A STUDY OF TOUCH AS A MODE OF NONVERBAL COMMUNICATION AS USED BY GRADE THREE TEACHERS IN SELECTED NEWFOUNDLAND SCHOOLS

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by

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ABSTRACT

The purpose of this study was to explore the area of touch in relation to the classroom environment, focusing specifically on the teacher's use of touch in their interactions with children.

Observations were conducted in six grade three classrooms. The data collected during the observation sessions consisted of the nature of the classroom activity, the type of touch teachers initiated, the body areas involved in the touch interaction, the child's activity at touch initiation and sex of the child.

From an analysis of the data collected during direct observation in the classroom settings, repertoires of types of touch and child's activity at touch initiation were developed for each of the six teachers. Patterns of touching behavior were noted among the sample of six teachers on these two dimensions. Meaning categories were developed for the occurrences of touch observed in this sample.

The study concluded that the sample of six grade three teachers did initiate various types of touch in a variety of circumstances in the classroom setting. Further research on the nature of touch as a form of nonverbal communication between teacher and child is recommended.

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CHAPTER I

Introduction

Although the need to be touched can be seen as a basic human need, the nature of touch in human interactions creates legal implications when one considers physical and sexual abuse of children. As caregivers, teachers are in vulnerable positions. Inherent in the reason for the use of touch with children has to be the physical and psychological nurturance of the child. Mazur and Pekor (1985) discussed the need for a clear theoretical understanding of the importance of touch in child development. They suggested professionals need to openly discuss these issues perhaps developing program policies as a means of support to caregivers. To date, no guidelines have been developed by the Newfoundland Teachers' Association to provide direction in the use of touch in interactions with children. Furthermore, the exact nature or impact of touch interactions in the classroom is not known. This study was designed as a beginning step to provide this information.

Statement of Purpose

The purpose of this study was to explore the area of touch in relation to the classroom environment, focusing specifically on teacher's use of touch in their interactions with children.

Importance of the Study

In order to view the importance of the study one must consider the significance of physical contact in human development, interpersonal relationships and communication.

From a developmental perspective, Montagu (1971) wrote:

> Touch is the earliest sensory system to become functional in all species, thus far studied, human, animal, and bird. The skin's growth and development proceed throughout life and the development of its sensitivities depends largely upon the kind of environmental stimulation it receives. (p. 3)
>
> ... adequate tactile satisfaction during infancy and childhood is of fundamental importance for the subsequent healthy behavioral development of the individual. (p. 318)

The need to touch and to be touched is a basic human need (Burgoon & Saine, 1978; Knapp, 1980; Montagu, 1971; Morris, 1971). According to Maslow (1968) all human beings face a series of needs in life, and needs at more basic levels must be met before a person can go on to fulfill higher-level needs. Within Maslow's heirarchy of needs, touch can be viewed as a fundamental, physiological and psychological need of the individual. Specifically, the individual has a fundamental need for <u>safety</u> which includes the need to feel secure, safe and out of danger as well as the psychological needs of <u>belongingness and love</u> which include the need to affiliate with others.

Anderson (1987) suggested that:

> ... a sense of worth is the most essential psychological need of every human being, and is derived from feelings of security (love, acceptance, belongingness) and significance (purpose, meaning,

> personal adequacy) ... Touching can break down feelings of discouragement, aloneness, or isolation which lead to a sense of worthlessness. (p. 203)

Burgoon and Saine (1978) suggested physical contact is important to a child's psychological sense of security and well-being. They wrote:

> If birth is a traumatic experience and the outside world an alien one, then human contact may be critical to overcoming feelings of isolation and fear. The fact that emotionally disturbed children usually respond well to stroking and rhythmic slapping suggests that this is true ... Touching seems to provide a source of reassurance and support. (p. 66-67)

Many authors (Burgoon & Saine, 1978; Knapp, 1980; Montagu, 1971; and Morris, 1971) view tactile stimulation as important for the emotional, intellectual, and physiological development of the individual. A number of studies cited in Burgoon and Saine (1978) and by Montagu (1971) demonstrate that serious biological, psychological, and sociological problems do result when humans beings are deprived of touch. Spitz (1946) conducted a series of studies of infants in a foundling home which revealed serious delays in the infants' mental and physical development, a marked decrease in resistance to disease and high mortality rates. Infants in the foundling home who existed under unfavourable environmental conditions, deprivation of maternal care, maternal love and maternal stimulation and isolation suffered irreparable damage and even death.

Knapp (1980) stated that early tactile experiences seem crucial to later mental and emotional adjustment. For

example, he reported that: youngsters who have little physical contact during infancy may walk or talk later; many children suffering from schizophrenia were deprived of handling as infants; and, retardation in reading and speech has been associated with early deprivation of, and confusion in, tactile communication. Silverman, Pressman and Bartel (1973) found a direct relationship between the extent of physical closeness a child experiences and self-esteem. The higher the student's self-esteem, the more comfortable the student was in communicating through touch. Montagu (1971) introduced the concept of the "tactually failed child". This term refers to someone who has experienced inadequate tactile, or touch stimulation and who is, therefore, physically, psychologically and behaviorally awkward in relationships with others.

Communication is comprised of the transmitting of messages through verbal and nonverbal channels. The verbal channels refer to the spoken words which an individual uses to communicate to another. The nonverbal channels refer to the messages sent to an individual through eye contact, proximity, tactility, facial expressions, body movement and posture, physical appearance, and vocal cues. Teachers communicate to students through these channels in each interaction which occurs. If this is so, then to effectively study the teachers' communication in the classroom environment one must study what the teacher is communicating, both

verbally and nonverbally.

Research on nonverbal communication in the classroom environment should provide a source of information to help teachers' better understand what their nonverbal behavior is communicating to the students. Galloway (1971) referred to the nonverbal as the language of sensitivity. He sees the teachers' nonverbal behavior to be integral in the formation of student attitudes toward school. Students often see and understand nonverbal behaviors that escape the awareness and sensitivity of adults. An example of this is illustrated in the following:

> Mrs. Johnson heard the door slam as Keith ran into the house from school.
>
> 'Guess what, Mom? My teacher likes me'
>
> 'Why, what did she say to you, Keith?'
>
> 'She didn't say nothin' but I know she likes me, really! She smiled at me when I was readin' and she put her arms around me. Gee - I like school!'
>
> A few houses down the street, Mrs. Turner looked out the front door and saw her son, David, kicking a stone up the sidewalk, mumbling angrily to himself.
>
> 'Why are you late, David? What's wrong?
>
> 'I hate that ol' icky school. I hate it. I hate, I hate it. And I hate my teacher. She don't like me.'
>
> 'How do you know she doesn't?' Did something happen?'
>
> 'Yeah. I was readin' and Miss Brown kept lookin' at me. Then she clicked her tongue like this - tsk, tsk, tsk. And she told Keith to read. She put her arm around him! I hate her. I don't wanna go to school no more. (Galloway, 1971, p. 227)

Galloway (1971) addressed the challenge of nonverbal research through a discussion of: (a) the neglect on the part of educational researchers to conduct studies of nonverbal influence; (b) the importance of the nonverbal dimension in interactions; and (c) problems associated with studying nonverbal behavior. He pointed out, that the research challenge facing students of nonverbal behavior is the collection of data showing how nonverbal cues provide crucial information unobtainable from the observation of verbal behavior. Nonverbal behavior is a rich source of information that can be observed with profit. He acknowledged the accumulation of knowledge about the distinctive kinds of information nonverbal behavior transmits is a necessary next step.

Koch (1971), in discussing the teacher and nonverbal communication, stated one must remember that the nonverbal message is much stronger than the verbal and if there is an incongruity, the nonverbal is believed. He discussed the various forms of nonverbal communication, and with reference to touching he wrote:

> Touching, when it is desired by the student, and when it is a natural act with the teacher, is a most powerful nonverbal act. At times it is the only way to reach a child. Special-education children often need much touching, even hugging. (p. 236)

Galloway (1971) suggested research focusing on interactions in the classroom environment may explore the possible functions and pedagogical values of nonverbal behavior in the

classroom. He emphasized all communication in the classroom should be analyzed as part of the larger enterprise of teaching itself. It should be noted here that, ten years after Galloway (1971) emphasized the need for research in classrooms to focus on nonverbal behavior, Major (1981) stated "observations of touch interactions involving teacher-child interactions beyond preschool are sorely needed."

Major (1981) commented that despite the acknowledged importance of touch, it is the least researched and least understood area of nonverbal communication. She acknowledged that touch has been neglected in almost every review of nonverbal communication research (e.g. Argyle, 1975; Harper, Weins, & Matarazzo, 1978; Knapp, 1980; Patterson, 1976).

In discussing observational studies which have been conducted, Major (1981) reported that:

> Observational studies of the frequency and correlates of touch have focused on both children's and adult's touching behavior. Those involving children generally have observed one of three types of interactions: mother-infant, preschool child-teacher, and child-child. Observations of other touch interactions involving children, such as father--child and teacher-child interactions beyond preschool, are sorely needed. (p. 18)

As education is concerned with the healthy development of all aspects of the child, and since it is evident that tactile stimulation has its place in the child's psychological, physiological and social development, its role in the educational setting requires further study.

Literature on communication within the classroom environ-

ment (Tobey, 1970; Hurt, Scott & McCroskey, 1978; Bassett & Smythe, 1979) described the sense of touch as having dual purposes. First, it is a means through which children can explore, manipulate, and discover objects in their surroundings and the world in which they live. Secondly, it is a means of communication with others. Touch plays an important developmental role because it communicates a sense of belonging, security and understanding to children. The use of touch in interactions with children provides immediate approval or disapproval far more convincingly than words.

In this vein, touch can become a social reinforcer within the classroom environment (Herbert, 1981; Sulzer & Mayer, 1972). Wood (1975) described touch as a means through which the teacher nurtures the child, lets him know he is doing a good job, calms him down and tells the child in a general sense, that the teacher likes him. Montagu (1971) wrote that children who are unhappy, frightened or otherwise disturbed may usually be soothed and restored to a sense of security when taken up in the arms of a comforter. To put one's arms around another is to communicate love and security to the other person. Anderson (1988) viewed physical closeness and touching as vital tools in the teaching-learning experience. He wrote:

> In as much as tactile experience is essential to the child's cognitive development and growing sense of self, physical contact between teacher and student should be a natural ingredient of that interactive relationship ... Physical closeness says to the child, particularly the one who has been experi-

> encing learning or behavioral difficulties 'We are in this together'. (p. 54)

These authors expressed very strong viewpoints on the importance of touch as a form of communication between individuals. In interactions with children, touch serves as a means to help the child fulfill his basic needs and to enhance his development as a human being.

Few researchers have explored the nature of touch in the classroom environment. The studies which have been found to date are summarized to provide the reader with an overview of the nature of the research conducted. Beutler (1978) studied the relationship between teacher behaviors (such as movement variations in the classroom, proximity to students, bending down to students, and tactile activity) and student achievement (as measured by standardized achievement tests at the fourth and sixth grade). Pratt (1973) attempted to determine the extent to which nonverbal communication through touch was related to reading achievement scores of first and second grade students and sex of students. Rezmierski (1973) conducted an exploratory study of the nonverbal communication of teachers and children which examined aspects of the observation process, development of an observational instrument and data analysis. Kleinfeld (1973) conducted a cross-cultural study to observe whether nonverbal teacher warmth would increase the learning and verbal communication of Eskimo students and to determine if Eskimos were more sensitive than whites to teacher warmth. Gehrke (1982) conducted a five year

longtitudinal study with 11 beginning secondary school teachers. In the fifth year of the study teachers were asked direct questions about their liking of students. Larsen (1975) studied the effects of teacher supportive behaviors on preschool children's learning of a motor skill and cognitive task. Wheldall, Bevan and Shortall (1986) examined the effects of contingent teacher touch on the classroom behavior of young children in infant classes. Cheney, Maples & Jenkins (1988) conducted a pilot study of third-grade students to determine whether a relationship existed between increased amounts of teacher touch and student's self-esteem.

If one acknowledges the significance of touch as a basic human need, the potential misuse of touch in society today, and the role of the significant other in a child's development; then the need for further study of the exact nature and impact of touch in the classroom setting of young children can be seen as necessary and, in fact, crucial.

Research Questions

Since so little is known about or reported in the literature on this topic, an exploratory study of the nature of touch in the classroom environment was seen as a beginning step towards a greater understanding of this mode of nonverbal communication in the classroom. It must be emphasized at this point, that as so little is known it is very difficult to provide the reader with specific research questions. Hope-

fully, through this exploratory study we will be better able to specify further direction in which research should be undertaken. Several general questions arose out of the material presented in the Introduction. For instance, does touch actually occur between teachers and children in their daily interactions? What is the nature of this touch (if it occurs), and under what circumstances do teachers use touch as a means of communication? More specifically, this study examined the following questions:

1. Do teachers use touch in their interactions with children in selected grade three classrooms? It is often assumed that touch occurs between teachers and children in classrooms. However, the authors review of the literature raises serious doubt about this assumption. Therefore, this basic question must be answered before any of the following questions can be explored.

2. What is the nature of touch as used by teachers in selected grade three classrooms? (eg. Where and how do teachers use touch with children in their classrooms?)

3. Will there be patterns emerge among the sample of six teachers with respect to where and how teachers use touch with children in their classrooms?

4. When do teachers use touch in their interactions with children in selected grade three classrooms? (eg. What teacher/child activity is occurring in the classroom at touch initiation?)

5. Will there be patterns emerge among the sample of six teachers with respect to teacher/child activity at touch initiation?

6. Based on the model provided by Jones & Yarbrough (1985), if patterns emerge, among the sample of six teachers, can one assign meaning to these patterns?

Because of the limitations inherent in the observation of behavior in a small sample of Grade Three classrooms, these questions were answered on an exploratory basis.

Limitations

The following delimitations are noted in connection with this study:

1. The study was conducted in two elementary schools with a sample of six Grade Three classrooms. Therefore the generalization of the findings is limited.

2. The six classrooms were selected based on the cooperative nature of school personnel. The researcher was familiar with the administations of the school and their respective teaching staffs.

3. The study extended over a period of about seven weeks in the May-June period of the school year. Due to the end of the year schedules each classroom could only be visited for five half-day sessions.

4. In an observational study at least two observers should be present to compensate for observer bias, this was

not possible due to lack of funding and scheduling problems.

5. A fair degree of rescheduling had to occur during the observation process as teacher illness and field trips interfered with the data gathering. These problems made it impossible to counterbalance classroom observations.

6. It was not possible to control the specific activities in each classroom. Therefore, rates and type of touch observed could have been affected by the type of activity each teacher was engaged in.

Definition of Terms

To provide a frame of reference for the reader the following basic terms, as typically used in the literature, are provided below. These terms are referred to throughout this study and their inclusion in this section was important to clarify and define the nature of touch interaction and the approach to the observational process undertaken in this study.

Touch: Any type of physical contact between people.

Holding: A touch which restricts the body movement of the other person. (Jones & Yarbrough, 1985)

Spot touching: Brief contact without holding, with no hand movements and minimal exertion of pressure. Can occur with a number of body parts. (Jones & Yarbrough, 1985)

Pat: A gentle repetitive tap usually with the palm of the hand or fingers.

Push: Touch which involves pressing against a body part with some degree of pressure being exerted.

Pull: Touch which involves holding a body part (body) and causes forward movement.

Grab: A sudden, eager grasp by the hand of another's body part (body).

Meaning categories: The categories of meaning developed by Jones & Yarbrough (1985), in which the context of touch interaction was examined to derive common characteristics and establish categories of meanings for touch. (A detailed description of the meaning categories is provided in Appendix E).

Field notes: The notes kept by the observer which consist of personal observations, impressions, and interpretations. (Good & Brophy, 1987)

Running record: Running records are narrative records which provide a detailed, continuous, or sequential descriptive account of the behavior and its immediate environmental context. (Good & Brophy, 1987)

This chapter discussed the significance of physical contact in human development, interpersonal relations and communication, with specific reference to the healthy development of children. The value of the use of touch by teachers in their daily interactions with children in the school environment was highlighted. Research which focused on aspects of touch in the school environment was reviewed. The

need for further research examining the use of touch by teachers in their interactions with children was established. Chapter II provides an overview of research conducted in the area of touch and the development of observation systems.

CHAPTER II

Review of Literature

This chapter focuses on a review of the literature related to the area of touch. In the literature, touch has been studied in a number of disciplines, such as sociology, psychology, educational psychology and medicine. Inherent in the studies in each of these disciplines, are differences in focus. This review is divided into the following areas: observations of touch in natural settings; perceptions of touch; effects of touch; cultural differences; the taboo nature of touch; occurrence of touch in the classroom; significance of touch in the classroom; considerations in developing an observation system; and, an overview of the observation systems applied to the present study.

Significance of Touch in the Classroom

This section will discuss the significance of the use of touch in the teacher-student relationship.

In the classroom setting, one of the teacher's primary goals is the establishment of an environment where the child feels as if he/she belongs, is accepted, and where his/her needs are being met. In this environment, the teacher must emanate a sense of care and concern for each child, recognizing individual differences in learning styles, motivational levels and personalities. The teacher should develop a close

relationship with each child in the classroom. Anderson (1988) wrote of the importance of touching as a natural ingredient in the interactive relationship between teacher and student. He suggested that:

> The teacher's willingness to maintain physical closeness and to touch the student, therefore, not only communicates acceptance and caring, but is a reflection of the depth and sincerity of the teacher's concern for the student and discloses the quality of the teacher-learner relationship. Among ways to strengthen the teacher-learner relationship is making physical contact with children through such actions as holding, hugging, rocking or gently touching students while speaking to them. (p. 55)

The response an individual has to being touched will differ from one person to another. Variations in child rearing practices, ways of showing affection among family members and beliefs taught to the young child about touching will contribute to the child's feelings of being touched. The response an individual makes upon receiving a touch is immediate. The person may shy away, act inappropriately or appear appreciative of the touch. Since there are variations in the degree of comfortableness one has in touching, the teacher or student may find it uncomfortable. Anderson (1988), Hurt, Scott and McCrosky (1978), Wood (1975), and Macfarlane (1986) each addressed the need to "read" the student's response to being touched. Anderson (1988) summarized that "the teacher's respect for the child as a human being will dictate the type of closeness or contact attempted" (p. 55). Anderson (1988) continued his discussion of the individual differences in tactile experience by

questioning the meaning of the teacher's behavior when a touch is withheld.

> Since all our interactions with others communicate something, it is important to ask what message is being given to children by an adult's refusal or hesitance to interact physically with the child, except to push, pull, pound or mold. Perhaps the child learns that the body is evil or dirty, or that anyone who does touch you is evil. Perhaps children learn that we do not want them near us, or that they are not really important, or that we really do not care about them as individuals. Perhaps they learn that school is a boring, uncaring, unfriendly place and should be avoided as much as possible.
>
> Obviously, these are not the lessons we want children to learn. Such lessons may produce individuals who are uncomfortable with their own body and with closeness with others or who have a limited or shallow self-concept. And, because of these limitations, these children are restricted in their ability to relate warmly and successfully to other people. They are 'tactually failed', ie., they have experienced inadequate tactile or touch stimulation, and, therefore, are physically, psychologically, and behaviorally awkward in relationships with other persons. How many lonely or disturbed, tactually failed people already exist (and are many teachers)? (p. 55)

Developmental therapy, which is a psychoeducational intervention for children who have serious emotional and behavioral disorders, advocates the use of touch with children. Wood (1975) discussed the significance of touch in developmental therapy. Body contact is used throughout the stages of the therapy quite extensively and will vary widely according to the needs of the children. Body contact and touch from the teacher are used to nurture a child, to let him/her know he/she is doing a great job, to calm him/her down, and generally to tell him/her that the teacher likes

him/her. Wood (1975) cautioned that there are some children who do not trust their environment, people or the teacher enough to tolerate any physical contact. For these children, body contact may trigger impulsivity and acting out instead of calming them down or rewarding them. Physical contact may be associated with abuse or severe punishment. The personal attention associated with a touch may also be difficult for some children to handle.

Barker (1982) described the different types of classroom touch. He suggested, in the elementary school years, teachers act as surrogate parents and large quantities of touch are permitted and probably expected. Since touch is one of the most immediate, intimate forms of communication, tactile contact may be necessary for the elementary teacher to convey love and affection to students.

Hurt, Scott & McCroskey (1978) suggested that when a teacher withholds touch, a child may feel isolated and rejected. Furthermore, they suggested a number of tactile behaviors that can be used at any level from elementary school through college. Since touch is a very personal form of communication, handshakes and shoulder touches can convey immediacy while rarely being interpreted as a sexual come-on. Similarly, pats on the back and other non-threatening forms of touch can serve as powerful reinforcers in a way that talk or high grades simply cannot. Finally, instrumental or functional touches occur frequently, in school, particularly

in classes where psychomotor skills are being taught, such as shop courses, athletics, dance, art and even in learning skills such as handwriting. While the primary purpose of instrumental touch is purely task related, this form of tactile communication probably conveys immediacy as well.

Herbert (1981) listed "hugs" as a social reinforcer which could be used by others to reinforce children's behaviors. Sulzer and Mayer (1972) listed social reinforcers for children and include nods, smiles, pats on the back, pats on the head, pats on the knee, touches on the cheek, and tickles as examples. Macfarlane (1986) described the use of social reinforcers that included positive praise, smiles, hugs, pats on the back, pats on the knee and tickles. She cautioned that the indiscriminate use of touch may create ethical or legal problems. She advised that setting, events and the age of the student be considered in determining the appropriateness or inappropriateness of using touch as a reinforcer. Furthermore, teachers must learn to "read" the environment when using touch as a reinforcer. Macfarlane suggested that we not abandon such a powerful technique as touch but rather we need to be careful about its use. She outlined several ways to determine the appropriateness and appeal of social reinforcers which include: (a) the need to "read" the environment; (b) the need to think about how other adults in the same environment respond to similiar situations; (c) the age and sex of the student; and (d) the personalities of particular students

and their interpretations of the touch. Finally, open communication between parents, children and professionals can help to alleviate potential problems.

Mazur and Pekor (1985) further emphasized the need for open communication among professionals who work with children as public mistrust mounts with stories of sexual abuse investigations. They discussed the value of physical contact in child development in the context of early childhood programs. Their advice to professionals who work with children is applicable to all educators. They emphasized the need to develop a clear theoretical understanding of the value of physical contact in child development, and, to use this understanding as a basis for thoughtful interactions with children. Professionals need to discuss these issues openly, to support each other, share ideas about appropriate types of touches, acknowledge vulnerabilities that are being experienced by male teachers, in particular, and consider the potential role that program policies can play.

Le Landgren (1986) wrote "In the face of restrictions, restraints, or reluctance ... teachers can try 'nontouching' hugs for students" (p. 46). Le Landgren (1986) developed a program called the "nontouching hug". Students are required to think of a hug as any meaningful connection with another person. Nontouching hugs included a wink, a smile, a hug message on a rubber stamp, stickers with hug themes, a button with a hug message, stuffed animals in the classroom, a hug

jar filled with cookies, coupon redeemable for a hug at home, a hug license and a soft puppet designated as the classroom hugger. Classroom activities are suggested such as a hug bulletin board, a hug stuff center, hug posters, a hug club and creative writing about hugs.

The importance of the use of physical contact in teacher-student interactions in the classroom has been recognized. Its significance has been described in the value of touch in communicating feelings of acceptance, caring, and nurturance, and its value as a social reinforcer for children taking into consideration the individual child's personality, age, sex, and response to touch. Furthermore, questions are raised as to the message one is communicating when a teacher withholds touch. Cautions toward its use have been discussed as they relate to the cultural implications of touching behavior, current concerns with child physical and sexual abuse, court cases on sexual abuse which have involved persons in positions of trust, including teachers, and the vulnerable position one is placed in as a teacher. Clearly, the need for program policies with emphasis on the value of physical contact in teacher-student interactions, and guidelines on the appropriate types of touch with children are needed. The basis for such program policies and guidelines lies within an increased understanding of the nature of the touch which occurs in the classroom between teacher and students. Even in light of the established importance placed on touch in teacher-student

interactions, as can be seen from the review of related literature, research to assess if touch actually occurs in the classroom setting and the nature of that touch has not been conducted. The present study was a preliminary attempt to find out more about classroom touch and its prevalence in various circumstances in the classroom setting.

Observations of Touch in Natural Settings

This section will deal with studies that have been involved in discovering what types of touch occur in natural situations.

Burgess (1981) studied the distances maintained between closest playmates during free play in mentally retarded and normal grade school children. It was found that younger public school children touched more frequently while playing (43.8% of time samples) than did their older peers (who touched in 8.3% of time samples). In contrast, no touching was recorded in the mentally retarded children during observed play periods.

Willis and Hoffman (1975) studied changes which occurred in touch interaction in primary school children. In same-sex pairs boys and girls in white and in integrated schools showed a reduction in frequency of touch from kindergarten to sixth grade. In the black school, however, no reduction in the frequency of touch was observed. Touch was more frequent in same-sex pairs than in different-sex pairs. With regard to

body area touched, hand-to-hand touches were frequent in female-to-female interactions and never observed in male-to-male interactions.

Williams and Willis (1978) studied the effects of race and social class upon touch in pre-school aged children. Children were observed at play in black low-income, black middle-income, white low-income, and white middle-income preschools. Rates of touch were higher for low-income children in inside play areas and higher for same-gender pairs. In outside play areas, touch was higher for black same-gender pairs but there was no race difference in touch for different gender pairs. In general, rates of touch were higher than those previously reported for older American children and adults, but lower than those for both children and adults from some other cultures.

Willis and Reeves (1976) extended the study of touch interactions to children of junior high school ages to determine whether the reduction in touch interactions observed in the primary school continued in older subjects. A combination of male and female whites, blacks, and Mexican-Americans were observed in school cafeteria lines in seven junior high schools. The sex of the student, ethnic group, body area used to touch and area touched were each recorded. It was found a student was more likely to stand behind another of the same sex and the same race. The results were similiar to the primary school, in that touch was most likely in black-black

combination and least in white-black combination. Touch was most likely to occur shoulder to shoulder and elbow to elbow. Increased aggression was noted among females as they were observed to use their fists. It appeared racial and sexual segregation continued from primary school. Finally, touch was less frequent for all races than that observed in primary school children.

Willis, Reeves and Buchanan (1978) studied the interpersonal touching which occurs between high school students in school cafeteria lines. Instances of touch were recorded along with body part used to touch and area touched. High school students were observed to segregate themselves by race and sex as did the primary and junior high students in the earlier studies. Although hypothesized, touch with high school students was not less frequent than that observed in younger students. Touch was highest among black students. An increase in aggressive touch in female junior high students, as observed and reported by, Willis & Reeves (1976) was not observed in this study.

Willis, Rinck and Dean (1978) studied interpersonal touch among adults (college students and elderly) in cafeteria lines. It was found that college students segregated themselves by race and sex. The elderly subjects did not segregate themselves by gender. For college students, touch was highest for female to male combinations; blacks were most likely to touch blacks and least likely to touch whites. For

the elderly subjects, touch was more likely for female to female interactions than it was for the college students, but there were no differences for the other gender combinations. Body areas involved in touch were classified as either personal (hand, kiss, hug) or impersonal (upper arm, shoulder, back). In college students, personal body areas were more likely to be used to touch others of different gender while impersonal body areas were more likely to be used to touch others of the same gender. For elderly subjects, there was no differences in frequencies with which personal or impersonal areas were involved in touch in relation to gender for either area used to touch or area touched. Similar findings were reported by Rinck, Willis and Dean in another study in 1980.

The studies in this section focused on observations of touching behaviours in natural settings. Various components such as types of touch, body parts involved in the touch interaction, age groups, ethnic background, socioeconomic class, and sex of the individuals were included in the observation process. These observational studies were conducted to examine the differences among components of the touch interaction. In the present study, the classroom environment provided a natural setting in which touch interaction could be observed as it occurred between teacher and child. The components of the touch interactions were identified in the context of the school setting. These components

of the touch interactions provided the framework for and basis of the research questions of this study.

Perceptions of Touch

The studies in this section deal with peoples perceptions of touching behaviours. Perceptions of touch will have an effect on the way a student feels about a teacher and about the school.

Heslin, Nguyen and Nguyen (1983) studied the meaning of touch by a stranger or a close friend of the same or opposite sex. Two hundred and eight respondents rated what it means to them to be touched in these ways. Both male and female respondents agreed that (a) touch from a close friend is pleasant, and (b) touch from a same sex person is unpleasant. However, touch from an opposite sex stranger is considered to be unpleasant by women but quite pleasant by men. For women, the meaning of touch is primarily influenced by how well they know the other person, for men, the meaning is primarily determined by the other person's sex.

Major and Heslin (1982) assessed observers' perceptions of actors engaged in cross-sex and same-sex nonreciprocal touch and no-touch. Touchers were rated significantly higher than recipients on dimensions of status/dominance, instrumentality/assertiveness, and warmth/expressiveness. Furthermore, touchers were rated higher and recipients were rated lower, on these dimensions than no-touch controls. Results

suggested that nonreciprocal touch conveys several messages, and benefits the toucher more than the recipient.

Jones and Yarbrough (1985) examined the meanings in context of touches reported by persons from their daily interactions. The participant observers were university students, 17 males and 22 females, mainly between 20 - 24 years of age. The participants were asked to record the initiator of the touch, the body parts involved in the touch, where the touch event occurred, verbalization between the individuals and timing of the verbalization in terms of the touching behavior, apparent meaning of touch, whether touch was accepted or rejected, nature of the touching, and the status of the individual.

The results revealed 12 distinct meanings: support, appreciation, inclusion, sexual interest or intent, affection, playful affection, playful aggression, compliance, attention-getting, announcing a response, greetings, and departure. There were also several kinds of hybrid meanings, the main ones being greeting/affection and departure/affection, and four categories of potentially ambiguous touches: reference to appearance, instrumental ancillary, instrumental intrinsic, and accidental. The first three of these potentially ambiguous categories of meaning for touch, were directly related to the performance of a task. Reference to appearance touches were touches which pointed out a body part referred to through verbalization about the touch recipient's

appearance. Instrumental ancillary touches occurred as an incidental part of performing a task such as a touch of the hand to hand when passing the telephone. Instrumental intrinsic touches accomplished a task in and of themselves such as helping someone get up.

The analysis also revealed a number of patterns of behaviour consisting of a series of related touches defined as touch sequences. A touch sequence was defined as a series of two or more touches which are communicatively related to one another within the same interaction. Two types of sequences were found: repetitive sequences, which consist of a series of touches in which the same meaning is conveyed by each, and strategic sequences, which consist of a series of touches in which the meaning changes in the progression of touches.

As can be seen above there has been little research conducted focusing on how people, in general, perceive touching behavior. Heslin et al. (1983) studied the meanings of touch among adults in the context of the relationship between the individuals in the touch interaction. Major and Heslin (1982) studied observers' perceptions of the meanings of touch through observation of actors. Jones and Yarbrough (1985) examined the meanings of touches in daily interactions as reported by participant observers. To examine perceptions of touch, one can question people to assess their feelings toward various types of touches, and use observers to examine

perceived meanings of touches. The research found in the review has been confined to adult populations and touch which occurs between adults. There has been no research found that examined perceptions of touch between adults and children. An examination of the perceptions of types of touch leads one to review the impact of touch on the parties involved in the process. This present study examined observers' perceptions of the meanings of touch in adult-child interactions in the classroom environment. This will provide a beginning to further understanding of the meanings of touch between adults and children.

Effects of Touch

The effects of touch will also be of concern to the classroom teacher as they could have a bearing on how the student feels toward the teacher, the class and the schooling experience. The teacher's use of touch may have significance in motivation of the student and dealing with classroom management. The following studies examined relationships between touch and behaviours after the touch occurred.

Raiche (1977) studied the effectiveness of touch in helping the counsellor of the young child to communicate empathy and regard and to help the child to be more self-disclosing within the counselling interaction. Specifically, he was concerned with touch of the hand, shoulder, back or knee. The population consisted of 950 first, second and third grade

children. Ninety-eight students from this population were randomly selected by groups to take part in a test-retest reliability study of the instrument. The instrument, designed by the author, consisted of video-taped segments of simulated counselling sessions with children. For any given administration, two taped segments were presented which were essentially identical, except touch was included in one and not the other. The sex of the six year old client who was shown in the segment was always the same as the counsellor. The order of presentation (touch or no touch) was varied. The children chose the counsellor who employed touch significantly more frequently than the counsellor who did not.

Beutler (1978) attempted to determine the relationship between teacher/student nonverbal interaction and academic achievement. It was hypothesized teacher behaviors such as movement variations in the classroom, proximity to students, postural variations, such as bending down to students, and tactile activity between teachers and students would have motivational potency and would tend to increase student achievement beyond the average expected growth as measured by standardized achievement tests. The study was conducted with grade four and grade six pupils of a middle-sized urban school population and observations were limited to social studies and mathematics. The aspects of teacher expressive behavior investigated as independent variables were: (a) degree of teacher movement in a time-space frame; (b) degree of proxi-

mity between teacher and student; (c) number of postural variations directed by teachers at students; and (d) number of touch contacts initiated by the teacher toward students. As dependent measures he used the class average composite score of the Iowa Tests of Achievement and attitudinal data such as student tardiness, absences, conduct grades, and parent participation at "Back to School" night. The tactile activity measure counted the number of touch contacts teachers directed toward their students during the observation periods. No distinctions were made between a light touch, which might have been used to get a student's attention, or a heavier touch, such as might be used to restrain a student from undesirable or calamitous activity. Beutler (1978) included touch in his study as previous research suggested that touch was essential not only in human development, but also in learning. Analysis of the results suggested physical touch may be implicated in learning achievement and that students seemed to interpret it as conveying the same attitude of care and concern as bending down and giving personal attention.

Pratt (1973) attempted to determine the extent to which nonverbal communication through touch was related to reading achievement scores of first and second grade students and sex of students. The sample consisted of twenty teachers, ten first grade and ten second grade, and their respective students. The teachers were videotaped three different times for a total of one hour each. The tapes were viewed by judges

trained to categorize the type of touch exhibited by the teacher. The students were given subtests of the Stanford Achievement Test. The rating device allowed for touch to be categorized in three ways: affectional, directive, and disciplinary. Affectional referred to body contact of a warm, loving nature, either solicited by or reciprocated by the teacher. Directive referred to body contact between a teacher and a student for the purpose of direction (redirecting a student's attention). Disciplinary referred to body contact between teacher and student for the purpose of discipline. The rating scale was executed such that each time a teacher exhibited an action commensurate to the categories contained on the scale the observer marked in the appropriate category and distinguished between sex of the child to which the action was directed. Results of the study indicated there was no significant relationship between the type of touch exhibited by the teacher and reading achievement. The small sample used in the study could account, in part, for the inability to obtain significance. Results of the analysis involving the relationship between the type of touch and sex of the students proved significant beyond the .001 level of confidence, suggesting a positive relationship between the sex of the student to whom the touch is being directed and the type of touch exhibited.

Kleinfeld (1973) conducted a cross-cultural study to observe whether teacher nonverbal warmth would increase the

learning and verbal communication of Eskimo students and to determine if Eskimos were more sensitive than whites to teacher warmth. Twenty village Eskimo students and twenty urban white students from the ninth grade, equally divided by sex, attended two college guidance and information sessions. The instructor (a 26 year old white female) behaved in a warm style in one of the sessions and in a neutral, impersonal style in the other. In the warm session, the instructor sat at a distance of 30 inches which is defined as a personal distance that generates a kinesthetic sense of closeness. She smiled frequently and touched the student twice while showing him a map locating colleges. In the neutral session, the instructor stood at a distance of 80 inches and did not smile or touch the student. Three measures which determined differences in verbal expression and learning in the situation were: question-answering, question-asking, and learning. The number of words in the student's reply to four questions about a class, served as the question-answering measure; the number of questions the student asked about information given to him on two unfamiliar colleges served as the question-asking measure; and the student's verbal responses to eight questions measuring information acquisition served as the learning measure. Among the findings were: both Eskimo and white students tended to learn significantly more in a nonverbally warm situation, with Eskimo females showing the greatest increase. When the warm session preceded the neutral session,

all groups had about the same scores. This would suggest a possible carry-over effect from one session to the next.

Clements and Tracy (1977) investigated the effects of tactile and verbal reinforcement and a combination of both on attention to task and accuracy of performance solving mathematical problems. Ten boys, of normal intelligence, ranging in age from 9-11 years old, who had been diagnosed as emotionally disturbed and placed in a special education classroom served as the subjects for this study. The tactile cue consisted of firm hand pressure being applied to both shoulders on the child. The verbal cue consisted of telling the child that he would do a "good job". The treatment conditions consisted of tactile, verbal, both tactile and verbal, and control (no cue). Each subject received each of these treatment conditions on four different occasions. It was found that, for attention to task, both the combination of tactile and verbal cues, and tactile cue alone were significantly more effective than either verbal cue alone or control. The verbal cue alone was also more effective than the control in attention to task. For arithmetic performance, the combination of tactile and a verbal cue was significantly more effective than the tactile cue alone, verbal cue alone, or control condition. These findings demonstrated that tactile stimulation may have reinforcing value especially when combined with verbal praise.

Larsen (1975) investigated teacher supportive behaviors

and attempted to vary these behaviors to measure their effects on preschool children's learning of a motor skill and cognitive task. The investigation consisted of three parts: observations of teacher supportive behaviors, a teacher training program to increase the occurrence of these supportive behaviors, and the effects of the use of these supportive behaviors on the childrens' learning. The supportive behaviors which Larsen (1975) identified, from a review of the literature, included: physical proximity, facial, verbal, and physical contact. Physical contact behaviors identified as supportive included embracing, patting, and holding the hand or arm of the child, but not hurting or punishing such as spanking, hitting or grabbing. The teacher training program significantly increased three teacher behaviors--physical proximity, verbal behavior, and physical contact. Comparisons between the experimental and control groups, on the two learning tasks, yielded the findings that preschool children, especially girls: (a) benefitted significantly by increased teacher support in learning a motor skill; and (b) showed greater gain in the cognitive area without increased teacher support.

Wheldall, Bevan and Shortall (1986) conducted two studies which examined the effects of contingent teacher touch on the classroom behavior of young children in infant schools. The first study examined the effect of positive contingent teacher touch on the on-task behavior and disruption rates of infant

class children. Observations were made for ten half hour sessions in two infant classes for the collection of baseline data. Following this, teachers were instructed to touch children only when they praised them for appropriate academic and/or social behavior and not to touch them for other purposes of instruction or re-direction. Observations were then made for ten more half hour sessions. The results indicated that both teachers increased their contingent use of positive touch. During intervention the majority of praise statements were accompanied by touch, unlike during baseline, where very few praises were accompanied by touch. This effect was generally confined to approval for appropriate academic behavior. An interesting observation was made that both teachers decreased their use of disapproval to inappropriate social conduct although not instructed to do so. The second study attempted to replicate the first with two more infant classes. In all four cases mean class on-task behavior increased substantially following intervention and measured rates of disruptive behavior fell. All teachers, without being instructed to do so, decreased their use of disapproval, which may have influenced children's on-task behavior. Changes in children's behavior were noted with increased use of contingent touch with approval and decreased use of disapproval.

Cheney, Maples and Jenkins (1988) investigated the relationship between increased teacher touch and children's

self-esteem in third grade classrooms. Eight third grade classrooms in three elementary schools participated in this study. Classrooms were randomly assigned to either the experimental or control group conditions. The Battles Culture-Free Self-Esteem Inventory (Form A) was administered to all eight classrooms on a pretest and posttest basis, approximately nine weeks apart. During the 9-week period, between the testing, the teachers in the experimental groups were instructed to make an effort to touch each child in their classes no less than two times per week. The touches were defined as the encouraging and attention-provoking gentle touch of the teacher's hand on the child's head, shoulder, arm, or upper back. The teachers in the control group were given no instructions except that their classes constituted a control group in a study examining children's self-esteem. Two school counsellors made periodic observations in the experimental and control classrooms and met with the teachers in the experimental condition, individually, to discuss the intervention and any problems being experienced. Anecdotal reports of the frequency of touch observed in the experimental and control conditions were made by the counsellors. The teachers in the experimental condition were observed to use touch moderately to frequently, touching 5 to 15 children per 30 minute instructional period. The teachers in the control condition were observed to use touch occasionally to moderately, touching 0 to 7 children per 30 minute instruc-

tional period. Positive changes were noted in student self-esteem from the pretest to the posttest measurements in both the experimental and control groups. No significant differences between the groups were noted.

Holly, Trower and Chance (1984) described a program in which the concept of hugging was introduced to a class of grade five students. An experimental club was formed to study the effects of touch on the students. Hugging was introduced as a means of showing friendship. Those who participated in the study were instructed to hug one student each day over a sixty day period. At the end of the sixty days, the 20 students who participated were given an evaluation form. Analysis of the evaluation forms revealed that most of the students (85%) believed their teacher had a positive attitude toward hugging and viewed hugging as a nice way of saying hello. Fifty-five percent of the students reported that they had made new friends through the club. Thirty-five percent thought other students were treating them better and they enjoyed the class more. Twenty-five percent of the children believed their teacher was being nicer as a result of the club. There were no negative responses indicated on the evaluation forms. The teacher thought the program helped foster better peer relations, a more tolerant attitude toward each other, with less name-calling and general harrassment, and an increase in on-task behavior. It was concluded that the use of touch is a viable means of enhancing classroom

climate.

The studies in this section have provided an overview of research in the educational setting on the effects of touch. The effects of touch on those who have been touch recipients have been investigated. The findings of the studies suggest a number of effects which relate to the focus of the study and the context of the touch interaction. The effects of touch as identified in these studies indicate nonverbal behaviors including touch may have an effect on academic achievement and attention to task. The relationship between touch and academic achievement has yielded significant and non-significant findings. The relationship between touch and self-esteem in the classroom setting was not significant.

In summary, the teacher's use of touch may personalize the schooling experience and the teacher-student relationship. It may be an integral component in the development of childrens' perceptions of the teacher, the class, and the school. Its use may have value in helping the shy, withdrawn child become an active participant in the class.

Touch may also have value in maintaining on-task behaviors and diminishing disruptive classroom behaviors. As can be seen above, the effects of touch have been examined in different contexts. Possible effects of the use of touch in teacher-student interactions in the classroom environment can be identified and need to be further explored.

Cultural Differences

This section focuses on the cultural differences which exist in tactile behavior. The cultural norms which exist will determine the degree to which an individual uses touch in his/her daily interactions and the meanings which are associated with the touching behavior. In interactions in the classroom environment, the teacher who uses touch will also be aware of the cultural norms based on the beliefs he/she has about touching from childhood.

Knapp (1980) highlighted the existence of cultural differences with reference to observations a traveller can make. He discussed the concept of "contact" versus "non-contact" cultures. An example which he cites is the observation one can make of the greeting behaviors of the French or Italian, who are very "contact-oriented", compared to the British, who are very "non-contact" oriented.

Morris (1971) wrote extensively of the tactile experiences of various cultures. In his discussion of the tactile experiences of infants and children in the United States, he cited an unpublished doctoral dissertation by Vidal Stair Clay in which it was found that tactile contact became a diminishing factor in the mother-child affectional system with the increasing age of the child. Montagu (1971), as cited in Wolfgang (1979), suggested there may be national, cultural, and social class differences in expressing tactile behaviors, whereby those who speak Anglo-Saxon derived languages would

be on the non-contact side of the continuum, and those speaking Latin-derived languages would be on the more tactile end of the continuum. People from contact cultures such as those from Latin America, Italy, Portugal, Greece, Spain, and French Canada would tend to touch more frequently, gesture more, and space themselves closer than Anglo-Saxon British, Americans or Anglophones.

Wolfgang (1979) cited an example of a teacher who immigrated from England to Canada and was teaching Italian students in Canada. She stated that the first thing an Italian child would notice, in the Anglo-Saxon culture, would be the absence of physical contact between teachers and students. She mentioned that teachers and students in Italy, especially younger children, touch each other frequently. Children, she said, frequently greet their teacher with a kiss on both cheeks and put their arms around the teacher or the teacher puts her arm around the child. This physical contact, the teacher pointed out continues into adolesence, with boys or girls frequently walking along with their arms around each other or their arms linked.

North Americans would be considered "nontactile". There would be individual variations in touching behavior which would be dependent on one's experiences within childhood. Child rearing practices and the teaching of beliefs would differ among families. Inherent in these beliefs is the idea that touching is "taboo", that is, that touching may be

interpreted as sexual. Burgoon and Saine (1978) discussed the taboo nature of touch which is engrained at an early age. They wrote that parents discourage children from touching their private parts by nudging their hands away or quickly handing them a toy to distract them. Knapp (1980) commented on the nature of touching in the United States. He wrote that touching is seen as being reserved for extremely personal and intimate relationships giving it a sensual meaning. Touching is associated with the admonitions of "not nice" or "bad" and is punished.

In our "non-contact" oriented culture, the tactile experience adopts a taboo nature. The combination of this taboo feeling about touch and the individual differences which would exist from childhood will, in turn, affect the degree of comfortableness one experiences in using touch in daily interactions and in receiving an interpersonal touch. In the classroom setting, one would expect that the teacher's own beliefs about touch would influence the comfortableness he/she feels in using touch in interactions with children. The touch recipients, the children, will have different experiences of being touched which will in turn, affect their response. This issue was addressed in a longitudinal study by Gehrke (1982). Eleven beginning secondary school teachers were used in this five year longitudinal study. During the study it was noted that teachers were more likely to express dislike or hostility toward individual students than feelings of affection. In the

fifth year of the study teachers were asked direct questions about their liking of students. Touching was described as a natural part of interactions with students. The teachers varied in the amount of touching they reported for themselves all the way from "I'm a real hugger" to virtually no physical contact at all. There was some agreement from the men that touching was riskier with older female students because it may be interpreted as suggestive. In fact, the men seemed to agree that older female students were more dangerous to touch because "they might take your attention seriously". The men, too, were uncomfortable about being alone with a female student. Conversely, the female teachers mentioned no need to alter touching behavior or eye contact with older male students. Gehrke (1982) ended her discussion on the use of touch by teachers by stating that the only dictum that appears to have emanated from teacher educators is "Don't touch" a declaration which she feels is patently foolish and inhuman.

The taboo nature of touch in North American culture places some questions on its use and meaning; i.e. for what purpose is touch being used and can this intended use be misinterpreted. Furthermore, the use of physical contact can have an abusive nature as in child abuse, wife battering, and physical assault. Misinterpretations of the intentions of an individual using touch to communicate may lead to false accusations of abuse. The person who initiates touch, in this case, the teacher, is placed in a position of vulnerability.

Mazur & Pekor (1985) addressed the issue of the vulnerability of all those working with children, to public mistrust in light of sexual abuse investigations. They discussed the value of physical contact in child development and noted that the loss of spontaneous affection with a child would be a serious detriment. They emphasized that educators must develop a more clear theoretical understanding of the importance of physical contact for facilitating children's development. This understanding of the value of physical contact can then be used as a basis for thoughtful interactions with children.

Occurrence of Touch in the Classroom

This section focuses on an overview of studies which have been conducted in the educational setting involving children and adults. Studies conducted in educational settings, and previously discussed will be summarized. The reader can refer back to them for further details.

Johnston, Hodge and Cagle (1974) explored dimensions of teacher behavior in the context of the classroom interactions with young children. The results of the study indicated an inconsistency between teacher verbal and nonverbal messages. Teacher nonverbal behaviors exhibited during acceptable moral conduct episodes showed that while teachers, were in effect, verbally telling the children, "I like what you are doing," they were most often standing erect and looking down at the

involved child or children. Additionally, it was noted that teachers never touched a child engaged in conduct overtly responded to by the teacher as acceptable. On the other hand, when the teacher's verbal statements indicated a child's conduct was unacceptable, the teacher was most often bent fully at the waist in order to look the child squarely in the eyes. Moreover, in contrast to acceptable conduct episodes--where no body contact occurred--teachers who were verbally responding to unacceptable ways usually established body contact, generally grasping children around the neck or shoulders and frequently changing the child's position or posture. These authors contended that a careful examination should be carried out with respect to the extent and power with which the teachers' nonverbal communication is received by young children during the socialization process.

Rezmierski (1973) studied the nonverbal communication of teachers and children. He explored whether both teachers and children were mutually involved in nonverbal behaviors, whether these nonverbal behaviors could be recognized by an observer and the nature of the nonverbal interaction. Results indicated observers can identify and agree upon the beginnings and endings of encounters. During these interactions the teachers and children were: (a) near each other; (b) not touching each other; (c) turned away from each other; (d) open to further communication; and (e) looking straight ahead. The children's nonverbal behaviors were judged to be more

frequently negative than the teachers'.

Cowen, Weissberg and Lotyczewski (1982) studied the frequency of occurrence of four different types of physical contact (touching, holding hands, sitting on lap, and hugging) in the context of the school based helping interactions between nonprofessional child aides and referred children. Such contacts varied markedly from a high of 81% for touching to a low of 4% for sitting on lap. Four variables accurately predicted the occurrence of physical contact behaviors: (a) girls had more contact than boys; (b) younger children had more contact than older ones; (c) aides from different backgrounds differed in the amount of physical contact they had with children; and (d) aides previously trained in Ginnottian limit-setting approaches had fewer physical contacts with children than those without such training.

Perdue and Connor (1978) conducted a study of the touching patterns between pre-school children and their teachers. Observations were made in four classrooms each of which contained a male and female teacher. For each touch that occurred between a teacher and child, records were made of who initiated the touch, the sex of the child and the type of touch classified as friendly, helpful, attentional or incidental. Findings indicated that teachers touched children of their own sex more often than children of the opposite sex. When male teachers touched a female child, the touch was more likely to occur in the helping context, than when they touched

a male child. When male teachers touched boys the touch was more likely to be of a friendly nature a greater proportion of the time than when they touched girls. There was no significant difference in female teachers' use of type of touch (friendly, helpful, attentional, or intentional) to boys or girls. The rate and distribution of types of touches that children directed to teachers appeared to be influenced by the factor of sex. Boys touched male teachers more frequently than female teachers. Boys, in comparison to girls, touched male teachers more frequently. There were no differences in the rates at which boys and girls touched female teachers or the rates at which girls touched male and female teachers. Most of the touches that occurred from child to teacher were of a friendly or incidental nature. It was concluded sex-role expectations appear to influence the rate and pattern of touching observed in adult-child interactions.

As discussed in the section focusing on the effects of touch, studies by Beutler (1978), Pratt (1973), Kleinfeld (1973), Larsen (1975), Clements and Tracy (1977) and Cheney et al. (1988), have been conducted in the educational setting. Beutler (1978) studied the relationship between teacher/ student nonverbal interaction and academic achievement. It was hypothesized teacher behaviors such as movement variations, proximity to students, postural variations and tactile activity would have motivational potency and would tend to increase student achievement. Analysis suggested physical

contact may be implicated in learning achievement and students' interpreted touch as conveying the attitude of care and concern. Pratt (1973) studied the relationship between the type of touch exhibited by teachers and the reading achievement of first and second grade children and found no significant results. Kleinfeld (1973) studied the effects of nonverbal teacher warmth on learning and verbal communication of Eskimo students. White people were also included in the study to determine if Eskimos are more sensitive than whites to teacher warmth. Smiling, close body distance and touch were used as indicators of teacher warmth. Findings indicated both Eskimo and white students tended to learn significantly more in a nonverbally warm situation, with Eskimo females showing the greatest increase. Larsen (1975) investigated the effects of increased teacher support (including touching) on the learning of cognitive and motor skills by preschool children. The data indicated that increases in teacher support behaviors were associated positively with greater gain in motor skills among girls. No significant increase was noted in cognitive learning. Clements and Tracy (1977) examined the contingent use of teacher touch, verbal cues, and a combination of both on attention to task and arithmetic performance of emotionally disturbed boys. Tactile reinforcement and the combination of tactile and verbal reinforcement were both found to be superior to verbal cues in increasing the boys' attention and performance. Cheney et al. (1988)

examined the relationship between increased teacher touch and children's self-esteem in third grade classrooms. Positive changes were noted in student self-esteem from the pretest to posttest measurements in both the experimental and control groups, however no significant differences between the groups were noted. The study by Gehrke (1982) was discussed in the section on the cultural norms of touching behavior. Gehrke (1982) conducted a five year longitudinal study with high school teachers. She measured teachers' attitudes toward their personal use of touch in interactions with their students. Variations were noted in the amount of touching and types of touches the teachers claimed to use.

These studies provided an overview of the research conducted on the use of touch in the classroom. No research was found which examined the types of touch teachers used in their daily interactions nor on the settings in which touch was used. Observations of the types of touch teachers use in interactions with students, the body parts involved in the touch interaction and the settings in which different types of touch are observed to be used should provide relevant data on the nature of the occurrence of touch in the classroom.

Considerations in Developing an Observation System

Nature of observations.

Observations, interviewing, and the collection of artifacts are the predominant research strategies used in

qualitative research. Ross (1981) stated the purpose of qualitative research was to provide descriptions and explanations of experiences within a cultural setting. This research relies heavily on the use of language in such descriptions and explanations. Qualitative data analysis is a process of applying meaning or making sense of words. The analysis of the data is an inherent part of the process of the study, attempting to find answers to research questions which are posed by the study.

Simon and Boyer (1970) referred to observation instruments as the "meta-languages of communication". To be useful for describing communication they emphasized that a "language" needs to meet these requirements:

1. The language must be descriptive rather than evaluative, and although it can be used to analyze emotional or evaluative situations, the language itself must be descriptive of the values or feelings being discussed.

2. The language must focus on what can be categorized or measured.

3. The language must deal with small bits of action or behavior rather than global concepts.

Types of system(s).

Within the educational context, there are two main types of observation systems, a "sign" system and a "category" system. Whether a "sign" or "category" system is developed

is determined by the type of information which the researcher is interested in collecting. For example, Medley and Mitzel (1963) stated that "category" systems were more likely to develop from studies which were based on a theoretical approach in which the researcher was interested in looking at specific behavior to be examined in light of theoretical hypotheses. "Sign" systems originated from studies which were looking for cause and effect relationships and were not guided by theory toward a particular set of behaviors. The discussion in this section is relevant to the observation system developed in this study which is categorized as a "modified category" system because the author is studying specific behaviors but without a preconceived theoretical hypothesis.

Categorization.

The first major decision an instrument developer must make is that of focusing the observation system. Boehm and Weinberg (1977) suggested that the observation of an environment for research purposes has to be approached in a systematic and carefully planned manner. What the observer focuses upon and the pattern of observations that result are guided by the question posed or the problem needing to be solved. What behaviors are to be observed and how are they to be placed into categories? Since "category" systems usually arise from some theoretical basis, the behaviors to be observed are in most instances dictated by the theory or model

under consideration.

Simon and Boyer (1970) stated that optimally, observation systems represent sets of mutually exclusive and all inclusive behaviors. They noted that systems generally fall short of this ideal in that a category for each behavior may not be available or a behavior may fall into a number of categories. Developers of observation systems must create a balance between a system with a large number of categories with fine distinctions and a system with few categories which is easier to learn to use. They acknowledged that most systems rest between the two extremes.

Boehm and Weinberg (1977) suggested that the categories devised be precise and clearly defined for labelling components of the setting, specific people in the observed situation, and the behavioral activities that occur. In collecting and recording observations, the trained observer uses a system that allows a sampling of the situation, taking into account sources of bias. Through a sufficient number of objective observations he/she is prepared to build valid inferences from a reliable, rich data base of direct observations in natural settings.

Unit sampling.

In the development of an observation system, the developer must choose which method to use in sampling behavior. There are two basic approaches to behavior sampling

known as "event sampling" or "time sampling". The choice of approach will depend on the focus of the observation.

Recording.

In designing an observation system, the developer will consider an approach to information gathering. This approach could include in-person observations and/or permanent recordings through audio and videotape. The choice will depend on the nature of the information, cost of the equipment and training, time available, influence of the in-person observer and/or recording equipment. For example, Long (1974) gathered information from classrooms using live observers and videotape recordings. Little difference was found between the two methods. Long (1974) concluded that factors such as cost and ease of data collection should be given prime consideration in deciding methods of data acquisition.

Recording forms.

As reported in the literature, observation systems may employ a number of strategies to record the data which is the focus of the observation. Observational data can be recorded in the form of coding sheets, anecdotal records, running records, and field notes. The focus of the observation will help to determine which narrative strategy to be employed. Good and Brophy (1987) described the characteristics of these narrative strategies. Running records as described by Good

and Brophy (1987) have the following characteristics:

1. These records are used to record the situation in a manner that lets someone else read the description later and be able to visualize the scene or event as it occurred.

2. Running records provide a detailed, continuous, or sequential descriptive account of the behavior and its immediate environmental context.

3. They can be used to help locate the source of a problem or pattern of behavior. Field notes, as described by Good and Brophy (1987), contain personal observations, impressions, and interpretations.

A more detailed account of the system used in this study is presented in Chapter III.

Data analysis.

Qualitative data analysis is a process of making sense or applying meaning to words. The analysis of the data is not decided upon once the observation is completed but rather is an integral part of the process of the study attempting to find answers to research questions which are posed by the study.

Miles and Huberman (1984) discussed qualitative analysis as consisting of three concurrent flows of activity: data reduction, data display and conclusion drawing/verification. Data reduction occurs continuously throughout the life of any qualitatively oriented project. Before the data are actually

collected anticipatory data reduction is occurring as the researcher decides which conceptual framework, which sites, which research questions and which data collection approaches to use. As the data collection proceeds there are further episodes of data reduction and the data reduction continues until a final report is complete. Data reduction is a form of analysis that sharpens, sorts, focuses, discards and organizes data in such a way that "final" conclusions can be drawn and verified. Data display refers to an organized assembly of information that permits conclusion drawing and action taking. Displays could include matrices, graphs, and charts. Conclusion drawing/verification occurs throughout the data collection as the researcher is beginning to decide what things mean, is noting regularities, patterns, explanations and possible configurations. Final conclusions may not appear until data collection is over.

Reliability.

Kerlinger (1973) described three approaches which can be taken to define reliability. One approach examines the question "If we measure the same set of objects again and again with the same or comparable measuring instrument, will we get the same or comparable results?" This question implies the notion that reliability encompasses the stability, predictability and dependability aspects of a measuring instrument. In terms of the accuracy of a measuring instru-

ment, the question "Are the measures obtained from a measuring instrument the 'true' measures of the property measured?" must be considered. Thirdly, the degree of error of measurement must be considered to determine the consistency of the measuring instrument. Kerlinger (1973) defined reliability as the accuracy or precision of a measuring instrument. The meaning and determination of reliability for observation systems has been discussed in terms of inter-observer reliability and intra-observer reliability. Boehm and Weinberg (1977) described intraobserver reliability as one observer consistent over time in his own observations. Inter-observer reliability was described as the agreement among observers of the situation. Boehm and Weinberg (1977) addressed the need for precise, unambiguous specifications of what behavioral activities are to be focused upon as these categories form a prerequisite to behavioral observations. This precision in defining an observed behavior increases the extent to which various observers report similiarly about the behavior on which they focused. Furthermore, precise definitions force individual observers to be consistent with themselves.

Validity.

Validity, in broad terms, is addressed by the question: Are we measuring what we think we are measuring? In other words, does our observation system actually measure the behavior under observation? Medley and Mitzel (1963) in their

discussion of observational measurements of behavior stated that two conditions must be met: (a) a representative sample of the behaviors to be measured must be observed; and (b) a complete accurate record of the observed behavior must be made.

There are three types of validity: content, criterion-related, and construct. With reference to observation systems in the classroom, Bennett and McNamara (1979) posed the following questions for consideration:

1. Do the aspects of classroom behavior the system purports to measure actually differ from classroom to classroom? (construct validity) (p. 112)

2. Are the aspects of classroom behavior the system purports to measure relatively stable in one classroom? (p. 112)

3. Does the system fully measure the aspects of classroom behavior it purports to measure? (content validity) (p. 112)

This section has provided an overview of considerations in the development of observation systems providing a basis for the discussion in Chapter III on the methodology of this study.

Overview of Observation Systems Applied to Present Study

Observation systems have been developed for use in the classroom environment. These observation systems may focus on the behavior of the class as a whole, the behavior of individual children as outlined in the research questions, the behavior of the teacher as outlined in the research

questions, or the behavior of teachers and the effects on the children. The focus may be on the verbal or nonverbal aspects of behavior or a combination of both. Categories of pupil behavior and teacher behavior have been developed by a number of researchers to study various dynamics in the classroom environment. An anthology of observation instruments by Simon and Boyer (1970) described 79 observation systems which focus on various aspects of the classroom environment. There was one instrument described in the anthology that focused specifically on the categories of pupil behavior. This observation form was the Student Observational Form by Lindvall. For the purposes of this study, the categories of child behavior by Lindvall, as described in Simon and Boyer (1970), the categories of child and teacher behavior outlined by Thomas, Becker and Armstrong (1968), the Interpersonal Observation Form K developed by Madsen and Madsen (1981) and the tactility scale developed by Hall (1963) were of particular relevance. The categories of child behaviors developed by Lindvall, as described in Simon and Boyer (1970), were designed to measure the self-directiveness of the pupil by determining how the pupil spends his time when not actively being guided by the teacher. The behaviors of the child, described in this system, included the contact the child has with the learning materials, other children, and the teacher. The categories of child behaviors developed by Thomas et al. (1968) contained two main categories, disruptive behavior and

relevant behavior, with numerous subcategories of behavior for each. The category of Disruptive Behavior included the behaviors which were disruptive to the learning task taking place. The category of Relevant Behavior included the behaviors which would be on-task given the nature of the learning activity. As this present study was concerned with the antecedent and consequent behavior of the child when touch was initiated, these two observation systems combined provided a reportoire of child behaviors which included both on-task and disruptive behaviors. The categories of child behaviors are outlined in Tables 1 and 2.

Table 1

Categories for Student Observational Form Individual Prescribed Instruction

I. Independent Work

A. The student is reading independently.

B. The student is working independently on a worksheet.

C. The student is individually listening to a tape recorder.

D. The student is independently viewing a filmstrip.

E. The student is independently checking his work.

F. The student is working with a language master.

G. The student is working with a disc-phonograph.

H. The student is using programmed material.

I. The pupil corrects a test (makes corrections).

J. The pupil takes an individual test.

K. The pupil corrects a study exercise.

(Table 1 continued)

L. The pupil works with supplementary reading material.

M. The pupil makes corrections on test.

N. Miscellaneous

II. Teacher-Pupil Work

A. The pupil seeks assistance from the teacher.

B. The pupil receives assistance from the teacher.

C. The pupil discusses his progress with a teacher.

III. Non-Instructional Use of Pupil Time

A. Pupil spends time at desk not working.

B. Pupil waits for teacher or clerk to provide lesson materials for him.

C. Pupil waits for prescription.

D. Pupil goes to get materials.

E. Pupil waits for papers to be corrected by a clerk.

F. Pupil talks to other pupils.

G. Pupil leaves room to get material.

H. Miscellaneous

IV. Pupil-Pupil Activity

A. Pupil asks assistance from another pupil.

B. Pupil receives assistance from another pupil.

V. Group Activity

A. Pupil contributes to a group discussion.

B. Pupil takes a group test under supervision.

C. Pupil answers a question directed to him.

D. Pupil asks a question.

E. Pupil listens to a teacher lecture or demonstrate.

F. Pupil watches a film with the group.

G. Pupil listens to records with the group.

H. Pupil watches a performance with the group.

I. Miscellaneous

*Adapted from Lindvall as described in Simon and Boyer (1970)

Table 2

Classes of Child Behaviors

Disruptive Behavior

1. Gross Motor activities include: getting out of seat, standing up, walking around, running, hopping, skipping, jumping, rocking chair, moving chair, sitting with chair in aisle, kneeling in chair, arm flailing, and rocking body without moving chair.

2. Noise Making activities include: tapping feet, clapping, rattling papers, tearing papers, throwing books or other objects onto desks, slamming desk top, tapping objects on desk, kicking desk or chair, and scooting desk or chair.

3. Verbalization activities include: carrying on conversations with other children, calling out teacher's name to get her attention, crying, screaming, singing, whistling, laughing, and coughing.

4. Orienting activities require that the child be seated. These include: turning of head or head and body toward another person, showing objects to another child, and looking at another child.

5. Aggression activities include: hitting, pushing, shoving, pinching, slapping, striking with objects, poking with objects, grabbing objects or work belonging to another, knocking neighbor's property off desk, destroying another's property, throwing objects.

Relevant

Relevant behaviors include: looking at teacher when she was speaking to the entire class or to the child being observed, answering questions of the teacher, raising hand and waiting for the teacher to respond, writing answers to workbook questions, looking at pages of text in which reading was assigned.

*Adapted from Thomas et al. (1968).

This present study was concerned with the nature of the interaction between teacher and student when touch was initiated. The categories of teacher behavior outlined by Thomas et al. (1968) provided descriptions of the nature of interactions with categories of behavior which included: Disapproving Behavior, Approving Behavior. and Instructional Behavior. Further subcategories were devised to include physical, verbal and facial behaviors of the teacher in the Disapproving and Approving categories. The subcategory of Physical Behaviors included types of teacher touch. These categories were of relevance to this present study, as they provided an indication of the contextual factors (physical, verbal and facial behaviors) in interactions defined as Disapproving and Approving, and they provided a distinction in types of teacher touch. Table 3 outlines the classes of teacher behaviors as described by Thomas et al. (1968).

The nature of touch behavior in human interactions was of importance to this present study which focussed on the nature of touch behavior between teacher and child. Madsen & Madsen (1981) developed a record form for use in observations of group interactions called Interpersonal Observation (Form K). It contained categories designated as Verbal, Contact and Expressions of an approving nature, Verbal, Contact and Expressions of a disapproving nature, and Neutral interactions. Of particular relevance to the present study were the categories of Approving Contact, Disapproving Con-

tact and Neutral. Table 4 presents a section of the Interpersonal Observation (Form K) Record Form.

Table 3

Classes of Teacher Behaviours

Disapproving Behavior
1. Physical behaviors include: forcibly holding a child, grabbing, hitting, spanking, shaking, slapping, or pushing a child into position.
2. Verbal behaviors include: yelling, scolding, raising voice, belittling, or making fun of the child, and threats.
3. Facial behaviors include: frowning, grimacing, side-to-side head shaking, gesturing.
Approving Behavior
1. Physical behaviors include: embracing, kissing, patting, holding hand or arm of child, or holding the child in the teacher's lap.
2. Verbal behaviors include: statements of affection, approval, or praise.
3. Facial behaviors include: smiles, winks or nods at one or more of the children.
Instructional Behavior
Any response from teacher to children which involves giving instructions, information, or indicating correct responses.

*Adapted from Thomas et al. (1968).

Table 4

Interpersonal Observation (Form K)

Contact: The touching of any parts of the bodies of two or more people.

Approving Contact: The touching of another person which expresses caring, correctness, acceptance, or agreement. Examples:

hugging	nudging
patting	holding
kissing	leaning against
touching	caressing

Disapproving Contact: The touching of another person which expresses dislike, disinterest, nonacceptance, incorrectness (determined by intensity). Examples:

hitting	restraining
grabbing	kicking
pushing	shoving

Neutral contact. Recorded as neutral other. Unintentional contact or passive behavior.

*Adapted from Madsen and Madsen (1981)

Hall (1963) developed a system of observation and notation of proxemic behavior. Proxemic behavior was viewed as having eight different dimensions with a scale of notation for each. A touch code was developed as one of the eight dimensions of proxemic behavior. A seven point tactility scale was developed to code contact and non-contact situations. Since the nature of touch entails that each person in the pair could touch the other, all combinations

could be recorded on a 7*7 grid. The touching proceeds from 00 (mutual caressing) to 66 (no contact) between individuals. Table 5 outlines the differentiations in types of touch between individuals. The grid of all possible types of touch between two parties would be a combination of two numbers to indicate the type of touch displayed by each.

Table 5

Touch Code

0 = caressing and holding
1 = feeling or caressing
2 = extended or prolonged holding
3 = holding
4 = spot touching (hand peck)
5 = accidental touching (brushing)
6 = no contact whatever

*Adapted from Hall (1963).

This section has provided an overview of observation systems which have formed an integral part in the development of the observation system in this present study. As this present study was concerned with child behaviors, teacher behaviors, and types of touch, a review of observation systems in these areas was essential. The observation system developed in this study was based on a combination of

aspects of the systems described above.

Chapter II reviewed the literature on touch in human interactions, the development of observation systems and the observation systems applied to the present study. As can be seen from the review of the literature, touch behavior is an area of research in many disciplines. In the field of education, the use of touch in teacher-student interactions has been examined to measure its effects on achievement, task performance, attention to task, and self-esteem. Teachers' attitudes toward their personal use of touch have also been examined. Observations of touch behavior in natural settings form a large part of the research which has been conducted. Considerations in the development of observation systems were discussed as this present study attempted to develop a system to observe touch in teacher-student interactions. Specific observation systems applicable to the nature of the system in this present study were also discussed. Chapter III focuses on the methodology of the study.

CHAPTER III

Procedures

The procedures followed in the development of instruments to observe the teachers' use of touch in teacher/student interactions in the classroom environment are outlined in this chapter. The material presented is divided into discussion areas to focus on the various aspects of the observational process. These sections include the methodology of the study, participants, length of observations, recording instruments, data collection procedures and data analysis.

Purpose

The purpose of this study was to explore the use of touch by six grade three teachers and the context in which touch was initiated by the teacher in the classroom setting.

Methodology

Six grade three classrooms were visited by an observer(s) for five half-day sessions. The observer(s) positioned herself in the back of the classroom in a location in which the actions of the teacher and children could be observed. Materials for each observation session included Record Form-A, Record Form-B, a pencil and a watch. Observations would involve recording the time and length of

teacher/child activity. The length of teacher activity was defined when the teacher changed from one activity to another. An example to clarify this concept is provided, the teacher was circulating in the classroom then proceeds to sit at her desk. Each time a teacher initiated touch to a child the nature of the touch (teacher's body part involved, child's body part involved, how the touch was performed, child activity at touch initiation and teacher activity at touch initiation) were recorded on a record form referred to as Record Form-A. The sex of the child and if the child had previously received a touch during the observation session was also recorded. This type of data collection is described as continuous, descriptive recording in the narrative form of the behaviors identified as the focus of observation. Thus, the data was collected through direct observation of specific behaviors in the classroom environment using event sampling in which every occurrence of preselected response categories were recorded. Several authors, Green (1983) and Jones and Yarbrough (1985) referred to the importance of contextual factors in deriving the meaning of a behavior. Green (1983) stated that what a behavior "means" is determined by considering how it is used, what precedes it and what follows it. Jones and Yarbrough (1985) discussed the contextual analysis method in which all potentially relevant behaviors including the behavior of interest and accompanying verbal statements are coded from film or videotape. Features of the

environment and the social environment are also recorded. The observation records are then examined to determine the function or meaning of a behavior in combination with its context. Jones and Yarbrough (1985) modified the contextual analysis method by using a participant-observation technique to explore the cultural meanings of touch behaviors in everyday interactions. This study employed a modification of the contextual analysis method by using a live observer to record touch occurrences between teacher and children in the classroom environment.

Participants

There were six grade three classrooms involved in this study. The grade three classrooms were located in two elementary schools (K-6) in an urban setting in Newfoundland, Canada. The six grade three teachers were females and their teaching experience ranged from 10-21 years. The teachers were informed that the study focused on nonverbal communication in the classroom environment. Due to the nature of nonverbal communication under observation they could not be informed of the exact form of nonverbal communication. The school principals were informed of the exact nature of the observational study, rationale for the study, and time involved for the observations.

Length of Observations

Each classroom was visited for five half-day sessions interspersed over a seven week period during May and June 1986. An observational session was constructed according to the length of the morning and afternoon sessions in the schools. For these sessions, the observation occurred during teacher-student contact in the classroom. During the morning session there was a recess break of twenty minutes. No observations were made during the recess period as not all teachers remained in their classrooms and this time was not considered instructional time. The number of hours of observation for each teacher was not uniform; rescheduling of observations occurred due to teacher illness and teacher attendance at workshops. An observation schedule was developed at the beginning of the study to involve teachers in choosing appropriate sessions for the presence of an observer and to inform them of possible visitations.

Table 6 presents the length of observation for each of the six teachers indicated by the letters A-F.

Recording Instruments

There were two recording forms employed in this study which were developed based largely upon a review of the literature. In the following discussion these record forms will be referred to as Record Form-A (Appendix A) and Record Form-B (Appendix B). Both record forms were used in each

observation session.

Table 6

Length of Observations

Teacher	Length of Observation
A	11 hours
B	9 hours 50 minutes
C	11 hours
D	11 hours
E	11 hours
F	9 hours 50 minutes

Record form-A.

Record Form-A was a running record of the classroom interaction. This record form contained a number of sections which focused on the recording of information specific to the activity of the teacher, activity of children in the classroom, the time that touch was initiated, the type of touch used by the teacher, body part used to touch , body part which received the touch, child's activity at the initiation of the touch, activity immediately following the touch and the sex of the child. These aspects of the classroom inter-

action were presented in a graduate seminar on research design for discussion and analysis of the instrument. Each of these categories will be discussed separately.

1. **Time Frame.** Time frame refers to the period of time that the classroom teacher engages in a specific activity. (eg. teacher changes from circulating correcting seatwork to sitting at her desk). The time at which there was a change in teacher position in the classroom indicates the time for the end of one frame and the commencement of the next.

2. **Activity.** Activity referred to the activity of the teacher and children and the position of each in the classroom. For example, the following is a sample listing of some teacher activities:

- giving instructions
- writing on the blackboard
- correcting work
- reading from a textbook
- distributing papers

Furthermore, the following list are samples of the positions of the teacher in the classroom.

- teacher at blackboard
- teacher circulating
- teacher sitting at desk
- teacher standing at desk
- teacher standing in front of class

- teacher sitting in front of class

A sample of the positions of the children in the classroom is given below:

- children sitting at desks
- children sitting in circle on the floor
- children lined up by teacher's desk
- children lined up by the door
- children assembled in groups in desks

The observer abbreviated these activities by writing a "t" and a "c" to represent the teacher and children respectively. Any change in focus of the teacher as in "teacher circulating" to "teacher sitting at desk" was considered a change in activity and the time of the change would be recorded to constitute a "Time Frame". Table 7 provides a sample recording of the sections "Time Frame" and "Activity".

Table 7

Sample of Recording

Time Frame	Activity
1:20-1:35	t-circulating c-desks
1:35-1:45	t-sitting at desk c-desks

3. **Time.** Time referred to the time at which the touch was initiated. Given the information in the previous two sections, one can examine the locations of the teacher and children at the time the touch was initiated.

4. **Teacher Behavior.** The type of touch initiated by the teacher, body part used to touch, body part which received the touch, verbalization (if any) by the teacher at the time of the touch were recorded. The type of the touching behavior was adapted and modified from Hall's (1963) tactility scale, Madsen and Madsen (1981) and Thomas et al. (1968).

Table 8 presents a compilation of the types and locations of touch usually found in other studies represented in literature Hall's (1963) tacility scale and Jones and Yarborough (1985).

Table 8

Definitions of Touch

Type	Definition
Touch	Any type of physical contact between people.
Holding	A touch which restricts the body movement of the other person.
Spot Touching	Brief contact without holding, with no hand movements and minimal exertion of pressure. Can occur with a number of body parts.

(Table 8 continued)

Type	Definition
Pat	A gentle repetitive tap usually with the palm of the hand or fingers.
Push	Touch which involves pressing against a body part with some degree of pressure being exerted.
Pull	Touch which involves holding a body part (body) and causes forward movement.
Grab	A sudden, eager grasp by the hand of another's body part (body).

5. **Antecedent/Consequent.** Antecedent and consequent refer to two sections on the record form. They are presented together in this discussion as they both refer to the behavior of the touch recipient (the child). The behavior of the child prior to the touch initiation was described in the section "Antecedent". The behavior of the child immediately following the touch was described in the section "Consequent". Any verbalizations which may occur during the touching was recorded. The categories of children's behavior was adopted and modified from Thomas et al. (1968) and Lindvall as described in Simon and Boyer (1970). As can be seen in Table 9, examples are provided of the types of children's behavior typically observed in classrooms. The author used this listing as a framework in her observations but did not limit herself to just these behaviors.

Table 9

Types of Children's Behavior

- getting out of seat
- moving in chair
- making noise disturbances
- talking with others
- calling teacher's name
- crying
- screaming
- laughing
- showing objects to another
- turning head toward another person
- turning head and body toward another person
- hitting
- pushing
- pinching
- throwing objects
- destroying another's property
- grabbing objects of another
- looking at the teacher when he/she is speaking
- answering questions
- contributing to class discussion
- asking teacher questions
- discussing work with the teacher
- writing answers to seatwork assignment
- looking/following pages in a book
- listening to a tape recorder
- viewing a filmstrip
- correcting a test
- raising hand
- going to get materials
- asking another child question

6. **Sex.** The sex of the child who was the touch recipient was recorded. If the child was a previous touch recipient in the observational session an asterick was placed by the sex of the child.

A sample of recordings for Record Form-A is presented in Table 10 (also see Appendix C for further examples).

Table 10

Sample Record Form-A

Frame	Activity	Time	*Teacher Beh.	*Ant.	*Cons. Sex
1:20-1:35	*t-circ. c-desks discussion	1:29	pat on head "Good"	answered question	continued F to look at teacher while speaking
1:35-1:50	*t-circ. c-desks correct work	1:48	hand to hand passed t money	spoke to teacher	continued M writing

*Teacher Beh. = Teacher Behavior
*Ant. = Antecedent Behavior of the child
*Cons. = Consequent Behavior of the child
*t-circ. = teacher circulating

Reliability.

With reference to observer reliability, Boehm and Weinberg (1977) discussed that the development of precise, unam-

biguous specifications of what behavioral activities are to be focused upon increased the extent to which various observers reported similiarly about the behavior on which they focused. The behavior descriptions on Record Form-A required a minimal amount of inference on the part of the observer during the observations. These categories of behavior were adapted from categories reported in the literature by: Lindvall as described in Simon and Boyer (1970), Thomas et al. (1968), and Madsen and Madsen (1981). All of the above authors used different types of categories for classifying teacher and children's behavior in classroom observations. Their inclusion in this study provided the basis for the categorization of the context of touch. The categories of touch were adapted from categories reported in the literature by: Thomas et al. (1968); Madsen and Madsen (1981) and Hall (1963). These authors used different types of touch in their repertoire of touch behaviors. Their inclusion in this study provided the basis for the categorization of types of touch.

Boehm and Weinberg (1977) divided reliability into two types: intra-observer reliability, one observer consistent over time in his own observations, and, inter-observer reliability, the agreement among observers of the situation. Following Boehm and Weinberg (1977), the author chose to use intra-reliability methods in the present study. In the present study, one observer was primarily used. On two occa-

sions two observers were used to provide a reliability check. In one observation session, in which there were two observers, one instance of touch was observed by the principal observer. The second observer did not observe this instance of touch. The low-occurence of touch in this session made it impossible to accurately assess the rate of agreement. In the second observation session, in which there were two observers, the agreement between observers was calculated. The rate of agreement was calculated using the steps outlined by Boehm and Weinberg (1977) and yielded an adequate reliability coefficient of .88.

Validity.

Construct validity addresses the question of actual differences between the classrooms in the classroom behavior that the instrument purports to measure. Several researchers (Willis and Hoffman, 1975; Williams and Willis, 1978; Williams and Reeves, 1976; Willis et al., 1976; Willis et al., 1978; Rinck et al., 1980; Cowen et al., 1983; Jones & Yarborough, 1985) indicated there have been observations of touching behaviors that show differences in the types of touch used in daily interactions and the context of their use. Record Form-A was devised to record the type of touch observed, the body parts used to touch, body part which received the touch, the context of its use (focus of the class, activity of the teacher and children), and the sex of

the touch recipient. Record Form-A enables the observer to make a record of both the differences in setting and type of touch.

Content validity refers to the observers ability to record the aspects of classroom behavior for which the recording instrument has been devised. The format of Record Form-A was developed based on the types of information necessary for the recording of contextual factors, the types of touch behaviors, teacher behaviors in the classroom and childrens' behaviors.

Record form-B.

At the end of each observation session field notes (Record Form-B) were completed in which the observer(s) recorded the nature of class activities, impressions of the lessons, unusual events which may have altered natural behavior, appearance of the teacher (uptight, relaxed, pre-occupied, well-prepared, tired) and the overall behavior of the class. Table 11 provides a specific sample of Record Form-B.

Validity.

Record Form-B contained the observer(s) field notes which were completed after each observation session to enable the observer to comment on any events which may have created potential data loss through observer error. Conditions which

may have affected the teachers' normal functioning and thus affected the observation data were recorded. As the circumstances under which the observation system was completed may affect the validity of the results, the information in the field notes provided data useful in the data analysis.

Table 11

Sample Record Form-B

The children were very quiet during the observation session. They completed a number of pages in their workbooks which the teacher corrected while circulating from desk to desk. It appeared that the teacher spoke to the children with errors in their work, frequently erasing their work and requesting that they re-do. The afternoon lessons were comprised of seatwork and listening to a story.

Data Collection Procedures

The study employed primarily one observer in the six classrooms. Two additional observers were used during two observation sessions. The three observers who did contribute to the classroom observations had received teacher training in primary education and had at least one year of teaching experience. Time and the non-availability of funding at the onset of data collection interfered with the frequency of use of additional observers.

Prior to collecting the data to be used for analysis, the

primary observer spent two observation sessions in a grade two classroom. The purpose of this was to identify any potential problems with the use of the record forms to obtain the observational data. No problems were identified at this time.

Prior to the employment of the two additional observers, the purpose of the study, nature of teacher behaviors and childrens behaviors were explained. Training in the use of the record forms was conducted in which each section of the record forms was explained and demonstrated. Role plays with the primary observer were conducted as practice exercises.

For the purposes of data collection, observations of the type of touch and the context in which touch was used were conducted in six grade three classrooms. Four classrooms were observed for three morning and two afternoon sessions yielding a total of eleven hours of observation for each. Two classrooms were observed for two morning and three afternoon sessions yielding a total of nine hours fifty minutes of observation for each.

Data Analysis

As a preliminary step, the record forms for each observation session were grouped according to the classroom to which they belonged. Each teacher was given a letter from A-F.

Scoring the behavior of each teacher was the first step. The observation forms for teacher A were examined. From Record Form-A, the types of touch, body part used to touch and

body part touched were recorded. As each touch interaction was examined their frequencies were recorded. This was completed for each teacher (A-F) to determine the types of touch exhibited. Next, an examination of the situations in which touch occurred took place. From Record Form-A, the antecedent/consequent behaviors of the child and activity section were examined to determine the activity of the child when the touch was initiated. The activity of the child and the frequencies of each were recorded. This was completed for each teacher A-F.

The final stage in the analysis involved an interpretation of the ways touch interactions and contextual factors combine to derive meanings of touch interactions. Using the definitions of the meanings of touch as defined by Jones and Yarbrough (1985), the settings in which touch occurred (teacher activity, children's behavior during the touch interaction, and accompanying verbalizations) were examined to establish categories of meanings for the initiation of touch in the teacher-student interactions in the classroom environment. This analysis was completed for each of the touch interactions of teachers A-F. These categories were then examined for commonalities among the six teachers in the settings in which they used touch.

Further explanations of the analysis of the data are presented in Chapter IV with a discussion of the findings of this study.

CHAPTER IV

Analysis of the Data

This chapter will present an analysis of the data regarding the use of touch by teachers in the classrooms in which direct observations were conducted. The discussion is divided into sections which correspond to the aspects of teacher-student interaction identified for examination in this study. The first section describes the data as recorded during the observation process. The second section provides an overview pertaining to the length of observation and touch occurrence. Thus, addressing the research question "Do teachers use touch in their interactions with children in selected grade three classrooms?" The third section deals with the analysis pertaining to the body parts used to touch and body parts which received touch. The research questions "What is the nature of touch as used by teachers in selected grade three classrooms? (eg. Where and how do teachers use touch with children in their classrooms?)" and "Will there be patterns emerge among the sample of six teachers with respect to where and how teachers use touch with children in their classrooms?" are addressed. The fourth section deals with the observed behaviors of the child when the teachers initiated touch. The research questions "When do teachers use touch in their interactions with children in selected grade three classrooms? (eg. What teacher/child activity is occurring in

the classroom at touch initiation?)" and "Will there be patterns emerge among the sample of six teachers with respect to teacher/child activity at touch initiation?" are addressed. The fifth section deals with the interaction of touch and contextual factors which relate to the meanings of the touch. Thus, addressing the research question "Based on the model provided by Jones & Yarbrough (1985) if patterns emerge, among the sample of six teachers, can one assign meaning to these patterns?"

Initial Steps in Data Analysis

The initial step in the analysis of the data was to group each set of observation forms by teacher and assign each teacher a letter from A to F. The letters A to F refer to each of the six teachers involved in the study. Next, the total frequency of touch initiation for each teacher was tallied. Table 12 outlines the total frequency of touch and length of time each teacher was observed. A response to the question "Do teachers use touch in their interactions with children in selected grade three classrooms?" is provided through an examination of Table 12. The six grade three teachers participating in this study were observed to use touch in their interactions with children.

As can be seen in Table 12, the length of observations varied, with two teachers being observed for 9 hours 50 minutes and four teachers being observed for 11 hours each.

The frequency of occurrence of touch in teacher-student

Table 12

Frequency of Teacher Touch With Length of Observation

Teacher	Number of Touches	Length of Observations
A	32	11 hours
B	21	9 hours 50 minutes
C	42	11 hours
D	34	11 hours
E	40	11 hours
F	18	9 hours 50 minutes

interactions varied for each teacher. The rate (per hour) at which teachers were observed to use touch was calculated by dividing the total number of touches for each teacher by the length of observation. Teachers C and E were observed to touch most frequently with touch occurring approximately every 15 minutes. Teachers A and D were observed to use touch approximately every 20 minutes. Teachers B and F were observed to use touch approximately every 30 minutes. In summary, teachers were observed to use touch at varying rates in teacher-student interactions.

Types of Touch

The first step in the analysis of the types of touch teachers were observed to use consisted of extrapolating the body areas used to touch and body areas which received the touch from Record Form-A. This information was extracted from the section labelled "Teacher Behavior". The research questions "What is the nature of touch as used by teachers in selected grade three classrooms? (eg. where and how do teachers use touch with children in their classrooms?)" and "Will there be patterns emerge among the sample of six teachers with respect to where and how teachers use touch with children in their classrooms?" are addressed in the discussion of this section. The repertoire of types of touch teachers were observed to use as well as the frequency of occurrence of each type of touch are presented in Table 13. The letters A to F presented in this table represent each of the six teachers in this study. The difference between the teachers in the types of touch they were observed to use can be noted in Table 13 through an examination of the differences in frequencies of occurrence/non-occurrence of each. Given the extensive nature of the data collected the question of potential differences among the teachers in the types of touch they were observed to use was extended to include an examination of differences with respect to the type of touch each teacher most frequently used and types of touch and sex of the child. The types of touch are redefined below to help the

reader to visualize and better understand the following discussion.

Definitions of types of touch.

Touch: Any type of physical contact between people.

Holding: A touch which restricts the body movement of the other person. (Jones & Yarbrough, 1985)

Spot touching: Brief contact without holding, with no hand movements and minimal exertion of pressure. Can occur with a number of body parts. (Jones & Yarbrough, 1985)

Pat: A gentle repetitive tap usually with the palm of the hand or fingers.

Push: Touch which involves pressing against a body part with some degree of pressure being exerted.

Pull: Touch which involves holding a body part (body) and causes forward movement.

Grab: A sudden, eager grasp by the hand of another's body part (body).

As can be seen in Table 13, differences in the types of touch teachers were observed to use are noted. The repertoire of touch behaviors varied for each teacher, with four types of touch being observed for all teachers. The six teachers who participated in this study were observed to use the following: spot touches of the hand to hand, hand to back, arm to arm, and pats of the hand to the head. Four of the six teachers were observed to use a spot touch of the hand to

shoulder.

Table 13 also presents the teacher's body area used to touch and the student's body area which received the touch.

Table 13

Frequency and Type of Touch Initiated by Teachers A - F

Types of Touch	Teachers						TOTAL
	A	B	C	D	E	F	
Spot touch							
T S							
Hand to Hand	4	2	4	5	10	2	27
Hand to arm	3	1	0	1	1	0	6
Hand to shoulder	5	1	1	0	5	0	12
Hand to back	6	2	7	2	1	1	19
Hand to head	1	2	0	0	2	0	5
Hand to chest	0	0	0	0	1	0	1
Arm to arm	3	3	9	3	1	8	27
Arm to head	1	0	0	0	0	0	1
Arm to back	0	1	0	0	0	0	1
Arm to shoulder	0	0	6	2	0	0	8
Finger to head	0	1	0	0	0	0	1
Finger to back	0	2	0	1	0	0	3
Finger to arm	0	0	0	2	0	0	2
Chest to head	0	0	11	3	0	0	14
Chin to head	0	0	0	1	0	0	1

(Table 13 continued)

Pat							
Hand to arm	2	1	0	2	2	0	7
Hand to shoulder	1	0	0	1	2	2	6
Hand to head	2	3	2	1	1	2	11
Hand to back	1	0	1	0	1	0	3
Hand to knee	0	0	0	0	0	1	1
Finger to arm	0	0	0	1	0	0	1
Finger to back	0	0	0	0	0	1	1
Push							
Hand to back	3	2	1	0	8	0	14
Finger to back	0	0	0	0	0	1	1
Hand to head	0	0	0	3	0	0	3
Hand to shoulder	0	0	0	4	0	0	4
Pull							
Hand to arm	0	0	0	1	3	0	4
Shake							
Hand to arm	0	0	0	1	0	0	1
Grab							
Hand to arm	0	0	0	0	2	0	2
TOTAL	32	21	42	34	40	18	187

T = Teacher S = Student

The most frequently occurring touches consisted of a spot touch of the teacher's hand to the child's hand, to the child's back, and to the child's arm. An examination of the

circumstances in which each of these types of touches were observed was conducted.

A spot touch of the teacher's hand to the child's hand occurred when the teacher would give or receive an object from the child, or when the teacher was correcting the child's seatwork. In some of these interactions there were accompanying verbalizations by the teacher about the child's errors in seatwork or the provision of instructions to aid the child in task completion.

A spot touch of the teacher's hand to the child's back occurred when the teacher moved the child as she passed by, the child was out of his/her seat and redirected back to the seat, the child was asking the teacher a question or the teacher was seating children in positions on the floor.

A spot touch of the teacher's arm to the child's arm occurred when the teacher was correcting seatwork. These three types of touches were observed to occur for all six of the teachers involved in this study.

One other type of touch was observed to occur with all six teachers, however, not with the same frequency as those previously discussed. A pat of the teacher's hand to the child's head was observed for all six teachers. This type of touch was observed to occur when the teacher was seating children on the floor with verbalizations as to the appropriate places to sit, the child was oriented towards another child, the teacher drew attention to the child's work through

verbalizations, the teacher verbally requested the child move or the child was talking with others and not completing seatwork.

Four of the six teachers were observed to use a spot touch of the teacher's hand to the child's shoulders. This type of touch was observed when the child was oriented towards another child, the child was out of his/her seat during a seatwork activity, or the child was asking the teacher a question.

There were two touches described in Table 13, which the reader may have problems understanding. These were a spot touch of the teacher's chest and chin to the child's head. These touches were observed to occur when the teacher was standing behind the child's desk, bent down, correcting seatwork, reading from the child's text or giving instructions about a seatwork activity.

Analysis of the types of touch individual teachers were observed to use most frequently indicated there were teachers who initiated one or two types of touch predominantly. Teacher A initiated touch of the teacher's hand to child's shoulder and child's back most frequently. Teacher B did not demonstrate a predominant type of touch. In the analysis of her style of touch, a number of touches were initiated with frequencies for each ranging from 1-3 occurrences. Teacher C initiated touch of the teacher's chest to the child's head most frequently with 11 occurrences recorded. Teacher D was

observed to initiate touch of the teacher's hand to the child's hand as the most frequent type of touch. Teacher E initiated touch of the teacher's hand to the child's hand, most frequently with 10 occurrences recorded. Teacher F initiated touch of the teacher's arm to the child's arm, most frequently with 8 occurrences being recorded.

The most frequently occurring touches were touches which aided in: task completion, (as in the case of the teacher circulating around the classroom checking children's seatwork, giving instructions to aid in task completion or correcting completed work), and classroom management, as in redirecting children who were out of their seats, seating children in appropriate positions on the floor, and redirecting the focus of the child who was oriented towards others. Given the nature of this touch it appears that the frequency of these types of touch could depend on the ability of the children to complete independent work, the difficulty of the seatwork activity, and the attending skills of the children (distractibility).

Further analysis of the types of touch was conducted to examine sex differences observed in the touching behavior of the six teachers. The analysis of sex differences in types of touch is presented for each teacher in Tables 14-19.

As shown in Table 14, Teacher A was observed to use spot touches of the hand to head, arm to arm, and arm to head with female children only. Pats of the hand to shoulder were

observed with male children only.

Table 14

Frequency of Type of Touch Initiated With Sex of the Child for Teacher A

Types of Touch	Students		Total
	Male	Female	
Spot Touch			
Hand to hand	3	1	4
Hand to arm	1	2	3
Hand to shoulder	2	4	6
Hand to back	1	4	5
Hand to head	0	1	1
Arm to arm	0	3	3
Arm to head	0	1	1
Pat			
Hand to arm	1	1	2
Hand to shoulder	1	0	1
Hand to head	1	1	2
Hand to back	1	0	1
Push			
Hand to back	2	1	3
TOTAL	13	19	32

As shown in Table 15, Teacher B was observed to use spot touches of the hand to arm, hand to shoulder, finger to back and pat of the hand to arm with male children only. Spot

touches of the hand to head and arm to back were used with female children only.

Table 15

Frequency of Type of Touch Initiated With Sex of the Child for Teacher B

Types of Touch	Students		Total
	Male	Female	
Spot Touch			
Hand to hand	1	1	2
Hand to arm	1	0	1
Hand to shoulder	1	0	1
Hand to back	1	1	2
Hand to head	0	2	2
Arm to arm	2	1	3
Arm to back	0	2	2
Finger to head	0	1	1
Finger to back	1	0	1
Pat			
Hand to arm	1	0	1
Hand to head	1	2	3
Push			
Hand to back	1	1	2
TOTAL	10	11	21

As shown in Table 16, Teacher C was observed to use spot

touches of the hand to shoulder and pat of the hand to the back with female children only. A push of the hand to head was used with one male child.

Table 16

Frequency of Type of Touch Initiated With Sex of the Child for Teacher C

Types of Touch	Students		Total
Spot Touch	Male	Female	
Hand to hand	3	1	4
Hand to shoulder	0	1	1
Hand to back	5	2	7
Arm to arm	6	3	9
Arm to shoulder	3	3	6
Chest to head	5	6	11
Pat			
Hand to head	1	1	2
Hand to back	0	1	1
Push			
Hand to back	1	0	1
TOTAL	24	18	42

As shown in Table 17, Teacher D was observed to use a number of types of touch with male children only. These

included: spot touches of the hand to arm, finger to back, finger to arm, chin to head, pats of the hand to arm and hand to head, a pull on the arm and shaking an arm. A spot touch of the arm to shoulder was observed for female children only. It is interesting to note that Teacher D used seven aggressive touches (pushes, pulls, and shakes) with males and only two such touches with females.

Table 17

Frequency of Type of Touch Initiated With Sex of the Child for Teacher D

Types of Touch	Students		Total
Spot Touch	Male	Female	
Hand to hand	4	1	5
Hand to [illegible]	1	[illegible]	[illegible]
Arm to arm	1	2	3
Arm to shoulder	0	2	2
Finger to back	1	0	1
Finger to arm	2	0	2
Chest to head	3	0	3
Chin to head	1	0	1
Pat			
Hand to arm	2	0	2
Hand to shoulder	0	1	1
Hand to head	1	0	1

(Table 17 continued)

Finger to arm	0	1	1
Push			
Hand to head	2	1	3
Hand to shoulder	3	1	4
Pull			
Hand to arm	1	0	1
Shake			
Hand to arm	1	0	1
TOTAL	24	10	34

As shown in Table 18, Teacher E was observed to use spot touches of the hand to shoulder, hand to chest, and a pat of the hand on the arm with male children only. Spot touches of the hand to arm, hand to back, arm to arm and pats of the hand to head and hand to back were used with female children only.

As shown in Table 19, Teacher F was observed to use touch mainly with male children. Spot touches of the arm to arm were observed for both males and females. Spot touches of the hand to hand were observed for female children only.

Table 18

Frequency of Type of Touch Initiated With Sex of the Child for Teacher E

Types of Touch	Students		Total
	Male	Female	
Spot Touch			
Hand to hand	4	6	10
Hand to arm	0	1	1
Hand to shoulder	5	0	5
Hand to back	0	1	1
Hand to head	1	1	2
Hand to chest	1	0	1
Arm to arm	0	1	1
Pat			
Hand to arm	2	0	2
Hand to shoulder	0	2	2
Hand to head	0	1	1
Hand to back	0	1	1
Push			
Hand to back	5	3	8
Pull			
Hand to arm	2	1	3
Grab			
Hand to arm	1	1	2
TOTAL	21	19	40

Table 19

Frequency of Type of Touch Initiated With Sex of the Child for Teacher F

Types of Touch	Students		Total
Spot Touch	Male	Female	
Hand to hand	0	2	2
Hand to back	1	0	1
Arm to arm	3	5	8
Pat			
Hand to shoulder	2	0	2
Hand to head	2	0	2
Hand to knee	1	0	1
Finger to back	1	0	1
Push			
Finger to back	1	0	1
TOTAL	11	7	18

Each of the teachers were observed to use particular types of touch with male children or female children only. Since the frequencies of the types of touch in which there were sex differences did not exceed 3 touches (with the exception of one in which there were 5 touches) these findings should be noted, however, not considered to be significant. However, it is interesting to note that when one compiles the

total number of pushes, pulls, grabs and shakes) 69% of these aggressive types of touches were directed toward males. All other touches observed in the repertoire of touches for individual teachers were observed to be used with both male and female children.

Analysis of the total frequencies of touch initiation for male and female children, in the six classrooms, indicated that male children received 103 touches while female children received 84 touches. In a summary of the data presented in Tables 14-19, individual teacher's initiation of touch with reference to the sex of the child, showed four of the six teachers (teachers C,D,E,F) were observed to initiate touch with male children more frequently. The numerical difference in touch initiation toward male children, by these female teachers, ranged from 2 touches as observed for Teacher E to 14 touches as observed for Teacher D. Teacher C touched male children 6 more times than female children. Teacher F touched male children 4 more times than female children. Teachers A and B were observed to initiate touch more frequently with female children with differences of 6 touches for Teacher A and 1 touch for Teacher B between female and male children.

Child Behaviors - Touch Initiation

A running record (Record Form-A) was used in which records of the behaviors of the individual children at the time of touch initiation were recorded. The behaviors of the

child in relation to the classroom activity were noted when teachers initiated touch. This data was considered to respond to the research question "When do teachers use touch in their interactions with children in selected grade three classrooms? (eg. What teacher/child activity is occurring in the classroom at touch initiation?). Tables 20-25 present an overview of the teacher/child activities at touch initiation for each of the Teachers A-F. As can be seen from these tables, teachers use touch in a variety of settings in the classroom environment.

As can be seen in Tables 20-25, the children in the six classrooms exhibited a number of behaviors in the classroom environment at the time touch was initiated by the teacher. There was one category of children's behavior in which there were two specific behaviors of children which were difficult to classify. This occurred when children were observed to be out of their seat and asking the teacher a question. In the categorization of these behaviors, the teacher touch could have been initiated to respond to the "out of seat" behavior or the "asking teacher question" behavior. The distinction between these two behaviors was made according to the timing of the touch. If touch was initiated while the child was asking the teacher a question it was so categorized. If the touch was initiated after the teacher had responded to the question and the child was to return to his/her seat the touch was categorized as a response to "out of seat" behavior.

Table 20

Child Behaviors With Frequency of Type of Touch for Teacher A

Children Specific Behaviors	Teacher Types and Frequency of Touch	
Out of seat	- pat of hand on back	(1)
	- spot touch hand to back	(2)
	- spot touch hand to shoulders	(3)
	- push hand to back	(3)
Standing	- spot touch hand to arm	(1)
	- spot touch hand to back	(1)
Standing and waiting for corrections	- spot touch hand to shoulder	(1)
Sitting on floor	- spot touch hand to arm	(1)
	- pat of hand on head	(2)
Passing object	- spot touch hand to hand	(1)
Turning of head and body towards another	- spot touch hand to arm	(1)
	- spot touch hand to head	(1)
	- spot touch hand to shoulder	(1)
Looking at object in desk	- spot touch hand to hand	(1)
Talking with others	- pat of hand on arm	(1)
Asking teacher question	- spot touch hand to shoulder	(1)
	- spot touch hand to back	(2)
	- spot touch arm to arm	(1)
Writing answers to questions	- spot touch hand to hand	(2)
	- spot touch arm to arm	(2)
	- spot touch arm to head	(1)
	- pat of hand to shoulder	(1)
	- pat of hand to arm	(1)

Table 21

Child Behaviors With Frequency of Type of Touch for Teacher B

Children Specific Behaviors		Teacher Types and Frequency of Touch	
Out of seat	-	spot touch arm to back	(1)
	-	spot touch finger to back	(1)
	-	spot touch hand to head	(1)
	-	spot touch hand to back	(1)
Standing	-	spot touch hand to back	(1)
Lining up to leave room	-	spot touch hand to head	(1)
	-	push hand to back	(2)
	-	spot touch hand to shoulder	(1)
Standing by own desk and writings answers	-	spot touch arm to back	(1)
Sitting on floor	-	pat of hand on head	(1)
Passing object	-	spot touch hand to hand	(1)
Turning head toward another	-	pat of finger on head	(1)
Writing answers to questions	-	spot touch hand to arm	(1)
	-	spot touch arm to arm	(3)
	-	pat of hand on head	(2)
Not writing answers	-	pat of hand on arm	(1)
Showing the teacher cut hand	-	spot touch hand to hand	(1)

Table 22

Child Behaviors With Frequency of Type of Touch for Teacher C

Children Specific Behaviors		Teacher Types and Frequency of Touch	
Out of seat	-	spot touch hand on back	(2)
	-	spot touch hand to arm	(1)
	-	push hand to back	(1)
Standing and waiting for corrections	-	spot touch hand to back	(1)
Asking teacher question	-	spot touch arm to shoulder	(1)
	-	spot touch hand to back	(4)
	-	spot touch arm to arm	(1)
	-	pat of hand on head	(1)
Writing answers to questions	-	spot touch arm to arm	(6)
	-	spot touch arm to shoulder	(5)
	-	spot touch hand to hand	(3)
	-	spot touch chest to head	(11)
	-	pat of hand on back	(1)
	-	pat of hand on head	(1)
	-	spot touch hand to shoulder	(1)
Listening to tape	-	spot touch chest to head	(1)
Crying	-	spot touch hand to hand	(1)

Table 23

Child Behaviors With Frequency of Type of Touch for Teacher D

Children Specific Behaviors	Teacher Types and Frequency of Touch	
Out of seat	- push hand to head	(2)
	- spot touch hand to back	(2)
	- push hand to shoulder	(1)
Standing	- push hand on shoulder	(3)
Moving in seat	- pat of hand on head	(1)
Passing object	- spot touch hand to hand	(5)
Turning away from work	- push hand to head	(1)
	- pat of hand on shoulder	(1)
Pushing another	- pull hand to arm	(1)
	- shake hand to arm	(1)
Writing answers to questions	- spot touch arm to arm	(2)
	- spot touch chest to head	(3)
	- spot touch arm to shoulder	(1)
	- pat of hand to arm	(1)
	- spot touch finger on back	(1)
Answering teacher question	- spot touch of hand to arm	(1)
	- spot touch of finger to arm	(1)
Working at computer	- pat of finger on arm	(1)
	- spot touch ofhand on shoulder	(2)
Correcting work	- spot touch arm to arm	(1)

(Table 23 continued)

Children Specific Behaviors	Teacher Types and Frequency of Touch	
Out of seat	- spot touch arm to back	(1)
Looking in text as teacher reads from child's text	- spot touch chin to head	(1)
Looking in text but not reading aloud with class	- spot touch arm to shoulder	(1)

Table 24

Child Behaviors With Frequency of Type of Touch for Teacher E

Children Specific Behaviors	Teacher Types and Frequency of Touch	
Out of seat	- spot touch hand to back	(1)
	- spot touch hand to chest	(1)
	- push hand to back	(3)
Sitting on floor	- pull hand to arm	(3)
	- push hand to back	(3)
	- spot touch hand to shoulder	(1)
Passing object	- spot touch hand to hand	(6)
	- spot touch hand to head	(1)

(Table 24 continued)

Children Specific Behaviors	Teacher Types and Frequency of Touch	
Turning of head and body towards another	- spot touch hand to shoulder	(3)
Our of seat	- spot touch arm to back	(1)
Moving in desk	- push hand to back	(2)
Talking with others	- grab hand to arm	(1)
Writing answers to questions	- spot touch arm to arm	(1)
	- spot touch hand on head	(1)
	- spot touch hand to hand	(1)
	- pat of hand on head	(1)
	- pat of hand on shoulder	(2)
	- pat of hand on back	(1)
	- spot touch hand to arm	(1)
Not writing answers	- spot touch hand to hand	(1)
Oral reading by individual child	- pat of hand on arm	(1)
	- spot touch hand to hand	(1)
Distributing books	- grab hand to arm	(1)
Jogging on spot	- spot touch hand to shoulder	(1)
Pinning thumbtack	- spot touch hand to hand	(1)

Table 25

Child Behaviors With Frequency of Type of Touch for Teacher F

Children Specific Behaviors	Teacher Types and Frequency of Touch	
Passing object	- spot touch hand to hand	(1)
Turning of head and body towards another	- push finger on back	(1)
Talking with others	- pat of hand on head	(2)
Looking at another's book	- pat of hand on shoulder	(1)
Asking teacher question	- pat of hand on knee	(1)
	- spot touch arm to arm	(1)
Writing answers to questions	- spot touch arm to arm	(7)
	- spot touch hand to hand	(1)
	- pat of finger on back	(1)
Participating in discussion	- spot touch of hand to back	(1)
Moving the desk in response to teacher request	- pat of hand to shoulder	(1)

Patterns can be noted, from an examination of the data presented in Tables 20-25, indicating the commonalities in the contexts of children's behaviors in which teachers were observed to initiate touch. The numerical notation which follows the context of children's behavior described below represents the number of teachers observed to use touch in each of the contexts. The context of children's behavior in which three or more of the teachers in the sample were observed to use touch included: writing answers to questions (n=6), out of seat (n=5), orienting body towards another (n=4), exchanging objects (n=5), talking with others (n=3), asking teacher questions (n=3).

Analysis of the touch patterns for individual teachers with reference to the categories of children's behavior at touch initiation was conducted. Teacher A was observed to use touch most frequently when the children demonstrated "out of seat" behavior (9). The context of "writing answers to questions" was the next most frequent context for Teacher A (7). It is interesting to note that teachers B, C, D, E and F were observed to initiate touch most frequently in the context of children's behavior "writing answers to questions". The frequencies of touch observed in this context for each teacher B-F were teacher B (6), teacher C (28), teacher D (8), teacher E (9), and teacher F (9). Further analysis of the contextual factors in the touch interactions follows in the analysis of teacher behaviors which accompany the initiation

of touch.

Contextual Factors

The following analysis will focus on the categories of children's behaviors and the context of the touch (teacher behavior accompanying verbalizations). Table 26 presents an overview of the child behavior categories and touch initiation for the sample of teachers. The numbers which are presented for each teacher represent the frequency of touch occurrence in each of the contexts observed.

Table 26

Child Behaviors With Frequency of Touch Initiation for the Sample of Teachers

Child Behavior	Teachers						
Categories	A	B	C	D	E	F	Total
Out of seat	9	4	4	5	5	0	27
Standing	3	6	1	3	0	0	13
Sitting on floor	3	1	0	0	7	0	11
Passing object	1	1	0	5	7	1	15
Turning of head towards another	0	1	0	0	0	0	1
Turning of head and body towards another	3	0	0	0	3	1	7

(Table 26 continued)

Child Behavior	Teachers						
Categories	A	B	C	D	E	F	Total
Looking at object in desk	1	0	0	0	0	0	1
Talking with others	1	0	0	0	1	2	4
Asking teacher question	4	0	7	0	0	2	13
Writing answers to questions	7	6	28	8	9	9	67
Not writing answers	0	1	0	0	1	0	2
Turning away from work	0	0	0	2	0	0	2
Moving in seat	0	0	0	1	2	0	3
Pushing another	0	0	0	2	0	0	2
Looking at another's book	0	0	0	0	0	1	1
Answering teacher questions	0	0	0	2	0	0	2
Listening to tape	0	0	1	0	0	0	1
Working at computer	0	0	0	3	0	0	3
Correcting work	0	0	0	1	0	0	1
Showing teacher hand	0	1	0	0	0	0	1
Crying	0	0	1	0	0	0	1
Looking in text as teacher reads	0	0	0	1	0	0	1
Looking in text not reading aloud with class	0	0	0	1	0	0	1
Reading aloud	0	0	0	0	2	0	2
Distributing books	0	0	0	0	1	0	1
Jogging	0	0	0	0	1	0	1
Pinning thumbtack	0	0	0	0	1	0	1
Participating in discussion	0	0	0	0	0	1	1
Arranging desk	0	0	0	0	0	1	1
Total	32	21	42	34	40	18	187

Table 26 presents a summary of the contexts of child behavior categories in which touch was initiated. As the previous section, described in Tables 20-25, focused on the child behavior categories and the type of touch initiated in each context, this stage of data analysis extends the discussion of context. The children's behavior categories, classroom activity, and teacher behavior at touch initiation are examined to provide further information on the contextual factors at touch initiation. All teachers in the sample were observed to use touch when children were writing answers to questions (seatwork activity). Furthermore, all teachers (n=6) were observed to use touch in the contexts of "correcting work with no accompanying verbalizations", and "correcting work with verbalizations about incorrect answers". Teachers B-F (n=5) were observed to use touch while "correcting work with verbalizations giving instructions". Teachers A-E (n=5) were observed to use touch when children were out of their seats. Teachers B-E (n=4) were observed to use "touch with no accompanying verbalizations" when children were out of their seats. For the reader who wishes to see the interplay of child behavior categories and teacher behavior at touch initiation, in more detail, a description for each teacher is provided in Appendix D.

Jones and Yarbrough (1985) examined the meanings-in-context of touches. They emphasized the importance of contextual factors in establishing the meanings of touches.

They defined the contextual factors as "verbal and nonverbal behaviors, relational factors and situational factors which accompany a given touch behavior". The contextual factors which accompanied the initiation of touch by the teachers were described in the previous section (with more detailed descriptions presented in Appendix D). Examining the meanings-in--context of touches reported by participant observers as recorded in their daily interactions, Jones & Yarbrough (1985) identified "meaning categories" for individual touches and touch sequences. They grouped the categories according to similarities in meaning of context. For individual touches, these groupings included: positive affect touches (support, appreciation, inclusion, sexual, affection), playful touches (playful affection, playful aggression), control touches (compliance, attention-getting, announcing a response), ritualistic touches (greeting, departure), hybrid touches (greeting/affection, departure/affection), task-related touches (reference to appearance, instrumental ancillary, instrumental intrinsic) and accidental touches. For further explanation of the characteristics and meanings of these individual touches see Appendix E.

The research question "Based on the model provided by Jones & Yarbrough (1985), if patterns emerge, among the sample of six teachers, can one assign meaning to these patterns?" is addressed in the following discussion. Applying Jones and Yarbrough's (1985) "meaning categories" to the touches

observed in the present study one finds positive affect, control, task-related and accidental touches. Table 27 presents the "meaning categories" for touch initiation for the sample of teachers in this study.

Table 27

Frequency of Touch When Applied to the "Meaning Categories"

"Meaning Categories"	Number of Occurrences
Positive Affect Touches	4
Control Touches	94
Task-related Touches	73
Accidental	2
Miscellaneous	14
Total	187

In the category of control touches, (compliance and attention-getting), the researcher was unable to make a clear distinction between the two categories based on the nature of the data collected. These contexts are presented under the general heading "control touches". It was determined that the majority of the touches (166 touches) observed in this present study fall into the categories of control touches (compliance, attention-getting) and task-related touches (instrumental

ancillary). Support touches, instrumental intrinsic, and accidental touches were observed in a small sample of only 7 touches. Through an examination of the contextual factors in touch initiation, as recorded on Record Form-A, the researcher was able to categorize 173 of the 187 touches observed (see Table 27). There were 14 touches in which there was not sufficient data to derive meaning categories in a reliable manner. Of the 173 touches which the researcher categorized, according to Jones and Yarbrough's (1985) "meaning categories", there were 94 touches which were categorized as control touches, 73 touches categorized as task-related touches, 4 touches categorized as support and 2 touches categorized as accidental. The types of touch which were categorized as "control", "task-related", "positive-affect" and "accidental" touches for the sample of six teachers are described in detail in Appendix F. Excerpts, (relevant to the data in this study), from the detailed material in Appendix F are given below.

Control Touches

- Teacher touches child as assembling the children forming a line.

- Teacher touches child, redirects to seat.

- Teacher touches child who is talking to others, teacher verbalizes to child about seatwork.

Task-Related Touches

- Teacher touches child while correcting child's work.

- Teacher touches child as they exchange objects.

Positive Affect Touches

- Teacher touches child as the child asks questions about task with which the child is experiencing difficulties.

In summary, this section focussed on the final stage of data analysis. It included an examination of the contextual factors in which touch was observed to occur in the sample of six classrooms, and the categorization of the touches into meaning categories determined by an examination of the meanings-in-context of the touches. The "meaning categories" developed by Jones and Yarbrough (1985) were used in a discussion of the data from present study.

Presented in this chapter was the data analysis undertaken to determine the types and frequency of touch teachers use in teacher-student interactions in six grade three classrooms, the child behaviors at touch initiation and the settings in which touch was observed to be initiated.

The final chapter will provide a summary of the study, draw conclusions based on the results and provide recommendations for practise and further research.

CHAPTER V

Summary, Conclusions, and Recommendations

Summary

The purpose of this study was to explore the use of touch in teacher-student interactions in the classroom environment in six grade three classrooms. Each classroom was observed for a total of 9 to 11 hours depending upon the split between morning and afternoon sessions. A running record (Record Form-A) was made for each observation period. It included the: ongoing classroom activity; time frame for the activity; time of touch initiation; teacher behaviors at touch initiation; type of touch (body area used to touch and body area which received the touch); child's behavior at touch initiation; and, sex of the touch recipient. Field notes (Record Form-B) were used to record any information pertaining to the atmosphere of the class, any interruptions during the observation period, or other data which may have affected the observation. Two additional observers were used for two observation sessions. The employment of a second observer on a more systematic basis could not be achieved due to lack of funding at the onset of data collection. The categories regarding types of touch, teacher behavior and children's behavior, in classroom environments were established from a review of the literature. They were used to increase the researcher's understanding of the dynamics of the classroom

environment and for the identification of specific behaviors. Two observation sessions were spent in a grade two classroom, prior to data collection, to assess potential difficulties with the process. No difficulties were identified. The primary observer possessed a degree in primary education and had two years teaching experience, at that level, when the study was conducted.

The model used to study teachers' use of touch, in the present study, was comprised of an analysis of (a) the types of touch,(b) part of the teacher's body involved in touch, (c) child's body part which received the touch,(d) the behavior of the child when the touch was initiated, and (e) the context of touch initiation (teacher behavior, classroom activity).

This analysis was based on the nature of the research questions posed in this study. For clarity they are restated below:

1. Do teachers use touch in their interactions with children in selected grade three classrooms? If so,

2. What is the nature of touch as used by teachers in selected grade three classrooms? (eg. Where and how do teachers use touch with children in their classrooms?)

3. Will there be patterns emerge among the sample of six teachers with respect to where and how teachers use touch with children in their classrooms?

4. When do teachers use touch in their interactions with children in selected grade three classrooms? (eg. What

teacher/child activity is occurring in the classroom at touch initiation?)

5. Will there be patterns emerge among the sample of six teachers with respect to teacher/child activity at touch initiation?

6. Based on the model provided by Jones and Yarbrough (1985), if patterns emerge among the sample of six teachers, can one assign meaning to these patterns?

The six teachers involved in this study were observed to use touch in their interactions with children. The frequency of touch initiation varied with teachers C and E observed to initiate touch at a rate of approximately 1 touch every 15 minutes, teachers A and D observed to initiate touch at a rate of approximately 1 touch every 20 minutes, and teachers B and F observed to initiate touch at a rate of approximately 1 touch every 30 minutes.

The circumstances in which teachers were observed to use touch were described in terms of the children's behavior at touch initiation. The children's behaviors observed at touch initiation included: out of seat behavior, standing, sitting on floor, passing objects, turning of head towards another, turning of head and body towards another, looking at object in desk, talking with others, asking teacher a question, writing answers to questions, showing teacher cut on hand, listening to tape, crying, moving in seat, turning away from work, pushing other, working at computer, correcting work,

looking in text as teacher reads, looking in text not reading aloud with class, reading aloud, distributing books, jogging, pinning thumbtack, looking at another's book, participating in discussion and arranging desk.

Child behaviors which were frequently responded to through touch by the majority of the six teachers in the sample included: writing answers to questions (n=6), out of seat behavior (n=5), orienting body towards another (n=4), passing object (n=4), asking teacher questions (n=3) and talking with others (n=3). Across the sample of six teachers there was a difference in the context of touch initiation as described through the childrens' behavior. Patterns were noted, as described above, in which a group of teachers within the sample were observed to respond to the same behaviors of the child.

The teachers in this study were observed to use a number of types of touches in their teacher-student interactions. These types of touches included: spot touches, pats, pulls, grabs, pushs, and shakes. These touches involved the teacher's hand, arm, finger, chest, and chin. The body parts of the child which received the touch involved the child's hand, arm, back, shoulder, chest, head, and knee.

There was a difference in the types of touches which teachers were observed to use. Spot touches and pats were observed to be used by all six teachers in the study. A push of the teacher's hand to the child's back was observed for

four of the six teachers in the sample. Other types of touch defined as push (with the exception of the teacher's hand to the child's back), pull, shake and grab were observed for three of the teachers. The frequency of these types of touch (total of 29 touches) comprised 16% of the total of 187 touches observed in the sample of teachers. A significant difference was noted with resect to the sex of the child. It was noted that 20 of the 29 touches were directed toward male children. Patterns were noted in teacher touching behavior.

To facilitate discussion of the general atmosphere in which touch was observed to be initiated and to aid in the derivation of meaning of the touches, the "meaning categories" defined by Jones and Yarbrough (1985) were applied to this present study. The touches observed were categorized as touches of positive affect (support), control (compliance, attention-getting), task-related (instrumental ancillary, instrumental intrinsic) and accidental. The "meaning category" of touch which was observed most frequently by the teachers was that of "control touches" with a total of 94 "control touches" of the 173 touches categorized. The next most frequently occurring "meaning category" of touch was that of "task-related touches" with a total of 73 touches so categorized. The combination of "control" and "task-related" touches totalled 167 out of 173 touches categorized. Ninety-seven percent of the touch teachers were observed to initiate comprised these two categories. The value of touch in the

literature review focused on its reinforcing and motivational value, and its value in depicting an attitude of care and concern toward the recipient. The majority of the touch teachers were observed to use in this study was initiated in response to needs for classroom management, discipline, and completion of assigned tasks. A small sample of the touches observed (4 touches) could be categorized as "support" touches.

In summary, the touch interactions observed in this study, with a sample of six grade three teachers, provide the reader with further insight into the function and usage of touch between teachers and children in the classroom environment.

Conclusions

The environment created in the teaching-learning experience is composed of many factors which include the physical arrangement of desks and children, the teacher, the teaching style, the learning activities, the learning styles of the children and behavior of the children. To create an environment which is rich in the potential to foster children's learning is an important task of the teacher. In becoming a facilitator for learning, the teacher has to maintain a general sense of classroom control, maintain children's attention to the learning task and instruct the children. The results of this study and the conclusions to be drawn have to

be acknowledged in this context.

The use of touch by the teacher in interactions with the children in the classroom environment forms one dimension in the study of classroom communication. Based on the findings of this study, the following conclusions are made:

1. Touch was observed to be used by the sample of six teachers.

2. The majority of the touch observed appears based on the need to maintain classroom control and on-task behavior. Thus, the touch recipient was often a child who was not attending to the assigned task, or requests of the teacher. A child who consistently exhibited these behaviors may have received attention from the teacher, through touch, most frequently.

3. The frequency of touch initiation by the teacher appears dependent upon the proportion of time spent by the teacher in close proximity to the children. It was most probable for touch to occur was when the teacher was circulating in the classroom while the children completed seatwork. The variance among teachers in the frequency with which they initiated touch may be related to the variance among the teachers in the proportion of time spent circulating in the classroom.

4. There was a low number of touch occurrences observed which demonstrated a response for a "job well done" for the child.

5. The focus of this study was at the grade three level at the latter part of the school year. It is possible that the demands of the curriculum at this point in the school year and in a child's schooling experience (the end of the primary grades) are factors to consider to better understand the nature of the touch observed.

Touch, in conjunction with other verbal and nonverbal behaviors of the teacher, played an integral role in maintaining on-task behavior, and a general sense of classroom order and discipline. The significance of physical contact in human interactions and its place in the teaching-learning environment, in particular, remains an area for further research in teacher education.

Recommendations for Further Research

Based upon the findings of this study the following recommendations for further research are made:

1. This study should be replicated with more than one observer to enable further distinctions in the types of touches and "meaning categories" of touches teachers use in teacher-student interactions. The degree of inference and interpretation required for further distinction entails the use of several observers.

2. This study should be replicated and the specific type of teacher activity controlled for the sample of teachers. This would address the issue of construct validity

more fully and allow for further comparisons to be conducted of the relationship between type of touch and teacher activity.

3. A study could be conducted in which teacher touching behavior is observed and using Thomas et al.'s (1968) categorization of children's behavior, the relationship between the categorization of children's behavior (ie. relevant or disruptive) and teacher touch type could be determined.

4. To increase the ability to generalize about touch, studies of teacher's use of touch in the classroom environment in a broader range of primary, elementary, junior and senior high classrooms should be conducted.

5. A study of the use of touch assessing the relationship between touch initiation and the teacher perceptions of the children (touch recipients) on variables such as social skills, ability levels, and attitudes should be conducted. This study would identify possible common characteristics among the population of touch recipients.

6. A study of the teacher's use of touch in the classroom environment could be conducted with observations over a complete school year to assess the relationship between the teacher's use of touch and the rapport which is established over the school year.

7. A study of the teacher's use of touch in the classroom environment could be conducted to determine the relation-

ships between the meaning of the nonverbal message transmitted through the use of touch and the accompanying verbal messages.

8. Teachers' beliefs about the appropriateness of touch in teacher-student interactions needs to be assessed. This assessment could be supplemented with the research on appropriate types of touch and the development of guidelines for teachers.

9. Teachers' perceptions of their use of touch and their actual use in teacher-student interactions could be assessed through the administration of a questionnaire or interview technique prior to classroom observations. The relationships between the perceived and actual use of touch could be measured and used as a basis for teacher education.

10. Development of instruments that would measure students' perceptions of the appropriateness of touch, from their teachers, from primary to senior high school could be undertaken.

11. An instrument could be developed to measure teachers' perceptions of various types of touch which in turn could lead to increased teacher insight into their own touching behavior.

Recommendations For Practise

Based upon the findings of this study the following recommendations for practise are made:

1. Teacher associations need to become active in

developing guidelines for teachers based on a theoretical understanding of the significance of touch. This is becoming increasingly necessary when one considers the vulnerable position that a teacher holds.

2. Teachers need to reflect on their own belief systems with respect to appropriate types of touch and circumstances for touch occurrence in their interactions with students.

3. Teachers need to become more aware of their use of touch in their interactions with students.

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RECORD FORM A

CLASS: _____ OBSERVER: _____

SESSION: _____ DATE: _____

OBSERVATION NO.: _____

Frame	Activity	Time	Teacher Behavior	Antecedent	Consequent	Sex

RECORD FORM B

CLASS: _____ OBSERVER: _____

SESSION: _____ DATE: _____

OBSERVATION NO.: _____

Reaction to Observation:

(Nature of class activities, impressions, unusual events, appearance of teacher, information loss, behavior of children, atmosphere of class).

RECORD FORM A

CLASS: Teacher A OBSERVER: Judy Pollett

SESSION: Friday (p.m.) DATE: _____

OBSERVATION NO.: 1

Frame	Activity	Time	Teacher Behavior	Antecedent	Consequent	Sex
1:20-1:30	Homework Assignment t-board c-seats					
1:30-1:33	t-desk cutting out materials c-seats					
1:33-1:50	t-chair reading a story c-floor in front of class	1:34	touches hand on child's arm	looking for a place to sit on floor	turns around and goes back to find a place t-says "no, you have to go back there"	M
1:50-1:56	t-chair explaining Art c-floor					
1:56-1:58	t-standing by desk c-seats	1:56	hand touching and passing back money	child asked for money	t-gave child money	M

RECORD FORM A

CLASS: Teacher A

OBSERVER: Judy Pollett

SESSION: Friday (p.m.)

DATE:

OBSERVATION NO.: 1

Frame	Activity	Time	Teacher Behavior	Antecedent	Consequent	Sex
1:58-2:07	t-distributing papers c-seats - some out of seat					
2:07-2:09	t-writing on board c-seats					
2:09-2:14	t-distributing crepe paper c-seats					
2:14-2:20	t-desk c-seats	2:18	hand touches back	child asked question re art work	returned to seat t-answered question and placed hand on back to guide child	F
	c-looking out (5) window	2:20	placed both hands on child's shoulders turned child around toward desk	child looking out window (out of seat)	"no girls, back to seats", turned girls around, told them "you won't have time to do all your art Mothers Day this pm	F

RECORD FORM A

CLASS: Teacher A OBSERVER: Judy Pollett

SESSION: Friday (p.m.) DATE: _____

OBSERVATION NO.: 1

Frame	Activity	Time	Teacher Behavior	Antecedent	Consequent	Sex
2:20-2:26	t-distributing material c-seats	2:20	placed both hands on child's shoulders turned child around toward desk	child looking out window (out of seat)		F
	t-distributing material c-seats	2:24	hand touches back	out of seat	back to seat	F
2:26	t-desk cutting material	2:31	hand touches arm	standing up modeling apron	touches arm child sits down speaks to another child who has been making fun of girl	F
2:31	t-circulating around class	2:34	hand touches shoulder	asks question	t-responds to question, child returns to seat	M
2:31-2:35	t-circulating	2:34	places hand on shoulder	asks question t-responds to child and simultaneously places hand on c's shoulders	returns to seat has question answered	M

RECORD FORM A

CLASS: Teacher A

OBSERVER: Judy Pollett

SESSION: Friday (p.m.)

DATE:

OBSERVATION NO.: 1

Frame	Activity	Time	Teacher Behavior	Antecedent	Consequent	Sex
2:35-2:41	t-desk standing requesting children sit on floor c-on floor working at desks	2:41 2:41	hand touches back hand touches back	child asking question about art t-respond to question child asking question about art t-respond to question	child has answer to question returns to seat child has answer to question returns to seat	F F
2:42-2:50	t-sitting at desk correcting work c-floor at desks					

RECORD FORM A

CLASS: Teacher C OBSERVER: Judy Pollett

SESSION: Thursday (p.m.) DATE:

OBSERVATION NO.: 4

Frame	Activity	Time	Teacher Behavior	Antecedent	Consequent	Sex
1:20-1:55	Gym - unable to observe the gym period today					
1:55-2:13	Math t-desk c-desks t-asking oral time tables					
2:13-2:18	seatwork c-seats t-returning papers from a.m.					
2:18-2:23	t-desk correcting c-working					
2:23	t-correcting work circulating	2:24	arm touching arm while correcting work (no verbal feedback by teacher)	child working	continues working	M
		2:26	head touches chest	no verbal feedback child working	child working	M

RECORD FORM A

CLASS: Teacher C

OBSERVER: Judy Pollett

SESSION: Thursday (p.m.)

DATE:

OBSERVATION NO.: 4

Frame	Activity	Time	Teacher Behavior	Antecedent	Consequent	Sex
		2:27	arm touching shoulder while correcting work (no verbal feedback)	child working	continues working	M
		2:28	head touching chest while correcting work	child working	continues working	F
		2:30	head touching chest while correcting work (no verbal feedback)	child working	continues working	M
		2:31	arm touching shoulder while correcting work (verbal - pointing out errors	child working	continues working	F
2:23-2:35	Math circulating correcting work	2:33	arm touches shoulder teacher says "the ones I don't mark are wrong ..." while correcting work	child working	continues working	M
		2:34	head touches chest (no verbal comments)	child working	continues working	F

RECORD FORM A

CLASS: Teacher C

OBSERVER: Judy Pollett

SESSION: Thursday (p.m.)

DATE:

OBSERVATION NO.: 4

Frame	Activity	Time	Teacher Behavior	Antecedent	Consequent	Sex
2:35-2:38	teacher sitting on empty desk correcting work					
2:38-2:40	circulating correcting	2:38	arm touches child's shoulders (no verbal comments)	child working	continues working	M
		2:39	head touching chest while correcting work (no verbal comments)	child working	continues working	F
		2:40	head touching chest while correcting work (no verbal comments)	child working	continues working	M
2:40-2:44	t-desk correcting work					
2:44-2:46	t-desk talking to class re: clean-up homework					
2:46-2:50	t-standing talking					

RECORD FORM A

CLASS: Teacher E

OBSERVER: Judy Pollett

SESSION: Friday (a.m.)

DATE:

OBSERVATION NO.: 4

Frame	Activity	Time	Teacher Behavior	Antecedent	Consequent	Sex
9:45 (9:45-9:49)	t-desk c-seats assigning spelling seatwork discussion					
(9:49-9:55)	6 children distributing workbooks t-desk	9:50	t-went to 3 desks hands on child's shoulder turned child completely around (no verbal comments)	child turned toward person behind him	turned around to face the front	M M M
		9:51	hand touches hand took paper out of child's hand	looking for something in desk	put paper away	F
		9:53	t-grabbed the arm of child who was distributing books	child was behind on giving out book - could not find name	went to child's desk	F

RECORD FORM A

CLASS: Teacher E OBSERVER: Judy Pollett

SESSION: Friday (a.m.) DATE: _____

OBSERVATION NO.: 4

Frame	Activity	Time	Teacher Behavior	Antecedent	Consequent	Sex
9:55	t-circulating c-seats	9:56	teacher said "writing" pat on the shoulder	child doing spelling	continued working	F
(9:55-10:05)	spelling exercises	9:56	hand touches hand t-moves books to get child started at work	child not started his work	prepared to begin work	F
		9:57	teacher stated "would you write a little darker" pat on shoulder	child working	continues to work	F
10:05-10:09	t-desk c-seats					
10:09-10:50	t-desk c-individually going to desk to have one exercise checked before proceeding					
10:50-11:10	recess time					

RECORD FORM A

CLASS: Teacher E

OBSERVER: Judy Pollett

SESSION: Friday (a.m.)

DATE:

OBSERVATION NO.: 4

Frame	Activity	Time	Teacher Behavior	Antecedent	Consequent	Sex
11:10-11:18	t-in front of class settling children down c-seats					
11:18	Reading t-in front of class					
(11:18-11:40)	class black-board c-desks introducing new words new topic					
(11:40-11:44)	t-standing in front of class c-seats children reading aloud individually					
(11:44-12:00)	t-sitting at desk					

RECORD FORM B

CLASS: _____ OBSERVER: Judy Pollett

SESSION: Friday (a.m.) DATE: June 6, 1986

OBSERVATION NO.: 4

Reaction to Observation:

(Nature of class activities, impressions, unusual events, appearance of teacher, information loss, behavior of children, atmosphere of class).

During the discussion in spelling this a.m. the children shared animal stories - the teacher let a number of children contribute and smiled during the storytelling. During the spelling seatwork the teacher spent a great deal of time helping the children. It appears that the instructions at the onset of the lesson were not understood clearly.

Another teacher came into the classroom 3 times before recess discussing the children's work.

Immediately following recess the teacher settled the children down. She told the child she knew they did not want to be there and it would soon be summer, out playing, only 5 hours a day in school, etc. She was very firm in this lecture-type approach.

APPENDIX D

Teacher Behaviors in Response to Specific Children's Behaviors During Touch

Teacher A

Child Behaviors	Context of Touch	Total
OUT OF SEAT		
- child asks teacher question followed by touch		4
- teacher touches and verbalizes about incomplete work		2
- teacher touches children no verbalization		3
STANDING		
- teacher touches child who is standing when others are sitting		1
- teacher touches while passing by child		1
- teacher touches child who is waiting by teacher's desk for corrections		1
SITTING ON FLOOR		
- teacher touches while passing by child		1
- teacher touches while passing by child and verbalizes for child to move		1
- teacher touches and verbalizes where child is to sit		1
PASSING OBJECT		
- teacher touches while giving child object		1
TURNING OF HEAD AND BODY TOWARDS ANOTHER		
- teacher touches children, no verbalization		3

LOOKING AT OBJECT IN DESK

- teacher touches no verbalization 1

TALKING WITH OTHERS

- teacher touches child and verbalizes for quiet 1

ASKING TEACHER A QUESTION

- teacher touches child and responds to question 4

WRITING ANSWERS TO QUESTIONS

- teacher touches child while correcting work, no verbalization 2
- teacher touches child while correcting work and verbalizes about incorrect answers 2
- teacher touches child while helping child find answers in dictionary 2
- teacher touches child while correcting work apologizes for touch 1

Teacher B

Child Behaviors	Context of Touch	Total
OUT OF SEAT		
- child asks teacher question followed by touch and verbalization to sit		2
- teacher touches child no verbalization others writing answers to questions		1
- teacher touches child no verbalization others seating themselves		1
STANDING		
- teacher touches children as they are lining up to leave room and verbalizes directions		4
- teacher touches child who is standing writing answers and questions if the child's desk is too small		1
- teacher touches while passing by child		1
SITTING ON FLOOR		
- teacher touches child and verbalizes places to sit		1
PASSING OBJECT		
- teacher touches child while taking object from child and verbalizes about incomplete work		1
TURNING OF HEAD TOWARDS ANOTHER		
- teacher touches child and verbalizes about incomplete work		1
WRITING ANSWERS TO QUESTIONS		
- teacher touches child while correcting work and verbalizes about incorrect work		3

- teacher touches child while correcting work, no verbalization 2
- teacher touches child and verbalizes instructions while correcting 1

NOT WRITING ANSWERS

- teacher touches child while correcting work, no verbalization 1

SHOWING TEACHER CUT ON HAND

- teacher touches while looking at hand and verbalizes directions for care of hand 1

Teacher C

Child Behaviors	Context of Touch	Total
OUT OF SEAT		
- teacher touches children	no verbalization	3
- teacher touches and verbalizes	for child to sit	1
STANDING		
- teacher touches child and questions	what child is doing	1
ASKING TEACHER QUESTION		
- teacher touches child and verbalizes	answer to question	6
- teacher touches child and points to book	no verbalization	1
WRITING ANSWERS TO QUESTIONS		
- teacher touches child while correcting work,	no verbalization	15
- teacher touches child while correcting work	verbalizes about incorrect work	10
- teacher touches child while correcting work	questions child about its completion	1
- teacher touches child while correcting work and	verbalizes instructions	2
LISTENING TO TAPE		
- teacher touches child while looking at child's	activity	1

CRYING

- teacher touches child and verbalizes instructions for care of finger 1

Teacher D

Child Behaviors	Context of Touch	Total
OUT OF SEAT		
- teacher touches child while verbalizing to return to desk		2
- teacher touches child while questioning child's activity		1
- teacher touches child, no verbalization		2
STANDING		
- teacher touches while passing by child		3
MOVING IN SEAT		
-teacher touches child, no verbalization		1
PASSING OBJECT		
- teacher touches child while taking object from child to use for instruction		2
- teacher touches while taking object from child who is not on task		2
- teacher touches while taking object to help child		1
TURNING AWAY FROM WORK		
- teacher touches child, no verbalization		1
- teacher touches child while questioning the completion of work		1
PUSHING OTHER		
- teacher touches child while verbalizing for child to stop		1
- teacher touches child, no verbalization		1

WRITING ANSWERS TO QUESTIONS

- teacher touches child while correcting work verbalizes about incorrect answers 3
- teacher touches child while correcting work gives instructions 1
- teacher touches child while correcting work, no verbalization 2
- teacher touches while correcting work and verbalizes about desk area 2

ANSWERING TEACHER QUESTIONS

- teacher touches child to indicate for child to stop speaking due to interruption 1
- teacher touches child who then recommences answer 1

WORKING AT COMPUTER

- teacher touches child while questioning child's activity 1
- teacher touches child while giving instructions 1
- teacher touches child while apologizing to child as he has to stop task due to time 1

CORRECTING WORK

- teacher touches child while checking work that child is correcting 1

LOOKING IN TEXT AS TEACHER READS

- teacher touches child while reading from child's text 1

LOOKING IN TEXT NOT READING ALOUD WITH CLASS

- teacher touches child while standing over child, no verbalization 1

Teacher E

Child Behaviors	Context of Touch	Total
OUT OF SEAT		
	- teacher touches child, no verbalization	5
SITTING ON FLOOR		
	- teacher touches while passing by child	1
	- teacher touches child while verbalizing where child is to sit	6
PASSING OBJECT		
	- teacher touches child while taking object from child who is not on task	3
	- teacher touches child while taking object from child and verbalizes that child is not on task	2
	- teacher touches child while collecting money	1
	- teacher touches child while passing object	1
TURNING OF HEAD AND BODY TOWARDS ANOTHER		
	- teacher touches child, no verbalization	3
MOVING IN DESK		
	- teacher touches child, no verbalization	2
TALKING WITH OTHERS		
	- teacher touches child while verbalizing for child to move desk	1
WRITING ANSWERS TO QUESTIONS		
	- teacher touches child while correcting work and verbalizes about incorrect work	2
	- teacher touches child while verbalizing	

instructions 4

- teacher touches child while correcting work, no verbalization 1
- teacher touches child while correcting work and verbalizes about its completion 1
- teacher touches child while correcting work and verbalization about child's desk 1

NOT WRITING ANSWERS TO QUESTIONS

- teacher touches child while arranging books on child's desk, no verbalization 1

READING ALOUD

- teacher touches child while verbalizing for child to stop reading 1
- teacher touches child while pronouncing word for child 1

DISTRIBUTING BOOKS

- teacher touches child while taking books from child who is distributing books 1

JOGGING

- teacher touches as she loses her balance 1

PINNING THUMBTACK

- teacher touches child while helping child pin thumbtack 1

Teacher F

Child Behaviors	Context of Touch	Total
PASSING OBJECT		
- teacher touches child while taking pencil from child's hand to help child with task		1
TURNING OF HEAD AND BODY TOWARDS ANOTHER		
- teacher touches child, no verbalization		1
TALKING WITH OTHERS		
- teacher touches child while verbalizing for child to return to task		1
- teacher touches child while verbalizing about child's curiousity		1
LOOKING AT ANOTHER'S BOOK		
- teacher touches child while verbalizing for child to look at own book		1
ASKING TEACHER A QUESTION		
- teacher touches child in response to question about body part		1
- teacher touches child while verbalizing answer		1
WRITING ANSWERS TO QUESTIONS		
- teacher touches child while correcting work, no verbalization		4
- teacher touches child while correcting work and verbalizes about incorrect work		3
- teacher touches child while correcting work and apologizes for touch		1

- teachers touches child while correcting work and verbalizes instructions 1

PARTICIPATING IN DISCUSSION

- teacher touches body part as an example in discussion 1

ARRANGING DESK

- teacher touches child while verbalizing about moving desk to new location 1

APPENDIX E

Characteristics and Meanings of Individual Touches

Positive Affect Touches

Support - Support touches serve to nurture, reassure or promise protection. In general, such touches show concern for another who is experiencing distress.

Appreciation - Appreciation touches express gratitude for something another person has done.

Inclusion - Inclusion touches draw attention to the act of being together and suggest physical closeness.

Sexual - Sexual touches express physical attration or sexual intent.

Affection - Affection touches express generalized positive regard beyond mere recognition of the other.

Playful Touches

Playful Affection - Playful affection touches serve to lighten interaction. The seriousness of the affection is qualified.

Playful Aggression - Playful aggression touches serve to lighten interaction. The seriousness of the aggression is qualified.

Control Touches

Control touches serve to direct the behavior, attitude or feeling state of the recipient. Almost all touches initiated by the person who attempts influence.

Compliance - Compliance touches attempt to direct the behavior of another person, and oftentimes, by implication, to influence attitudes or feelings. Verbalization includes words that are direct or implied demands, commands or requests for information and action (question form).

Attention-getting - Attention-getting touches serve to direct the touch recipient's perceptual focus toward something. Attention-getting touches are highly distinctive in character. The touch is always initiated, and the initiator always verbalizes, clarifying the purpose of the touch. Attention is called to an object or event or to the verbalization itself.

Announcing a Response - These touches call attention to and emphasize the feeling state of the initiator. The touch implicitly requests affect response from another.

Ritualistic Touches

This group of meanings consists of greeting and departure touches.

Greeting - Greeting touches serve as part of a simple act of acknowledging another's presence.

Departure - Departure touches occur at the end of a

focused encounter and serve to close it.

Hybrid Touches

Hybrid touches involve two or more meanings.

Greeting/Affection - These touches express affection for and acknowledgement of another during the initiation of an encounter.

Departure/Affection - These touches similar to greeting/affection touches, except that they occur at the end of encounters and predominantly include some kind of parting verbalization.

Task-Related Touches

There are three categories of meaning in which touches are directly associated with the performance of a task.

Reference to Appearance - These touches are those which point out or inspect a body part or body artifact referred to in a verbal comment about the receiver's appearance. An example would be touching an item of clothing while commenting on it.

Instrumental Ancillary - These touches occur as an incidental part of performing a task. They occur as part of the accomplishment of a task, but are unnecessary to task completion. An example would be touching hand-to-hand when passing someone the telephone.

Instrumental Intrinsic - These touches accomplish the

task in and of themselves. They consist mainly of acts of physical aid such as helping someone get up, information gathering such as checking for a fever and grooming such as putting on suntan lotion.

Accidental Touches

Accidental touches are those which are perceived as unintentional and therefore meaningless.

*Jones and & Yarbrough (1985)

APPENDIX F

Meaning Categories for Teachers' Use of Touch

Positive Affect Touches

Support

- Teacher touches child as child asks questions about task with which the child is experiencing difficulties.

Control Touches

- Teacher touches child as assembling the children in a line.
- Teacher touches child as seating children in specific places on the floor.
- Teacher touches child, redirects child to desk.
- Teacher physically moves child as she passes by.
- Teacher touches child while asking him/her a question.
- Teacher touches child while verbalizing for child to move desk.
- Teacher touches child who is pushing another verbalizing for the child to stop pushing.
- Teacher touches child who is oriented toward another child verbalizing about seatwork.
- Teacher touches child and verbalizes attention to object on the floor.
- Teacher touches child who is talking with others verbalizing about seatwork.

- Teacher touches child verbalizing instructions about seatwork.
- Teacher touches child who is moving in seat verbalizing about the child's level of movement.
- Teacher touches child who is looking at object in desk verbalizing about the child's activity.

Task-Related Touches

Instrumental Ancillary

- Teacher touches child as she helps with pinning thumb-tack.
- Teacher touches child as they exchange objects.
- Teacher touches child as she points to material in book.
- Teacher touches child while correcting child's work.
- Teacher touches child as she stands over child reading from child's book.
- Teacher touches child as she writes in child's workbook.

Instrumental Intrinsic

- Teacher touches child's hand while feeling the cut on the hand.

Accidental

- Teacher touches child immediately verbalizing apology.