time.
4. Among International and American girls, the personal perceptual factor of personal teaching efficacy (PTE) was negatively related to the frequency (FN) and quality (QN) or only the frequency (FN) of negative behaviors displayed by student teachers toward them during structured story time. In addition, among International and American girls, the social perceptual factor of peer support (PS) was negatively related to the frequency of negative behaviors (FN) displayed by student teachers toward them during structured story time.

5. Among International and American boys, the social perceptual factor of work environment autonomy (WA) was positively related to both the frequency (FN) and quality (QN), or only frequency (FN) of negative behaviors displayed by student teachers toward them during structured story time. In addition, among International boys, the social perceptual factor of peer support (PS) was negatively related to the frequency of negative behaviors (FN) displayed by student teachers toward them during structured story time.
6. The variable of teacher preparation level (TPL) was not found to be related to the frequency and quality of positive (FP, QP) and negative (FN, QN) behaviors displayed by student teachers toward International and American girls and boys during structured story time.
7. The frequency (FP) and quality (QP) of positive behaviors displayed by student teachers toward International and American girls and boys during structured story time were positively related.
8. The frequency (FN) and quality (QN) of negative behaviors displayed by student teachers toward International and American girls and boys during structured story time were positively related.
9. Aspects of positive behaviors (i.e., FP and QP) and aspects of negative behaviors (i.e., FN and QN) displayed by student teachers toward International and American girls and boys during structured story time were negatively related, with a large majority of them statistically significant ($n = 14$ out of 16). This was particularly true among American girls relative to the frequency

(FN) and quality (QN) of negative behaviors displayed by student teachers toward them.

Again, caution must be made in interpreting the results obtained in this portion of the analyses, since all significant correlation coefficients were relatively low, with the exception of the relationship within and some relationships between the positive and negative behaviors displayed by student teachers toward International and American children.

Regression Analyses

Table 14 summarizes 16 separate non-hierarchical multiple regression analyses applied to the data to determine the relative contributions of all predictor variables to the criterion variable, which included aspects of observed positive and negative behaviors displayed by student teachers toward International and American girls and boys during structured story time. Only 3 of the 16 regression models tested were significant. Two of these included the frequency (FN; $R^2 = .11$, $F(7,126) = 2.17$, $p < .05$) and quality (QN; $R^2 = .11$, $F(7,126) = 2.20$, $p < .05$) of negative behaviors displayed by student teachers toward International girls during structured story time. In these two models, the personal perceptual factor of personal teaching efficacy (PTE) contributed negatively to the frequency (FN) and quality (QN) of negative behaviors displayed by student teachers toward International girls. The third model that was significant involved the frequency of negative behaviors (FN) displayed by student teachers toward American girls ($R^2 = .11$, $F(7,126) =$

Table 14. Non-hierarchical Multiple Regression Analyses for Observed Teacher Behaviors toward International and American Girls and Boys During Structured Story Time

Children	OTB	Model				Standardized regression coefficients for predictors					
		R ²	F	df	p <	Personal perceptual factors		Social perceptual factors			
						SE	PTE	FS	PS	SS	WA
International											
Girls	FP	.02	.43	7,126	ns						
	QP	.03	.61	7,126	ns						
Boys	FP	.04	.68	7,126	ns						
	QP	.02	.36	7,126	ns						
American											
Girls	FP	.04	.80	7,126	ns						
	QP	.05	1.00	7,126	ns						
Boys	FP	.06	1.14	7,126	ns						
	QP	.05	.98	7,126	ns						
International											
Girls	FN	.11	2.17 *	7,126	.04						
	QN	.11	2.20 *	7,126	.04						
Boys	FN	.07	1.25	7,126	ns						
	QN	.04	.78	7,126	ns						
American											
Girls	FN	.11	2.18 *	7,126	.04						
	QN	.08	1.50	7,126	ns						
Boys	FN	.09	1.76	7,126	ns						
	QN	.09	1.55	7,126	ns						

Note.

SE = Self-esteem

PTE = Personal teaching efficacy

FS = Family support

PS = Peer support

SS = Supervisor support

WA = Work environment autonomy

TPL = Teacher preparation level

Observed teacher behaviors (OTB):

FP = Frequency of positive behaviors

QP = Quality of positive behaviors

FN = Frequency of negative behaviors

QN = Quality of negative behaviors

* $p < .05$. ** $p < .01$. *** $p < .001$.

2.18, $p < .05$) during structured story time. In this model, the personal perceptual factor of personal teaching efficacy (PTE) contributed negatively to the frequency of negative behaviors (FN) displayed by student teachers, while the social perceptual factor of work environment autonomy (WA) contributed positively to the frequency of negative behaviors (FN) displayed by student teachers toward American girls during structured story time. These findings appeared to be replicated when considering the quality of negative behaviors (QN) displayed by student teachers toward American girls, but this model was not significant.

In spite of the fact that all other regression models tested were not significant, a few of these models produced variables that were significant predictors of student-teacher behaviors during structured story time. Examination of Table 14 revealed that the social perceptual factor of family support (FS) negatively predicted the frequency (FP) and quality (QP) of positive behaviors displayed by student teachers toward American girls during structured story time. In addition, the personal perceptual factor of self-esteem (SE) negatively predicted the frequency of positive behaviors (FP) displayed by student teachers toward American boys during structured story time. Furthermore, the social perceptual factor of work environment autonomy (WA) positively predicted the quality of negative behaviors (QN) displayed by student teachers toward American boys during structured story time.

Overall, therefore, it appears that the personal perceptual factor of personal teaching efficacy (PTE) was a negative predictor of the frequency (FN) and quality (QN) of negative behaviors displayed by student teachers toward International and

American girls during structured story time. In addition, the social perceptual factor of work environment autonomy (WA) was a positive predictor of the frequency (FN) and quality (QN) of negative behaviors displayed by student teachers toward American girls. Furthermore, the social perceptual factor of work environment autonomy (WA) was also a positive predictor of the frequency of negative behaviors (FN) displayed by student teachers toward American boys during structured story time.

With respect to the frequency and quality of positive behaviors displayed by student teachers, none of the models tested was significant, but the social perceptual factor of family support (FS) was a negative predictor of the frequency (FP) and quality (QP) of positive behaviors displayed by student teachers toward American girls, while the personal perceptual factor of self-esteem was a negative predictor of the positive behaviors displayed by student teachers toward American boys during structured story time.

Caution must again be made relative to these generalizations, however, since most of the regression models tested in these analyses were not significant. Furthermore, the manner in which the personal and social perceptual factors contributed to the observed behaviors of student teachers varied as a result of the aspect of teacher behaviors and perceptual variables being considered. In addition, variability in findings was evident relative to the child's gender and cultural background (International vs. U.S.).

DISCUSSION

This study examined the relative contributions of selected personal and social perceptual factors to the teaching performance of 67 female, undergraduate, Caucasian (U.S. citizens) students, enrolled as student teachers in a early childhood teacher preparation program. Student teachers were classified into five teacher preparation levels, from beginning (TPL I) to advanced (TPL V), based on their coursework as well as past informal and formal teaching and training experiences. The personal perceptual factors included student teachers' self esteem and personal teaching efficacy, while the social perceptual factors included family, peer, and supervisor support, as well as their work environment autonomy. The dimensions of student-teacher performance included both teacher competency ratings by supervisors and observed teacher behaviors in small group activity settings. These observed teacher behaviors consisted of the frequency and quality of positive and frequency and quality of negative behaviors displayed by student teachers toward preschool children in these small group activities. These small group activities (activity type) included both unstructured table activities and structured story time activities. Furthermore, the early childhood teacher preparation environment represented a multicultural preschool setting in which children from both International and U.S. cultures were enrolled. Therefore, this study also examined the relative contributions of selected personal and social perceptual factors to the student teachers' frequency and quality of positive and negative behaviors displayed toward children from both International and U.S. cultures.

Discussion of findings obtained in this study are presented in five parts. Part I consists of findings relative to the teacher competency ratings of student teachers. In this part, a discussion of findings relative to the relationships (Pearson r 's) among the predictor and teacher competency variables are presented first, followed by those associated with the regression analysis focused on the relative contributions of the predictor variables to the criterion variable of teacher competency. As previously summarized, the predictor variables included the (a) personal perceptual factors of student teachers' self-esteem and personal teaching efficacy; (b) social perceptual factors of family, peer, and supervisor support, and work environment autonomy; and (c) teacher preparation level.

Part II of the discussion focuses upon understanding findings relative to the application of a five-way MANOVA on all observed teacher behaviors scores displayed by student teachers toward preschool children. In this analysis, the effects of children's ethnicity, gender, age, socioeconomic status, activity type, and their interactions on all observed student-teacher behavior scores were examined. Findings obtained were used to determine the manner in which all observed student-teacher behavior scores would be further analyzed.

Part III involves a discussion of findings associated with the observed teacher behavior scores of student teachers. First, findings relative to the relationships (Pearson r 's) among the predictor variables and observed teacher behaviors during unstructured table activities by ethnicity and gender were examined, followed by those associated with the regression analyses focused on determining the relative

contributions of the predictor variables to aspects of observed teacher behaviors during unstructured table activities by ethnicity and gender. Second, findings relative to the relationships (Pearson r 's) among the predictor variables and observed teacher behaviors during structured story time activities by ethnicity and gender were examined, followed by those associated with the regression analyses focused on determining the relative contributions of the predictor variables to aspects of observed teacher behaviors during structured story time activities by ethnicity and gender. As indicated earlier, aspects of observed teacher behaviors included the frequency and quality of positive and negative behaviors displayed by student teachers toward preschool children.

Part IV discusses the implications of findings obtained in this study for early childhood teacher preparation programs, while Part V focuses upon a discussion of the limitations of this study and suggestions for future research.

Part I: Teacher Competency Ratings

Relationships Among Predictor and Teacher Competency Variables

A number of findings relative to the relationships among the predictor and teacher competency variables obtained in this study are worth noting. The significant relationships obtained among the variables in this study were all positive, and were, for the most part, consistent with previous research.

First, the personal perceptual factors of self-esteem and personal teaching efficacy were not significantly related. This finding would have been predicted on

the basis of Bandura's (1977, 1986) theory of self-efficacy which upholds that self-esteem and self-efficacy are two different constructs. The concept of self-esteem refers to more global feelings of self-worth, while self-efficacy (i.e., personal teaching efficacy in this study) is domain-specific. Although Bandura would agree that these two constructs do overlap a little since they both deal with perceptions about the self, domain specific self-efficacy includes perceptions about the self involving specific skills and abilities that are situation-specific. These situation-specific skills and abilities are not included in the global concept of self-esteem (Ames & Ames, 1984). To support this point of view, a number of studies have been conducted in which measures of global self-esteem and domain specific self-efficacy were administered to subjects and their scores related to their performance in specific situations (i.e., math achievement, reading abilities, etc.). Findings revealed that, while domain specific self-efficacy was positively related to subjects' performance in that specific domain, global self-esteem was not (Lent et al., 1986; Gorrell, 1990; Guskey, 1988; Spindler & Spindler, 1989).

Second, the social perceptual factors of family, peer, and supervisor support, as well as work environment autonomy, were significantly related to each other in unique ways. Family support was positively related to work environment autonomy. While researchers have not investigated the direct relationship between family support and work environment autonomy, other studies were found supporting the positive relationship between family support and an individual's sense of autonomy and competence (Gecas & Schwalbe, 1986; Mortimer & Lorence, 1990; Sewell &

Hauser, 1980). As indicated in the review of literature, family support functions in a way that provides individuals with personal security and skills, which ultimately facilitate achievement and competence as well as psychological and physical well-being (Gecas & Seff, 1990; Kenny, 1987, 1990; Rosenberg, 1965). For example, Kenny (1987) found a significant positive relationship between college women's quality of attachment with their parents and their sense of assertion. In a later study (1990), Kenny (1990) also found a positive relationship between parental attachment among college seniors and their career maturity. Taken together these studies support the assumption that family support positively enhances an individual's sense of self-direction and autonomy as well as performance in a career-related experience. Work environment autonomy was defined in the present study as the degree to which student teachers perceived they were encouraged to be self-sufficient and to make their own decisions in a student teaching environment. It was not unusual, therefore, that family support among student teachers was found to be positively related to their perception of work environment autonomy in their teacher preparation environment. On the other hand, other studies are available which focus on relating various family demographic variables to an individual's sense of self-direction and autonomy. For example, findings have revealed that individuals from middle-class, in comparison to lower class families, encourage their children to be more self-directed and autonomous as individuals (Mortimer et al., 1986; Rosenberg, 1986; Schulenberg et al., 1984). Since a majority of the student teachers in the present study came from middle- and upper-middle socioeconomic backgrounds, it is likely that these student

teachers were encouraged to be self-directed and autonomous. Therefore it seems reasonable that, among student teachers in this study, family support would be positively related to work environment autonomy.

In addition, peer support was found to be positively related to supervisor support. Early childhood educators have long recommended that a quality early childhood environment consists of relationships among teachers, student teachers, children, and families that are positive and nurturant in nature. Within such an environment, the positive reciprocal interpersonal interactions that occur among individuals result in a team approach toward educating young children. Supervising teachers play a major role in fostering this supportive environment for all involved (Eicher et al., 1986; Jordell, 1987; McLaughlin et al., 1986; Zins et al., 1988). When supervising teachers work to provide such a supportive environment for student teachers, and encourage them to do likewise, then positive relationships among all persons in the environment are likely to occur (Caruso & Fawcett, 1986; Goldman & Manburg, 1985; Jorde-Bloom, 1988; Weller, 1983). In such an environment, therefore, student teachers' perceptions of their supervisor support would be positively related to their perceptions of peer support.

Furthermore, teacher competency ratings of student teachers were positively related to the personal perceptual factor of personal teaching efficacy, and the social perceptual factors of work environment autonomy and family support. The positive relationship between personal teaching efficacy and teacher competency ratings of student teachers was expected on the basis of Bandura's (1977) self-efficacy theory.

According to Bandura, a person's belief that they have the skills and abilities necessary to teach young children is directly related to their performance of such behaviors in a teaching situation. The teacher competency ratings of student teachers by their supervisors confirmed this proposition. Student teachers who believed in their abilities as teachers were more likely to be rated by their supervisors as competent teachers. Other studies are available which also support this proposition (Ashton et al., 1983; Denham & Michael, 1981; Lortie, 1975; Trentham et al., 1985).

With regard to the positive relationship between the teacher competency ratings of student teachers and the social perceptual factor of work environment autonomy, a few related studies have been done (Ashton et al., 1983; Ashton & Webb, 1986; Brodinsky, 1984; Kreis & Brockopp, 1986; Olson, 1991; Reyes, 1989). These studies, however, focus on the broader issue of factors contributing to positive work environment experiences and job satisfaction. In these studies, work autonomy and performance are often considered as variables for study. Positive work environments are described as ones in which the decision-making structure is more flexible than rigid, creating positive relationships among workers and leading to job satisfaction and higher work performance. If the teacher preparation environment can be considered a work environment for student teachers, and the environment is a positive one, then work environment autonomy would be expected to be positively related to teacher competency ratings (Ashton et al., 1983; Brodinsky, 1984; Jorde-Bloom, 1988; McLaughlin & Marsh, 1978; Moos, 1986; Olson, 1991).

Regarding the positive relationship between the teacher competency ratings of student teachers and the social perceptual factor of family support, as mentioned earlier, supportive family relationships provide individuals with a sense of personal security and skills that ultimately facilitate their achievement, competence, and physical and psychological well-being (Gecas & Seff, 1990; Kenny, 1987, 1990; Rosenberg, 1965). It was expected, therefore, that teacher competency would be positively related to family support. In fact, in several studies focused on the family's role during early childhood and the college years among student teachers (Manning & Payne, 1984, 1987; Rosen, 1975), findings revealed the importance of families as a social support system in the teaching performance of student teachers.

A number of previous studies are available that support the finding of a significant positive relationship between personal teaching efficacy and the social perceptual factor of work environment autonomy (Ashton et al., 1983; Gecas & Schwalbe, 1983; Kohn & Schooler, 1973; McLaughlin et al., 1986; Schwalbe, 1985). On the one hand, previous researchers have indicated that people who behave competently in their work environments believe in themselves. Competence and belief tends to enhance their sense of autonomy as persons (MacPhail-Wilcox & Hyler, 1985). On the other hand, others have reasoned that peoples' feelings of autonomy are likely to provide opportunities for them to perceive themselves as responsible for competent behaviors, thus leading them to develop self-attributions of competence (Schwalbe, 1985). Furthermore, in environments characterized by work autonomy, a great deal of self-evaluation information is available as a result of self-

appraisals and feedback from others. These occur within the student-teaching environment as well. As student teachers evaluate themselves and the reactions of others (adults and children) to them within an autonomous work environment, they discover the skills and abilities they have in teaching, which then facilitates the development of personal teaching efficacy among them.

Finally, the teacher preparation level of student teachers was positively related to the personal perceptual factor of personal teaching efficacy, the social perceptual factor of peer support, and the criterion variable of teacher competency. The finding that teacher preparation level was positively related to personal teaching efficacy was expected on the basis of Bandura's ideas (1977). According to Bandura, one of the most significant sources of efficacy information for individuals is their past performance accomplishments. From this perspective, therefore, student teachers' mastery of teaching competency through prior teacher preparation experiences would lead to an increase in their efficacy as teachers (Sherman & Giles, 1981; Sparks, 1988; Trentham et al., 1985). This proposition was consistent with findings obtained in this study.

The finding that teacher preparation level was positively related to the social perceptual factor of peer support appeared reasonable in light of studies focused on the relationship between peer support and teacher behaviors (McNairy, 1988; Thornton, 1990; Veale, 1989). Peer support has often been used as a means of helping student teachers improve their teaching performance, whether through the sharing of information, as a role model, or emotional support. The sharing of these

instrumental and emotional behaviors with each other among student teachers can create a positive work environment in which they can develop their competencies as teachers. These competencies as teachers do involve the development of interpersonal skills over time. The more teacher preparation experiences individuals have, therefore, the more likely they would have the skills necessary for interacting with their peers within the teacher preparation environment.

The finding of a positive relationship between teacher preparation level and teacher competency ratings was also expected on the basis of past research in this area. The more teacher preparation experiences individuals have, the more likely they would have developed their competencies as teachers (Eicher et al., 1986; Housego, 1990; Sugawara & Cramer, 1980). Prior supervised experiences in teaching young children, therefore, increase a student teacher's competency as a teacher.

Regression Analysis: Teacher Competency Ratings

Findings associated with the regression analyses applied to the teacher competency ratings of student teachers revealed that teacher preparation level was the only predictor variable to contribute significantly and positively to explaining the variance of teacher competency ratings among student teachers. This meant that the more teacher preparation experiences student teachers had, the more competent their competency ratings were. This finding confirms previous research in this area (Dembo & Gibson, 1985; Eicher et al., 1986; Housego, 1990; Sugawara & Cramer,

1980). Teacher preparation experiences are significant sources for facilitating the development of competency among student teachers.

It should be noted however, that the R^2 associated with this regression model, while significant, was small ($R^2 = .25$, $p < .01$). In addition, none of the predictor variables, including the personal perceptual factors of self-esteem and personal teaching efficacy and the social perceptual factors of family, peer, and supervisor support as well as work environment autonomy, contributed significantly to the model. This suggested that, in addition to teacher preparation level, there must be other variables that need to be investigated in future studies to understand the teacher competency ratings of student teachers.

Part II: Observed Teacher Behaviors (Preliminary Analysis)

Preliminary analysis of the observed teacher behavior scores of student teachers involved the application of a 5-way MANOVA to determine the effects of children's ethnicity, gender, age, socioeconomic status, and activity type on the frequency and quality of positive and negative behaviors displayed by student teachers toward preschool children. Findings obtained are discussed below.

First, International children were found to have significantly lower frequency and quality of positive and significantly higher frequency and quality of negative behaviors displayed toward them by student teachers than American children. These findings confirms previous research in this area indicating that student teachers tend to adopt more controlling or negative behaviors toward children from cultures other

than Euro-American (Grossman, 1991; Kleifgen, 1988; Ogilvy et al., 1990; Phillips, 1988). For example, Ogilvy et al. (1990) reported that staff in a school studied were less likely to respond positively to Asian (Pakistani) children than to indigenous (Scottish) children. A number of alternatives have been given as explanations for these findings. Brophy (1983) and Rosenthal and Jacob (1968) suggested that these findings can be explained on the basis of the "self-fulfilling prophecy" that occurs in children's classrooms. Teacher's expectations and perceptions of their students can markedly affect the type of teacher-student relationships that occur. Children who come from other cultures, with behaviors and traditions that do not conform with the behavioral expectations of the prevailing culture, are often viewed as having less potential than others. These expectations of teachers may be based on any available dispositional information pertaining to the child, such as knowledge (or limited knowledge) of a child's family, social, or ethnic background (Good, 1987). These expectations become generalized beliefs or biases that teachers use in interacting with individuals from various cultures (Hamilton, 1979).

Other researchers have emphasized the limited preparation student teachers have in interacting and communicating with children from International cultures. For example, Kleifgen (1988), in a study of supervising and student teachers, found that student teachers were observed to be less successful than supervising teachers in communicating with International children who had limited English proficiency. This appears consistent with the concerns raised by student teachers in the present study relative to their communication abilities and lack of knowledge of the family

backgrounds and traditions from which the International children came. For example, one student-teacher commented, "It's very hard to communicate with International children when you are unfamiliar with their language. It's frustrating at times." Another student-teacher remarked, "I need to learn more about the different cultures."

Second, findings revealed that girls had significantly lower frequency and quality of positive and negative behaviors displayed toward them by student teachers than boys. These findings are consistent with a number of previous studies conducted in this area (Brophy & Good, 1970; Carew & Lightfoot, 1979; Fagot & Kronsberg, 1982; Honig & Wittmer, 1982; Irvine, 1985; Wittmer & Honig, 1988). For example, Brophy and Good (1970) found that boys received more teacher-initiated contacts, work-related interactions, teacher-afforded responses and behavioral criticism than girls. These differences in the interactions of student teachers with boys and girls are reminiscent of those indicating that teachers continue to interact with young children in gender stereotypic ways (Fagot & Kronsberg, 1982). These gender stereotypes become cognitive processing schemas that teachers use to interact with young children (Brooks-Gunn & Mathews, 1979; McGuire & Richman, 1986, 1989; Skitka & Maslach, 1990). In this manner, teachers' gender stereotypes become self-fulfilling prophecies that show themselves in children's behaviors during various interaction situations.

Finally, findings revealed that student teachers displayed a significantly higher frequency of negative behaviors toward children during structured story time

activities than unstructured table activities. This finding was expected on the basis of previous research indicating that activity type does influence the manner in which children and teachers interact with one another during small group activity sessions (Allington, 1983; Smoothergill, Olson, & Moore, 1971; Tizard et al., 1972; Wells, 1979). This would be particularly true when comparing interactions between teachers and children in structured vs. unstructured small group situations.

Structured group activities involve more restrictions placed upon children. Such limitations are likely to be tested by preschool children, thus lead to more negative behaviors by student teachers to control children's behaviors. In addition, during structured group activities such as story time, teacher assistance and facilitation are necessary to engage children's participation in the activity. Such an activity, therefore, can be characterized as teacher-directed, and may be more demanding, since all children in the group often need attention at the same time. In such a situation, many opportunities for attending to the solicitations of individual children are often lost, and more children end up being ignored (i.e., a negative behavior in this study). On the other hand, in unstructured table activities, manipulative materials are provided for each child to play with in their own manner, individually or together with other children. In such an unstructured situation, student teachers have the possibility of spending more time listening and responding to individual children, thus reducing the frequency of negative behaviors (i.e., controlling, ignoring, etc.) directed toward children.

Part III: Observed Teacher Behaviors: Final Analyses

In this section, findings associated with the Pearson correlation coefficients expressing the relationships among all variables during unstructured table activities are discussed first, followed by findings associated with the application of regression analyses to determine the relative contributions of the predictor variables to the observed teacher behaviors. Findings associated with the Pearson correlation coefficients expressing the relationships among all predictor variables and the criterion variable of observed teacher behaviors during structured story time activities are then discussed, followed by findings associated with the application of regression analyses to determine the relative contributions of the observed teacher behavior scores of student teachers during structured story time activities. As previously indicated, observed teacher behavior scores included the frequency and quality of positive and negative behaviors displayed by student teachers toward preschool children. Since preliminary analyses indicated significant children's ethnicity, gender, and activity type differences between the teacher behavior scores of student teachers, separate correlation coefficients as well as regression analyses were computed taking into consideration these variables in all analyses undertaken.

Relationships Between Predictor Variables and Observed Teacher Behaviors During Unstructured Table Activities

International and American girls: positive behaviors. Among girls, findings revealed that the personal perceptual variable of self-esteem was negatively related to

the frequency of positive behaviors displayed by student teachers toward International and American girls, and the quality of positive behaviors displayed toward American girls during unstructured table activities. These findings were surprising in light of past research (Manning & Payne, 1987; Purkey, 1978; Schultz & Wolfe, 1973; Wolfe & Schultz, 1981) indicating a positive relationship between self-esteem among student teachers and their positive teacher behaviors. Still in the process of developing their ego identity at this time (Marcia, 1987), and yet unfamiliar with the kinds of skills necessary to be a truly competent teacher, student teachers, as a result of their enthusiasm and possibly, unrealistic perceptions of what a teacher ought to be, may have overestimated their self-esteem. Such overestimation may have negated or even inversely affected the positive relationship that exists between self-esteem and positive teacher behaviors among student teachers (Kilpatrick & Duncan, 1985; Peterson, Hines, & Yaakobi, 1980-81). Studies available focused on how assessment of one's self-esteem can lead to an overrating or underrating of one's achievement, intelligence, and abilities (Fenigstein, 1984; Jussim et al., 1987; Wells & Sweeney, 1986).

In addition, the personal perceptual factor of personal teaching efficacy was positively related to the frequency of positive behaviors displayed by student teachers toward International girls during unstructured table activities. This finding confirms those obtained in previous research (Ashton et al., 1983; Dembo & Gibson, 1985; Housego, 1990; Gibson & Dembo, 1984; Safran et al., 1990; Saklofske et al., 1988; Woolfolk & Hoy, 1990) and provides support for Bandura's (1977) theory of self-

efficacy. According to Bandura, it is a person's belief that one has the skills and abilities necessary to teach young children (personal teaching efficacy) that ultimately leads one to display such competent teaching behaviors.

International and American boys: positive and negative behaviors. Among International boys, the social perceptual variable of supervisor support was positively related to the frequency and quality of positive behaviors displayed toward them by student teachers during unstructured table activities. On the other hand, among International and American boys, supervisor support was, respectively, positively related to the frequency, or the frequency and quality of negative behaviors displayed toward them by student teachers during unstructured table activities. The finding associated with the positive relationship between supervisor support and positive behaviors (i.e., frequency and quality) among student teachers confirm those obtained in past research (Caruso & Fawcett, 1986; Fuller & Brown, 1975; Katz, 1972; Weller, 1983). Supervisor warmth, encouragement, and sensitivity play crucial roles in facilitating the personal and professional development of student teachers. Such supportiveness is likely to be modeled by student teachers in their own teaching of young children.

The finding associated with the positive relationship between supervisor support and negative behaviors among both International and American boys, however, was a surprise. Perhaps student teachers pay more attention to boys, and support from their supervisors provides them with a comfort level in which boys are allowed to express and assert themselves more freely in unstructured group

situations. Studies are available which suggest that children do indeed actively participate in unstructured group activities (Fagot & Hagan, 1985; Raph, Thomas, Chess, & Korn; 1968; Vlietra, 1981). Such expression and assertion are likely to be responded to by student teachers in both positive and negative ways, depending upon their characteristics. The more behaviors children display, the more opportunities teachers have to respond to them in both positive and negative ways.

In addition, among boys, family support was positively related to International boys' quality of positive behaviors displayed by student teachers, and significantly and negatively related to American boy's quality of negative behaviors displayed toward them by student teachers during unstructured table activities. As mentioned earlier, only a few studies are present investigating the relationship between family support and student teacher behaviors (Manning & Payne, 1984, 1987; Rosen, 1975). These studies support the positive relationship between family support and positive teacher behaviors. In the present study, however, such a finding was found only among International boys. Close family ties are characteristic of International children used in this study, particularly those from Asian, Middle Eastern, and Mexican/Latin American countries (Lynch & Hanson, 1992; Rao & Rao, 1985; William & Best, 1990). It was not surprising, therefore, that a positive relationship was found between student teachers' family support and the positive behaviors they displayed toward International boys. Possibly, the comfort of close family relationships among International children may have replicated themselves in their interactions with student teachers in small group situations, allowing student

teachers to recapture their own experiences of family support, which was ultimately related to the positive behaviors they displayed toward International boys.

On the other hand, student teachers' family support was also positively related to the quality of negative behaviors displayed by them toward American boys. In comparison to International cultures, family support in the U.S. culture is likely to be characterized by child rearing practices that socialize children for independence and autonomy, particularly boys (Lansky, 1967; Lynch & Hanson, 1992; Maccoby, 1988; Maccoby & Jacklin, 1974; McGuire, 1988). In unstructured small group situations, therefore, it is likely that American boys would express their independence and autonomy as persons. As a result, the family support experiences of American student teachers, involving socialization for independence and autonomy, are likely to be replicated in unstructured small group situations for American children, particularly boys, who are socialized to express their independence and autonomy. Such expression of independence and autonomy by children is likely to provide student teachers with more opportunities to interact with them negatively, employing such behaviors as controlling, restraining, and forbidding to manage children's behavior.

Furthermore, among International boys, personal teaching efficacy was negatively related to the frequency of negative behaviors displayed by student teachers toward them during unstructured table activities. This finding was expected on the basis of past research (Ashton et al., 1983; Barfield & Burlingame, 1974; Gibson & Dembo, 1984; Safran et al., 1990; Saklofske et al., 1988) and supports

Bandura's (1977) theory of self-efficacy. Student teachers with a high sense of personal teaching efficacy are not likely to display behaviors that are counter to their beliefs in being competent as teachers of young children. Such competence is not likely to include negative behaviors that often impede children's development.

Finally, work environment autonomy was negatively related to International boys' frequency of negative behaviors and American boys' quality of negative behaviors displayed toward them by student teachers during unstructured table activities. These findings are consistent with the few previous studies conducted in this area (Brodinsky, 1984; Saracho, 1990). Past research has indicated that autonomous teachers have a higher quality of teacher-child relationships. Student teachers who perceive themselves as having less opportunity or encouragement to make their own decisions relative to their teaching experience tend to display less competent and more negative behaviors toward children (Tizard et al., 1972).

Teacher preparation variable. Among International boys, teacher preparation level was positively related to the frequency of positive behaviors and negatively related to the frequency of negative behaviors displayed by student teachers toward them during unstructured table activities. These findings support the idea that the more practicum experiences student teachers have with young children, in this case International boys, the more likely they would interact positively and the less likely they would interact negatively with these children. They confirm studies that relating levels of teacher preparation and ratings of teacher competency among preschool student teachers (Sugawara & Cramer, 1980).

Frequency and quality of positive and negative behaviors. The frequency and quality of positive behaviors displayed by student teachers toward International and American boys and girls were positively related during unstructured table activities. This was also true for the frequency and quality of negative behaviors displayed by student teachers during unstructured table activities. However, aspects of positive and negative behaviors displayed by student teachers toward International and American boys and girls during unstructured table activities were all negatively related, with a large majority of them statistically significant. Findings such as these support the validity of the construct of positive and negative behaviors displayed by student teachers in the present study. The extremely high positive correlations between the frequency and quality of positive as well as the frequency and quality of negative behaviors does lead one to question whether or not the frequency and quality dimensions of student teacher behaviors are really distinct from each other. Findings just summarized, however, suggest that these aspects of positive and negative behaviors are related to some of the predictor variables in unique ways.

Regression Analyses: Observed Teacher Behaviors During Unstructured Table Activities

Overall, self-esteem and personal teaching efficacy (personal perceptual factors) predicted positive and negative student teacher behaviors displayed toward International and American girls during unstructured table activities better than social perceptual factors. On the other hand, the same behaviors displayed toward

International and American boys during unstructured table activities were predicted better by supervisor support and work environment autonomy (social perceptual factors) than personal perceptual factors. Perhaps this overall gender difference is representative of the impact of gender stereotypes on the interactions that occur between student teachers and children, most especially for International children where such stereotypes are more rigidly held than for American children (Lee & Sugawara, 1982; Lii & Wong, 1982; Rao & Rao, 1985; William & Best, 1982, 1990). Research has indicated that girls are socialized to become more affiliative in their relationships with others, particularly with members of their own gender (Gilligan, 1982; Lips & Colwill, 1978; Maccoby & Jacklin, 1974; Peck, 1986). Friendships between girls have been characterized as being more intimate and personal than those between boys (Lips & Colwill, 1978; Wittmer & Honig, 1988). In unstructured group situations, therefore, relationships that occur between female student teachers and girls are likely to be affiliative and personal. As a result, it seems reasonable to expect that such personal perceptual factors as student teachers' self-esteem and personal teaching efficacy would occur as the most powerful predictors of their teaching behaviors toward International and American girls.

On the other hand, boys are socialized to become more dominant, assertive, and autonomous than girls, particularly in International cultures where gender stereotypes are rigidly upheld (Lee & Sugawara, 1982; Lii & Wong, 1982; Lynch & Hanson, 1992; Rao & Rao, 1985; William & Best, 1982; 1990). In unstructured group situations, therefore, boys are likely to express much more of these

autonomous behaviors in their interactions with student teachers. In an attempt to deal with these autonomous behaviors, student teachers may rely on such social perceptual factors as supervisor support and work environment autonomy for their behavioral responses to International and American children. As a result, it seems reasonable to expect that the social perceptual factors of student teachers' supervisor support and work environment autonomy would occur as the most powerful predictors of their teaching behaviors toward International and American boys.

It should be indicated, however, that the manner in which the personal perceptual variables of self-esteem and personal teaching efficacy as well as the social perceptual variables of supervisor support and work environment autonomy contributed to student teachers' positive and negative behaviors toward children in this study, varied depending upon the gender, ethnicity and type of activities in which children were involved in. These unique relationships were previously discussed when the significant coefficients expressing the relationships between all predictor variables and the criterion variable were presented.

Again caution is urged relative to the above speculations, since most of the regression models tested were not significant. In addition, the manner in which the personal and social perceptual factors contributed to the observed teacher behaviors of student teachers varied according to which aspect of behavior was being considered (i.e., frequency vs. quality; positive vs. negative), which aspect of the perceptual factors (i.e., personal vs. social) was being studied, and the gender, ethnicity (i.e., International vs. American), and type of activity in which the child

was involved. Furthermore, there were a few exceptions to the above generalizations, since the social perceptual factor of work environment autonomy was also a negative predictor of International girls' frequency and quality of negative behaviors, and American girls' quality of negative behaviors displayed by student teachers toward them during unstructured table activities. These latter findings are interesting when interpreted from a gender perspective. In unstructured group situations, both International and American girls may feel more comfortable in expressing themselves more assertively, thus calling to them more negative behaviors from student teachers, particularly since such an assertion goes counter to the feminine stereotype (Feshbach, 1969; Fagot & Hagan, 1985; Fagot & Kronsberg, 1982).

Relationships Between Predictor Variables and Observed Teacher Behaviors During Structured Story Time Activities

International children: positive behaviors. None of the personal and social perceptual factors was found to be related to the frequency and quality of positive behaviors displayed by student teachers toward International children during structured story time activities. This was most surprising, since, on the basis of past theory and research, we expected positive relationships to exist between these variables (Ashton et al., 1983; Brown et al., 1988; Cummins, 1989; Doherty, 1980; Dunn et al., 1987; Eicher et al., 1986; Gibson & Dembo, 1984; Manning & Payne, 1984, 1987; McNairy, 1988; Noad, 1979; Okech, 1987; Pigge & Marso, 1987;

Rosen, 1975; Saracho, 1990; Veale, 1989; Wolf & Schultz, 1981). However, such nonsignificant findings does lead us to conclude that there may be other more important variables that need to be considered in studies focused on uncovering factors that might impact student teachers' interactions with International children. For example, no matter what perceptions student teachers may hold about themselves; their teaching abilities; the support they have from their families, peers, supervisors; and their work environment autonomy, the fact that they lacked a great deal of knowledge and experiences in interacting with individuals from other cultures may have rendered these variables inconsequential at this time.

American children: positive behavior. Among American girls, the social perceptual factor of family support was negatively related to the frequency and quality of positive behaviors displayed by student teachers toward them during structured story time, while among American boys, the personal perceptual factor of self-esteem was significantly and negatively related to the frequency and quality of positive behaviors displayed by student teachers toward them. These findings were puzzling at best, since they do not support what would have been expected on the basis of previous research (Manning & Payne, 1987; Purkey, 1978; Schultz & Wolfe, 1973; Wolfe & Schultz, 1981). For American girls, perhaps student teachers' perceptions of family support may have involved being socialized to adopt the "female" behavior, which, when played out in structured small group situations with young children, require girls to conform to the female stereotype of passivity and dependency. In structured group situations such as story time, however, the

restrictions placed upon preschool children are likely to be violated as both boys and girls assert themselves to gain attention for their comments and interests. Such assertions among girls, since they do not conform to the gender stereotypes that families have supported for their female (daughter) student teachers, may have led these student teachers not to respond positively to girls when they asserted themselves in structured small group situations which counter to the female stereotype.

The negative relationship between the personal perceptual factor of self-esteem among student teachers and the frequency and quality of positive behaviors they displayed toward American boys was discussed previously. It may be that student teachers in this sample were overestimating their self-esteem due to their present developmental search in establishing ego identity (Marcia, 1987) and limited experience in teaching young children. Such overestimation may have negated the positive relationships expected between the variables of interest or even rendered them inversely related (Fenigstein, 1984; Kilpatrick & Duncan, 1985; Peterson, Hines, & Yaakobi, 1980-81).

International and American girls: negative behaviors. Among International and American girls, the personal perceptual factor of personal teaching efficacy was negatively related to the frequency and quality or only the frequency of negative behaviors displayed by student teachers toward them during structured story time activities. These findings support previous studies in the area (Dembo & Gibson, 1985; Gibson & Dembo, 1984; Safran et al., 1990), and confirm Bandura's (1977)

self-efficacy hypotheses suggesting that student teachers' belief that they have the ability and skills to teach children is not likely to be related to the display of non-facilitative negative behaviors toward young children.

In addition, among International and American girls, peer support was found to be negatively related to the frequency of negative behaviors displayed by student teachers toward them in structured story time activities. Findings such as these provide support for previous research (Jordell, 1987; McNairy, 1988; Thornton, 1990; Veale, 1989; Zins et al., 1988). Peer support has been found to be related to teacher effectiveness. In addition, in settings where peer support and team teaching occur, student teachers learn to exchange ideas with each other, which facilitates the acquisition of teaching skills among them.

International and American boys: negative behaviors. Among International and American boys, the social perceptual factor of work environment autonomy was found to be positively related to the frequency and quality or only the frequency of negative behaviors displayed by student teachers toward them during structured story time activities. This finding suggests that the more autonomy the student teacher perceived she had in making decisions within a student teaching environment, the higher the frequency and/or quality of negative behaviors she displayed toward boys in structured small group situations. As mentioned previously, such structured small group situations involve some restrictions placed upon children's behaviors that are likely to be tested, particularly among boys, whose gender socialization experiences have led them to develop a strong sense of autonomy and assertiveness (Brooks-

Gunn & Matthews, 1979; Maccoby, 1988; McGuire, 1988; William & Best, 1982, 1990). Therefore, since student teachers are still developing their skills in guiding children's behavior during more structured group situations, when confronted with boys' assertiveness and independence, they may respond negatively to boys in an attempt to keep their behaviors under control.

In addition, among International boys, the social perceptual factor of peer support was negatively related to the frequency of negative behaviors displayed by student teachers toward them during structured story time activities. As indicated previously, this confirms research focused on how peer support among student teachers enhances among them the development of skills that facilitate rather than inhibit children's behavior (Jordell, 1987; McNairy, 1988; Thornton, 1990; Veale, 1989; Zins et al., 1988).

Finally, among American boys, the personal perceptual factor of self-esteem was positively related to the frequency and quality of negative behaviors displayed by student teachers toward them in structured story time activities. This finding, of course, was counter to what would have been predicted on the basis of previous theory and research (Manning & Payne, 1984, 1987; Purkey, 1978; Wolfe & Schultz, 1981). However, since we do know that boys in our society have been socialized to be assertive and independent (Lansky, 1967; Maccoby, 1988; McGuire, 1988), in structured small group activities, such behaviors are likely to be displayed in violation of restrictions imposed. These independent behaviors, therefore, are likely to be responded to by student teachers using a variety of negative behaviors to

control boys' behaviors (Fagot & Hagan, 1985; Feshbach, 1969). Add to this, student teachers' high self-esteem, overestimating their perceptions of themselves and their abilities as persons, then conflicts between student teachers and children appear inevitable. As a result, self-esteem would be positively related to the negative behaviors displayed by student teachers toward boys in structured group situations.

Frequency and quality of positive and negative Behaviors. The frequency and quality of positive behaviors displayed by student teachers toward International and American children were positively related to each other during structured story time activities. This was also true of the frequency and quality of negative behaviors displayed by student teachers during structured story time activities. However, aspects of positive and negative behaviors displayed by student teachers toward International and American boys and girls during structured story time activities were all negatively related to each other, with a large majority of them statistically significant. Findings such as these again support the validity of the constructs of positive and negative behaviors displayed by student teachers toward children in the present study. Yet, the extremely high positive correlations between the frequency and quality of positive as well as frequency and quality of negative behaviors leads one to question whether or not the frequency and quality dimensions of student teacher behaviors are really distinct from each other. However, findings associated with the relationships among aspects of positive and negative behaviors indicate that the predictor variables are related to these behaviors in unique ways.

Regression Analyses: Observed Teacher Behaviors During Structured Story Time Activities

Findings associated with the regression analyses applied to observed teacher behavior scores of student teachers revealed that the personal perceptual factor of personal teaching efficacy was a negative predictor of the frequency and quality of negative behaviors displayed by student teachers toward International and American girls during structured story time activities. As discussed previously, these findings support past research in this area (Ashton & Webb, 1986; Denham & Michael, 1981; Gibson & Dembo, 1985) and confirm Bandura's (1977) theory of self-efficacy.

Student teachers who perceived themselves as having the skills and abilities necessary to teach young children are not likely to display negative behaviors that would inhibit children's learning and development during structured small group situations.

In addition, the social perceptual factor of work environment autonomy was a positive predictor of the frequency and quality of negative behaviors displayed by student teachers toward American girls, and the frequency of negative behaviors displayed toward American boys during structured story time activities. As previously indicated, structured group activities are teacher-directed and involve limitations placed upon children's behavior. These limitations are likely to be violated by young children as they attempt to express their comments and interests in stories that are being read to them. On the other hand, student teachers are still in the process of developing their skills in guiding children's behavior, particularly in

structured small-group situations (Sugawara & Cramer, 1980). In structured small group situations, where student teachers are given autonomy to make their own decisions regarding teaching young children, it is likely that they would be confronted with situations in which children, in their enthusiasm, may violate the behavioral limitations imposed upon them by the structured situation. As a result, student teachers, still learning about group management skills, are more likely to display negative behaviors in attempting to control children's behavior than more advanced teachers. The positive relationship between work environment autonomy and the display of negative behaviors, therefore, seems reasonable from this perspective.

Finally, none of the regression models tested for the frequency and quality of positive behaviors displayed by student teachers toward International and American children during structured story time activities was significant. However, the social perceptual factor of family support was a negative predictor of the frequency and quality of positive behaviors displayed toward American girls, and the personal perceptual factor of self-esteem occurred as a significant negative predictor of the frequency of positive behaviors displayed by student teachers toward American boys during structured story time activities. These two findings were discussed previously when considering the correlation coefficients associated with them. The finding related to family support and its negative relationship to the frequency and quality of positive behaviors displayed by student teachers toward American girls during structured story time activities was seen as a consequence of student teachers'

socialization toward the female stereotype via family support. Learned behaviors, associated with the female stereotype were then used by student teachers in their interactions focused on dealing with American girls' behavioral assertions in structured small group situations. The finding related to self-esteem and its negative relationship to the frequency of positive behaviors displayed by student teachers toward American boys during structured story time activities was seen as a consequence of student teachers' overestimation of their self-esteem and their lack of experience in guiding children's behavior. This may have been particularly true when student teachers were confronted with assertiveness among boys (i.e., male stereotype) in structured small group situations.

However caution must be urged relative to the findings associated with the relationships between the personal and social perceptual factors and observed teacher behaviors that occurred during structured story time activities, since most of the significant correlation coefficients calculated were low and a majority of the regression models were not significant. Furthermore, the manner in which the personal and social variables contributed to student-teacher behaviors varied as, a result of the aspect of teacher behavior being considered, the type of activities in which children were involved, and the characteristics of children, including their gender and ethnicity.

Part IV: Implications of Findings for Teacher Preparation Programs

In spite of the fact that the correlation coefficients between the predictor and criterion variables of this study were relatively low and most of the regression models tested were not significant, those that were significant did provide support for the proposition derived from perceptual theory (Combs, 1965; Combs et al., 1976; Hamachek, 1978) that formed the general basis of this study. Knowledge of how student teachers perceive themselves and aspects of their teacher preparation and family environment are important variables to consider when attempting to understand their teaching performances in an early childhood teacher preparation program.

In addition, significant findings from the present study supported the significance of selecting variables identified in Hawkins's (1983) Modified Student-Teacher Model as important in understanding the teaching performance of these student teachers. These variables included the personal perceptual factors of self-esteem and personal teaching efficacy, and the social perceptual factors of family, peer, and supervisor support, as well as work environment autonomy. Teacher performance was defined as both competency ratings of student teachers by supervisors, and observed teacher behaviors in interacting with preschool children from International and American cultures in small group activity situations.

Although the variables identified in Hawkins's (1983) modified model were important, the manner in which these variables related to teacher competency and behavior did not always coincide with those predicted. For example, Hawkins would

have predicted that all of the personal and social perceptual variables included in this study would be positively related to the teacher competency ratings and positive behaviors of student teachers, and negatively related to the negative behaviors of student teachers. However, such clear findings were not obtained. In fact, the manner in which the personal and social perceptual variables were related to each other and to the teacher competency and behavior scores varied considerably. For example, self-esteem was negatively related to both the frequency and quality of positive behaviors displayed toward girls during unstructured table activities. Furthermore, work environment autonomy was positively related to the frequency of negative behaviors displayed by student teachers during structured story time activities. These are but a few of the examples where results varied from what would have been predicted on the basis of Hawkins's modified model.

Also, variables not originally associated with perceptual theory or Hawkins's model had an impact on the teacher competency ratings and behaviors student teachers displayed toward preschool children. These included such variables as student teachers' teacher preparation level, children's ethnicity (i.e., International vs. American), gender, and type of activity (i.e., structured vs. unstructured) in which they were involved. Indeed, teacher preparation level was the single most significant predictor of student teachers' competency ratings, while significant differences in the observed teacher behavior scores of student teachers were found relative to children's ethnicity, gender, and their involvement in different types of activities. All of these findings illustrate the complex nature of the relationships that exist among the

variables in this study. In spite of this fact, however, a number of suggestions can be made that might prove useful for teacher preparation programs as they attempt to prepare students for their role as teachers in multicultural early childhood education settings.

First, several implications can be drawn from findings associated with differences that occurred between the observed teacher behavior scores of student teachers as a result of children's ethnicity, gender, and activity type. International children received less positive and more negative behaviors displayed by student teachers than American children. Whether this reflects the stereotypic bias American female-student teachers have against International children or their lack of experience and knowledge of the behaviors and traditions of other cultures, teacher preparation programs must begin to focus on eliminating such bias or differential ways of interacting with children so that both International and American children may actualize their potentials according to their own culture traditions. Sensitivity to cultural differences, development of communication skills, and gaining knowledge of families from various cultures are important first steps in this process of eliminating bias and differential ways of behaving.

In addition, the fact that student teachers displayed less positive and negative behaviors toward girls than to boys in this sample suggests that gender stereotypes continue to be reinforced by female student teachers in early childhood education settings. Accreditation standards for young children's educational programs have clearly indicated that such gender-based inequities are not acceptable in quality

programs for young children (Bredenkamp, 1987). Teacher preparation programs, therefore, must continue to work diligently toward helping student teachers rid themselves of these gender-based inequities so that girls and boys can explore their environments free from sex-typed limitations with teachers who are supportive rather than negative in their responses to children.

Furthermore, student teachers were found to display more negative behaviors toward young children during structured story time activities than unstructured table activities. Findings such as these suggest that teacher preparation programs have an important role to play in helping student teachers in their endeavors at guiding children's behavior in structured group situations. Skills in the effective use of positive rather than negative guidance techniques would be helpful to student teachers in these settings.

Second, teacher preparation level was the single most significant predictor of student teachers' competency ratings. In addition, student teacher preparation level was found to be positively related to the frequency of positive behaviors and negatively related to the frequency of negative behaviors displayed by student teachers toward International boys during unstructured table activities. These findings suggest that practicum experiences for student teachers at various levels in their teacher preparation programs are important in helping them to achieve their competencies as teachers, and in their display of more positive and less negative behaviors toward children, particularly toward International boys.

Third, self-esteem appeared to be negatively related to the positive behaviors displayed by student teachers toward International and American children, and in some cases positively related to their negative behaviors. These findings were interpreted from the point of view of student teachers' possible overestimation of their self-esteem during this time, due to their limited experience in working with young children and their present search for their own identity as persons. Teacher preparation programs, therefore, can center on helping student teachers develop more realistic perceptions of themselves in ways that would be beneficial for their interactions with young children.

Regarding the characteristic of personal teaching efficacy, overall findings revealed that such a characteristic was negatively related to the negative behaviors displayed by student teachers toward children, and in one case, positively related to the positive behaviors displayed by them. Such findings supported Bandura's (1977) self-efficacy theory, and suggest that a person's perception of their abilities and skills in working with young children was directly related to the kinds of behaviors they displayed. More negative perceptions were related to less positive behavioral displays, while more positive perceptions were related to less negative behavioral displays. Teacher preparation programs that provide student teachers with experiences that would facilitate their positive perceptions of their skills and abilities as teachers, therefore, would appear critical, if they are to display behaviors that would be beneficial to young children.

Fourth, regarding social perceptual variables for boys, whether International or American, family support was positively related to the quality of positive and negatively related to the quality of negative behaviors displayed toward them, respectively, by student teachers during unstructured table activities. For boys, therefore, student teachers' family support appeared beneficial to the way student teachers interacted with them. On the other hand, student teachers' family support was negatively related to the frequency and quality of positive behaviors displayed by student teachers toward American girls during structured story time activities. The role of family support in socializing student teachers is a possible cause of such a relationship, particularly when American girls asserted themselves in structured group situations. Whatever the case, teacher preparation programs must consider the role families play in the lives of student teachers as they attempt to facilitate their development as teachers.

The variable of peer support among student teachers was found to be negatively related to the frequency of negative behaviors displayed by student-teachers toward International girls and boys, and American girls during structured story time activities. This suggested that positive relationships between student teacher peers were important in helping them refrain from displaying negative behaviors toward a majority of the children studied during structured group activities. Teacher preparation programs, therefore, cannot overlook the importance of cooperation with peers and team work in helping student teachers develop the skills and competencies necessary to teach young children effectively.

Supervisor support among student teachers was found to be positively related to the frequency and quality of positive behaviors displayed toward International boys; it was also positively related to frequency only or frequency and quality of negative behaviors displayed toward International and American boys during unstructured table activities. The positive relationship between supervisor support and student teachers' positive behaviors were discussed from the perspective of how support from supervisors may be modeled by student teachers in their support for children. The positive relationship between supervisor support and negative behaviors, however, was interpreted from the perspective of how supervisor support created a comfort level among student teachers that allowed International boys to assert themselves in a way that led to negative behavioral responses from student teachers. However, conjectural these interpretations may be, supervisor support continues to be a dimension to which teacher preparation programs must continue to attend as supervisors seek to develop effective ways of facilitating the development of competent teachers.

Generally, findings revealed work environment autonomy to be negatively related to the frequency and quality of negative behaviors displayed by student teachers toward children during unstructured table activities, but positively related to the frequency and quality of negative behaviors displayed by student teachers during structured group activities. In unstructured group situations, student teachers' autonomy appears to inhibit their display of negative behaviors toward children, while in structured group situations, student teachers' autonomy appears to lead them

to display more negative behaviors. Perhaps unstructured group situations allow children and student teachers to interact autonomously, not necessarily conflicting with each other. In structured group situations, however, the autonomous nature of both children and student teachers may lead to conflicts due to the limits placed upon children's behavior in such settings. The impact on work environment autonomy, therefore, needs to be examined in teacher preparation programs so as to discover when such behaviors might facilitate or inhibit children's learning.

Finally, it should be indicated that while the personal and perceptual factors in this study were related to student-teaching performance (i.e., competency and behavior) in unique ways, they were also related to each other in unique ways as well. The positive correlations that occurred among the variables of personal teaching efficacy, family support, peer support, supervisor support, and work environment autonomy in unique combinations, suggest that teacher preparation programs must not only consider how each of these variables is independently related to teaching performance, but how they are related together in an early childhood teacher preparation environment. Such an integrated approach to teacher preparation is probably a more realistic and beneficial way of conceptualizing the teacher preparation environment. In this manner, various aspects of student teachers' perceptions, including those related to themselves and their teacher preparation environments, can be considered in developing experiences that would meet their specific needs as they strive to become effective teachers of young children.

Part V: Limitations and Suggestions for Future Research

Although attempts were made to control for a number of important variables in this study, several limitations were encountered throughout the course of this investigation that may have influenced the results. These limitations, along with suggestions for future research, are discussed below.

The Sample

In the present study, the sample is limited to 67 female, Caucasian student teachers from predominantly middle-class families. This relatively small sample seriously limit the power of statistical procedures to identify the significant relationships that may have existed among the variables. In addition, the relatively homogeneous nature of the sample employed limits generalization of findings to other student teacher populations. Future studies, therefore, in addition to increasing sample size, might wish to include in male as well as female student teachers from both International and U.S. cultures, covering a wide range of socioeconomic levels. Student teachers from a variety of American ethnic groups could also be used as subjects.

Selection of Variables

Although the theoretical and research literature was examined carefully to identify the important perceptual variables for inclusion in this study, their relatively low correlations with the criterion variables of teacher competency and behavior

suggested that other more important variables need to be considered in understanding student teachers' interactions with children from International and U.S. cultures. This suggestion was further supported by the small number of significant regression models; the limited number of perceptual variables that were found to contribute to student teachers' competency and behaviors; and the marked impact children's ethnicity, gender, and activity type had on student teachers' behavior scores.

Perhaps, future studies might wish to consider such perceptual variables as student teachers' general attitudes, concerns, and expectations relative to children based on their gender and ethnicity. In addition, student teachers' past International interaction experiences, a more accurate measure of their past involvement in children's education, and their comfort level in participating in various structured and unstructured preschool classroom activities, may be included among the variables in future investigations.

Instruments

Several limitations concerning the instruments used in this study were encountered during the data analyses process. In reference to limitations associated with the personal perceptual factor of self-esteem, the use of a global measure of self-esteem was problematic. Past research relating teachers' self-esteem to their behaviors with children have obtained more positive results when domain-specific rather than global measures of self-esteem were used (Bandura, 1986). According to Bandura (1986), while the construct of global and domain-specific self-esteem do

overlap somewhat, domain-specific self-esteem includes perceptions of the self involving specific skills and abilities that are situation-specific. It is these situation-specific measures of self-esteem that are significantly and positively related to teacher competency and behaviors. Future studies, therefore, might replicate the present study by using more domain-specific measures of self-esteem.

With respect to limitations related to the personal perceptual factor of motivation, the variable of personal teaching efficacy was used in this study. Personal teaching efficacy was defined as a cognitive motivational construct involving student teachers' beliefs that they had the requisite skills and abilities necessary to facilitate positive learning among children. Perhaps if more specific measures of student teachers' perceptions of their abilities and skills in interacting with particular groups of children, whether from International or U.S. cultures, were used, more significant results would have been obtained. It should be noted, however, that the scale used in assessing student teachers' personal teaching efficacy is still in the process of being developed. Even though previous studies involving factor analysis confirmed the existence of the construct of personal teaching efficacy (Dembo & Gibson, 1985), the amount of the total variance that was accounted for by this factor was very small. Future studies, therefore, might wish to spend more time further refining the scale so that the construct of personal teaching efficacy can be more reliably and validly assessed.

Although findings indicated that the social perceptual factor of family support at times significantly predicted teacher behaviors, examination of student teachers'

scores on this scale revealed that they were relatively homogeneous. Scores of student teachers tended to cluster at the upper end of this scale. This lack of variance in student teachers' family support scores may have limited the power of statistical procedures employed and not allowed researchers to conduct a true test of the relationships among family support and student teachers' competency and behaviors toward children. Future investigations, therefore, might wish to use other family support measures to obtain results that can be compared with those obtained in the present study.

Finally, limitations relative to the teacher competency ratings of student teachers were also present. In asking supervising teachers to rate the teaching competency of student teachers, their general competency in teaching preschool children was the major focus. In this manner, no information regarding how competent student teachers were in facilitating learning among both International and American children was obtained. Significant relationships among the personal and social perceptual variables and teacher competency, therefore, were primarily limited to children in general. Future studies might revise the teacher competency rating scale to assess student teachers' competency in working with International children separately from American children. In addition, studies have yet to be undertaken relating the competency ratings of student teachers by supervisors to with the actual competency behaviors displayed by student teachers toward children in the classroom. Studies such as these need to be conducted to provide the teacher competency rating scale with an important estimate of concurrent validity.

Research Design

A number of limitations associated with the research design employed in this study were present. These limitations centered around concerns associated with the (a) survey, (b) videotaping, (c) data-coding, and (d) data-entry procedures employed.

With respect to the survey procedures used, although no major problems were encountered relative to administering the survey questionnaire to student teachers, the time when these questionnaires were administered may have markedly affected the results obtained. In the present study, all survey questionnaires were administered to student teachers two weeks prior to the end of their student teaching experiences. The fact that both student teachers' self-esteem and personal teaching efficacy were assessed during this time rather than prior to their student teaching experiences, suggested that the student teaching experience may have affected the self-esteem and personal teaching efficacy of student teachers prior to their assessment. As a result, student teachers' self-esteem and personal teaching efficacy scores used to predict teacher competency ratings and behaviors may not have provided the researchers with a realistic picture of the complex relationships that may exist among these variables. Future studies, therefore, might wish to administer both self-esteem and personal teaching efficacy measures prior to and after the student teaching experience to decipher the contributions of self-esteem and personal teaching efficacy to student teachers' competency and behaviors, as well as how these relationships might change as a result of the student-teaching experience.

In reference to the videotaping procedures used, although overall no major problems were encountered which markedly disrupted the data collection process, several important concerns that have implications for future research can be pointed to at this time. First, although major efforts were made to acclimate student teachers to the general research project so that they would behave naturally during the videotaping periods, some student teachers indicated anxiety about their participation. Even though they were assured that their videotaped performances in small group activity sessions with children would not influence their grades, some concern about this matter arose. In addition, other student teachers who encountered difficulties in interacting with children during the videotaped periods wanted feedback about how they might improve their interactions with children. In all of these situations, the researchers listened carefully to the concerns of student teachers, reassuring them of the confidentiality of the research project, and the contributions they were making to the teacher preparation program. At no time were specific recommendations given to student teachers as to how they might improve their interaction skills with children, since such information might have influenced the results obtained in ways counter to the purpose of this study. However, in future studies, researchers might wish to explore ways in which to provide student teachers with experiences that might make them more comfortable during their videotaped sessions, and opportunities to debrief their interaction experiences and concerns without jeopardizing the design and intent of the study.

The second concern encountered relative to the videotaping procedures had to do with the random selection method used in identifying children for involvement in the small group activity sessions. While use of these random procedures ensured that each child had an equal chance of being selected for the small group activity sessions with student teachers, the limited number of children available for selection from different ethnic and gender subgroups led student teachers to interact with some children more often than once. Aside from the impact of familiarity that comes when student teachers interact with children in small group situations more than once, data obtained on student-teacher behaviors toward children in these sessions violated the assumption of data independence required of the statistical procedures used. In these cases, repeated measurements of the same student-teacher/child pairs were used as data points, rather than independent student-teacher/child pairs. This, of course, may have markedly affected the results obtained in this study. Future studies need to utilize procedures that ensure that data points studied are actually independent student-teacher/child pairs. In order to accomplish this task, a larger sample of children must be used in future investigations.

The third concern encountered relative to the videotaping procedures employed focused on the mechanical aspects of scheduling the videotaping of student teachers' interactions with children in the small group sessions. There were times in the data-collection process when large classroom activities interfered with these small group activity sessions, student teachers were absent, mechanical failures occurred relative to the video and recording equipment, and children needed to leave the

activity sessions for toileting purposes. Some of these incidence led to the rescheduling of videotaping sessions with student teachers and children, affecting the counterbalancing procedure used in scheduling student teachers for videotaping at the beginning of the research study. Such changes may have affected the results obtained. Future studies, therefore, should take care to plan the videotaping sessions with supervisors and student teachers, maintaining an appropriate degree of flexibility, so that the research design of the study is not markedly affected by such unexpected events.

With respect to the procedures used in coding the behaviors displayed by student teachers toward children in the videotaped small group interaction sessions, intercoder reliability estimates ranged from moderately high to high, depending upon which aspect of student teachers' behavior was being coded. Although quite acceptable at this time, future studies could further refine coder training to reach higher levels of intercoder reliability. Such training sessions would ensure that coders were understanding the coding categories, and the criteria being used in coding student teachers' behaviors. On several occasions after the training session, coders did have to review the coding categories and discuss them with the researchers before they could continue with their codings. Coder training sessions, therefore, are crucial in ensuring accuracy of coding at various points throughout the coding process. When they are effective, they save time by eliminating the necessity of retraining coders at points where intercoder reliability estimates fall below the established standard.

In addition, another limitation relative to the coding procedures used involved the student teachers' behaviors being coded. In the present study, only the frequency and quality of all behaviors displayed by student teachers toward International and American children, during each 10-minute, videotaped observation session, were coded. The length of time that a particular behavior occurred (i.e., duration), the number of specific behaviors displayed during specified time intervals (i.e., every 5 or 10 seconds), and the type of positive (i.e., ego boosting, teaching, etc.) and negative (i.e., commanding, ignoring, etc.) behaviors displayed were not coded or analyzed. Future studies, therefore, might wish to experiment with a variety of coding methods to see whether results are replicated under different coding procedures. Furthermore, the behaviors coded for analyses in this study focused primarily on student teachers' behaviors toward children. The child's initial behavior prior to a student teacher's response, as well as the sequential patterns of interactions that took place between student teachers and children over time could be undertaken in future investigations. This could occur through the recoding of the student teacher/child interactions that took place during the videotaped small group activity sessions.

Finally, with respect to limitations associated with the data-entry procedures, in the present study, individual coders coded the behaviors displayed by student teachers toward children on a single coding sheet containing all the coding categories relevant to coding the teacher behaviors which occurred relative to a particular student teacher/child pair while viewing the videotaped activity sessions. Since each

of the 67 student teachers interacted with four children in four 10-minute small group sessions, then the overall number of minutes during which student teachers' behaviors were coded for the entire research project was tremendous. All of these data were summed then key punched into the computer for data analyses. This method of data entry was time consuming and may have caused some recording errors in the data transfer process. Future studies, therefore, could benefit from the application of more modern technology as a medium for coding behavior. Presently, the coding of behavioral observations, whether through videotaped segments of interactions or in naturalistic settings, can be directly recorded into a personal computer with a key board. Therefore, in collecting or coding data for future studies, one could set-up a station that incorporates a TV monitor, VCR, and a computer program for collecting or coding data. Such a procedure would definitely save time, and eliminate errors that might occur if data were first recorded on the coding sheets, then transferred into the computer for analyses.

Data Analyses

Finally, with respect to limitations associated with data analyses, one major limitation stands out. This limitation has to do with the scores associated with the behaviors displayed by student teachers toward International and American children in the small group activity sessions. As mentioned earlier, although random procedures were used to identify children for participation with student teachers in the small group activity sessions, the limited number of children from various ethnic

and gender groups available for selection led to repeated interactions of student teachers with some of the children in the sample. When this occurred, the assumption of data independence required of the statistical procedures used were violated, thus not allowing for a true test of the contribution of selected personal and social perceptual factors to the observed behaviors of student teachers in this study. Short of designing newer studies that escape this problem by increasing the sample size of children used to established independent student teacher/child pairs, future studies need to search for additional statistical procedures that can resolve within-subject and between-subject sources of variation. Furthermore, it should be noted that each small group activity session contained four different children interacting with a student teacher during that 10-minute videotaped interaction session. The different combinations of children that occurred across all small group activity sessions probably has a marked impact in the way student teachers responded to them. In the present study, analyses of data did not effectively deal with this problem. Perhaps future studies might find a way of standardizing the behavior scores of student teachers as a result of different combinations of children within the groups. Findings obtained utilizing this scoring procedure can then be compared with results obtained in the present study.

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APPENDICES

APPENDIX A

DEMOGRAPHIC QUESTIONNAIRE

Name: _____ Code Number: _____

Instructions: The following questionnaire asks for information about yourself and your family. Please complete all items as accurately as you can.

I: INFORMATION ABOUT YOURSELF

1. Birthdate (fill in) :
_____ month _____ day _____ year
2. Gender (check one) : _____ Female _____ Male
3. Major (fill in) : _____
4. Class Standing (check one) :
_____ Freshman _____ Sophomore _____ Junior
_____ Senior _____ Other, specific _____
5. Grade Point Average (fill in estimate) : _____
6. Ethnic Background (check one) :
_____ Asian or Pacific Islander, specify nationality _____
_____ African American, Non-Hispanic
_____ Hispanic
_____ American Indian or Alaskan Native People
_____ White, Non-Hispanic
_____ Other, please specify _____

II: INFORMATION ABOUT YOUR FAMILY

7. What is your mother's and your father's occupation? (specify)
_____ Mother _____ Father

8. Estimate your mother's and father's occupational income.

Mother
(check one)

Father
(check one)

_____	Under 8,000	_____
_____	\$8,000-\$20,000	_____
_____	\$20,001-\$30,000	_____
_____	\$30,001-\$40,000	_____
_____	\$40,001-\$50,000	_____
_____	\$50,001-\$60,000	_____
_____	\$60,001 and up	_____

9. Please indicate your parents' marital status (check one) :

____ Married ____ Single ____ Other, specify _____

10. What is the last grade your mother and father completed in school?

Mother
(check one)

Father
(check one)

_____	None	_____
_____	1-6 grade	_____
_____	7-9 grade	_____
_____	10-11 grade	_____
_____	12 grade	_____
_____	Some college	_____
_____	Undergraduate degree	_____
_____	Graduate degree	_____

11. List other members within your family by age and relationship to you.

Age	Relationship to You
Example: 19	Brother
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

III: ABOUT YOUR COURSEWORK AND TEACHING EXPERIENCES

12. Please indicate in which course you are currently enrolled (check one) :

☐ HDFS 313 ☐ HDFS 430 ☐ HDFS 406
☐ Other, please indicate course number and title: _____

13. Please indicate which of the above or other unlisted past practicum courses you have completed. Designate course number and title:

HDFS _____ : (Title) _____
 HDFS _____ : (Title) _____
 HDFS _____ : (Title) _____
 HDFS _____ : (Title) _____

14. Please use the chart below to describe briefly all practical experiences you have had working with young children during the last four years. Three examples are provided below.

<u>Experience Description</u>	<u>Position</u>	<u>Hours/ Week</u>	<u>Length of Time</u>
Led a group of 15, 8-year-olds	Girl Scout Leader	5 hours	2 years
Led a morning playgroup of 6, 3-5 year-olds	Playgroup Leader	4 hours	1 summer
Student in an early childhood education class	Student Teacher	4 hours	1 quarter

If you have any comments you would like to make about this research project, you may do so in the space provided below. Thank you very much for your participation in this research project.

APPENDIX B

ROSENBERG'S SELF-ESTEEM INVENTORY

Instructions: The following questionnaire contains 10 statements about yourself. Please rate the degree to which you agree or disagree with each of them using the scale below.

Rating Scale:

SA = Strongly Agree

A = Agree

D = Disagree

SD = Strongly Disagree

(1) On the whole, I am satisfied with myself.....	SA	A	D	SD
(2) At times I think I am no good at all.....	SA	A	D	SD
(3) I feel that I have a number of good qualities.....	SA	A	D	SD
(4) I am able to doing things as well as most other people.....	SA	A	D	SD
(5) I feel I do not have much to be proud of.....	SA	A	D	SD
(6) I certainly feel useless at time.....	SA	A	D	SD
(7) I feel that I'm a person of worth, at least on an equal plane with others.....	SA	A	D	SD
(8) I wish I could have more respect for myself.....	SA	A	D	SD
(9) All in all, I am inclined to feel that I am a failure.....	SA	A	D	SD
(10) I take a positive attitude toward myself.....	SA	A	D	SD

APPENDIX C

GIBSON AND DEMBO'S PERSONAL TEACHING EFFICACY SCALE

Instructions: Please complete the following questionnaire relative to your skills and abilities in teaching young children using the rating scale below.

Rating Scale :

SA = strongly agree

MA = Moderately agree

A = Agree slightly more than disagree

D = Disagree slightly more than agree

MD = Moderately disagree

SD = Strongly disagree

(1) When a child does better than usual, many times it is because I exerted a little extra effort.....	SA MA A D MD SD
(2) When a child is having difficulty with a particular concept, I am usually able to adjust my teaching approach to his/her level.....	SA MA A D MD SD
(3) When a child achieves at a level better than is expected, it is usually because I found better ways of teaching that child.....	SA MA A D MD SD
(4) When I really try, I can get through to most difficult children.....	SA MA A D MD SD
(5) When the children in my classroom improve in their learning, it is usually because I found more effective teaching approaches.....	SA MA A D MD SD
(6) If a child masters a new concept quickly, this might be because I knew the necessary steps to take in teaching that concept.....	SA MA A D MD SD

Rating Scale:

SA = strongly agree

MA = Moderately agree

A = Agree slightly more than disagree

D = Disagree slightly more than agree

MD = Moderately disagree

SD = Strongly disagree

<p>(7) If a child did not remember information I gave him/her in a previous curriculum activity, I would know how to increase his/her retention in the next curriculum activity.....</p>	<p>SA MA A D MD SD</p>
<p>(8) If a child in my class becomes disruptive and noisy, I feel assured that I know some of the techniques which can be used in redirecting the child's behavior quickly.....</p>	<p>SA MA A D MD SD</p>
<p>(9) If one of the children in my class cannot accomplish a particular task, I would be able to accurately assess whether the task was at the correct level of difficulty.....</p>	<p>SA MA A D MD SD</p>

APPENDIX D

FLEMING ET AL.'S FAMILY SUPPORT SCALE

Instructions: Listed below are 7 statements about your family. Please rate the degree to which you agree or disagree with each statement about your family using the following rating scale (circle one per statement).

SA = Strongly Agree
 A = Agree
 D = Disagree
 SD = Strongly Disagree

(1) I can turn to members of my family when I am in trouble.....	SA	A	D	SD
(2) My family provides me with satisfaction and a sense of strength.....	SA	A	D	SD
(3) As a child I received a great deal of support from my family.....	SA	A	D	SD
(4) I feel comfortable when asking my family for support.....	SA	A	D	SD
(5) There were always people around when I was growing up who could help me when I needed it.....	SA	A	D	SD
(6) Members of my family are supportive of me.....	SA	A	D	SD
(7) When I don't have my family's support I feel more anxious about what I am doing.....	SA	A	D	SD

APPENDIX E

MOOS'S WORK ENVIRONMENT QUESTIONNAIRE (WES)

Instructions: Listed below are 27 statements about the place in which you do your student teaching. Please rate the degree to which you agree or disagree with each statements about your student teaching environment using the following rating scale (circle one per statement).

SA = Strongly Agree
 A = Agree
 D = Disagree
 SD = Strongly Disagree

Note: The term "student teacher" refers to students like yourselves in the Child Development Laboratory. The term "supervisors" refers to the head and assistant teachers who supervise your student teaching experiences in the Child Development Laboratory.

(1) Student teachers go out of their way to help each other feel comfortable.....	SA	A	D	SD
(2) Supervisors tend to talk down to student teachers.....	SA	A	D	SD
(3) Student teachers have only few important responsibilities.....	SA	A	D	SD
(4) The atmosphere is somewhat impersonal.....	SA	A	D	SD
(5) Supervisors usually compliment a student teacher who does something well.....	SA	A	D	SD
(6) Student teachers have a great deal of freedom to do as they like.....	SA	A	D	SD
(7) Student teachers take a personal interest in each other.....	SA	A	D	SD
(8) Supervisors tend to discourage criticisms from student teachers.....	SA	A	D	SD

(9) Student teachers are encouraged to make their own decisions.....	SA	A	D	SD
(10) Student teachers rarely do things together outside of class.....	SA	A	D	SD
(11) Supervisors usually give full credit to ideas contributed by student teachers.....	SA	A	D	SD
(12) Student teachers can use their own initiative in doing things.....	SA	A	D	SD
(13) Student teachers are generally frank about how they feel.....	SA	A	D	SD
(14) Supervisors often criticize student teachers over minor things.....	SA	A	D	SD
(15) Supervisors encourage student teachers to rely on themselves when a problem arises.....	SA	A	D	SD
(16) Student teachers often socialize together.....	SA	A	D	SD
(17) Student teachers generally feel free to ask questions of supervisors.....	SA	A	D	SD
(18) Student teachers generally do not try to be unique and different.....	SA	A	D	SD
(19) Student teachers who differ greatly from the others in the Child Development Lab don't get along.....	SA	A	D	SD
(20) Supervisors expect far too much from student teachers.....	SA	A	D	SD

(21) Student teachers are encouraged to learn things even if they are not directly related to their student teaching responsibilities.....	SA	A	D	SD
(23) Student teachers can discuss their personal problems with supervisors.....	SA	A	D	SD
(24) Student teachers function fairly independently of their supervisors.....	SA	A	D	SD
(25) Often student teachers make trouble by talking behind each other's backs.....	SA	A	D	SD
(26) Supervisors really stand up for their student teachers.....	SA	A	D	SD
(27) Supervisors meet with student teachers regularly to discuss their future teaching goals.....	SA	A	D	SD

APPENDIX F

SUGAWARA AND CRAMER'S PRESCHOOL TEACHER
COMPETENCY RATING SCALE

Student's Name: _____

Course Number: _____

Instructor: _____

Date: _____

Instructions: Please respond to the following items by circling the number on the scale below which most closely reflects your rating of a student teacher's performance in the preschool classroom. Please do not omit any items. If an item does not apply for a student at a particular teacher preparation level, please indicate NA (not applicable) beside that item. Your first impressions of the student teacher are of primary interest in this questionnaire.

0 1 2 3 4 5 _____	0 1 2 3 4 5 _____
The student teacher has not worked on this.	The student teacher does this easily.

I. In UNDERSTANDING AND EVALUATING CHILDREN'S BEHAVIOR, the student is able to: 1. accept a child as she or he is..... 2. use knowledge of child-development principles and sequences to understand children..... 3. use information regarding home, family, and sociocultural back-ground, experiences to understand children's behavior..... 4. identify significant observations of child behavior.....	 0 1 2 3 4 5 0 1 2 3 4 5 0 1 2 3 4 5 0 1 2 3 4 5
II. In FOLLOWING AND INTERPRETING GUIDANCE GUIDELINES, the student is able to: 1. forestall situations..... 2. use positive suggestions.....	 0 1 2 3 4 5 0 1 2 3 4 5

II. In FOLLOWING AND INTERPRETING GUIDANCE GUIDELINES, the student is able to:

- | | | | | | | |
|---|---|---|---|---|---|---|
| 3. recognize when and where she or he is needed..... | 0 | 1 | 2 | 3 | 4 | 5 |
| 4. give choices to children when choices are available..... | 0 | 1 | 2 | 3 | 4 | 5 |
| 5. help interpret and verbalize children's feelings..... | 0 | 1 | 2 | 3 | 4 | 5 |
| 6. use prescribed limits and follow through..... | 0 | 1 | 2 | 3 | 4 | 5 |
| 7. set reasonable limits and follow through..... | 0 | 1 | 2 | 3 | 4 | 5 |
| 8. redirect children when the need arises..... | 0 | 1 | 2 | 3 | 4 | 5 |
| 9. encourage self-help skills among children..... | 0 | 1 | 2 | 3 | 4 | 5 |
| 10. display flexibility in guiding children's learning..... | 0 | 1 | 2 | 3 | 4 | 5 |
| 11. making effective use of non-verbal communication skills in guiding children's behavior..... | 0 | 1 | 2 | 3 | 4 | 5 |
| 12. avoiding expressions of threat..... | 0 | 1 | 2 | 3 | 4 | 5 |
| 13. helping children find ways of settling their own quarrels..... | 0 | 1 | 2 | 3 | 4 | 5 |
| 14. express positive social reinforcement when appropriate..... | 0 | 1 | 2 | 3 | 4 | 5 |

III. RELATIONSHIPS

A: In RELATING TO CHILDREN, the student is able to:

- | | | | | | | |
|---|---|---|---|---|---|---|
| 1. express feeling about him/herself..... | 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|

III. RELATIONSHIPS

A: In **RELATING TO CHILDREN**, the student is able to:

- | | | | | | | |
|---|---|---|---|---|---|---|
| 2. sense children's feelings so as to maintain interaction with them..... | 0 | 1 | 2 | 3 | 4 | 5 |
| 3. communicate with children while still recognizing that s/he is an adult..... | 0 | 1 | 2 | 3 | 4 | 5 |
| 4. display effective communication with children..... | 0 | 1 | 2 | 3 | 4 | 5 |
| 5. maintain relationships with all children in a variety of areas..... | 0 | 1 | 2 | 3 | 4 | 5 |
| 6. relate with individual children..... | 0 | 1 | 2 | 3 | 4 | 5 |
| 7. relate with children in small groups..... | 0 | 1 | 2 | 3 | 4 | 5 |
| 8. relate with children in large groups..... | 0 | 1 | 2 | 3 | 4 | 5 |
| 9. display honesty in interacting with children..... | 0 | 1 | 2 | 3 | 4 | 5 |

B: In **RELATING TO THE PROGRAM**, the student is able to:

- | | | | | | | |
|---|---|---|---|---|---|---|
| 1. permit children to explore materials in a variety of ways..... | 0 | 1 | 2 | 3 | 4 | 5 |
| 2. recognize and use spontaneous happenings within the environment to facilitate children's learning..... | 0 | 1 | 2 | 3 | 4 | 5 |
| 3. display adaptability in curriculum implementation within the classroom..... | 0 | 1 | 2 | 3 | 4 | 5 |
| 4. make effective use of limited resources to achieve educational goals..... | 0 | 1 | 2 | 3 | 4 | 5 |

III. RELATIONSHIPS						
B: In RELATING TO THE PROGRAM, the student is able to:						
5. display familiarity with the preschool facility...	0	1	2	3	4	5
6. display knowledge of the preschool program routines.....	0	1	2	3	4	5
7. preplan programs and activities.....	0	1	2	3	4	5
8. function independently when appropriate.....	0	1	2	3	4	5
9. use names of individual children and staff.....	0	1	2	3	4	5
10. maintain confidentiality in all matters concerning the preschool program.....	0	1	2	3	4	5
11. recognize and use policies and procedures of the preschool program.....	0	1	2	3	4	5
C: In RELATIONS TO STAFF, the student is able to:						
1. show positive attitudes towards other staff members.....	0	1	2	3	4	5
2. give directions to other staff members.....	0	1	2	3	4	5
3. receive directions from other staff members.....	0	1	2	3	4	5
4. participate as a team member.....	0	1	2	3	4	5
D: In RELATING TO PARENTS, the student is able to:						
1. recognize parents by name.....	0	1	2	3	4	5
2. converse with parents.....	0	1	2	3	4	5

III. RELATIONSHIPS

D: In RELATING TO PARENTS, the student is able to:

- | | | | | | | |
|---|---|---|---|---|---|---|
| 3. incorporate the cultural background of families in the preschool program..... | 0 | 1 | 2 | 3 | 4 | 5 |
| 4. facilitate a free flow of information between teachers and parents about their children's needs and behaviors..... | 0 | 1 | 2 | 3 | 4 | 5 |
| 5. communicate in both written and verbal forms concerns about the program, children, and families..... | 0 | 1 | 2 | 3 | 4 | 5 |
| 6. use parents as resources in developing the preschool program..... | 0 | 1 | 2 | 3 | 4 | 5 |
| 7. recognize and appreciate parental values and priorities for their children..... | 0 | 1 | 2 | 3 | 4 | 5 |
| 8. maintain confidentiality regarding matters concern parents..... | 0 | 1 | 2 | 3 | 4 | 5 |

IV. EVALUATION

A: In EVALUATING THE PROGRAM, the student is able to:

- | | | | | | | |
|--|---|---|---|---|---|---|
| 1. understand the major objectives of the program..... | 0 | 1 | 2 | 3 | 4 | 5 |
| 2. evaluate the adequacy of the educational program in meeting children's needs..... | 0 | 1 | 2 | 3 | 4 | 5 |
| 3. evaluate the parent education/involvement component of the program..... | 0 | 1 | 2 | 3 | 4 | 5 |
| 4. evaluate the staff development component of the program..... | 0 | 1 | 2 | 3 | 4 | 5 |

B: In EVALUATING THE STAFF, the student is able to:						
1. communicate perceptions of staff performance in an honest and open manner.....	0	1	2	3	4	5
2. direct staff in areas where their teaching skills may be enhanced.....	0	1	2	3	4	5
3. use objective observations to clarify perceptions of staff teaching performance.....	0	1	2	3	4	5
4. communicate openly observations and perceptions of staff-teaching performance with concrete suggestions for improvement.....	0	1	2	3	4	5
5. maintain confidentiality in all matters concerning staff evaluation.....	0	1	2	3	4	5
C: In EVALUATING THE SELF, the student, is able to:						
1. communicate perceptions of his/her teaching performance in an honest and open manner.....	0	1	2	3	4	5
2. recognize his or her teaching strengths and limitations.....	0	1	2	3	4	5
3. identify and undertake ways of improving his/her teaching skills.....	0	1	2	3	4	5
4. seek evaluation of his/her teaching performance from other staff members.....	0	1	2	3	4	5
5. listen and hear staff feedback about his/her teaching performance and act upon suggestions made.....	0	1	2	3	4	5
6. discuss openly discrepancies between staff evaluations and his/her own evaluations of teaching performance.....	0	1	2	3	4	5

APPENDIX G

TEACHER BEHAVIOR OBSERVATION CODING SHEET

Observational Code # _____ Teacher Code # _____ Program Code: 1 2 3 4 (Circle one)
 Room Code: 1 2 (Circle one) Observation: 1 2 (Circle one) Activity Type: S U (Circle one)
 Child's Video Position: 1 2 3 4 (Circle one) Child Code # _____ Activity Name: _____

INSTRUCTIONS: Check the behaviors found in this 10 minute video segment. Begin the observation time at the Log Start Time _____ and end at the Log Stop Time _____. The following symbols are used for checking the behaviors:

EG (Ego Boosting); T (Teaching); Q (Questioning- O = Open; C = Closed); A (Attending);
 COMM (Commanding); NR (Negatively Responding); IG (Ignoring); PC (Physical Control).

EG	T	Q Open Closed	A	COMM	NR	IG	PC
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Total							

When you have finished, take a moment and reflect upon what you have just viewed. Using the scale below, rate how **positive** you feel the teacher's behavior was to the child (circle one).

1 2 3 4 5 6 7
 (1 = Virtually No Positiveness; 2 = Low Positiveness; 3 = Some Positiveness; 4 = Moderate Positiveness;
 5 = More Than Moderate Positiveness; 6 = High Positiveness; 7 = Very High Positiveness)

Now, rate how **negative** you feel the teacher's behavior was toward the child (circle one).

1 2 3 4 5 6 7
 (1 = Virtually No Negativeness; 2 = Low Negativeness; 3 = Some Negativeness; 4 = Moderate Negativeness;
 5 = More Than Moderate Negativeness; 6 = High Negativeness; 7 = Very High Negativeness)