

NON-VERBAL BEHAVIORS OF EFFECTIVE TEACHERS OF AT-RISK  
AFRICAN-AMERICAN MALE MIDDLE SCHOOL STUDENTS

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(ABSTRACT)

Students in school districts throughout the United States are administered standardized tests in an effort to assess achievement. These annual "academic rites of passage" serve as measures of accountability to the citizenry of every locality served. Many at-risk African-American males score in the lower two quartiles on these tests. Remediation efforts have not significantly raised the achievement of these students. However, there are teachers who are effective with these students. They use both verbal and non-verbal behaviors that facilitate learning. This study was designed to answer the question: What non-verbal behaviors are used by effective teachers of at-risk African-American male middle school students?

Data were collected via teacher observations using the Non-verbal Behavior Teacher Observation Form, an instrument developed to record nonverbal behaviors of teachers. The instrument consists of thirteen behaviors that cover seven non-verbal domains. Four teachers were observed three times each for thirty minutes and two teachers were observed one time. The researcher selected a different at-risk male student each observation resulting in a total of fourteen teacher observations and their interactions with fourteen at-risk male students.

Descriptive statistics were used to identify most frequently and least frequently used non-verbal behaviors. When effective teachers in this study interacted with the at-risk African-American male middle school students, they frequently were in close proximity, changed their voice inflections, established eye contact, invaded students' territories (were within two feet), and gestured to students.

The results of this study may be used as a vehicle or catalyst for the implementation of a school or district-wide training program for teachers of at-risk African-American male students. These results may also be used for teacher preparation programs at the college or university level.

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This dissertation is dedicated to my family. To the memory of my deceased wife, Mrs. Virginia Hardison Boyd, whose memory I cherish and whose spiritual presence is always with me. To my two daughters, Mrs. Monica Boyd Barnes and Mrs. Davita Boyd Williams, the love you show and the expressions of how proud you are, are sources of inspiration and encouragement. I love you. To my two sons, Frederick Douglas Boyd, Jr., and Geoffrey Vincent Boyd, I truly appreciate both of you allowing me to be a "student"

along with you during part of your middle and high school years. Both of you are loving, hardworking, and goal-oriented young men who make me proud to be your father, friend, and role model. I love you. This dissertation is also dedicated to the cherished memory of my deceased parents, Mr. Copeland C. Boyd, Sr., and Mrs. Lillian V. Boyd.

Education was always a high priority in our home. We established a tradition to encourage, support, share, and celebrate one another's educational successes. Thus, I dedicate this dissertation to my family with my undying love.

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# **CHAPTER 1**

## **INTRODUCTION**

Three conditions motivated this researcher to pursue a study of non-verbal teacher behaviors that facilitate the learning of at-risk African-American male middle school students. The first condition was a disproportionate number of discipline referrals submitted for the at-risk male population in our middle school. Among the at-risk male population, the number of referrals for African-American males compared to white males was approximately two to one. Upon examination via classroom observations of this phenomenon, this researcher noticed that in some situations, some academic deficiencies were camouflaged by misconduct by some of the at-risk male students. Some of these students would disrupt class proceedings which resulted in a referral to the office in an effort to hide their inability to keep up with class work.

Our division superintendent instructed all building principals to have teachers make their daily lesson “rigorous and relevant” in his attempt to enhance student achievement throughout the school division. This researcher’s administrative team monitored our teachers’ implementation of rigorous and relevant lessons through classroom observations and weekly team meetings. The administrative team discovered that some teachers who had several at-risk African-American male students in a given class exercised managerial skills by way of written referrals in lieu of intervention steps as was required. The administrative team further discovered that some of our marginal teachers, in regard to instructional and managerial skills, were matched with our most needy at-risk students. This unfortunate combination highlighted a major concern that the administrative team had to address just short of revamping the entire master schedule midway into the school year. It was decided that an in-house staff development training program could serve as a viable solution. Central office personnel gave teachers multicultural training and they were challenged to develop strategies for teaching diverse student populations within a class. As a follow-up to the multicultural training, our

teachers had the freedom to meet in whatever configurations they thought best, such as in assigned instructional teams, by subject area, or by grade level, in order to develop more effective instructional strategies and delivery systems.

The second condition was centered around civic responsibility. Six years ago this researcher attended a regional meeting in Hampton, Virginia, sponsored by an organization called 100 Black Men. This organization was composed of men in several professions such as school superintendents, judges, lawyers, medical doctors, teachers, college professors, school board members, and business leaders. The purpose of the meeting was to address the concern that African-American males between the ages of 12 and 24 were becoming an "endangered species." It was stated that one out of every four young African-American males would end up incarcerated or dead. The panel discussions and speeches had a profound impact on all in attendance. This researcher left that meeting with a heightened sense of civic, social, and professional responsibility to address the expressed "endangered species" concern within my profession.

"One of the most actively discussed, and sometimes vigorously debated issues since the late 1980s has been the declining social, economic, and educational status of young African-American males in our society" (Garibaldi, 1992, p.4). The author asserted that some see "these young men's future as hopeless and impossible to salvage" (p. 4).

The third condition was a personal one in the fact that this researcher is a single African-American male parent raising two teenage sons. The death of this researcher's wife placed our sons in the now familiar at-risk African-American male student category.

There is substantial evidence that, especially among urban and poor African-American males, a crisis is upon us. Reglin (1994, p.1) indicated that this African-American male crisis is characterized by some alarming statistics:

1. It is projected that by the year 2000, 70% of African-American males may be imprisoned, awaiting trial, addicted to drugs, or killed (Commission on Minority Participation in Education and American Life, 1988).
2. Fifty-seven and one-half percent of African-American children

live in single parent homes (U.S. Bureau of Census,1992). A large number of African-American males is from single-parent homes, headed by a matriarch, guardian, older sister, aunt, or grandmother. Children from single-parent families are more likely to show behavior problems such as absenteeism, tardiness, truancy, inefficient study habits at home, and disruptive classroom behavior.

3. Sixty percent of African-American children live in poverty. (U.S. Bureau of Census, 1992).

### **Statement of the Problem**

This study emerged from an administrative problem this researcher and his administrative team shared in our efforts to develop a training program for teachers. Teachers were given multicultural training and later were required to develop strategies for teaching diverse populations within a class. The administrative team wanted to provide a positive alternative to teachers who were marginal in their instructional and managerial skills of at-risk students in general and at-risk African-American male students specifically. The objective of the program was to improve the academic plight of one middle school's at-risk African-American male population.

Teachers and students communicate non-verbally constantly. This researcher agrees with Miller (1988) who indicated that teachers' awareness of their non-verbal behaviors in the classroom help them become more proficient at receiving students' messages as well as more proficient at sending accurate messages. This researcher observed teachers' non-verbal behaviors used in ways that facilitated a classroom climate that helped at-risk African-American male students achieve.

The problem of this study was to identify non-verbal behaviors used by effective teachers of at-risk African-American male middle school students. The focus of the problem was to conduct observations of selected effective teachers' classroom interactions with at-risk male students.

## **Research Questions**

There are teachers whose teaching behaviors, instructional strategies, and methods of delivery are effective. This study was designed to answer these questions:

1. What non-verbal behaviors are used by effective teachers of at-risk African-American male middle school students?
  - 1A. What non-verbal behaviors are least frequently used by effective teachers?
2. What non-verbal behaviors are most frequently used by effective teachers disaggregated by sex?
  - 2A. What non-verbal behaviors are least frequently used by effective teachers disaggregated by sex?
3. What non-verbal behaviors are most frequently used by effective teachers disaggregated by race?
  - 3A. What non-verbal behaviors are least frequently used by effective teachers disaggregated by race?
4. What non-verbal behaviors are most frequently used by effective teachers disaggregated by age?
5. What non-verbal behaviors are most frequently used by effective teachers with elementary, middle, and high school experience?
  - 5A. What non-verbal behaviors are most frequently used by effective teachers with middle school experience?
  - 5B. What non-verbal behaviors are most frequently used by effective teachers with elementary and middle school experience?
6. What non-verbal behaviors are most frequently used by the effective teacher of Related Arts?
  - 6A. What non-verbal behaviors are most frequently used by effective teachers of Language Arts?
  - 6B. What non-verbal behaviors are most frequently used by the effective teacher Science?



6C. What non-verbal behaviors are most frequently used by the effective teacher of Social Studies?

### **Definition of Terms**

Non-verbal behaviors -- These are acts of communication without the use of words between individuals using body movement, space, touch, eye movement, the voice, and use of physical surroundings. Non-verbal behaviors are categorized as kinesics, proxemics, haptics, oculosics, vocalics, environmental factors, and facial expressions. For the purpose of this study the terms non-verbal behavior and non-verbal communication will be used interchangeably.

At-risk African-American male students-- These eleven to fifteen year old male students are considered to be at-risk if they receive free or reduced-price lunch and will potentially fail to complete their education with an adequate level of skills. Risk factors include living in a home of low socioeconomic status and evidence of little or no educational support from home.

Positive-- The effective teacher's perceived non-verbal behavior with an at-risk African-American male student which shows approval or acceptance and effectuates a positive interaction.

Negative--The effective teacher's perceived non-verbal behavior with an at-risk African-American male student which shows disapproval or non-acceptance and effectuates a negative interaction.

Neutral--The effective teacher's perceived non-verbal behavior with an at-risk African-American male student which does not show approval / acceptance, disapproval/non-acceptance and effectuates a neutral interaction.

### **Summary of Chapter One**

In the introduction to chapter one, three conditions which motivated the pursuit of this study were set forth. The first condition was a disproportionate number of discipline referrals submitted for the at-risk male population in this researcher's middle school. The second condition was the researcher's sense of civic responsibility regarding the so-called "black male crisis." The third condition was personal in that the researcher is a single,

African-American male parent who is raising two teenage sons.

The purpose of this study was to identify non-verbal behaviors used by effective teachers of at-risk African-American male middle school students.

### **Overview of the Study**

The statement of the problem, the research questions, definition of terms, and a summary are presented in Chapter 1. Chapter 2 is a review of the literature related to non-verbal teacher behaviors. The design and procedures for the research are in Chapter 3. Chapter 4 contains a description of the collected data and analyses. Chapter 5 contains conclusions, discussion of issues related to the study, the researcher's reflections, implications for practice, limitations of the study, and recommendations for future research.

## **CHAPTER 2**

### **REVIEW OF THE LITERATURE**

In the following paragraphs, literature is reviewed which deals with non-verbal behaviors and instructional strategies used by teachers with at-risk African-American male students.

Communication is the transmission or exchange of information or opinions. Miller (1988) stated, "Communication is an ongoing process of sending and receiving messages that enables humans to share knowledge, attitudes, and skills. Effective teaching depends on successful communication (106). When teachers and students interact, explicit and implicit communication are occurring (138)" (p. 3). Research indicates that there are two dimensions of communication--verbal and non-verbal.

#### **Verbal Communication**

Problems develop in verbal communication when the sender and receiver do not share the same meaning for words used, or because they put words together in different patterns when speaking. Because of this, it is important that teachers (especially those in multicultural settings) increase their understanding of students in their classes (Bedwell et al., 1991). Effective teachers constantly clarify or explain ideas, concepts, or simply define new terms to their students. Sensitivity to this behavior becomes almost second nature as is the teacher's continuous probing for students' understanding.

#### **Non-verbal Communication**

Non-verbal communication involves transactions through non-verbal symbols (Craib, 1979). Knapp (1972) indicated that non-verbal communication maybe considered as all of those human responses which are not identified as overtly spoken or written words. Miller (1988) synthesized the definition of several researchers when he stated, " Non-verbal communication has been defined as communication without words...." (p. 3). Miller also asserted " It includes overt behaviors such as facial expressions, eyes, touching and tone of voice, as well as less obvious messages such as dress, posture, and spatial distance between two or more people (120)" (p. 3). Miller indicated that non-verbal communication is learned shortly after birth, is practiced and

refined throughout a person's life (p.3) Non-verbal communication is complex, it is both behavior and communication, intentional or unintentional (Hickson & Stacks, 1993, p.5). Richmond and McCroskey (1995) defined non-verbal communication as “ The process of one person stimulating meaning in the mind of another person or persons by means of non-verbal messages.” (p. 1).

### **The Importance of Non-verbal Behavior**

The operative words in Miller's (1988) definition are overt behaviors. During the course of a day, teachers and students send and receive non-verbal behavioral cues constantly. This fact underscores the importance of the two basic reasons why teachers need to be aware of their non-verbal behaviors in the classroom : (1) to become more proficient at receiving students' messages and (2) to acquire the ability to send accurate messages (Miller, 1988, p.5).

Knapp and Hall (1992) made two important points regarding non-verbal behaviors: (1) while we are in the presence of another person, we constantly give signals about our attitudes, feelings, and personality; and (2) persons who receive these signals may become particularly adept at sensing and interpreting these signals (p.4). These points underscore the importance teachers need to attach to their knowledge and use of non-verbal behaviors in the classroom. "A person's non-verbal behavior has more bearing than his words when transmitting feelings or attitudes to others" according to Mehrabian (1971, p.44). Ninety-three percent of the emotional meaning is transmitted as followed:

7 percent is verbal expression

38 percent is vocal expression

55 percent is facial expression

Grant and Hennings (1971) indicated that as much as 82 percent of teacher messages are non-verbal, while 18 percent are verbal. Knapp and Hall (1992) estimated that in simultaneous verbal and non-verbal communication, approximately 65 percent of the meaning is created by the non-verbal messages.

Argyle (1979) indicated that “One of the key processes in social skill sequences occurs when interactor A does what B wants him to do, B is pleased and sends immediate

and spontaneous reinforcement such as a smile, gaze, or verbal approval signals which modifies A's behavior" (p.140). He indicated that A is modifying B's behavior the same way at exactly the same time. Thus, one may conclude that a teacher who exhibits non-verbal behaviors which students perceive as being strong rewards or punishments will be able to modify their behavior in a desired direction.

Richmond and McCroskey (1995) reported more than 10,000 teachers felt that non-verbal behavior was a more effective communicative tool for improving student-teacher relationships than verbal communication, in a survey they conducted. They also asserted that "Many teachers discovered that non-verbal communication helped them to be better controllers, managers, and helpers because non-verbal communication is more subtle and can be used more often." (p. 261).

Non-verbal behavior in a diverse classroom setting can be frustrating for students and teachers. Manning and Baruth (1996) indicated that "In most school settings, teachers expect the culturally diverse learner to adopt the non-verbal communication of the majority culture of the school. Such a practice forces the minority diverse student to become bicultural" (p. 334). In order to minimize student frustrations associated with non-verbal communication, Manning and Baruth suggested that teachers analyze particular non-verbal behaviors when students do not respond as teachers expect.

Students use non-verbal behaviors to signal teachers to slow down, speed up, or modify delivery of a lesson. Woolfolk and Brooks (1985) indicated that students' non-verbal behaviors impact teachers' impressions, attitudes, and reciprocal behaviors. A great deal is communicated through non-verbal behaviors such as feelings, intentions, and values. Miller (1988) stated, " Without the help of the non-verbal dialogue that goes on in the classroom, teachers would not be able to assess their teaching methods and strategies as they ordinarily do" (p. 4). Accurate analysis and use of the "non-verbal dialogue" which occurs in the classroom could have positive effective benefits in addition to underscoring the reason why teachers should become proficient in receiving students' non-verbal messages.

Miller (1988) indicated that when teachers give verbal messages that conflict with non-verbal messages, students become confused, and this confusion may affect their learning and attitudes (p.6). The confusion is the result of the brain's processing functions. There are brain researchers, according to Knapp and Hall (1992, p.7), who believe that the left hemisphere of the brain processes mainly sequentially ordered, digital, verbal or linguistic information; the right hemisphere processes mainly visual/spatial relationships, and vocal components. In short, some researchers classify non-verbal messages as those which are processed by the right side of the brain and verbal messages as those which are processed by the left side of the brain. Teachers need to be cognizant of and understand the implications of this concept.

Galloway (1979) indicated that it was not until recent that he realized the full significance that nonverbal communication had for teachers and students. The forces of power, control, influence, motivation, self-esteem, and interpersonal understanding are connected to the interactions of nonverbal exchanges in the classroom. Nonverbal expressions provide a full measure of what we mean to communicate (p. 198).

It is important that teachers be aware of the dominant role of non-verbal behavior. When verbal and non-verbal messages conflict, the non-verbal messages are believed (Galloway, 1982). Miller (1988) agreed with this finding when he stated, " If there is incongruity between the verbal and the non-verbal, the non-verbal will win hands down" (p. 5).

### **Non-verbal Behavior and Non-verbal Communication**

People behave. Inanimate objects may communicate only because people perceive or interpret them in certain ways and act accordingly. It has been stated in the literature that people cannot not behave. In light of the fact that part of the definition of non-verbal communication includes overt behaviors and phenomena such as dress and spatial distance, this researcher will use the terms non-verbal communication and non-verbal behavior interchangeably.

### **History of Non-verbal Behavior**

Ancient Greek and Roman scholars commented on what we today call non-verbal behavior (Knapp & Hall, 1992, p. 25). Non-verbal studies have never been the province of any one particular discipline. Researchers in such fields as philosophy, psychiatry, psychology, sociology, speech, linguistics, and anthropology have done work in some phase of non-verbal behavior. Knapp and Hall commented that the scientific study of non-verbal communication is primarily a post-World War II activity. Probably the beginning of the study of non-verbal communication, as we know it today, is to be found in analyses of one of the most influential pre-twentieth century works of Darwin's The Expression of the Emotions in Man and Animals in 1872 (Hickson & Stacks, 1993, Knapp & Hall). Darwin's work launched the modern study of facial expressions.

An increase in the number of non-verbal research efforts occurred in the 1950s. Knapp and Hall(1992) indicated that:

These anthropologists were responsible for taking some of the principles of linguistics and applying them to non-verbal phenomena, providing new labels for the study of body movements (kinesics) and space (proxemics), and launching a program of research in each area (p. 26).

During the decade of the 1960s, Rosenthal and Jacobson's Pygmalion in the Classroom, (1968), considered one of the most intriguing and controversial publications of educational research, supported the premise that teacher expectations manifested non-verbally could foster academic achievement (Miller, 1988, p. 6). This work demonstrated the potential impact of teachers' non-verbal subtleties on students' intellectual growth.

Some of the literature of the 1970s misrepresented findings in research in the interest of simplification and readability of material. This was a time of summarizing and synthesizing (Knapp & Hall, 1992, p. 27).

The trend of the 1980s focused on identifying the various ways non-verbal behaviors worked in order to accomplish common communicative goals. In other words,

the trend was an attempt to bring research efforts more in sync with communication as it naturally occurred.

### **Non-verbal Behaviors in the Classroom**

The classroom is a setting where a great deal of non-verbal behavior takes place (Galloway, 1979; Smith, 1979; Thompson, 1973; Woolfolk & Brooks, 1985). Acceptance and understanding of ideas and feelings by both teacher and student, encouraging and criticizing, silence and questioning are all manifested through non-verbal behaviors.

Woolfolk and Brooks (1983) indicated that teachers form impressions and expectations about students based on many sources of information, including the student's non-verbal behavior. "Teachers' attitudes and expectations affect their behavior toward students, especially their non-verbal behavior. Students "read" these messages respond, sometimes without being fully aware of the impact of the teacher's non-verbal behavior on them." (p.106).

Richmond and McCroskey (1995) believe "The primary function of teachers' non-verbal behaviors in the classroom is to improve affect or liking for the subject matter, teacher, class, and desire to learn more about the subject matter. When the teacher improves affect through effective non-verbal behavior, then the student is likely to listen more, learn more, and have a positive attitude about school." (p. 262).

Bedwell, Hunt, Touzel & Wiseman (1991); Burgoon, Buller & Woodall (1989); Hickson & Stacks (1993); Knapp and Hall, (1992); and McCroskey (1972) made us aware of seven non-verbal behaviors relevant to classroom communication which this researcher believes are utilized by effective teachers. The seven behaviors are kinesics, proxemics, haptics, oculosics, vocalics, environmental factors, and facial expressions.

A teacher's non-verbal immediacy behaviors can affect students' attitudes and feelings toward a subject area (Andersen, 1979). Immediacy behavior is simply a person's instant reaction to something, someone, or an event by evaluating it as positive or negative, good or bad, and like or dislike. Andersen (1999) indicated that immediacy behaviors are the primary way to promote positive student attitudes. (p. 212). He asserted



that “Teachers can be trained to be more immediate and, as a result, produce more positive student affect.” (p. 213).

In terms of space (proxemics) and touching (haptics) interactions between a teacher and a student, immediacy behaviors express approach or avoidance thereby communicating positive or negative feelings. Immediacy usually involves a combination of verbal and non-verbal behaviors. More eye contact, vocal expressiveness, smiling, close proximity, leaning toward a student, appropriate touching, overall body movements, and gesturing (Andersen, 1979) communicate acceptance of students and the educational experience.

Research has begun to examine the relationship between teacher and student behaviors. Woolfolk and Woolfolk (1974) indicated that students correctly perceive verbal and non-verbal communications of their teachers. Feldman and Donohoe (1978) indicated that black and white teachers were non-verbally more positive in their behavior to students of their own race.

Simpson and Erickson (1983) examined teachers' verbal and non-verbal behaviors in first grade classrooms to assess differences based on sex of the student, race of the student, and race of the teacher. The subjects were eight black and white female teachers in an urban public elementary school system. "White teachers were found to be more differential in their behavior toward male and female students than black teachers" (Simpson and Erickson, 1983, p. 193). This study indicated that on the non-verbal level, white teachers may react in a more negative or critical way toward black males. Both researchers recommend that it " would be interesting to examine the impact of teacher behavior on the black male child" (1983, p. 196). This recommendation underscores this study.

In 1974 while doing research to select three or four teachers to act as models in a film to show teachers and student teachers how nonverbal behaviors can be utilized effectively in the classroom and some techniques that could be used for becoming sensitized to their nonverbal behaviors, Wolfgang discovered that good teachers had several characteristics in common:

- They were all experienced, with at least five or six years of teaching experience,
- Were enthusiastic in teaching their lesson,
- Gestured for emphasis,
- Smiled frequently,
- Showed varied facial expressions,
- Moved toward the class,
- Spent more time in front of the class than behind the desk or at the blackboard,
- Were attentive to students' comments by keeping eye contact and head nodding,
- Showed variation and clarity in their voice, their nonverbal movements were in concert with the verbal and easily decodable, and
- They used humor in the class.

The students were responsive, attentive, and the class atmosphere was relaxed. (p.164)

Pasch, Sparks-Langer, Gardner, Starko, and Moody (1991, p.328) point out other non-verbal behaviors utilized by effective teachers. These behaviors include **observing students**. A student who perceives that the teacher is observing him or her is likely to engage in appropriate behavior. The teacher must be alert to classroom behaviors, relationships and effort. The effective teacher **listens to students**. More than any other aspect of communication, the skill of listening is the least studied and the most taken for granted. Competency in the listening process requires awareness, concentration, and practice. Various techniques may be utilized in the classroom. Bedwell et al. (1991) suggest:

1. Reading communication should be integrated in all subject matter areas in an interdisciplinary approach on a school-wide basis.
2. Students should be encouraged to feel that they have something important to say. They, like teachers, need encouragement, praise, and a forum to express their ideas. Written messages serve as positive reinforcers even if the students' work is not the highest caliber.
3. Design your classroom physical environment to encourage the enjoyment of communication. Make seating and grouping arrangements to ensure that everyone can see, hear, and participate (p. 76).

The art of listening may be one of the teacher's most important assets. Listening is essential for thinking in the classroom and for appropriate response. Listen for feelings as well as facts. The third non-verbal behavior entails using facial expressions. Teachers not only can, but should **use facial expressions** to appropriately show students impatience, concern, patience, or anger. Another behavior simply entails **using the hands**. As a management technique, hands can point out a student, draw attention, signal silence, and so forth. The authors indicate the **use of posture** as a non-verbal behavior. Standing tall during the execution of a discipline procedure may suggest command or superiority.

### **Teacher Expectancies**

Teachers sometimes display different attitudes, feelings, and expectations toward individuals and groups of students. Despite efforts to be unbiased, fair, and just, teachers may acquire preconceived opinions about certain students from colleagues or hearsay. An ideal expectation is for teachers to provide differential, yet equitable and fair, treatment to all students. Babad (1992) pointed out that "the crux of the teacher expectancy problem lies in the affective domain, and that is why the psychology of non-verbal communication is so relevant to teacher expectancy research" (p. 170). Babad also asserted that:

The issue of individual differences among teachers has remained a relatively neglected aspect of teacher research. Not enough research has been carried out to identify attributes and characteristics of teachers who are more likely to have expectancy effects in their classrooms (p. 172).

Teacher expectations are linked to teacher behaviors, which may affect students' performance. Miller (1988) indicated that without words teachers communicate how they feel about students, what they expect of them as well as other things they never verbally admit. Students know when something bothers their teachers, and whom their teachers like or dislike.

### **Expectations for African-American Males Are Low**

Preparing teachers to work effectively across boundaries drawn by cultural, racial/ethnic, and class differences continues to be a problem (Murrell, 1995). As most students in public schools are increasingly children of color in urban settings, the stakes

are high with regard to finding ways of providing these students with teachers who can promote their learning, development, and intellectual growth.

In January 1990 the Milwaukee School Board impaneled a task force to study district programs to determine how they were serving African-American males. The task force found that statistics describing the educational experiences of African-Americans in Milwaukee mirrored those of other urban centers. Approximately 70% of public school students in Milwaukee are minority. Although the African-American males constituted 28% of the total enrollment during the 1989-90 school year, 50% of the students suspended were African-American males. The task force found that equally disturbing figures described the educational experiences of African-American females (Leake & Leake, 1992, p. 784).

Garibaldi (1992) reported that during the 1986-87 academic year where 87 percent of the 86,000 students in the New Orleans public school system, African-American males accounted for 58 percent of the nonpromotions, 65 percent of the suspensions, 80 percent of the expulsions, and 45 percent of the dropouts, while accounting for only 43 percent of the school population. Black males in grades four to eleven constituted more than 50 percent of the total number of students retained at each grade level (p.5).

Some participants in Hopkins' (1997) study characterized the attitudes of some teachers toward Black males as "poor and negative." They saw this as a continuing reality. His study participants identified three specific "teacher attitude problems": (1) low expectations for Black males, (2) fear of Black males, and (3) apathy toward Black males (Hopkins, p. 96).

Teachers who expect that African-American male students cannot achieve academically will model inappropriate behaviors to support this erroneous assumption asserts Reglin (1994, p.3). Reglin (1994) prescribed four effective strategies that, when used with African-American male students, support high and realistic expectations: (1) the use of activity-oriented learning with real problems; (2) the development of higher-level thinking skills to deal with problems and conditions in their lives; (3)

acceptance of the students as they are, giving them the necessary experiences to help them become autonomous; and (4) elimination of the debilitating system of competition in the classroom and replacement of the system with one that is essentially cooperative in nature ( p.3).

### **One Proposal: Single-sex Education**

A variety of projects have been attempted in different parts of the United States in response to the grim statistics surrounding African-American male students. The one project which was controversial was the single sex/race schools for African-American males. Detroit, Baltimore, Milwaukee, and Dade County (Florida), all areas with large African-American populations, have attempted or established African-American male-only schools.

In 1987, the Dade County Public Schools instituted a program called "At-Risk All- Male Classes" in one inner-city elementary school. The major objectives were academics, using instructional strategies that were felt to be more relevant to the way boys learned. In addition, cooperative learning and socialization were emphasized. The results of the pilot year program were gratifying and indicated continuation of the program. The overall esprit de corps improved significantly and gave the students a sense of pride and a feeling of being special. The overall grades of the controlled group were significantly improved over male students in co-ed classes at the same grade levels. The program was a tremendous success.

A formal proposal was submitted to the Department of Education's Office of Civil Rights detailing the experimental and control groups of the Dade County program. The proposal was submitted because it was felt that the program might be running contrary to the spirit of Title IX of the Federal Civil Rights Act. The Office of Civil Rights decided that the proposal could not be accepted, and three months into the second school year the program was disbanded.

In the summer of 1990, the Detroit Board of Education accepted a proposal by Clifford Watson for the creation of three male academies (Watson & Smitherman, 1994). The underlying rationale was that a unique school program was necessary to address the

unique needs of urban males. The academies were premised on an Afrocentric perspective that infused African-American culture, experience, and contributions into all subject areas. Foreign language, science, computer, vocational technology, rites of passage, and instruction in civic and community responsibility completed the core curriculum. Careful attention was given to the academies so as to avoid biasing them toward any single class group. The admission policy provided for an even distribution of high, medium, and low-risk male students. The proposal design reflected the pioneering nature of this educational intervention and called for a demonstration program where educators could experiment with instructional strategies, curricula, and programs to impact at-risk students throughout the Detroit system.

Four days prior to the opening of the three academies, the American Civil Liberties Union and the National Organization for Women Legal Defense and Education Fund filed suit on behalf of three African-American female students alleging that the establishment of all-male academies constituted discrimination based on sex and requested a preliminary injunction. Federal Judge George Woods granted the injunction and ordered the school board to work out a compromise.

In their recommendation for a future direction for single-sex education for girls, Campbell and Wahl (1997) posed research questions which this researcher believes parallel the motives surrounding the African-American male only schools when they asked:

1. What is the rationale behind the establishment of the single-sex classroom in this country?
2. Is the single-sex classroom being established because of a belief that girls need more support and help (remediation) to achieve the same outcomes as boys?
3. Is it to provide experience, skills, and confidence (compensation) that have been denied girls because of inequitable opportunities and low expectations in ways that might be different from what boys receive in class? (p. 68)

On November 12, 1997, the American Association of University Women Educational Foundation held a one day roundtable forum with 16 prominent educational researchers. The purpose of the forum was to examine collected research on single-sex education in grades k-12 generated over the past twenty years. A consensus was reached on certain issues which had implications for girls and boys.

1. There is no evidence that single-sex education in general "works" or is "better" than coeducation.
2. Single-sex education programs produce positive results for some students in some settings.
3. The long-term impact of single-sex education on girls or boys is unknown (American Association of University Women, 1998, p. 2).

### **The Effective Teacher**

An effective teacher is successful at planning, communicating, performing, instructing, managing behavior, and evaluating. These are some of the behaviors effective teachers are expected to exhibit to further the academic achievement of students in the classroom. One may find at the core of effective teacher behaviors such qualities as nurturance, empathy, initiative, personal warmth, and child centeredness (Bedwell et al., 1991). In chapter four of his book, which deals with the teacher as an effective performer, Bedwell et al., generated a list of characteristics common to effective instruction. While not inclusive, it is a list that most would agree should be in a description of a model lesson. Thus the lesson should:

1. **Be appropriate to the developmental level of the students.** Some teachers assume that all students at a given grade level are developmentally equal. Students at a given chronological age will usually vary in their physical, emotional, social, and intellectual development. This information should be used as a beginning point for the analysis of individual student needs.
2. **Address the stated objectives in the lesson.** Instruction should be purposefully designed to help students reach the stated objectives. Before any

instruction takes place, the way the lesson will benefit the students as they strive to learn should be ascertained.

3. **Have a motivational aspect that will stimulate students' desires to attend to the lesson.** This is an essential of quality instruction. A rationale helps assist students in identifying the importance of the content. During the rationale or introduction, effective teachers often plan what is referred to as attention grabbers which may:
  - a. use carefully planned introductory questions
  - b. use role playing by the teacher
  - c. pose an unpopular argument or point of view
  - d. present a puzzling problem for solution

Teachers may motivate students by modeling enthusiasm. Truly effective teachers, through their enthusiasm, project the notion that they enjoy their work.

4. **Be organized around a variety of grouping structures within the classroom in order to accommodate the learners' styles, rates, and abilities.** To be an effective teacher, one must develop the ability to teach whole groups, small groups, and individuals in a given instructional episode in order to address the learning needs of students.
5. **Have opportunities for all learners to become actively involved in the learning activities.** At the very least, students should be given the opportunity to engage in some speaking or writing activities during every lesson. This will provide the teacher with valuable information about the students' level of understanding. Active involvement in classroom instruction frequently serves to address the affective domain of the classroom environment.
6. **Allow students to function at least at the application level of learning.** Frequently students are simply required to answer questions which demand rote memory. It is necessary that students be given the opportunity to



demonstrate, not only to the teacher, but to themselves, an ability to put their learning to some practical use.

7. **Provide the teacher an opportunity to determine if all students are learning from instructional activities.** One of the most serious mistakes a teacher can make is to assume that learning has taken place simply because instruction was conducted. Good teachers are routinely actively involved in strategies designed to monitor and reinforce student progress. To be effective, a teacher must have the ability to determine when learning is taking place.
8. **Be designed so as to allow students feedback concerning their level of competency.** Providing quality feedback is a very complex and difficult task to master. It may very well be that one of the most powerful determiners of effective teaching is the proper use of informational feedback (p.100).

Kauchak and Eggen ( p.60) identified seven teacher behaviors related to student achievement. These behaviors somewhat parallel those of Bedwell et al. (1991) in description though not necessarily by name. Effective teacher behaviors according to Kauchak and Eggen include:

1. effective use of time
2. clear verbal communications
3. focus on the anticipatory set
4. good organization
5. pacing of the lesson
6. practice and feedback
7. review and closure of objectives (p. 60)

Smith (1996) conducted a study at the elementary level. She observed twelve effective teaching behaviors used by teachers of at-risk students. A more effective teacher:

1. Maintains smooth transition.
2. Manages disruptive behavior.
3. Exhibits control and calmness.

4. Begins class promptly.
5. Involves students quickly by focusing on the lesson.
6. Provides high time on task.
7. Demonstrates established routines and procedures.
8. Prepares equipment and materials for use.
9. Paces the lesson.
10. Provides for varied learning styles.
11. Uses a variety of learning strategies and models.
12. Incorporates a variety of learning modalities. (p. 98)

It is felt that control skills are among the most important abilities an effective teacher may possess, for classroom management not only implies the ability to deal with problems when they arise but the ability to organize the classroom environment in such a way as to prevent the occurrence of deviant behavior. The ability to avoid behavioral problems is one of the most important competencies an effective or any teacher may possess. Most deviant behavior emerges when students are not on task. Effective teachers plan for the entire period, thus time is not wasted.

Students are less likely to exhibit misconduct when they know what to do, what is expected of them, and therefore can function almost by habit. Good managers tend to structure the classroom environment so as to lessen the chance for confusion. It is precisely through establishment and development of routines that effective teachers manage attempts to structure daily activities in such a way as to promote a calming effect on students.

Effective teachers tend to exhibit leadership characterized by calm, confident behavior. Teachers who seem out-of-control appear weak and insecure to students. Students have a greater respect for teachers who seem calm and confident than those who have emotions which are easily manipulated.

In an effort to answer the research question: What non-verbal behaviors are used by effective teachers of at-risk African-American male middle school students?, several areas of inquiry were pursued. This researcher reviewed definitions of non-verbal

communication by researchers and scholars in the field, the history and importance of non-verbal behaviors, non-verbal behaviors in the classroom, teacher expectancies, expectations for African-American males, single-sex education, and the effective teacher.

This researcher agrees with Miller (1988) who indicated that “non-verbal behaviors are learned shortly after birth and are practiced and refined throughout a person’s life” (p.3). He also asserted that “teachers need to be aware of non-verbal behaviors in the classroom: (1) to become more proficient at receiving students’ messages and (2) to acquire the ability to send accurate messages” (p.5).

## **CHAPTER 3**

### **METHODOLOGY**

The purpose of this study was to identify non-verbal behaviors of effective teachers of at-risk African-American male middle school students. This chapter contains a description of the procedures and methods that were used in this study. Included is a description of the selected pilot and field study middle schools, selection of the subjects, data collection, the instrument, and the analysis of data.

#### **Pilot Study**

The explicit objective of the pilot study was to authenticate the researcher as an observer before commencing the field study. Selection of the pilot school was made in collaboration with the Supervisor of Research and Program Evaluation for the school division. The researcher asked the Supervisor of Research and Program Evaluation to recommend a middle school which had a 50/50 racial balance among the student population. In addition the supervisor was asked to consider if a high percentage of students were in the free or reduced-price meal program. Thus the selection of the pilot school was made on the basis of this criteria.

This Hampton Roads, Virginia, urban middle school, located in the middle of a mid-sized city, was constructed in 1990 and encompasses grades 6-8. It has the largest student enrollment of the seven middle schools in the division. Total enrollment during the 1997-98 school year was 1395 that included 683 (49%) Black students, 640 (46%) White students, 31 (2%) Asian students, and 32 (2%) Hispanic students. Five hundred forty-seven (39%) of the student population are in the free or reduced-price meal program.

The pilot school has seven elementary feeder schools located around the central area of the city. As one of two of the division's architectural showcase middle schools, this pilot school was designed to accommodate a program capacity of 1200 students. Four portable classrooms have been added to accommodate the large enrollment that includes 15 special education classes. The professional personnel are a principal, two assistant principals, three instructional support administrators, seventy-eight teachers,

four guidance counselors, two librarians, thirteen teacher assistants, seven clerical/secretarial staff, and ten other professional staff members.

Prior to initiating the pilot study, this researcher submitted an application to conduct research. Written approval was granted by the school division's Research Authorization and Review Committee and the building principal.

### **Meeting with the Staff Development Specialist**

In 1989 Mrs. Jane Smith was hired as a staff development specialist. The major function of that position was to teach a course, Program for Effective Teaching. The course, based on Madeline Hunter's Direct Instruction Model, was taught to teachers in the division. The course included six days of instruction on pedagogy and five classroom observations and conferences with teachers implementing the information learned.

In 1991 Mrs. Smith and Dr. Peggy Johnson, staff development specialists, created Program for Effective Teaching (P.E.T). in a Box, a tool to assist administrators with observing and conferencing with teachers. This tool was developed in response to administrators' concerns about their ability to discuss instructional issues with teachers. P.E.T. in a Box included an outline of lesson components, questions to guide the discussion of teaching, and suggestions for documenting commendations and recommendations.

She developed and taught a course for division administrators on instructional supervision. This six-week course covered the pedagogy of instructional strategies (direct instruction, cooperative learning, etc.) as well as practical skills involved in observing and conferencing with teachers.

In 1993 Mrs. Smith developed and taught a course entitled "Tools for Teachers," which incorporated elements from the Program for Effective Teaching, creative innovations, and current pedagogy. This course also included strands of brain research and learning styles. Mrs. Smith was instrumental in forming the Staff Development Council for teachers. The council determines the instructional needs of teachers and searches for effective practices to meet the identified needs.

Mrs. Smith has an Educational Specialist Degree (Ed. S.) in Elementary and Secondary Administration from George Washington University. As a staff development coordinator, Mrs. Smith has conducted hundreds of classroom observations with the expressed purpose of identifying effective teaching techniques. In addition, she has trained and assisted building administrators in the development of observation and feedback skills. Mrs. Smith is qualified as an expert in instructional strategies.

### **Pilot Study Procedures**

The building principal of the pilot school identified five effective teachers of at-risk African-American male middle school students using criteria provided by the researcher ( see Appendix B). The purpose of the pilot observations was to determine a 75% or greater interrater reliability between the instructional specialist and the researcher using the non-verbal behaviors found in Table 1. The researcher informed the five volunteer subjects about the nature of this study and the importance of their participation. Arrangements were made for the day and time of the observation with each. Three requests were asked of each subject prior to the observation:

1. Engage in active teaching.
2. Provide a seating chart of students.
3. Identify all at-risk students on a seating chart.

For each pilot study observation, the researcher and specialist used the instrument in Table 1 (Non-verbal Teacher Behavior Observation Form) to independently record the frequency of observed non-verbal interactions directed toward a selected at-risk African-American male student. Before each observation, the researcher and specialist collectively selected one student to observe from the seating chart provided by each teacher. The pilot study took place during April 1999.

On March 12, 1999, prior to the pilot study, the researcher met with Mrs. Smith. During the meeting she was informed about the nature and purpose of this study. She was also informed that her assistance was sought because of this researcher's first-hand knowledge of her expertise and effective experience with teachers and building administrators within this Hampton Roads School District. The researcher discussed

Table 1

**Non-verbal Teacher Behavior Observation Form**

Key: Positive behavior = +  
 Negative behavior = -  
 Neutral behavior = o  
 Data will be recorded every three seconds

Teacher: \_\_\_\_\_  
 Student: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Observation: # \_\_\_\_\_

**Non-verbal Behaviors**

**Timeline**

**Notes**

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	
Nods head																						_____
Shakes head																						_____
Gestures to student																						_____
Close proximity to student																						_____
Invades student's territory																						_____
Touches student																						_____
Makes eye contact																						_____
Stares at student																						_____
Uses voice inflection																						_____
Pauses in speech pattern																						_____
Displays student's work																						_____
Smiles at student																						_____
Frowns at student																						_____

Mrs. Smith's role in authenticating the researcher as an observer. She was given pertinent material which included the instrument, Table 1 (Non-verbal Teacher Behavior Observation Form), Table 2 (Teacher Non-verbal Behavior Scorecard), Appendix C (Researchers' Findings on Effective Non-verbal Teacher Behaviors), Appendix A (Seven Domains of Non-verbal Behaviors), and Appendix B (Identification Criteria for Effective Teachers of At-Risk African-American Male Middle School Students). The use and design of this instrument was explained. The purpose of the instrument was to record the frequency of non-verbal interactions between an effective teacher and an identified at-risk African-American male student during a normal thirty-minute classroom observation. Data were collected every three seconds and recorded as positive, negative, or neutral. After the observations of the five volunteer effective teachers, the researcher and specialist analyzed the results to determine if there was 75% or greater interrater reliability with each observation.

Because the researcher would be the observer in the field study, as such, the observer would function as an instrument. Therefore it was necessary that the researcher be validated. Ary, Jacobs, and Razavieh (1990, p.282) indicated that an interrater reliability is an index of the extent to which different observers give similar ratings to the same behavior. The observers' ratings are then correlated to determine the extent of agreement. A correlation coefficient agreement of .75 or greater of the 39 non-verbal behaviors would authenticate the researcher as an observer. If the agreement falls below .75 the researcher and specialist will continue the process until .75 agreement is obtained.

Mrs. Smith and I met on April 23, 1999, to finalize the procedures for the interrater reliability pilot study observations. Based on trial usage of the instrument at his middle school, the researcher decided to enlarge and print the instrument on 11x14 paper for ease of recording data every three seconds. Mrs. Smith indicated that the use and focus of a stop watch every three seconds could possibly impede the collection of data with this type of intense, fast-moving, decision-making process. The instrument's one page format included a twenty-column design that represented one minute. Because of this fact, the researcher suggested and the specialist agreed that we could check our



Table 2

**Teacher Non-verbal Behavior Scorecard**

**Kinesics**

- 1. Teacher nods head
- 2. Teacher shakes head
- 3. Teacher gestures to student

**Proxemics**

- 4. Teacher is in close proximity
- 5. Teacher "invades" student's territory

**Haptics**

- 6. Teacher touches student

**Oculesics**

- 7. Teacher establishes eye contact
- 8. Teacher stares at student

**Vocalics**

- 9. Teacher changes voice inflection
- 10. Teacher uses pause in speech pattern

**Environmental factor**

- 11. Teacher displays student's work

**Facial expressions**

- 12. Teacher smiles at student
- 13. Teacher frowns at student

Teacher _____		Observation # _____			
	Positive	Negative	Neutral		
Sub total					
Sub total					
Sub total					
Sub total					
Sub total					
Sub total					
Sub total					
Sub total					
<b>Total</b>					

stopwatches several times during a one-minute cycle thus ensuring the three seconds on an average. This procedure later proved quite satisfactory once we got a “rhythm” for the timing by way of prior individual practice.

### **Pilot Study Subjects**

The five subjects for the pilot study were volunteer effective teachers of at-risk African-American male middle school students each identified by the building principal using criteria provided. The researcher contacted each subject and arranged the day and time of the scheduled observation. Each pilot subject signed the Virginia Polytechnic Institute and State University Informed Consent Form for Pilot Study which was reviewed and approved by the Institutional Review Board for Research Involving Human Subjects.

Subject 1 was a 29-year-old white female with 6 years of experience. She was a science teacher who had 3 years at the middle school level and 3 years at the high school level.

Subject 2 was a 31-year-old African-American male math teacher with 7 years of experience. All of his experience was at the middle school level.

Subject 3 was a 55-year-old white female teacher. She was an Integrated Language Arts teacher with 30 years of experience. Fifteen years at both the middle and high school levels.

Subject 4 was a 43-year-old African-American female math teacher who had 15 years of experience. Thirteen years at the middle school level and two at the high school level.

Subject 5 was a 41-year-old African-American female math teacher with 13 years of experience. All thirteen years were at the middle school level.

### **Instrumentation and Data Collection Procedures**

#### **Development of the Non-verbal Teacher Behavior Observation Form**

Development of the Non-verbal Teacher Behavior Observation Form was patterned after Beecher's Scale for Rating Effective Teacher Behavior (Borich & Madden, 1977, p.165). The Non-verbal Teacher Behavior Observation Form (Table 1),

developed to record teacher interactions with at-risk African-American middle school male students, consists of thirteen non-verbal behaviors which cover seven domains. Development of this instrument began with a review of the literature that produced seven domains:

Kinesics, Proxemics, Haptics, Oculistics, Vocalics, Environmental factors, and Facial expressions. Under these domains were classified the specific non-verbal teacher behaviors which researchers indicated would most likely provoke or stimulate a reaction from students.

During the early stages of development of the Non-verbal Teacher Behavior Observation Form it was conceptualized that an observed non-verbal teacher behavior would be coded as E-encourage, A-acceptive, S-supportive, R-restrictive, or N-non-supportive. Data would be collected every three seconds. The researcher would clarify his coding with anecdotal comments on the rating sheets as needed.

The researcher initiated trial usage of the instrument in his middle school by conducting seven thirty-minute classroom observations of seven effective teachers of at-risk African-American male students. These experiences highlighted the difficulty associated with determining which domain to place the behavior. Clearer distinctions between coding the categories were needed in order to make the required decisions within three seconds. The researcher made many anecdotal comments for clarification purposes. These written comments increased the three-second interval. As a result of these trial experiences, the previous five coding categories were deleted and the researcher recorded the effective teacher's non-verbal behaviors as (+) positive, (-) negative, and (o) neutral.

### **Validity**

This instrument (Table 1) was developed from research data on teacher non-verbal behaviors. The observable non-verbal criteria were taken from data from Bedwell et al. (1991), Burgoon et al. (1989), Hickson & Stacks (1993), Knapp (1972), Knapp & Hall (1992), McCroskey (1972), Miller (1988), Smith (1979), and Thompson (1973). A doctoral cohort of school administrators in the greater Hampton Roads, Virginia, area

examined an early draft of the instrument. That draft contained seven domains and twenty-three non-verbal behaviors. As a result of their valuable feedback regarding content validity, the instrument was reduced to seventeen non-verbal behaviors. As a result of seven trials, the instrument was further reduced to its present form which consists of seven domains and thirteen non-verbal behaviors. The Non-verbal Teacher Behavior Observation Form was the result of several pilot practices, careful scrutiny, and refinement.

### **Interrater Reliability**

Interrater reliability was tested between this researcher and the staff development specialist. Following each of the five pilot school observations, the researcher and specialist transferred their individual results from Table 1 ( The Non-verbal Teacher Behavior Observation Form) to Table 2 (The Non-verbal Behavior Scorecard). The researcher's results were then compared to those of the specialist to determine if an interrater reliability coefficient of .75 or greater was obtained.

### **Data Collection Procedures**

The pilot study was conducted in April 1999 during which time the researcher and the specialist simultaneously observed and independently recorded non-verbal behaviors (Table 1) for each of the five participants during a thirty-minute classroom observation following the agreed upon procedure described earlier.

### **Results of the Pilot Study**

The specialist and the researcher simultaneously observed five volunteer effective teachers of at-risk African-American male middle school students in an effort to authenticate the researcher as an observer. It was established that an interrater reliability coefficient of .75 or greater was to be obtained using the thirty-nine non-verbal behaviors as criteria between the specialist and the researcher on three of the five observations.

After each observation the researcher and specialist obtained a total frequency for each of the observed behaviors in each category (Table 1) and transferred those totals to the scorecard (Table 2). The researcher's data were compared to the specialist's (the benchmark) by way of (1) observed behaviors, (2) selection of category, and (3) total

frequency. Using the researcher's data as the numerator and the specialist's data as the denominator, percentages for each category were obtained. Seventy-five percent or better agreement with the specialist's totals per classroom observation were obtained three of the five observations conducted. There was 89% agreement between the specialist and the researcher on the first observation, 85% on the second observation, 50% on the third, 62% on the fourth, and 80% on the fifth observation. Three of the five interrater reliability coefficients were greater than .75. These results indicated that the researcher accurately observed and recorded those non-verbal behaviors which effective teachers directed toward selected at-risk African-American male students in their classes thus indicating that the field study data should be collected with a reasonable degree of accuracy. This validated the researcher as an observer.

### **Field Study**

#### **Selection of the Subjects for the Field Study**

The volunteer subjects in this study were six teachers of at-risk African-American middle school male students each identified by the building principal as effective using criteria (see Appendix B) provided by the researcher. The volunteer subjects included two male and four female teachers. One white male, one black male, and four black females.

The researcher sent each subject a cover letter which included an introduction, the nature and purpose of this study, and the fact that each had been identified as an effective teacher by their building principal. Each was extended an invitation to participate and informed of the three requests the researcher would ask of them if they answered in the affirmative. The researcher called each subject, answered any and all questions posed, and arranged an observation schedule. All six subjects agreed to voluntarily participate.

Each of the six subjects signed the Virginia Polytechnic Institute and State University Informed Consent for Field Study Teacher Form which was reviewed and approved by the Institutional Review Board for Research Involving Human Subjects. The names of the subjects, the field study school as well as the division remained anonymous per the stipulation of the School Division's Research Authorization Review Committee.

Each subject was assigned a number.

Subject 1 was a 41-year-old white male teacher with 20 years of experience. He is an Art teacher who has 6 years of experience at the elementary level, 13 years at the middle level, and 12 years at the senior high level.

Subject 2 was a 43-year-old black female teacher with 3 years of experience. She does not have elementary or senior high level experience. She has taught Social Studies at the middle school level for 3 years.

Subject 3 was a 28-year-old black female teacher with 7 years of experience. She teaches Integrated Language Arts (English & Reading). She does not have elementary or senior high level experience. All 7 years have been at the middle school level.

Subject 4 was a 44-year-old black female teacher with 23 years of experience. She is a Science teacher with 5 years experience at the elementary level, 18 years at the middle school level, and no experience at the senior high school level.

Subject 5 was a 46-year-old black male teacher with 25 years of experience. He is an Integrated Language Arts teacher with 10 years experience at the elementary level, 15 years at the middle school level, and one year at the senior high level.

Subject 6 was a 29-year-old black female teacher with seven years of experience. She was an Integrated Language Arts teacher. She does not have elementary or senior high level school experience. All seven years of her teaching experience was at the middle school level.

### **Field Study School**

The field study school was a large urban middle school that has a substantial minority student population. The school was constructed in 1936 and underwent a major renovation in 1989. The building has 77 classrooms and a program capacity of 1400. Of the 939 students enrolled during the 1997-98 school year, 833 (89%) were Black, 92 (10%) White, 4 (1%) American Indian, 9 (1%) Hispanic, and 1 (1%) Asian. Eighty-two percent (774) of the student population qualified for free or reduced-price meals, which is one of the school division's at-risk criteria. This also is indicative of the fact that more than 75 percent of the students' families are in the lower socioeconomic status. The

percentages of students with grades of C or lower in the core areas were 73% of 866 in English, 75% of 805 in math, 69% of 773 in science and 73% of 779 in social studies.

The staff of the field study school consists of 10 administrators, 66 teachers, 3 guidance counselors, 2 librarians, 5 other professional staff, 17 teacher assistants, and 7 clerical/secretarial staff.

### **Data Collection for the Field Study**

Data collection for the field study followed the same procedure outlined in the pilot study. The building principal identified six effective teachers for the field study using the criteria provided as originally planned. The researcher contacted each teacher and each agreed to participate in the study. Because of personal illness of two of the subjects, one teacher was observed only once, as was an alternate effective teacher. Therefore four of the six effective teachers were observed three times for thirty minutes each during the last three weeks of May and the first week of June 1999 and two were observed once. The researcher selected a different at-risk student each observation resulting in a total of fourteen teacher observations and their non-verbal interactions with 14 at-risk male middle school students using the 39 non-verbal behaviors in Table 1.

The researcher used the Non-verbal Teacher Behavior Observation Form (Table 1) to collect data during each thirty-minute classroom observation. The frequency data were compiled and transferred to a Teacher Non-verbal Behavior Score Card (Table 2) for each subject's observation. These data were entered into an SPSS data matrix for computation and analysis using SPSS software.

### **Data Analysis Procedure**

The researcher analyzed and compared the mean, standard deviation, sum, minimum, and maximum data created from the raw data using SPSS to answer all research questions posed in this study.

## **CHAPTER 4**

### **RESULTS**

The focus of this study was on identifying non-verbal behaviors of effective teachers of at-risk African-American male middle school students. Data were collected via thirty-minute classroom observations of selected effective teachers' interactions with at-risk male students. Teachers 1, 2, 3, and 4 were observed three times each. Teachers 5 and 6 were observed once each during the observation window due to illness. This resulted in a total of 14 observations.

The non-verbal interactions initiated by the six effective teachers were recorded as positive, negative, or neutral. An interaction was positive if the teacher's perceived non-verbal behavior resulted in a positive interaction with the targeted at-risk student. An interaction was negative if the teacher's perceived non-verbal behavior resulted in a negative interaction with the targeted student. Likewise, an interaction was neutral if the perceived non-verbal behavior of the effective teacher resulted in a neutral interaction with the targeted at-risk male student.

As previously stated, the focus of this study was on identifying non-verbal behaviors of effective teachers of at-risk African-American male middle school students. Primary emphasis was placed on those behaviors most frequently used. Throughout the identification process, this researcher used a mean of 10 as a cut-off score to determine the most frequently used behaviors. A mean of 10 represented 71% of the 14 observations. Non-verbal behaviors with a mean of ten or greater were considered most frequently used while non-verbal behaviors with a mean below ten were considered least frequently used. It was also important to identify non-verbal behaviors not used by effective teachers as well. Analysis of the data for the never used and least frequently used non-verbal behaviors were limited to Tables 3 – 5.

Tables 3 - 13 show total and disaggregated observed frequencies recorded for each of the thirteen non-verbal behaviors. Each behavior was classified as positive, negative, or neutral; therefore, there were 39 possible behaviors. The tables and supporting analyses demonstrate how this researcher answered the research questions.



### **Most Frequently Used Non-verbal Behaviors: All Teachers**

Analysis of Table 3 indicates that six of 39 non-verbal behaviors were most frequently used by the six effective teachers during the 14 observations. These non-verbal behaviors in descending rank order are:

Teacher was in close proximity (neutral).

Teacher changed voice inflection (positive).

Teacher established eye contact (neutral).

Teacher established eye contact (positive).

Teacher invaded student's territory (positive).

Teacher gestured to student (positive).

Examination of the total frequencies of the three categories of non-verbal behaviors indicates that there were 1600 positive interactions, 1316 neutral interactions, and 264 negative interactions. Thus, these effective teachers of at-risk African-American male middle school students were 6.06 times more likely to be positive when interacting with these students than negative. In addition, these teachers were 4.98 times more likely to have neutral interactions with at-risk African-American male middle school students than negative interactions. When they did interact negatively, they most frequently changed the inflection in their voices.

### **Non-verbal Behaviors That Were Never Used: All Teachers**

Analysis of the data in Table 3 indicates that there were 9 of 39 non-verbal behaviors that were never used by the six effective teachers. These were:

Teacher frowned at student (positive).<sup>1</sup>

Teacher nodded head (negative).

Teacher displayed student's work (negative).

Teacher smiled at student (negative).

Teacher shook head (neutral).

Teacher stared at student (neutral).

Teacher used pause in speech pattern (neutral).

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<sup>1</sup> Some behaviors appear to be illogical because they were categorized as positive, negative, or neutral.

Table 3

**Field Study: Frequency of Non-verbal Behaviors Used by Effective Teachers of At-Risk African-American Male Middle School Students, N = 6**

<b>Non-verbal behaviors</b>		<b>Effective teachers</b>					
<b>Positive category</b>	<b>Rank</b>	<b>N<sup>a</sup></b>	<b>Sum</b>	<b>M<sup>b</sup></b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
1. Nods head.	13	14	41	2.93	5.86	0	22
2. Shakes head.	26.5	14	2	0.14	0.36	0	1
3. Gestures to student.	6	14	177	12.64	15.06	0	53
4. Close proximity to student.	9	14	110	7.86	13.46	0	52
5. Invades student's territory.	5	14	328	23.43	22.96	0	89
6. Touches student.	16	14	29	2.07	2.84	0	10
7. Makes eye contact.	4	14	389	27.79	20.85	11	87
8. Stares at student.	20	14	13	0.93	1.94	0	6
9. Changes voice inflection.	2.5	14	391	27.93	28.28	5	98
10. Pause in speech pattern.	29.5	14	1	0.01	0.27	0	1
11. Displays student's work.	29.5	14	1	0.01	0.27	0	1
12. Smiles at student.	8	14	118	8.43	15.02	0	57
13. Frowns at student.	31.5	14	0	0.00	0.00	0	0
<b>Total positive</b>		<b>14</b>	<b>1600</b>	<b>114.17</b>	<b>127.17</b>	<b>16</b>	<b>477</b>
<b>Negative category</b>							
1. Nods head.	31.5	14	0	0.00	0.00	0	0
2. Shakes head.	21	14	11	0.79	2.01	0	6
3. Gestures to student.	17	14	26	1.86	3.18	0	11
4. Close proximity to student.	26.5	14	2	0.14	0.53	0	2
5. Invades student's territory.	23	14	9	0.64	2.41	0	9
6. Touches student.	26.5	14	2	0.14	0.53	0	2

(table continues)

Table 3 (continued)

	<b>Rank</b>	<b>N<sup>a</sup></b>	<b>Sum</b>	<b>M<sup>b</sup></b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
7. Makes eye contact.	<b>12</b>	14	43	3.07	5.54	0	15
8. Stares at student.	<b>14.5</b>	14	34	2.43	6.32	0	23
9. Changes voice inflection.	<b>10</b>	14	86	6.14	10.28	0	37
10. Pause in speech pattern.	<b>18</b>	14	17	1.21	4.54	0	17
11. Displays student's work.	<b>31.5</b>	14	0	0.00	0.00	0	0
12. Smiles at student.	<b>31.5</b>	14	0	0.00	0.00	0	0
13. Frowns at student.	<b>14.5</b>	14	34	2.43	7.31	0	27
<b>Total negative</b>		<b>14</b>	<b>264</b>	<b>18.85</b>	<b>42.65</b>	<b>0</b>	<b>149</b>
<b>Neutral category</b>							
1. Nods head.	<b>24.5</b>	14	7	0.50	1.40	0	5
2. Shakes head.	<b>31.5</b>	14	0	0.00	0.00	0	0
3. Gestures to student.	<b>7</b>	14	126	9.00	12.88	0	41
4. Close proximity to student.	<b>1</b>	14	681	48.64	47.69	7	181
5. Invades student's territory.	<b>11</b>	14	79	5.64	6.52	0	16
6. Touches student.	<b>22</b>	14	10	0.71	2.67	0	10
7. Makes eye contact.	<b>2.5</b>	14	391	27.93	19.45	1	60
8. Stares at student.	<b>31.5</b>	14	0	0.00	0.00	0	0
9. Uses voice inflection.	<b>24.5</b>	14	7	0.50	1.61	0	6
10. Pause in speech pattern.	<b>31.5</b>	14	0	0.00	0.00	0	0
11. Displays student's work.	<b>31.5</b>	14	0	0.00	0.00	0	0
12. Smiles at student.	<b>19</b>	14	15	1.07	4.01	0	15
13. Frowns at student.	<b>31.5</b>	14	0	0.00	0.00	0	0
<b>Total neutral</b>		<b>14</b>	<b>1316</b>	<b>93.99</b>	<b>96.23</b>	<b>8</b>	<b>334</b>
N <sup>a</sup> = the number of observations; M <sup>b</sup> = the average number of behaviors per observation.							

Teacher displayed student's work (neutral).

Teacher frowned at student (neutral).

These non-verbal behaviors may not have been observed because they may not be a part of the teachers' usual way of interacting with at-risk African-American male students.

### **Least Frequently Used Non-verbal Behaviors: All Teachers**

Analysis of the data in Table 3 indicates that there were 24 of 39 non-verbal behaviors least frequently used by the six effective teachers. These were:

- 1.5 -Teacher used pause in speech pattern (positive).
- 1.5 -Teacher displayed student's work (positive).
- 3.5 -Teacher shook head (positive).
- 3.5 -Teacher was in close proximity (negative).
- 3.5 -Teacher touched student (negative).
- 6.5 -Teacher nodded head (neutral).
- 6.5 -Teacher used voice inflection (neutral).
- 8 -Teacher invaded student's territory (negative).
- 9 -Teacher touched student (neutral).
- 10 -Teacher shook head (negative).
- 11 -Teacher stared at student (positive).
- 12 -Teacher smiled at student (neutral).
- 13 -Teacher used pause in speech pattern (negative).
- 14 -Teacher gestured to student (negative).
- 15 -Teacher touched student (positive).
- 16.5 -Teacher stared at student (negative).
- 16.5 -Teacher frowned at student (negative).
- 18 -Teacher nodded head (positive).
- 19 -Teacher established eye contact (negative).
- 20 -Teacher invaded student's territory (neutral).
- 21 -Teacher changed voice inflection (negative).

- 22 –Teacher was in close proximity (positive).
- 23 –Teacher smiled at student (positive).
- 24 –Teacher gestured to student (neutral).

Like the never used non-verbal behaviors of these effective teachers, this researcher feels that the observed low frequencies occurred because these non-verbal behaviors may not be part of their (the teachers’) usual way of interacting with at-risk African-American male students. Another possibility is that the infrequent use was the result of conscious effort.

**Most Frequently Used Non-verbal Behaviors Disaggregated by Sex**

A comparison of non-verbal behaviors most frequently used by female and male teachers (see Table 4) was conducted. The most frequently used behaviors for each group in order of the frequency with which they were observed follow:

**Female Teachers (N = 4)**

- 1. Teacher was in close proximity (neutral).
- 2. Teacher established eye contact (neutral).
- 3. Teacher changed voice inflection (positive).
- 4. Teacher established eye contact (positive).
- 5. Teacher invaded student’s territory (positive).
- 6. Teacher gestured to student (positive).
- 7. Teacher smiled at student (positive).

**Male Teachers (N = 2)**

- 1. Teacher was in close proximity (neutral).
- 2. Teacher invaded student’s territory (positive).
- 3. Teacher established eye contact (positive).
- 4. Teacher changed voice inflection (positive).
- 5. Teacher was in close proximity (positive).
- 6. Teacher established eye contact (neutral).

Both female and male teachers tend to use their physical presence (close proximity) when communicating with at-risk students. This sends a message of acceptance to students in addition to having a controlling effect. This researcher concluded that this frequent practice served as an effective intervention for the easy distractibility of some of the at-risk male students.

Female teachers tend to follow close proximity with eye contact and changes in voice inflection, thus displaying their interest, care, concern, and responsiveness to students. Female effective teachers used only one non-verbal behavior (voice inflection) from the negative category moderately frequently.

Male teachers, on the other hand, tend to take the use of their physical presence a step further in communicating with at-risk students by invading students’ territories. This

Table 4

**Field Study: Frequency of Non-verbal Behaviors Used by Effective Teachers of At-Risk African-American Male Middle School Students Disaggregated by Sex**

Non-verbal behaviors	Female teachers <u>N</u> = 4							Male teachers <u>N</u> = 2						
	Rank	<u>N<sup>a</sup></u>	Sum	<u>M<sup>b</sup></u>	<u>SD</u>	Min	Max	Rank	<u>N<sup>a</sup></u>	Sum	<u>M<sup>b</sup></u>	<u>SD</u>	Min	Max
<b><u>Positive category</u></b>														
1. Nods head.	12.5	10	39	3.90	6.76	0	22	16.5	4	2	0.50	1.00	0	2
2. Shakes head.	26.5	10	2	0.20	0.42	0	1	21.5	4	0	0.00	0.00	0	0
3. Gestures to student.	6	10	159	15.90	16.78	0	53	9	4	18	4.50	3.70	0	9
4. Close proximity to student.	11	10	51	5.10	4.93	0	16	5	4	59	14.75	24.97	0	52
5. Invades student's territory.	5	10	229	22.90	25.49	0	89	2	4	99	24.75	18.25	0	42
6. Touches student.	17	10	18	1.80	1.87	0	5	10	4	11	2.75	4.86	0	10
7. Makes eye contact.	4	10	316	31.60	23.42	13	87	3	4	73	18.25	8.34	11	30
8. Stares at student.	20	10	13	1.30	2.21	0	6	21.5	4	0	0.00	0.00	0	0
9. Changes voice inflection.	3	10	322	32.20	31.77	5	98	4	4	69	17.25	14.97	5	39
10. Pause in speech pattern.	28.5	10	0	0.00	0.00	0	0	18.5	4	1	0.25	0.50	0	1
11. Displays student's work.	28.5	10	0	0.00	0.00	0	0	18.5	4	1	0.25	0.50	0	1
12. Smiles at student.	7	10	108	10.80	17.25	0	57	11	4	10	2.50	4.36	0	9
13. Frowns at student.	28.5	10	0	0.00	0.00	0	0	21.5	4	0	0.00	0.00	0	0
<b>Total positive</b>		<b>10</b>	<b>1257</b>	<b>125.70</b>	<b>130.90</b>	<b>18</b>	<b>434</b>		<b>4</b>	<b>343</b>	<b>85.75</b>	<b>81.45</b>	<b>16</b>	<b>195</b>
<b><u>Negative category</u></b>														
1. Nods head.	28.5	10	0	0.00	0.00	0	0	21.5	4	0	0.00	0.00	0	0
2. Shakes head.	21	10	11	1.10	2.33	0	6	21.5	4	0	0.00	0.00	0	0
3. Gestures to student.	16	10	22	2.20	3.68	0	11	13.5	4	4	1.00	1.41	0	3
4. Close proximity to student.	28.5	10	0	0.00	0.00	0	0	16.5	4	2	0.50	1.00	0	2
5. Invades student's territory.	23	10	9	0.90	2.85	0	9	21.5	4	0	0.00	0.00	0	0
6. Touches student.	26.5	10	2	0.20	0.63	0	2	21.5	4	0	0.00	0.00	0	0
7. Makes eye contact.	12.5	10	39	3.90	6.40	0	15	13.5	4	4	1.00	1.41	0	3

(table continues)

Table 4 (continued)

	Rank	N <sup>a</sup>	Sum	M <sup>b</sup>	SD	Min	Max		Rank	N <sup>a</sup>	Sum	M <sup>b</sup>	SD	Min	Max
8. Stares at student.	15	10	31	3.10	7.43	0	23		15	4	3	0.75	1.50	0	3
9. Changes voice inflection.	9	10	77	7.70	11.90	0	37		12	4	9	2.25	2.22	0	5
10. Pause in speech pattern.	18	10	17	1.70	5.38	0	17		21.5	4	0	0.00	0.00	0	0
11. Displays student's work.	28.5	10	0	0.00	0.00	0	0		21.5	4	0	0.00	0.00	0	0
12. Smiles at student.	28.5	10	0	0.00	0.00	0	0		21.5	4	0	0.00	0.00	0	0
13. Frowns at student.	14	10	34	3.40	8.58	0	27		21.5	4	0	0.00	0.00	0	0
<b>Total negative</b>		<b>10</b>	<b>242</b>	<b>24.20</b>	<b>49.18</b>	<b>0</b>	<b>147</b>			<b>4</b>	<b>22</b>	<b>5.50</b>	<b>7.54</b>	<b>0</b>	<b>16</b>
<b>Neutral category</b>															
1. Nods head.	24	10	7	0.70	1.64	0	5		21.5	4	0	0.00	0.00	0	0
2. Shakes head.	28.5	10	0	0.00	0.00	0	0		21.5	4	0	0.00	0.00	0	0
3. Gestures to student.	8	10	89	8.90	13.86	0	41		7	4	37	9.25	11.93	0	25
4. Close proximity to student.	1	10	397	39.70	33.94	7	103		1	4	284	71.00	73.94	21	181
5. Invades student's territory.	10	10	55	5.50	6.88	0	16		8	4	24	6.00	6.48	0	13
6. Touches student.	22	10	10	1.00	3.16	0	10		21.5	4	0	0.00	0.00	0	0
7. Makes eye contact.	2	10	336	33.60	18.23	7	60		6	4	55	13.75	16.34	1	36
8. Stares at student.	28.5	10	0	0.00	0.00	0	0		21.5	4	0	0.00	0.00	0	0
9. Changes voice inflection.	25	10	6	0.60	1.90	0	6		18.5	4	1	0.25	0.50	0	1
10. Pause in speech pattern.	28.5	10	0	0.00	0.00	0	0		21.5	4	0	0.00	0.00	0	0
11. Displays student's work.	28.5	10	0	0.00	0.00	0	0		21.5	4	0	0.00	0.00	0	0
12. Smiles at student.	19	10	15	1.50	4.74	0	15		21.5	4	0	0.00	0.00	0	0
13. Frowns at student.	28.5	10	0	0.00	0.00	0	0		21.5	4	0	0.00	0.00	0	0
<b>Total neutral</b>		<b>10</b>	<b>915</b>	<b>91.50</b>	<b>84.35</b>	<b>14</b>	<b>256</b>			<b>4</b>	<b>401</b>	<b>100.25</b>	<b>109.19</b>	<b>22</b>	<b>256</b>

N<sup>a</sup> = number of observations; M<sup>b</sup> = the average number of behaviors per observation.

means coming within two feet of an individual's personal space. The researcher observed that this "up close and personal interaction" caused targeted students to give their undivided attention to the teachers. Male teachers also used eye contact and voice inflection, not just to indicate interest, but to reinforce the message being communicated. These same teachers only moderately frequently gestured to their students.

Female teachers, like their male counterparts, invaded students' territories to capture the at-risk male students' undivided attention and to send a strong message to focus. These behaviors usually generated a response of focused engagement from the targeted students.

It is important to note the marginal use of two non-verbal behaviors: "Teacher gestured to student" and "Teacher smiled at student" were ranked 6th and 7th for female effective teachers. These two behaviors, ranked 9th and 11th respectively, were used even more sparingly by male teachers in this study. It is equally important to note that effective female teachers used the domain of facial expression (smiling or frowning) moderately, which is surprising since use of the face is one of a teacher's most immediate resources to visually communicate interest, concern, patience, or anger to a student.

Appropriate touching of students was ranked 10th for male teachers and 17th for female teachers in the positive category. While this non-verbal behavior was sparingly used by males and females alike, it is not surprising that teachers, even those identified by building principals as effective teachers, choose to restrict their use of this behavior within this potentially misunderstood and emotional area.

Of considerable importance is the fact that close analysis of Table 4 indicates that both male and female effective teachers rarely used non-verbal behaviors in a negative manner. One exception was the low moderate use of changing voice inflection. The researcher could not observe or determine whether this sparse use of negative non-verbal behaviors was the result of this school's culture, administrative edict, or the conscious choice of the selected effective teachers in this study.



### **Least Frequently Used Non-verbal Behaviors Disaggregated by Sex**

A comparison of non-verbal behaviors least frequently used by female teachers and male teachers (see Table 4) was conducted. The least frequently used behaviors for each group in order of the frequency with which they were observed follow:

#### Female Teachers (N = 4)

1. Teacher used pause in speech pattern (positive).
2. Teacher displayed student's work (positive).
3. Teacher frowned at student (positive).
4. Teacher nodded at student (negative).
5. Teacher was in close proximity (negative).
6. Teacher displayed student's work (negative).
7. Teacher smiled at student (negative).
8. Teacher shook head at student (neutral).
9. Teacher stared at student (neutral).
10. Teacher used pause in speech (neutral).
11. Teacher displayed student's work (neutral).
12. Teacher frowned at student (neutral).

#### Male Teachers (N = 2)

1. Teacher shook head at student (positive).
2. Teacher stared at student (positive).
3. Teacher frowned at student (positive).
4. Teacher nodded head at student (negative).
5. Teacher shook head at student (negative).
6. Teacher invaded student's territory (negative).
7. Teacher touched student (negative).
8. Teacher used pause in speech (negative).
9. Teacher displayed student's work (negative).
10. Teacher smiled at student (negative).
11. Teacher frowned at student (negative).
12. Teacher nodded head at student (neutral).
13. Teacher shook head at student (neutral).
14. Teacher touched student (neutral).
15. Teacher stared at student (neutral).
16. Teacher used pause in speech (neutral).
17. Teacher displayed student's work (neutral).
18. Teacher smiled at student (neutral).
19. Teacher frowned at student (neutral).

There were 12 of 39 non-verbal behaviors least frequently used by female teachers as compared to 19 of 39 for male teachers. Close examination of both groups' least frequently used non-verbal behaviors show 41% agreement as contrasted to 63% agreement between their most frequently used non-verbal behaviors. Male teachers were equal in their infrequent use of 8 negative behaviors (42%) and 8 neutral behaviors (42%) as compared to their use of 3 positive non-verbal behaviors (16%). Female teachers' least frequently used non-verbal behaviors were more diverse with 33% negative, 42%, neutral and 25% positive. Comparison of the totals (three categories) of least frequently used non-verbal behaviors between groups show 50% negative agreement, 63% neutral

agreement, and 100% positive agreement. Thus, this researcher concluded that there was similarity of conscious behavior between female and male effective teachers' interactions with at-risk African-American male students.

### **Most Frequently Used Non-verbal Behaviors Disaggregated by Race**

A comparison of non-verbal behaviors most frequently used by the white teacher and the African-American teachers (see Table 5) was conducted. The most frequently used behaviors for each group in order of the frequency with which they were observed follow:

#### White teacher (N = 1)

1. Teacher was in close proximity (neutral).
2. Teacher invaded student's territory (positive).
3. Teacher established eye contact (positive).
4. Teacher changed voice inflection (positive).
5. Teacher was in close proximity (positive).

#### African-American teachers (N = 5)

1. Teacher was in close proximity (neutral).
2. Teacher established eye contact (neutral).
3. Teacher changed voice inflection (positive).
4. Teacher established eye contact (positive).
5. Teacher invaded student's territory (positive).
6. Teacher gestured to student (positive).
7. Teacher gestured to student (neutral).

Using a mean of 10 as a cut-off score, it is important to point out that there were no negative non-verbal behaviors frequently used by the white teacher. Simpson and Erickson (1983) reported in their study that "White teachers were found to be more differential in their behavior toward male and female students than black teachers (1983, p. 193). They further indicated that on the non-verbal level, white teachers may react in a more negative or critical way toward black males. Analysis of the data in Table 5 indicates an opposing view. There were 302 positive non-verbal interactions directed toward at-risk African-American male middle school students by the white teacher, 317 neutral interactions, and 19 negative interactions. These findings illustrate that the effective white teacher was 15.89 times more likely to interact in a positive manner with these at-risk students than in a negative or critical manner.

There were a total of 1,298 positive interactions directed toward at-risk African-American male middle school students by effective African-American teachers. There were 999 neutral interactions and 245 negative interactions. Thus, African-American teachers were 5.29 times more likely to interact positively with these students than in a

Table 5

**Field Study: Frequency of Non-verbal Behaviors of Effective Teachers of At-Risk African-American Male Middle School Students Disaggregated by Race**

Non-verbal behaviors	White <u>N</u> = 1							African-American <u>N</u> = 5						
	Rank	<u>N</u> <sup>a</sup>	Sum	<u>M</u> <sup>b</sup>	<u>SD</u>	Min	Max	Rank	<u>N</u> <sup>a</sup>	Sum	<u>M</u> <sup>b</sup>	<u>SD</u>	Min	Max
<b>Positive category</b>														
1. Nods head.	16.5	3	2	0.67	1.15	0	2	13	11	39	3.55	6.52	0	22
2. Shakes head.	20.5	3	0	0.00	0.00	0	0	26.5	11	2	0.18	0.40	0	1
3. Gestures to student.	11	3	9	3.00	2.65	0	5	6	11	168	15.27	16.06	0	53
4. Close proximity to student.	5	3	53	17.67	29.74	0	52	10	11	57	5.18	4.69	0	16
5. Invades student's territory.	2	3	99	33.00	9.54	23	42	5	11	229	20.82	25.15	0	89
6. Touches student.	9.5	3	10	3.33	5.77	0	10	17	11	19	1.73	1.79	0	5
7. Makes eye contact.	3	3	59	19.67	9.61	11	30	4	11	330	30.00	22.84	13	87
8. Stares at student.	20.5	3	0	0.00	0.00	0	0	20	11	13	1.18	2.14	0	6
9. Changes voice inflection.	4	3	58	19.33	17.62	5	39	3	11	333	30.27	30.81	5	98
10. Pause in speech pattern.	18.5	3	1	0.33	0.58	0	1	28.5	11	0	0.00	0.00	0	0
11. Displays student's work.	18.5	3	1	0.33	0.58	0	1	28.5	11	0	0.00	0.00	0	0
12. Smiles at student.	9.5	3	10	3.33	4.93	0	9	8	11	108	9.82	16.68	0	57
13. Frowns at student.	20.5	3	0	0.00	0.00	0	0	28.5	11	0	0.00	0.00	0	0
<b>Total positive</b>		<b>3</b>	<b>302</b>	<b>100.66</b>	<b>82.17</b>	<b>39</b>	<b>191</b>		<b>11</b>	<b>1298</b>	<b>118</b>	<b>127.08</b>	<b>18</b>	<b>434</b>
<b>Negative category</b>														
1. Nods head.	20.5	3	0	0.00	0.00	0	0	28.5	11	0	0.00	0.00	0	0
2. Shakes head.	20.5	3	0	0.00	0.00	0	0	21	11	11	1.00	2.24	0	6
3. Gestures to student.	13.5	3	3	1.00	1.73	0	3	16	11	23	2.09	3.51	0	11
4. Close proximity to student.	16.5	3	2	0.67	1.15	0	2	28.5	11	0	0.00	0.00	0	0
5. Invades student's territory.	20.5	3	0	0.00	0.00	0	0	23	11	9	0.82	2.71	0	9
6. Touches student.	20.5	3	0	0.00	0.00	0	0	26.5	11	2	0.18	0.60	0	2
7. Makes eye contact.	13.5	3	3	1.00	1.73	0	3	12	11	40	3.64	6.14	0	15

(table continues)

Table 5 (continued)

	Rank	N <sup>a</sup>	Sum	M <sup>b</sup>	SD	Min	Max		Rank	N <sup>a</sup>	Sum	M <sup>b</sup>	SD	Min	Max
8. Stares at student.	13.5	3	3	1.00	1.73	0	3		15	11	31	2.82	7.11	0	23
9. Changes voice inflection.	12	3	8	2.67	2.52	0	5		9	11	78	7.09	11.47	0	37
10. Pause in speech pattern.	20.5	3	0	0.00	0.00	0	0		18	11	17	1.55	5.13	0	17
11. Displays student's work.	20.5	3	0	0.00	0.00	0	0		28.5	11	0	0.00	0.00	0	0
12. Smiles at student.	20.5	3	0	0.00	0.00	0	0		28.5	11	0	0.00	0.00	0	0
13. Frowns at student.	20.5	3	0	0.00	0.00	0	0		14	11	34	3.09	8.20	0	27
<b>Total negative</b>		<b>3</b>	<b>19</b>	<b>6.34</b>	<b>8.86</b>	<b>0</b>	<b>16</b>			<b>11</b>	<b>245</b>	<b>22.28</b>	<b>47.11</b>	<b>0</b>	<b>147</b>
<b>Neutral category</b>															
1. Nods head.	20.5	3	0	0.00	0.00	0	0		24.5	11	7	0.64	1.57	0	5
2. Shakes head.	20.5	3	0	0.00	0.00	0	0		28.5	11	0	0.00	0.00	0	0
3. Gestures to student.	8	3	12	4.00	6.93	0	12		7	11	114	10.36	14.02	0	41
4. Close proximity to student.	1	3	263	87.67	80.84	40	181		1	11	418	38.00	32.69	7	103
5. Invades student's territory.	6	3	23	7.67	6.81	0	13		11	11	56	5.09	6.67	0	16
6. Touches student.	20.5	3	0	0.00	0.00	0	0		22	11	10	0.91	3.02	0	10
7. Makes eye contact.	7	3	19	6.33	8.39	1	16		2	11	372	33.82	17.31	7	60
8. Stares at student.	20.5	3	0	0.00	0.00	0	0		28.5	11	0	0.00	0.00	0	0
9. Uses voice inflection.	20.5	3	0	0.00	0.00	0	0		24.5	11	7	0.64	1.80	0	6
10. Pause in speech pattern.	20.5	3	0	0.00	0.00	0	0		28.5	11	0	0.00	0.00	0	0
11. Displays student's work.	20.5	3	0	0.00	0.00	0	0		28.5	11	0	0.00	0.00	0	0
12. Smiles at student.	20.5	3	0	0.00	0.00	0	0		19	11	15	1.36	4.52	0	15
13. Frowns at student.	20.5	3	0	0.00	0.00	0	0		28.5	11	0	0.00	0.00	0	0
<b>Total neutral</b>		<b>3</b>	<b>317</b>	<b>105.67</b>	<b>102.97</b>	<b>41</b>	<b>222</b>			<b>11</b>	<b>999</b>	<b>90.82</b>	<b>81.60</b>	<b>14</b>	<b>256</b>
N <sup>a</sup> = the number of observations; M <sup>b</sup> = the average number of behaviors observed per observation.															

negative manner. These same effective teachers were 4.07 times more likely to interact in a neutral manner with at-risk African-American male students than in a negative manner.

### **Least Frequently Used Non-verbal Behaviors Disaggregated by Race**

A comparison of non-verbal behaviors least frequently used by the white teacher and the African-American teachers (see Table 5) was conducted. There were 20 of the 39 non-verbal behaviors not used by the white teacher and 12 of the 39 not used by African-American teachers. These were:

#### White teacher (N = 1)

1. Teacher shook head at student (positive).
2. Teacher stared at student (positive).
3. Teacher frowned at student (positive).
4. Teacher nodded head at student (negative).
5. Teacher shook head at student (negative).
6. Teacher invaded student's territory (negative).
7. Teacher touched student (negative).
8. Teacher used pause in speech (negative).
9. Teacher displayed student's work (negative).
10. Teacher smiled at student (negative).
11. Teacher frowned at student (negative).
12. Teacher nodded head at student (neutral).
13. Teacher shook head at student (neutral).
14. Teacher touched student (neutral).
15. Teacher stared at student (neutral).
16. Teacher used voice inflection (neutral).
17. Teacher used pause in speech (neutral).
18. Teacher displayed student's work (neutral).
19. Teacher smiled at student (neutral).
20. Teacher frowned at student (neutral).

#### African-American teachers (N = 5)

1. Teacher used pause in speech (positive).
2. Teacher displayed student's work (positive).
3. Teacher frowned at student (positive).
4. Teacher nodded head at student (negative).
5. Teacher was in close proximity (negative).
6. Teacher displayed student's work (negative).
7. Teacher smiled at student (negative).
8. Teacher shook head at student (neutral).
9. Teacher stared at student (neutral).
10. Teacher used pause in speech (neutral).
11. Teacher displayed student's work (neutral).
12. Teacher frowned at student (neutral).

Analysis of the data in Table 5 indicates that effective African-American teachers interact non-verbally more frequently with at-risk African-American male middle school students than the white effective teacher as evidenced by the number of behaviors most frequently and least frequently used by both groups. African-American teachers had positive interactions 4.29 times more, neutral interactions 3.15 times more, and negative

interactions 12.89 times more with at-risk male students than the white teacher. There is, however, 50 % agreement between both groups' most frequently used non-verbal behaviors and 39% agreement between both groups' least frequently used non-verbal behaviors. The 39% percent agreement may be due to the fact that these behaviors are not a part of the teachers' usual way of interacting with at-risk African-American male students, or the result of their conscious effort. Thus, the quality of the interactions between the effective white teacher and the effective African-American teachers with at-risk African-American male middle school students are similar. The difference was in the quantity of interactions.

**Most Frequently Used Non-verbal Behaviors Disaggregated by Age**

A comparison of non-verbal behaviors most frequently used by effective teachers between the ages of 28-29 and 41-46 (see Table 6) was conducted. The most frequently used behaviors for each group in order of the frequency with which they were observed follow:

Ages 28-29 (N = 2)

1. Teacher was in close proximity (neutral).
2. Teacher invaded student's territory (positive).
3. Teacher established eye contact (positive).
4. Teacher changed voice inflection (positive).
5. Teacher was in close proximity (positive).
6. Teacher established eye contact (neutral).

Ages 41-46 (N = 4)

1. Teacher was in close proximity (neutral).
2. Teacher changed voice inflection (positive).
3. Teacher established eye contact (positive).
4. Teacher established eye contact (neutral).
5. Teacher invaded student's territory (positive).
6. Teacher gestured to student (positive).
7. Teacher gestured to student (neutral).
8. Teacher smiled at student (positive).

Teachers between the ages of 41- 46 interacted 3.34 times more non-verbally with at-risk African-American male middle school students than teachers between the ages of 28-29. Close examination of the data indicates that there were 1337 positive non-verbal interactions directed toward at-risk students by the 41-46 age group, 1001 neutral interactions, and 223 negative interactions. These findings illustrate the fact that effective teachers between the ages of 41-46 years of age were 3.90 times more likely to interact in a positive manner, 2.50 times more likely to interact in a neutral manner, and 10.14 times more likely to interact in a negative manner with these at-risk male students than

Table 6

**Field Study: Most Frequently Used Non-verbal Behaviors of Effective Teachers of At-Risk African-American Male Middle School Students Disaggregated by Age**

Non-verbal behaviors	Ages 28 - 29 <u>N</u> = 2							Ages 41 - 46 <u>N</u> = 4						
	Rank	<u>N</u> <sup>a</sup>	Sum	<u>M</u> <sup>b</sup>	<u>SD</u>	Min	Max	Rank	<u>N</u> <sup>a</sup>	Sum	<u>M</u> <sup>b</sup>	<u>SD</u>	Min	Max
<b>Positive category</b>														
1. Nods head.	16.5	4	2	0.50	1.00	0	2	12	10	35	3.50	6.74	0	22
2. Shakes head.	21.5	4	0	0.00	0.00	0	0	26.5	10	2	0.20	0.42	0	1
3. Gestures to student.	9	4	18	4.50	3.70	0	9	6	10	148	14.80	17.54	0	53
4. Close proximity to student.	5	4	59	14.75	24.97	0	52	9	10	98	9.80	15.63	0	52
5. Invades student's territory.	2	4	99	24.75	18.25	0	42	5	10	271	27.10	25.51	0	89
6. Touches student.	10	4	11	2.75	4.86	0	10	16	10	19	1.90	3.11	0	10
7. Makes eye contact.	3	4	73	18.25	8.34	11	30	3	10	314	31.40	23.86	11	87
8. Stares at student.	21.5	4	0	0.00	0.00	0	0	22.5	10	9	0.90	2.02	0	6
9. Changes voice inflection.	4	4	69	17.25	14.97	5	39	2	10	334	33.40	31.97	5	98
10. Pause in speech pattern.	18.5	4	1	0.25	0.50	0	1	29.5	10	1	0.10	0.32	0	1
11. Displays student's work.	18.5	4	1	0.25	0.50	0	1	29.5	10	1	0.10	0.32	0	1
12. Smiles at student.	11	4	10	2.50	4.36	0	9	8	10	105	10.50	17.52	0	57
13. Frowns at student.	21.5	4	0	0.00	0.00	0	0	31.5	10	0	0.00	0.00	0	0
<b>Total positive</b>		<b>4</b>	<b>343.00</b>	<b>85.75</b>	<b>81.45</b>	<b>16</b>	<b>195</b>		<b>10</b>	<b>1337</b>	<b>133.70</b>	<b>144.96</b>	<b>16</b>	<b>477</b>
<b>Negative category</b>														
1. Nods head.	21.5	4	0	0.00	0.00	0	0	31.5	10	0	0.00	0.00	0	0
2. Shakes head.	21.5	4	0	0.00	0.00	0	0	20	10	11	1.10	2.33	0	6
3. Gestures to student.	13.5	4	4	1.00	1.41	0	3	18.5	10	15	1.50	2.01	0	6
4. Close proximity to student.	16.5	4	2	0.50	1.00	0	2	26.5	10	2	0.20	0.63	0	2
5. Invades student's territory.	21.5	4	0	0.00	0.00	0	0	22.5	10	9	0.90	2.85	0	9
6. Touches student.	21.5	4	0	0.00	0.00	0	0	26.5	10	2	0.20	0.63	0	2
7. Makes eye contact.	13.5	4	4	1.00	1.41	0	3	15	10	28	2.80	5.03	0	14

(table continues)

Table 6 (continued)

	Rank	N <sup>a</sup>	Sum	M <sup>b</sup>	SD	Min	Max		Rank	N <sup>a</sup>	Sum	M <sup>b</sup>	SD	Min	Max
8. Stares at student.	15	4	3	0.75	1.50	0	3		13.5	10	34	3.40	7.35	0	23
9. Changes voice inflection.	12	4	9	2.25	2.22	0	5		10	10	71	7.10	11.67	0	37
10. Pause in speech pattern.	21.5	4	0	0.00	0.00	0	0		17	10	17	1.70	5.38	0	17
11. Displays student's work.	21.5	4	0	0.00	0.00	0	0		31.5	10	0	0.00	0.00	0	0
12. Smiles at student.	21.5	4	0	0.00	0.00	0	0		31.5	10	0	0.00	0.00	0	0
13. Frowns at student.	21.5	4	0	0.00	0.00	0	0		13.5	10	34	3.40	8.58	0	27
<b>Total negative</b>		<b>4</b>	<b>22</b>	<b>5.50</b>	<b>7.54</b>	<b>0</b>	<b>16</b>			<b>10</b>	<b>223</b>	<b>22.3</b>	<b>46.46</b>	<b>0</b>	<b>143</b>
<b>Neutral category</b>															
1. Nods head.	21.5	4	0	0.00	0.00	0	0		24.5	10	7	0.70	1.64	0	5
2. Shakes head.	21.5	4	0	0.00	0.00	0	0		31.5	10	0	0.00	0.00	0	0
3. Gestures to student.	7	4	37	9.25	11.93	0	25		7	10	110	11.00	14.24	0	41
4. Close proximity to student.	1	4	284	71.00	73.94	21	181		1	10	499	49.90	51.92	10	181
5. Invades student's territory.	8	4	24	6.00	6.48	0	13		11	10	67	6.70	7.04	0	16
6. Touches student.	21.5	4	0	0.00	0.00	0	0		21	10	10	1.00	3.16	0	10
7. Makes eye contact.	6	4	55	13.75	16.34	1	36		4	10	286	28.60	21.01	1	60
8. Stares at student.	21.5	4	0	0.00	0.00	0	0		31.5	10	0	0.00	0.00	0	0
9. Uses voice inflection.	18.5	4	1	0.25	0.50	0	1		24.5	10	7	0.70	1.89	0	6
10. Pause in speech pattern.	21.5	4	0	0.00	0.00	0	0		31.5	10	0	0.00	0.00	0	0
11. Displays student's work.	21.5	4	0	0.00	0.00	0	0		31.5	10	0	0.00	0.00	0	0
12. Smiles at student.	21.5	4	0	0.00	0.00	0	0		18.5	10	15	1.50	4.74	0	15
13. Frowns at student.	21.5	4	0	0.00	0.00	0	0		31.5	10	0	0.00	0.00	0	0
<b>Total neutral</b>		<b>4</b>	<b>401</b>	<b>100.25</b>	<b>109.19</b>	<b>22</b>	<b>256</b>			<b>10</b>	<b>1001</b>	<b>100.10</b>	<b>105.64</b>	<b>11</b>	<b>334</b>
N <sup>a</sup> = the number of observations; M <sup>b</sup> = the average number of behaviors observed per observation.															



effective teachers in the 28-29 year old age group. Using a mean of 10 as a cut-off score, it is important to point out that neither age group used any of the non-verbal behaviors in the negative category most frequently even though the 41-46 age group's use was 10 times greater than the 28-29 age group.

Close examination of the most frequently used non-verbal behaviors of the 28-29 age group to those of the 41-46 age group indicates a 56% agreement, which indicates a similarity in the quality of the non-verbal interactions both age groups of effective teachers exhibited toward the at-risk African-American male middle school students in this study. These findings illustrate that the difference between the 28-29 year old effective teachers compared to the 41-46 year old effective teachers is in the quantity of interactions directed toward these students, not the quality.

### **Teaching Experience and Use of Non-verbal Behaviors**

The range of experience of the effective teachers in this study was 3 to 25 years. The teaching experiences represented by the effective teachers in this study were manifested in three categories:

- Elementary, middle and high school experience
- Middle school experience
- Elementary and middle school experience

Two teachers had experience at the elementary, middle, and high school levels. Three teachers had experience at the middle school level. And one teacher had experience at the elementary and middle school levels. Analyses (see Tables 7, 8, & 9) of the most frequently used non-verbal behaviors of effective teachers were conducted for each experience category.

### **Most Frequently Used Non-verbal Behaviors of Effective Teachers Who Have Elementary, Middle, and High School Experience**

Analysis of the data in Table 7 indicates that effective teachers who have elementary, middle, and high school experience most frequently used six of the 39 non-verbal behaviors. These non-verbal behaviors in descending rank order are:

1. Teacher was in close proximity to (neutral).

Table 7

**Field Study: Non-verbal Behaviors Most Frequently Used by Effective Teachers of At-Risk African-American Male Middle School Students Who Have Elementary, Middle and High School Experience,  $N = 2$**

<b>Non-verbal behaviors</b>		<b>Elementary - Middle - High experience</b>					
<b>Positive category</b>	<b>Rank</b>	<b><math>N^a</math></b>	<b>Sum</b>	<b><math>M^b</math></b>	<b><math>SD</math></b>	<b>Min</b>	<b>Max</b>
1. Nods head.	<b>16.5</b>	4	2	0.50	1.00	0	2
2. Shakes head.	<b>21.5</b>	4	0	0.00	0.00	0	0
3. Gestures to student.	<b>9</b>	4	18	4.50	3.70	0	9
4. Close proximity to student.	<b>5</b>	4	59	14.75	24.97	0	52
5. Invades student's territory.	<b>2</b>	4	99	24.75	18.25	0	42
6. Touches student.	<b>10</b>	4	11	2.75	4.86	0	10
7. Makes eye contact.	<b>3</b>	4	73	18.25	8.34	11	30
8. Stares at student.	<b>21.5</b>	4	0	0.00	0.00	0	0
9. Changes voice inflection.	<b>4</b>	4	69	17.25	14.97	5	39
10. Pause in speech pattern.	<b>18.5</b>	4	1	0.25	0.50	0	1
11. Displays student's work.	<b>18.5</b>	4	1	0.25	0.50	0	1
12. Smiles at student.	<b>11</b>	4	10	2.50	4.36	0	9
13. Frowns at student.	<b>21.5</b>	4	0	0.00	0.00	0	0
<b>Total positive</b>		<b>4</b>	<b>343</b>	<b>85.75</b>	<b>81.45</b>	<b>16</b>	<b>195</b>
<b>Negative category</b>							
1. Nods head.	<b>21.5</b>	4	0	0.00	0.00	0	0
2. Shakes head.	<b>21.5</b>	4	0	0.00	0.00	0	0
3. Gestures to student.	<b>13.5</b>	4	4	1.00	1.41	0	3
4. Close proximity to student.	<b>16.5</b>	4	2	0.50	1.00	0	2
5. Invades student's territory.	<b>21.5</b>	4	0	0.00	0.00	0	0

(table continues)

Table 7 (continued)

	<b>Rank</b>	<b>N<sup>a</sup></b>	<b>Sum</b>	<b>M<sup>b</sup></b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
6. Touches student.	<b>21.5</b>	4	0	0.00	0.00	0	0
7. Makes eye contact.	<b>13.5</b>	4	4	1.00	1.41	0	3
8. Stares at student.	<b>15</b>	4	3	0.75	1.50	0	3
9. Changes voice inflection.	<b>12</b>	4	9	2.25	2.22	0	5
10. Pause in speech pattern.	<b>21.5</b>	4	0	0.00	0.00	0	0
11. Displays student's work.	<b>21.5</b>	4	0	0.00	0.00	0	0
12. Smiles at student.	<b>21.5</b>	4	0	0.00	0.00	0	0
13. Frowns at student.	<b>21.5</b>	4	0	0.00	0.00	0	0
<b>Total negative</b>		<b>4</b>	<b>22</b>	<b>5.50</b>	<b>7.54</b>	<b>0</b>	<b>16</b>
<b><u>Neutral category</u></b>							
1. Nods head.	<b>21.5</b>	4	0	0.00	0.00	0	0
2. Shakes head.	<b>21.5</b>	4	0	0.00	0.00	0	0
3. Gestures to student.	<b>7</b>	4	37	9.25	11.93	0	25
4. Close proximity to student.	<b>1</b>	4	284	71.00	73.94	21	181
5. Invades student's territory.	<b>8</b>	4	24	6.00	6.48	0	13
6. Touches student.	<b>21.5</b>	4	0	0.00	0.00	0	0
7. Makes eye contact.	<b>6</b>	4	55	13.75	16.34	1	36
8. Stares at student.	<b>21.5</b>	4	0	0.00	0.00	0	0
9. Uses voice inflection.	<b>18.5</b>	4	1	0.25	0.50	0	1
10. Pause in speech pattern.	<b>21.5</b>	4	0	0.00	0.00	0	0
11. Displays student's work.	<b>21.5</b>	4	0	0.00	0.00	0	0
12. Smiles at student.	<b>21.5</b>	4	0	0.00	0.00	0	0
13. Frowns at student.	<b>21.5</b>	4	0	0.00	0.00	0	0
<b>Total neutral</b>		<b>4</b>	<b>401</b>	<b>100.25</b>	<b>109.19</b>	<b>22</b>	<b>256</b>
N <sup>a</sup> = the number of observations; M <sup>b</sup> = the average number of behaviors observed per observation.							

2. Teacher invaded student's territory (positive).
3. Teacher established eye contact (positive).
4. Teacher used voice inflection (positive).
5. Teacher was in close proximity (positive).
6. Teacher established eye contact (neutral).

**Most Frequently Used Non-verbal Behaviors of Effective Teachers Who Have  
Middle School Experience**

Examination of the data in Table 8 indicates that the non-verbal behaviors frequently used by effective teachers of at-risk African-American male middle school students who have middle school experience are:

1. Teacher was in close proximity (neutral).
2. Teacher established eye contact (neutral).
3. Teacher established eye contact (positive).
4. Teacher changed voice inflection (positive).
5. Teacher invaded student's territory (positive).
6. Teacher changed voice inflection (negative).

**Most Frequently Used Non-verbal Behaviors of the Effective Teacher Who Has  
Elementary and Middle School Experience**

Analysis of the data in Table 9 indicates that nine of the 39 non-verbal behaviors were most frequently used by the effective teacher who has elementary and middle school experience. These non-verbal behaviors are:

1. Teacher changed voice inflection (positive).
2. Teacher established eye contact (positive).
3. Teacher was in close proximity (neutral).
4. Teacher established eye contact (neutral).
5. Teacher invaded student's territory (positive).
6. Teacher gestured to student (positive).
7. Teacher smiled at student (positive).

Table 8

**Field Study: Non-verbal Behaviors Most Frequently Used by Effective Teachers of At-Risk African-American Male Middle School Students Who Have Middle School Experience,  $N = 3$**

Non-verbal behaviors	Middle School experience						
	Rank	$N^a$	Sum	$M^b$	$SD$	Min	Max
<b>Positive category</b>							
1. Nods head.	19.5	7	9	1.29	2.36	0	6
2. Shakes head.	23	7	1	0.14	0.38	0	1
3. Gestures to student.	7	7	51	7.29	4.19	0	13
4. Close proximity to student.	8	7	41	5.86	5.58	0	16
5. Invades student's territory.	5	7	116	16.57	12.31	0	32
6. Touches student.	17	7	15	2.14	1.95	0	5
7. Makes eye contact.	3	7	152	21.71	8.18	13	34
8. Stares at student.	21	7	4	0.57	1.51	0	4
9. Changes voice inflection.	4	7	127	18.14	11.95	5	38
10. Pause in speech pattern.	24.5	7	0	0.00	0.00	0	0
11. Displays student's work.	24.5	7	0	0.00	0.00	0	0
12. Smiles at student.	12.5	7	28	4.00	3.51	0	10
13. Frowns at student.	24.5	7	0	0.00	0.00	0	0
<b>Total positive</b>		<b>7</b>	<b>544</b>	<b>91.57</b>	<b>51.92</b>	<b>18</b>	<b>159</b>
<b>Negative category</b>							
1. Nods head.	24.5	7	0	0.00	0.00	0	0
2. Shakes head.	18	7	11	1.57	2.70	0	6
3. Gestures to student.	14	7	22	3.14	4.10	0	11
4. Close proximity to student.	24.5	7	0	0.00	0.00	0	0
5. Invades student's territory.	19.5	7	9	1.29	3.40	0	9

(table continues)

Table 8 (continued)

	<b>Rank</b>	<b><u>N</u><sup>a</sup></b>	<b>Sum</b>	<b><u>M</u><sup>b</sup></b>	<b><u>SD</u></b>	<b>Min</b>	<b>Max</b>
6. Touches student.	<b>22</b>	7	2	0.29	0.76	0	2
7. Makes eye contact.	<b>9</b>	7	39	5.57	7.11	0	15
8. Stares at student.	<b>11</b>	7	31	4.43	8.72	0	23
9. Changes voice inflection.	<b>6</b>	7	77	11.00	13.04	0	37
10. Pause in speech pattern.	<b>15</b>	7	17	2.43	6.43	0	17
11. Displays student's work.	<b>24.5</b>	7	0	0.00	0.00	0	0
12. Smiles at student.	<b>24.5</b>	7	0	0.00	0.00	0	0
13. Frowns at student.	<b>10</b>	7	34	4.86	10.11	0	27
<b>Total negative</b>		<b>7</b>	<b>242</b>	<b>34.58</b>	<b>56.37</b>	<b>0</b>	<b>147</b>
<b><u>Neutral category</u></b>							
1. Nods head.	<b>24.5</b>	7	0	0.00	0.00	0	0
2. Shakes head.	<b>24.5</b>	7	0	0.00	0.00	0	0
3. Gestures to student.	<b>16</b>	7	16	2.29	6.05	0	16
4. Close proximity to student.	<b>1</b>	7	259	37.00	32.49	7	103
5. Invades student's territory.	<b>12.5</b>	7	28	4.00	6.43	0	16
6. Touches student.	<b>24.5</b>	7	0	0.00	0.00	0	0
7. Makes eye contact.	<b>2</b>	7	207	29.57	18.69	7	52
8. Stares at student.	<b>24.5</b>	7	0	0.00	0.00	0	0
9. Uses voice inflection.	<b>24.5</b>	7	0	0.00	0.00	0	0
10. Pause in speech pattern.	<b>24.5</b>	7	0	0.00	0.00	0	0
11. Displays student's work.	<b>24.5</b>	7	0	0.00	0.00	0	0
12. Smiles at student.	<b>24.5</b>	0	0	0.00	0.00	0	0
13. Frowns at student.	<b>24.5</b>	7	0	0.00	0.00	0	0
<b>Total neutral</b>		<b>7</b>	<b>510</b>	<b>72.86</b>	<b>63.66</b>	<b>14</b>	<b>187</b>
N <sup>a</sup> = the number of observations; M <sup>b</sup> = the average number of behaviors observed per observation.							

Table 9

**Field Study: Non-verbal Behaviors Most Frequently Used by the Effective Teacher of At-Risk African-American Male Middle School Students with Elementary and Middle School Experience,  $N = 1$**

Non-verbal behaviors		Elementary and Middle School experience					
<u>Positive category</u>	Rank	$N^a$	Sum	$M^b$	$SD$	Min	Max
1. Nods head.	9	3	30	10.00	10.44	3	22
2. Shakes head.	18	3	1	0.33	0.58	0	1
3. Gestures to student.	6	3	108	36.00	18.68	16	53
4. Close proximity to student.	12.5	3	10	3.33	3.06	0	6
5. Invades student's territory.	5	3	113	37.67	44.74	7	89
6. Touches student.	17	3	3	1.00	1.73	0	3
7. Makes eye contact.	2	3	164	54.67	33.56	20	87
8. Stares at student.	14	3	9	3.00	3.00	0	6
9. Changes voice inflection.	1	3	195	65.00	42.53	17	98
10. Pause in speech pattern.	19.5	3	0	0.00	0.00	0	0
11. Displays student's work.	19.5	3	0	0.00	0.00	0	0
12. Smiles at student.	7	3	80	26.67	27.61	3	57
13. Frowns at student.	19.5	3	0	0.00	0.00	0	0
<b>Total positive</b>		<b>3</b>	<b>713</b>	<b>237.67</b>	<b>185.93</b>	<b>66</b>	<b>422</b>
<u>Negative category</u>							
1. Nods head.	19.5	3	0	0.00	0.00	0	0
2. Shakes head.	19.5	3	0	0.00	0.00	0	0
3. Gestures to student.	19.5	3	0	0.00	0.00	0	0
4. Close proximity to student.	19.5	3	0	0.00	0.00	0	0
5. Invades student's territory.	19.5	3	0	0.00	0.00	0	0

(table continues)

Table 9 (continued)

	<b>Rank</b>	<b>N<sup>a</sup></b>	<b>Sum</b>	<b>M<sup>b</sup></b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
6. Touches student.	<b>19.5</b>	3	0	0.00	0.00	0	0
7. Makes eye contact.	<b>19.5</b>	3	0	0.00	0.00	0	0
8. Stares at student.	<b>19.5</b>	3	0	0.00	0.00	0	0
9. Changes voice inflection.	<b>19.5</b>	3	0	0.00	0.00	0	0
10. Pause in speech pattern.	<b>19.5</b>	3	0	0.00	0.00	0	0
11. Displays student's work.	<b>19.5</b>	3	0	0.00	0.00	0	0
12. Smiles at student.	<b>19.5</b>	3	0	0.00	0.00	0	0
13. Frowns at student.	<b>19.5</b>	3	0	0.00	0.00	0	0
<b>Total negative</b>		<b>3</b>	<b>0</b>	<b>0.00</b>	<b>0.00</b>	<b>0</b>	<b>0</b>
<b><u>Neutral category</u></b>							
1. Nods head.	<b>15</b>	3	7	2.33	2.52	0	5
2. Shakes head.	<b>19.5</b>	3	0	0.00	0.00	0	0
3. Gestures to student.	<b>8</b>	3	73	24.33	15.63	10	41
4. Close proximity to student.	<b>3</b>	3	138	46.00	43.97	10	95
5. Invades student's territory.	<b>10</b>	3	27	9.00	7.94	0	15
6. Touches student.	<b>12.5</b>	3	10	3.33	5.77	0	10
7. Makes eye contact.	<b>4</b>	3	129	43.00	16.09	28	60
8. Stares at student.	<b>19.5</b>	3	0	0.00	0.00	0	0
9. Uses voice inflection.	<b>16</b>	3	6	2.00	3.46	0	6
10. Pause in speech pattern.	<b>19.5</b>	3	0	0.00	0.00	0	0
11. Displays student's work.	<b>19.5</b>	3	0	0.00	0.00	0	0
12. Smiles at student.	<b>11</b>	3	15	5.00	8.66	0	15
13. Frowns at student.	<b>19.5</b>	3	0	0.00	0.00	0	0
<b>Total neutral</b>		<b>3</b>	<b>405</b>	<b>134.99</b>	<b>104.04</b>	<b>48</b>	<b>247</b>
N <sup>a</sup> = the number of observations; M <sup>b</sup> = the average number of behaviors per observation.							



8. Teacher gestured to student (neutral).

9. Teacher nodded head (positive).

A comparative analysis of the data in Tables 7 & 8 indicates that effective teachers who have middle school experience interact non-verbally more frequently with at-risk African-American male middle school students than effective teachers who have elementary, middle, and high school experience. There were a total of 544 positive interactions directed toward these students by teachers with middle school experience. There were 510 neutral interactions and 242 negative interactions. Thus, effective teachers who possessed only middle school experience interacted in a positive manner 1.59 times more, 1.27 times more in a neutral manner, and 11 times more in a negative manner with at-risk African-American male middle school students than effective teachers who possessed elementary, middle, and high school experience. There is little difference in the quality and quantity of positive and neutral interactions between both groups. However, the difference in the quantity of negative interactions between both groups is greater. This is attributed to the fact effective teachers who have middle school experience used voice inflection in a negative manner a total of 77 times. Close examination of the six most frequently used non-verbal behaviors between both groups show 71% agreement.

A comparative analysis of the data in Tables 8 & 9 was conducted. There was a noticeable difference between the two groups of effective teachers. Teachers who have elementary and middle school experience used 9 of 39 non-verbal behaviors most frequently as compared to 6 of 39 used most frequently by teachers who have middle school experience. There were a total of 713 positive interactions directed toward African-American male middle school students by teachers who have elementary and middle school experience. There were 405 neutral interactions and 0 negative interactions. These findings indicate that effective teachers who have elementary and middle school experience interacted in a positive manner 1.31 times more with at-risk African-American male students than effective teachers who have middle school experience. However, teachers who possessed middle school experience interacted with

these students in a neutral manner 1.26 times more, and 242 times more in a negative manner than teachers with elementary and middle school experience. Note the difference between the totals in the negative categories of both groups. There were no observed negative non-verbal behaviors of teachers with elementary and middle school experience as compared to the one most frequently used non-verbal behavior (teacher changed voice inflection) of teachers with middle school experience which constitute an important difference between both groups. Close examination of the most frequently used non-verbal behaviors between the three effective teachers who have middle school experience and the effective teacher who has elementary and middle school experience shows 50% agreement.

A comparative analysis of the data in Tables 7 & 9 indicates that effective teachers who have elementary and middle school experience interact 1.46 times more with at-risk African-American male middle school students than effective teachers who have elementary, middle, and high school experience. There were a total of 713 positive interactions directed toward these students by teachers with elementary and middle school experience. There were 405 neutral interactions and 0 negative interactions. Thus, effective teachers who possessed elementary and middle school experience interacted in a positive manner 2.08 times more, in a neutral manner 1.01 times more than effective teachers who have elementary, middle, and high school experience. However, teachers with all three levels of experience (elementary, middle, and high) interacted in a negative manner 22 times more than teachers with elementary and middle school experience. In the positive category between the 2 effective teachers who have elementary, middle, and high school experience and the effective teacher who has elementary and middle school experience, there is a 2:1 difference. In the negative category there is a 22:0 difference between the two groups. And in the neutral category there is 1:0 difference between both groups. Close examination of the most frequently used non-verbal behaviors between both groups show 50% agreement.

## **Comparison of Frequently Used Non-verbal Behaviors Disaggregated by Academic Subjects**

### **Most Frequently Used Non-verbal Behaviors of the Related Arts Teacher**

Analysis of the data in Table 10 indicates that five of the 39 non-verbal behaviors were most frequently used by the Related Arts Teacher. These behaviors are:

1. Teacher was in close proximity (neutral).
2. Teacher invaded student's territory (positive).
3. Teacher established eye contact (positive).
4. Teacher changed voice inflection (positive).
5. Teacher was in close proximity (positive).

### **Most Frequently Used Non-verbal Behaviors of Language Arts Teachers**

Analysis of the data in Table 11 indicates that the non-verbal behaviors most frequently used by effective Language Arts Teachers are:

1. Teacher was in close proximity (neutral).
2. Teacher established eye contact (neutral).
3. Teacher established eye contact (positive).
4. Teacher changed voice inflection (positive).
5. Teacher invaded student's territory (positive).

### **Most Frequently Used Non-verbal Behaviors of the Science Teacher**

Analysis of the data in Table 12 indicates that the non-verbal behaviors most frequently used by the effective Science teacher are:

1. Teacher changed voice inflection (positive).
2. Teacher established eye contact (positive).
3. Teacher was in close proximity (neutral).
4. Teacher established eye contact (neutral).
5. Teacher invaded student's territory (positive).
6. Teacher gestured to student (positive).
7. Teacher smiled at student (positive).

Table 10

**Field Study: Non-verbal Behaviors Most Frequently Used by the Effective Related Arts Teacher,****N = 1**

<b>Non-verbal behaviors</b>		<b>Related Arts</b>					
<b>Positive category</b>	<b>Rank</b>	<b>N<sup>a</sup></b>	<b>Sum</b>	<b>M<sup>b</sup></b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
1. Nods head.	16.5	3	2	0.67	1.15	0	2
2. Shakes head.	20.5	3	0	0.00	0.00	0	0
3. Gestures to student.	11	3	9	3.00	2.65	0	5
4. Close proximity to student.	5	3	53	17.67	29.74	0	52
5. Invades student's territory.	2	3	99	33.00	9.54	23	42
6. Touches student.	9.5	3	10	3.33	5.77	0	10
7. Makes eye contact.	3	3	59	19.67	9.61	11	30
8. Stares at student.	20.5	3	0	0.00	0.00	0	0
9. Changes voice inflection.	4	3	58	19.33	17.62	5	39
10. Pause in speech pattern.	18.5	3	1	0.33	0.58	0	1
11. Displays student's work.	18.5	3	1	0.33	0.58	0	1
12. Smiles at student.	9.5	3	10	3.33	4.93	0	9
13. Frowns at student.	20.5	3	0	0.00	0.00	0	0
<b>Total positive</b>		<b>3</b>	<b>302</b>	<b>100.66</b>	<b>82.17</b>	<b>39</b>	<b>191</b>
<b>Negative category</b>							
1. Nods head.	20.5	3	0	0.00	0.00	0	0
2. Shakes head.	20.5	3	0	0.00	0.00	0	0
3. Gestures to student.	13.5	3	3	1.00	1.73	0	3
4. Close proximity to student.	16.5	3	2	0.67	1.15	0	2
5. Invades student's territory.	20.5	3	0	0.00	0.00	0	0

(table continues)

Table 10 (continued)

	<b>Rank</b>	<b>N<sup>a</sup></b>	<b>Sum</b>	<b>M<sup>b</sup></b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
6. Touches student.	<b>20.5</b>	3	0	0.00	0.00	0	0
7. Makes eye contact.	<b>13.5</b>	3	3	1.00	1.73	0	3
8. Stares at student.	<b>13.5</b>	3	3	1.00	1.73	0	3
9. Changes voice inflection.	<b>12</b>	3	8	2.67	2.52	0	5
10. Pause in speech pattern.	<b>20.5</b>	3	0	0.00	0.00	0	0
11. Displays student's work.	<b>20.5</b>	3	0	0.00	0.00	0	0
12. Smiles at student.	<b>20.5</b>	3	0	0.00	0.00	0	0
13. Frowns at student.	<b>20.5</b>	3	0	0.00	0.00	0	0
<b>Total negative</b>		<b>3</b>	<b>19</b>	<b>6.34</b>	<b>8.86</b>	<b>0</b>	<b>16</b>
<b><u>Neutral category</u></b>							
1. Nods head.	<b>20.5</b>	3	0	0.00	0.00	0	0
2. Shakes head.	<b>20.5</b>	3	0	0.00	0.00	0	0
3. Gestures to student.	<b>8</b>	3	12	4.00	6.93	0	12
4. Close proximity to student.	<b>1</b>	3	263	87.67	80.84	40	181
5. Invades student's territory.	<b>6</b>	3	23	7.67	6.81	0	13
6. Touches student.	<b>20.5</b>	3	0	0.00	0.00	0	0
7. Makes eye contact.	<b>7</b>	3	19	6.33	8.39	1	16
8. Stares at student.	<b>20.5</b>	3	0	0.00	0.00	0	0
9. Uses voice inflection.	<b>20.5</b>	3	0	0.00	0.00	0	0
10. Pause in speech pattern.	<b>20.5</b>	3	0	0.00	0.00	0	0
11. Displays student's work.	<b>20.5</b>	3	0	0.00	0.00	0	0
12. Smiles at student.	<b>20.5</b>	3	0	0.00	0.00	0	0
13. Frowns at student.	<b>20.5</b>	3	0	0.00	0.00	0	0
<b>Total neutral</b>		<b>3</b>	<b>317</b>	<b>105.67</b>	<b>102.97</b>	<b>41</b>	<b>222</b>
N <sup>a</sup> = the number of observations; M <sup>b</sup> = the average number of behaviors per observation.							

Table 11

**Field Study: Non-verbal Behaviors Most Frequently Used by Effective Language Arts Teachers,**  
**N = 3**

<b>Non-verbal behaviors</b>							
<b>Positive category</b>	<b>Rank</b>	<b><u>N</u><sup>a</sup></b>	<b>Sum</b>	<b><u>M</u><sup>b</sup></b>	<b><u>SD</u></b>	<b>Min</b>	<b>Max</b>
1. Nods head.	15	5	6	1.20	2.68	0	6
2. Shakes head.	18.5	5	0	0.00	0.00	0	0
3. Gestures to student.	7	5	38	7.60	2.19	4	9
4. Close proximity to student.	8	5	18	3.60	2.88	0	6
5. Invades student's territory.	5	5	57	11.40	13.15	0	32
6. Touches student.	18.5	5	0	0.00	0.00	0	0
7. Makes eye contact.	3	5	89	17.80	4.71	14	26
8. Stares at student.	16	5	4	0.80	1.79	0	4
9. Changes voice inflection.	4	5	68	13.60	6.31	9	24
10. Pause in speech pattern.	18.5	5	0	0.00	0.00	0	0
11. Displays student's work.	18.5	5	0	0.00	0.00	0	0
12. Smiles at student.	11.5	5	13	2.60	2.61	0	7
13. Frowns at student.	18.5	5	0	0.00	0.00	0	0
<b>Total positive</b>		<b>5</b>	<b>293</b>	<b>58.60</b>	<b>36.32</b>	<b>27</b>	<b>114</b>
<b>Negative category</b>							
1. Nods head.	18.5	5	0	0.00	0.00	0	0
2. Shakes head.	18.5	5	0	0.00	0.00	0	0
3. Gestures to student.	13	5	12	2.40	4.83	0	11
4. Close proximity to student.	18.5	5	0	0.00	0.00	0	0
5. Invades student's territory.	18.5	5	0	0.00	0.00	0	0

(table continues)

Table 11 (continued)

	<b>Rank</b>	<b>N<sup>a</sup></b>	<b>Sum</b>	<b>M<sup>b</sup></b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
6. Touches student.	<b>14</b>	5	11	2.20	2.17	0	5
7. Makes eye contact.	<b>9.5</b>	5	16	3.20	6.61	0	15
8. Stares at student.	<b>18.5</b>	5	0	0.00	0.00	0	0
9. Changes voice inflection.	<b>9.5</b>	5	16	3.20	5.54	0	13
10. Pause in speech pattern.	<b>18.5</b>	5	0	0.00	0.00	0	0
11. Displays student's work.	<b>18.5</b>	5	0	0.00	0.00	0	0
12. Smiles at student.	<b>18.5</b>	5	0	0.00	0.00	0	0
13. Frowns at student.	<b>18.5</b>	5	0	0.00	0.00	0	0
<b>Total negative</b>		<b>5</b>	<b>55</b>	<b>11.00</b>	<b>19.15</b>	<b>0</b>	<b>44</b>
<b><u>Neutral category</u></b>							
1. Nods head.	<b>18.5</b>	5	0	0.00	0.00	0	0
2. Shakes head.	<b>18.5</b>	5	0	0.00	0.00	0	0
3. Gestures to student.	<b>6</b>	5	41	8.20	11.67	0	25
4. Close proximity to student.	<b>1</b>	5	203	40.60	37.87	7	103
5. Invades student's territory.	<b>11.5</b>	5	13	2.60	4.22	0	10
6. Touches student.	<b>18.5</b>	5	0	0.00	0.00	0	0
7. Makes eye contact.	<b>2</b>	5	141	28.20	15.85	7	44
8. Stares at student.	<b>18.5</b>	5	0	0.00	0.00	0	0
9. Uses voice inflection.	<b>17</b>	5	1	0.20	0.45	0	1
10. Pause in speech pattern.	<b>18.5</b>	5	0	0.00	0.00	0	0
11. Displays student's work.	<b>18.5</b>	5	0	0.00	0.00	0	0
12. Smiles at student.	<b>18.5</b>	5	0	0.00	0.00	0	0
13. Frowns at student.	<b>18.5</b>	5	0	0.00	0.00	0	0
<b>Total neutral</b>		<b>5</b>	<b>399</b>	<b>79.80</b>	<b>70.06</b>	<b>14</b>	<b>183</b>
N <sup>a</sup> = the number of observations; M <sup>b</sup> = the average number of behaviors per observation.							

Table 12

**Field Study: Non-verbal Behaviors Most Frequently Used by the Effective Science Teacher,****N = 1**

<b>Non-verbal behaviors</b>							
<b>Positive category</b>	<b>Rank</b>	<b><u>N</u><sup>a</sup></b>	<b>Sum</b>	<b><u>M</u><sup>b</sup></b>	<b><u>SD</u></b>	<b>Min</b>	<b>Max</b>
1. Nods head.	<b>9</b>	3	30	10.00	10.44	3	22
2. Shakes head.	<b>18</b>	3	1	0.33	0.58	0	1
3. Gestures to student.	<b>6</b>	3	108	36.00	18.68	16	53
4. Close proximity to student.	<b>12.5</b>	3	10	3.33	3.06	0	6
5. Invades student's territory.	<b>5</b>	3	113	37.67	44.74	7	89
6. Touches student.	<b>17</b>	3	3	1.00	1.73	0	3
7. Makes eye contact.	<b>2</b>	3	164	54.67	33.56	20	87
8. Stares at student.	<b>14</b>	3	9	3.00	3.00	0	6
9. Changes voice inflection.	<b>1</b>	3	195	65.00	42.53	17	98
10. Pause in speech pattern.	<b>19.5</b>	3	0	0.00	0.00	0	0
11. Displays student's work.	<b>19.5</b>	3	0	0.00	0.00	0	0
12. Smiles at student.	<b>7</b>	3	80	26.67	27.61	3	57
13. Frowns at student.	<b>19.5</b>	3	0	0.00	0.00	0	0
<b>Total positive</b>		<b>3</b>	<b>713</b>	<b>237.67</b>	<b>185.93</b>	<b>66</b>	<b>422</b>
<b>Negative category</b>							
1. Nods head.	<b>19.5</b>	3	0	0.00	0.00	0	0
2. Shakes head.	<b>19.5</b>	3	0	0.00	0.00	0	0
3. Gestures to student.	<b>19.5</b>	3	0	0.00	0.00	0	0
4. Close proximity to student.	<b>19.5</b>	3	0	0.00	0.00	0	0
5. Invades student's territory.	<b>19.5</b>	3	0	0.00	0.00	0	0

(table continues)



Table 12 (continued)

	<b>Rank</b>	<b>N<sup>a</sup></b>	<b>Sum</b>	<b>M<sup>b</sup></b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
6. Touches student.	19.5	3	0	0.00	0.00	0	0
7. Makes eye contact.	19.5	3	0	0.00	0.00	0	0
8. Stares at student.	19.5	3	0	0.00	0.00	0	0
9. Changes voice inflection.	19.5	3	0	0.00	0.00	0	0
10. Pause in speech pattern.	19.5	3	0	0.00	0.00	0	0
11. Displays student's work.	19.5	3	0	0.00	0.00	0	0
12. Smiles at student.	19.5	3	0	0.00	0.00	0	0
13. Frowns at student.	19.5	3	0	0.00	0.00	0	0
<b>Total negative</b>		<b>3</b>	<b>0</b>	<b>0.00</b>	<b>0.00</b>	<b>0</b>	<b>0</b>
<b><u>Neutral category</u></b>							
1. Nods head.	15	3	7	2.33	2.52	0	5
2. Shakes head.	19.5	3	0	0.00	0.00	0	0
3. Gestures to student.	8	3	73	24.33	15.63	10	41
4. Close proximity to student.	3	3	138	46.00	43.97	10	95
5. Invades student's territory.	10	3	27	9.00	7.94	0	15
6. Touches student.	12.5	3	10	3.33	5.77	0	10
7. Makes eye contact.	4	3	129	43.00	16.09	28	60
8. Stares at student.	19.5	3	0	0.00	0.00	0	0
9. Uses voice inflection.	16	3	6	2.00	3.46	0	6
10. Pause in speech pattern.	19.5	3	0	0.00	0.00	0	0
11. Displays student's work.	19.5	3	0	0.00	0.00	0	0
12. Smiles at student.	11	3	15	5.00	8.66	0	15
13. Frowns at student.	19.5	3	0	0.00	0.00	0	0
<b>Total neutral</b>		<b>3</b>	<b>405</b>	<b>134.99</b>	<b>104.04</b>	<b>48</b>	<b>247</b>
N <sup>a</sup> = the number of observations; M <sup>b</sup> = the average number of behaviors per observation.							

8. Teacher gestured to student (neutral).
9. Teacher nodded head (positive).

It is important to note that there were no observable negative non-verbal behaviors recorded during these classroom observations.

### **Most Frequently Used Non-verbal Behaviors of the Social Studies Teacher**

Analysis of Table 13 of non-verbal behaviors most frequently used by the effective Social Studies teacher are:

1. Teacher established eye contact (neutral).
- 2.5 Teacher was in close proximity (neutral).
- 2.5 Teacher established eye contact (positive).
4. Teacher changed voice inflection (positive).
5. Teacher changed voice inflection (negative).
6. Teacher invaded student's territory (positive).
7. Teacher frowned at student (negative).
8. Teacher stared at student (negative).

A comparative analysis of the data in Tables 10 & 11 indicates that the effective Language Arts Teachers interact non-verbally slightly more than 1.17 times with at-risk African-American males middle school students than the effective Related Arts Teacher. There were a total of 293 positive interactions directed toward these students by the Language Arts Teachers. There were 55 negative interactions and 399 neutral interactions. In the positive category, it was the Related Arts Teacher who interacted slightly more than 1.03 times than the other group. In the negative category, however, the Language Arts Teachers interacted 2.89 times more and in the neutral category 1.26 times more with these at-risk male students than the Related Arts Teacher. Thus, the quantitative differences are small. Close examination of the four most frequently used non-verbal behaviors between both groups show 67% agreement. This finding indicates a close similarity between the Language Arts Teachers and the Related Arts Teacher in the choice and quality of the non-verbal behaviors directed toward at-risk African-American male middle school students.

Table 13

**Field Study: Non-verbal Behaviors Most Frequently Used by the Effective Social Studies Teacher,**  
**N = 1**

<b>Non-verbal behaviors</b>							
<b>Positive category</b>	<b>Rank</b>	<b><u>N</u><sup>a</sup></b>	<b>Sum</b>	<b><u>M</u><sup>b</sup></b>	<b><u>SD</u></b>	<b>Min</b>	<b>Max</b>
1. Nods head.	19	3	3	1.00	1.73	0	3
2. Shakes head.	21	3	1	0.33	0.58	0	1
3. Gestures to student.	11	3	22	7.33	6.66	0	13
4. Close proximity to student.	9	3	29	9.67	6.51	3	16
5. Invades student's territory.	6	3	59	19.67	12.86	5	29
6. Touches student.	18	3	5	1.67	1.53	0	3
7. Makes eye contact.	2.5	3	77	25.67	11.15	13	34
8. Stares at student.	22.5	3	0	0.00	0.00	0	0
9. Changes voice inflection.	4	3	70	23.33	16.80	5	38
10. Pause in speech pattern.	22.5	3	0	0.00	0.00	0	0
11. Displays student's work.	22.5	3	0	0.00	0.00	0	0
12. Smiles at student.	14	3	15	5.00	5.00	0	10
13. Frowns at student.	22.5	3	0	0.00	0.00	0	0
<b>Total positive</b>		<b>3</b>	<b>281</b>	<b>93.67</b>	<b>62.82</b>	<b>26</b>	<b>147</b>
<b>Negative category</b>							
1. Nods head.	22.5	3	0	0.00	0.00	0	0
2. Shakes head.	15.5	3	11	3.67	3.21	0	6
3. Gestures to student.	15.5	3	11	3.67	2.08	2	6
4. Close proximity to student.	22.5	3	0	0.00	0.00	0	0
5. Invades student's territory.	17	3	9	3.00	5.20	0	9

(table continues)

Table 13 (continued)

	<b>Rank</b>	<b>N<sup>a</sup></b>	<b>Sum</b>	<b>M<sup>b</sup></b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
6. Touches student.	<b>20</b>	3	2	0.67	1.15	0	2
7. Makes eye contact.	<b>10</b>	3	24	8.00	7.21	0	14
8. Stares at student.	<b>8</b>	3	31	10.33	11.68	0	23
9. Changes voice inflection.	<b>5</b>	3	62	20.67	14.36	10	37
10. Pause in speech pattern.	<b>12</b>	3	17	5.67	9.81	0	17
11. Displays student's work.	<b>22.5</b>	3	0	0.00	0.00	0	0
12. Smiles at student.	<b>22.5</b>	3	0	0.00	0.00	0	0
13. Frowns at student.	<b>7</b>	3	34	11.33	14.01	0	27
<b>Total negative</b>		<b>3</b>	<b>201</b>	<b>67.01</b>	<b>68.71</b>	<b>12</b>	<b>141</b>
<b><u>Neutral category</u></b>							
1. Nods head.	<b>22.5</b>	3	0	0.00	0.00	0	0
2. Shakes head.	<b>22.5</b>	3	0	0.00	0.00	0	0
3. Gestures to student.	<b>22.5</b>	3	0	0.00	0.00	0	0
4. Close proximity to student.	<b>2.5</b>	3	77	25.67	14.15	17	42
5. Invades student's territory.	<b>13</b>	3	16	5.33	9.24	0	16
6. Touches student.	<b>22.5</b>	3	0	0.00	0.00	0	0
7. Makes eye contact.	<b>1</b>	3	102	34.00	23.07	8	52
8. Stares at student.	<b>22.5</b>	3	0	0.00	0.00	0	0
9. Uses voice inflection.	<b>22.5</b>	3	0	0.00	0.00	0	0
10. Pause in speech pattern.	<b>22.5</b>	3	0	0.00	0.00	0	0
11. Displays student's work.	<b>22.5</b>	3	0	0.00	0.00	0	0
12. Smiles at student.	<b>22.5</b>	3	0	0.00	0.00	0	0
13. Frowns at student.	<b>22.5</b>	3	0	0.00	0.00	0	0
<b>Total neutral</b>		<b>3</b>	<b>195</b>	<b>65.00</b>	<b>46.46</b>	<b>25</b>	<b>110</b>
N <sup>a</sup> = the number of observations; M <sup>b</sup> = the average number of behaviors per observation.							

A comparative analysis of the data in Tables 10, 11, & 12 was conducted. The science teacher (see Table 12) used 9 of the 39 non-verbal behaviors most frequently. Language Arts Teachers (see Table 11) and the Related Arts Teacher (see Table 10) used five of the 39 non-verbal behaviors most frequently. The science teacher interacted 1.50 times more with at-risk male students than the Language Arts teachers in this study. Likewise, the effective science teacher interacted 1.75 times more than the effective Related Arts teacher in this study. Because there were no observed negative interactions between the Science teacher and the at-risk students, Language Arts teachers and the Related Arts teacher negatively interacted 55 times and 19 times more, respectively, than the Science teacher. Close comparison of the most frequently used non-verbal behaviors among the three groups shows qualitatively that the effective Science teacher interacted two times more positively with at-risk African-American male students than the effective Language Arts teachers and 1.5 times more than the effective Related Arts teacher.

A comparative analysis of the data in Tables 12 & 13 was conducted. There were important differences between both groups of teachers. The effective Science teacher interacted 1.65 more non-verbally with at-risk African-American male middle school students than the effective Social Studies teacher. The science teacher used 9 of the 39 non-verbal behaviors most frequently compared to 8 of 39 used by the Social Studies teacher. A difference between the two groups is the fact that 6 of the most frequently used non-verbal behaviors of the Science teacher are in the positive category compared to 3 for the Social Studies teacher. Another difference is the fact that there were no negative interactions directed toward at-risk students by the Science teacher during the observations. The Social Studies teacher, on the other hand, has three most frequently used non-verbal behaviors in the negative category.

A succinct presentation of the findings in this study are presented in Table 14.

Table 14

**Field Study: Summary of the Most Frequently Used Non-verbal Behaviors of Effective Teachers**

Non-verbal behaviors	Frequency of use						
	All teachers <u>N</u> = 6			Males <u>N</u> = 2		Females <u>N</u> = 4	
	Most	Least	Never	Most	Least	Most	Least
<b>Positive category</b>							
1. Nods head		X					
2. Shakes head		X			X		
3. Gestures to student.	X					X	
4. Close proximity to student.		X		X			
5. Invades student's territory.	X			X		X	
6. Touches student.		X					
7. Makes eye contact.	X			X		X	
8. Stares at student.		X			X		
9. Changes voice inflection.	X			X		X	
10. Pause in speech pattern.		X					X
11. Displays student's work.		X					X
12. Smiles at student.		X				X	
13. Frowns at student.			X		X		X
<b>Negative category</b>							
1. Nods head.			X		X		X
2. Shakes head.		X			X		
3. Gestures to student.		X					
4. Close proximity to student.		X					X
5. Invades student's territory.		X			X		
6. Touches student.		X			X		
7. Makes eye contact.		X					

(table continues)

Table 14 (continued)

**Field Study: Summary of the Most Frequently Used Non-verbal Behaviors of Effective Teachers**

	Most	Least	Never		Most	Least		Most	Least
8. Stares at student.		X							
9. Changes voice inflection.		X							
10. Pause in speech pattern.		X				X			
11. Displays student's work.			X			X			X
12. Smiles at student.			X			X			X
13. Frowns at student.		X				X			
<b><u>Neutral category</u></b>									
1. Nods head.		X				X			
2. Shakes head.			X			X			X
3. Gestures to student.		X							
4. Close proximity to student.	X				X			X	
5. Invades student's territory.		X							
6. Touches student.		X				X			
7. Makes eye contact.	X				X			X	
8. Stares at student.			X			X			X
9. Changes voice inflection.		X							
10. Pause in speech pattern.			X			X			X
11. Displays student's work.			X			X			X
12. Smiles at student.		X				X			
13. Frowns at student.			X			X			X

(table continues)

Table 14 (continued)

**Field Study: Summary of the Most Frequently Used Non-verbal Behaviors of Effective Teachers**

Frequency of use							
White <u>N</u> = 1		African-American <u>N</u> = 5		Ages 28-29 <u>N</u> = 2		Ages 41-46 <u>N</u> = 4	
Most	Least	Most	Least	Most	Least	Most	Least
					X		X
	X						X
X		X		X		X	
X		X		X		X	
					X		X
X		X		X		X	
	X						X
X		X		X		X	
			X		X		X
			X		X		X
						X	
	X						
	X		X				X
					X		X
			X		X		X
	X						X
	X						X
					X		X

(table continues)



Table 14 (continued)

**Field Study: Summary of the Most Frequently Used Non-verbal Behaviors of Effective Teachers**

Most	Least		Most	Least		Most	Least		Most	Least
							X			X
	X									X
										X
	X			X						
	X			X						
	X									X
	X									X
	X			X						
			X				X		X	
X			X						X	
							X			X
	X									
	X		X						X	
	X			X						X
	X						X			
	X									
	X									
	X									X
	X			X						

(table continues)

Table 14 (continued)

**Field Study: Summary of the Most Frequently Used Non-verbal Behaviors of Effective Teachers**

Frequency of use		
Elementary-Middle-High School experience <u>N</u> = 2	Middle School experience <u>N</u> = 3	Elementary and Middle School experience <u>N</u> = 1
Most	Most	Most
		X
		X
X		
X	X	X
X	X	X
X	X	X
		X

(table continues)







## CHAPTER 5

### **CONCLUSIONS, DISCUSSION OF ISSUES RELATED TO THE STUDY, THE RESEARCHER'S REFLECTIONS, IMPLICATIONS FOR PRACTICE, LIMITATIONS OF THE STUDY, AND RECOMMENDATIONS FOR FUTURE RESEARCH**

Teachers and students continually communicate non-verbally. The focus of this study was on identifying those non-verbal behaviors used by effective teachers of at-risk African-American male middle school students. This chapter has six sections: the conclusions, a discussion of issues related to the study, the researcher's reflections, limitations of the study, implications for practice, and recommendations for future research.

#### **Conclusions**

##### **Non-verbal Behaviors Most Frequently Used by Effective Teachers**

Research question 1 was: **What non-verbal behaviors are used by effective teachers of at-risk African-American male middle school students?**

Effective teachers of at-risk African-American male middle school students used positive or neutral non-verbal behaviors most frequently in their interactions with these students. They interacted with at-risk male students by getting physically close to them, using voice inflection, establishing eye contact, invading students' territories, and gesturing. These interactions were positive or neutral and, in the researcher's opinion, they were conscious choices on the part of the teachers. All six teachers seemed to interact from an established rapport with the students which made the non-verbal behaviors effective tools in managing the classroom. The positive or neutral interactions initiated by these effective teachers appeared to engage, motivate, or stimulate the participation of these at-risk male students. This facilitated their learning and avoided such unproductive responses as embarrassment, turning off, or shutting down by these students. The researcher came to the conclusion that when at-risk male students perceive teachers' non-verbal behaviors as positive, they are able and willing to modify their behavior in a desired direction. This conclusion was based on observed students'

responses to their teachers' behavior. The researcher did not converse with any students.

Close proximity expresses approach thereby communicating positive feelings. Eye contact, vocal expressiveness (voice inflection), smiling, close proximity, leaning toward a student, appropriate touching, and gesturing (Andersen, 1979) communicate acceptance of students. Wolfgang (1979) cited four of the six most frequently used non-verbal behaviors identified in this study as characteristics of good teachers. A comparison follows:

**Wolfgang:**

1. They moved toward the class.
2. They showed variation and clarity in their voice.
3. They maintained eye contact.
4. They gestured for emphasis.
5. They smiled frequently.
- .

**Researcher:**

1. Teachers were in close proximity (neutral).
2. Teachers changed their voice inflection (positive).
3. Teachers established eye contact (neutral).
4. Teachers established eye contact (positive).
5. Teachers gestured to students (positive).
6. Teachers invaded students' territories (positive).

**Non-verbal Behaviors Least Frequently Used by Effective Teachers**

Research question 1A was: **What non-verbal behaviors are least frequently used by effective teachers of at-risk African-American male middle school students?**

There were twenty-four non-verbal behaviors least frequently used by effective teachers in this study. Eight behaviors were positive, ten were negative, and six were neutral. Effective teachers in this study seldom paused in their speech pattern in a positive manner. Nor did they frequently display students' work, shake their heads, stare, touch, nod their heads, come within close proximity, or smile at students in a positive manner. These same teachers seldom interacted with at-risk male students by coming in close proximity, touching students, invading students' territories, shaking their heads, using a pause in their speech pattern, gesturing, staring, frowning, establishing eye contact, or using voice inflection in a negative manner. These teachers infrequently interacted with at-risk male students by nodding their heads, using voice inflection, touching, smiling, invading territory, or gesturing to students in a neutral manner.

Comparison of the most frequently used behaviors to the least frequently used behaviors yielded an important finding. Using a mean cut-off score of 10 as a criterion,

there were four times more least frequently used non-verbal behaviors (24) than frequently used behaviors (6).

The six effective teachers in this study consciously chose to interact with their at-risk male students in a positive or neutral manner. The negative interactions observed were usually utilized to focus attention, to correct, or to bring about a positive change in a student's behavior.

There were nine non-verbal behaviors that were never used. Effective teachers in this study never frowned at students in a positive manner, nodded their heads, displayed students' work, or smiled at students in a negative manner, shook their heads, stared at students, used a pause in their speech pattern, or frowned at students in a neutral manner.

### **Similarities and Differences Between Female and Male Teachers**

Research questions 2 & 2A were: **What non-verbal behaviors are most frequently used by effective teachers disaggregated by sex? What non-verbal behaviors are least frequently used by effective teachers disaggregated by sex?**

Both female and male teachers' most frequently used non-verbal behaviors were in the positive and neutral categories. These behaviors were tools used effectively by the teachers which facilitated the learning of the at-risk male students by capturing their attention and focusing their engagement. Female teachers used seven non-verbal behaviors most frequently while male teachers used six behaviors. Of the eight different non-verbal behaviors most frequently used between males and females, there was 63% agreement. Thus, when female and male effective teachers interacted with at-risk African-American male middle school students, they came into close proximity and established eye contact in a neutral manner. They likewise changed voice inflection, established eye contact, and invaded students' territories in a positive manner. Both genders used their physical presence (close proximity) when interacting to engage, focus the attention, and garner the interest of targeted students by invading their personal space. They also used eye contact and voice inflection which reflected their interest and responsiveness.

Differences of most frequently used non-verbal behaviors between female and



male effective teachers were few. Female teachers gestured and smiled at students in a positive manner while male teachers came into close proximity in a positive manner. It is the opinion of the researcher that the seldom use of these non-verbal behaviors by the female and male teachers in this study were tools these teachers chose not to utilize in setting a “feeling tone” with their students and managing their classroom.

Both female and male teachers consciously chose to avoid interacting in a non-productive manner with at-risk male students by frowning at students in a positive manner, nodding their heads, displaying students’ work, smiling at students in a negative manner, shaking their heads, staring at students, using a pause in their speech pattern, or frowning at students in a neutral manner.

There was a difference of seven least frequently used non-verbal behaviors between female (12) and male (19) teachers; and a difference of 13 of the 22 total behaviors between both groups. Thus, there was 41% agreement of the least frequently used non-verbal behaviors between female and male effective teachers of at-risk African-American male middle school students.

Effective female teachers perpetuated their non-productive interactions by not using a pause in their speech pattern or displaying students’ work in a positive manner. They also did not come in close proximity with students in a negative manner.

Effective male teachers did not interact with at-risk male students by shaking their heads or staring at students in a positive manner. They also did not shake their heads, invade students’ territories, touch students, use a pause in their speech pattern, or frown at students in a negative manner. These male teachers perpetuated their non-productive interactions by not nodding their heads, touching students, or smiling at students in a neutral manner.

### **Similarities and Differences Between White and African-American Teachers**

Research questions 3 & 3A were: **What non-verbal behaviors are most frequently used disaggregated by race? What non-verbal behaviors are least frequently used disaggregated by race?**

The principal of the field study school was asked to select six effective teachers of

at-risk African-American male middle school students using the criteria in Appendix B. The list given the researcher had the names of two white and four African-American teachers with two African-American alternates. Because of personal illness, one white teacher was replaced. Thus, the racial make-up of the teachers in this study consisted of one white and five African-Americans. The white effective teacher used five non-verbal behaviors most frequently as compared to seven behaviors used by the African-American teachers.

Both the white teacher and the African-American teachers interacted with at-risk male students by coming into close proximity with them in a neutral manner. This behavior sent a message of acceptance and interest to the students. These teachers changed voice inflection, established eye contact, and invaded students' territories in a positive manner. Of the eight different most frequently used non-verbal behaviors of both groups, there was 50% agreement. This researcher believes that both races of teachers used these particular non-verbal behaviors to send an attitudinal message of acceptance, interest, and caring while at the same time using these behaviors as managerial tools in maintaining control within the classroom.

Differences between both groups' behaviors were few. The white effective teacher constantly moved about the classroom while monitoring students. This teacher's rapport with at-risk students allowed this individual to come in close proximity in a positive manner.

In addition to the four behaviors mentioned above, the African-American effective teachers interacted with at-risk male students by establishing eye contact and gesturing in a neutral manner. Unlike the white effective teacher, the African-American effective teachers gestured to their at-risk male students frequently in a positive manner.

There were 23 non-verbal behaviors least frequently used by white and African-American effective teachers. Of the 23 least frequently used behaviors, there was 39% agreement which represented 9 behaviors common to both groups. Thus, the white teacher and the African-American teachers seldom interacted with at-risk African-American male middle school students by frowning in a positive manner, nodding their

heads, displaying students' work, or smiling in a negative manner. Both groups seldom shook their heads, stared, used pause in their speech pattern, displayed students' work, or frowned in a neutral manner.

There were 20 least frequently used non-verbal behaviors by the white effective teacher. The breakdown was 3 positive, 8 negative, and 9 neutral behaviors. There were 12 least frequently used non-verbal behaviors by African-American effective teachers. The breakdown was 3 positive, 4 negative, and 5 neutral behaviors. Comparing the number of negative and neutral behaviors least frequently used by both groups, the white teacher interacted almost 50% less than the African-American teachers. Thus, other differences between both groups revealed that the white effective teacher seldom shook his head or stared in a positive manner; shook his head, invaded students' territories, touched, used pause in speech pattern, or frowned in a negative manner. In addition the white teacher seldom nodded his head; touched students; used voice inflection; or smiled in a neutral manner.

The non-verbal behaviors initiated by this white effective teacher are in contradiction to Simpson and Erickson's (1983) assertion that white teachers may react in a more negative way toward black males. Their study dealt with teachers at the elementary level. However, taking into account the frequently used and least frequently used non-verbal behaviors by this white middle school effective teacher, these findings present an opposing view to Simpson and Erickson's assertion.

The African-American effective teachers seldom interacted with at-risk African-American male middle school students by pausing in their speech pattern, displaying students' work in a positive manner, or coming into close proximity in a negative manner. These African-American teachers chose to interact with at-risk male students in a positive and neutral manner. They minimized the use of negative non-verbal behavior, using it in appropriate situations to bring about desired responses from targeted students.

### **Similarities and Differences Between Age Groups**

Research question 4 was: **What non-verbal behaviors are most frequently used by effective teachers disaggregated by age?** There were two age groups: 28-29 and 41-46.

There were nine non-verbal behaviors most frequently used by teachers in the 28-29 and 41-46 age groups. Of the nine behaviors, there was 56% agreement between both groups of teachers. Effective teachers between the ages of 28-29 and 41-46 interacted with at-risk African-American male middle school students by coming into close proximity and establishing eye contact in a neutral manner with these students. They also changed voice inflection; established eye contact, and invaded students' territories in a positive manner.

There was a 44% difference between the age groups. The 28-29 age group frequently came into close proximity with at-risk male students in a positive manner, whereas the 41-46 age group frequently gestured and smiled in a positive manner and gestured in a neutral manner. The 41-46 age group interacted 3.34 times more (2561) with at-risk male students than the 28-29 age group (766) for reasons not determined by this researcher.

### **Similarities and Differences Between Levels of Teaching Experience**

Research questions 5, 5A, & 5B were: **What non-verbal behaviors are most frequently used by effective teachers who have elementary, middle, and high school experience? Middle school experience? Elementary and middle school experience?**

There were 11 non-verbal behaviors most frequently used by effective teachers who have elementary, middle, and high school experience, middle school experience, and elementary and middle school experience. Of the 11 most frequently used behaviors, five were common to all three groups which represented 45% agreement. Therefore when teachers from all three groups interacted with at-risk African-American male middle school students they changed voice inflection and established eye contact in a positive manner, came into close proximity and established eye contact in a neutral manner, and

invaded students' territories in a positive manner.

Teachers with elementary, middle, and high school experience and teachers with middle school experience most frequently used 7 non-verbal behaviors with 71% agreement. Effective teachers with elementary, middle, and high school experience interacted with at-risk male students by coming into close proximity in a positive manner whereas effective teachers with middle school experience interacted by changing voice inflection in a negative manner. The one effective teacher with elementary and middle school experience interacted with at-risk male students by nodding her head, gesturing and smiling in a positive manner, and gesturing in a neutral manner.

In making a comparison of the most frequently used non-verbal behaviors of effective teachers by teaching experience, this researcher assumed that teachers with middle school experience would set a bench mark for teachers in the two other categories. This assumption was partially based on this researcher's knowledge of the training provided to middle level teachers in this school division. Another part of this researcher's assumption had to do with the fact that teachers with high school and elementary school experience possessed a knowledge of the students at those respective levels, and not at the middle school level, which could help or hinder these teachers in making the transition to teach at the middle school level.

The assumption of this researcher was not correct. The results of this study indicated that the effective teacher with elementary and middle school experience utilized more non-verbal behaviors than teachers in the two other categories.

### **Comparison of Frequently Used Non-verbal Behaviors Disaggregated by Academic Subjects**

Research questions 6, 6A, & 6B were: **What non-verbal behaviors are most frequently used by the effective related arts teacher? The effective language arts teachers? The effective science teacher? And the effective social studies teacher?**

The related arts, language arts, science, and social studies teachers frequently used a total of 13 non-verbal behaviors. Five of the 13 behaviors were used by the one social studies teacher, the one science teacher, and the three language arts teachers. The one

related arts teacher frequently used 4 of the 5 behaviors common to the others. Thus, when these effective subject-area teachers interacted with at-risk African-American male middle school students, they changed voice inflection, established eye contact, and invaded students' territories in a positive manner. They also established eye contact and came into close proximity in a neutral manner.

The related arts teacher and the language arts teacher used five non-verbal behaviors frequently with two differences. The related arts teacher came into close proximity frequently in a positive manner whereas the language arts teachers established eye contact in a neutral manner. The science teacher gestured in a neutral manner, nodded her head, gestured, and smiled in a positive manner.

The social studies teacher alone frequently frowned, stared, and used voice inflection in a negative manner.

### **Discussion of Issues Related to the Study**

#### **Principals' Selection of Effective Teachers**

During the pilot and field-study phases of this study, there was a concern in the mind of this researcher as to whether the cooperating building principals based their selections of effective teachers solely on the criteria provided them, or did they partially base their selection on teachers who could "handle" or "manage" at-risk African-American male middle school students. This way of thinking plays into the stereotyping of at-risk African-American male students as being slow academically and behavior problems socially. As a practicing building-level administrator, the researcher is aware that there are principals who assess teachers as effective based primarily on their managerial skills of at-risk students.

The design of this study did not provide a means of determining the selection (thinking) process of the participating principals. This researcher relied on the reputations of both principals as experienced administrators with strong instructional leadership skills. Because these teachers interacted in a positive or neutral manner with their at-risk African-American male students in what appeared to be a natural mode of operation, their selection as effective teachers seems to be valid.

### **Effective Teachers' Use of Students' Background Information**

Manning and Baruth (1996) assert that in most school settings teachers expect culturally-diverse students to become bicultural and adopt the non-verbal communication of the majority culture of the school. Effective teachers of at-risk students should take the “bicultural responsibility” upon themselves by reading students’ cumulative folders for information on students’ academic, social, domestic, and behavioral backgrounds in an effort to assess students’ strengths and weaknesses. This information is valuable for the assessment of and preparation for the individual needs of students as well as in establishing individual rapport with students. Such information gathering may even entail making home visits.

The effective teacher knows the importance of establishing and maintaining a strong home-school relationship. The teacher initiating parent conferences at school may foster this relationship. Such conferences would help to establish rapport and a cooperative relationship between both parent and teacher that could be a catalyst in bridging the next level of going into the community to make home visits. When at-risk students see the efforts of their teachers and sense teachers’ commitment to their (students’) education and well being, they usually respond to these efforts and acts by active engagement in the classroom. In other words, when at-risk students believe that a teacher believes in them, they work for success in an effort to please the teacher and to not let the teacher down.

An effective teacher with high efficacy who is matched with at-risk students has the opportunity to become an effective teacher of at-risk students. Astute school administrators who can identify effective teachers on the faculty are usually in positions where they can be catalytic agents in helping effective teachers become effective with at-risk students.

### **Interrater Reliability**

An interesting issue surfaced during one of the pilot study observations between the specialist and the researcher. Right after the first observation during our discussion,

we discovered a difference in our perceptions of one of the subject's actions. That which the researcher perceived as a gesture, the specialist perceived as a mannerism. Further discussion revealed that the specialist had worked with this teacher in previous capacities. Thus, familiarity may consciously or unconsciously be an influence during an observation. This could have serious implications when collecting and interpreting data. This situation may be avoided by using participants unknown to the observers involved in an interrater reliability process.

### **The Researcher's Reflections**

Any teacher can become an effective teacher of at-risk African-American students provided the individual possesses certain characteristics, qualities and skills, or is willing to acquire them. This researcher believes that an effective teacher should:

1. Be committed to the teaching profession. A committed teacher knows the importance of his or her own professional development and the impact it has on executing his or her teaching responsibilities. A committed teacher continually looks for or works to develop improved instructional strategies and delivery methods in meeting the needs of students.
2. Possess high efficacy. A teacher with high efficacy is an individual who has the belief that he or she possesses the skills and abilities to teach students, but more importantly, the desire and willingness to do what it takes to help students achieve and be successful.
3. Be successful at planning, communicating, performing, instructing, managing behavior, and evaluating to facilitate the academic achievement of students. An effective teacher knows that successful planning of lessons to facilitate learning is predicated on a thorough assessment of students' performance levels. An effective teacher knows that a successful teaching act requires excellent communicating skills in explaining the content; performing skills to model the procedure; instructing skills to check for understanding and to monitor and adjust when necessary; managing skills to maintain interest, focus, and to keep students engaged; and evaluating skills to provide valuable



feedback.

4. Listen to students. The effective teacher knows the importance of listening for feelings as well as facts.

Effective behaviors taken from Smith (1996) suggest that the effective teacher should:

1. Exhibit control and calmness. In class settings students take their behavioral cues from teachers.
2. Provide for varied learning styles.
3. Use a variety of learning strategies and models. Utilization of numbers 2 & 3 help to meet the needs of students, especially at-risk students in diverse classroom settings.

Teachers can become effective with at-risk students, including African-American males, by availing themselves of workshops, conferences, and staff development sessions which deal with teaching students of diverse backgrounds in the same classroom. The acquired knowledge and skills are beneficial to teachers' understanding of the culture of at-risk students.

### **Non-verbal Behaviors That Facilitate Learning**

Analysis of the data for most frequently used non-verbal behaviors by effective teachers in this study indicated that utilization of these behaviors could help create a climate conducive for academic achievement for at-risk students, including African-American males. Based on the results of this study, this researcher suggests that teachers interact with at-risk students by:

1. Getting physically close to them.
2. Using voice inflection for emphasis and reassurance.
3. Establishing good eye contact when communicating.
4. Invading their personal space when appropriate.
5. Gesturing to students.

A teacher's close physical presence heightens a student's awareness (tension) and his or her ability to stay focused and on task. A teacher usually invades a student's

personal space when it becomes necessary to take close proximity to another level. This other level may be invoked for such positive reasons as providing assistance and guidance or such negative reasons as changing unacceptable behaviors. The important point to remember is that the teacher's presence sends a message of acceptance, interest, and care to the student. It could also send a message of displeasure as well. When an at-risk student perceives a teacher's non-verbal behaviors as positive and supportive, the student usually modifies his behavior and uses his energy in a more desired direction.

### **Implications for Practice**

Principals can use these findings to provide staff development programs to enhance the overall effectiveness of the entire faculty or to focus on the deficiencies for marginal or less effective teachers who work with at-risk students. Building principals could use the Non-verbal Teacher Behavior Observation Form to identify the behaviors used by teachers. If too many behaviors are being used, the teachers would know where to target any change efforts. An analysis of behaviors used by teachers could be completed, and the data could be used to develop in-service programs to change the behaviors.

It is recommended that staff development personnel and principals in school districts provide in-service opportunities for teachers to make them aware of the importance of non-verbal behaviors in the classroom and the impact they have on students' behavior and achievement. Recommended programs could be at the building level or the district level. Suggested training topics may include:

1. Awareness of non-verbal behaviors in the classroom.
2. Using non-verbal behaviors to control the classroom and keeping students on task.
3. Effective use of negative non-verbal interactions to bring about positive student responses.
4. How adequate are you at receiving students' non-verbal messages? Can you perceive what your students are not saying?

Miller (1988) gave two reasons that underscore why teachers need to be aware of

their non-verbal behaviors in the classroom: (1) to acquire the ability to send accurate messages and (2) to become more proficient at receiving students' messages. It is important that teachers understand the role non-verbal behavior plays during the course of a day in a classroom. Implementation of the recommended programs would add alternative strategies to teachers' endeavors to work effectively with at-risk African-American male middle school students.

Principals are concerned about attaining accreditation for their schools. Due to the focused attention on accountability for the success of all eighth graders in middle schools, principals and teachers are looking for effective instructional strategies for those students who traditionally fall in the lower quartiles on standardized tests. Implementation of a program that utilizes the six most frequently used non-verbal behaviors identified in this study may be beneficial to facilitating the learning of certain targeted students.

#### **Limitations of the Study**

There were three limitations associated with this study. The first limitation was the small number of participants used. The second limitation was the racial imbalance of the participants used in this study. The third limitation was centered around the fact that the building principal was the only person asked to select the participants in this study. A larger more racially balanced group of participants would yield more data for the researcher to analyze, make findings, and draw conclusions.

#### **Recommendations for Future Research**

There are several recommendations for future research that are based on this study. The first recommendation is to increase the time for coding behaviors on the instrument from three to five seconds. Such decision-making every three seconds resulted in intense 30-minute observations. Additional time is needed in determining the category (positive, negative, or neutral) for the observed behavior. This would also eliminate the urge to record "short-hand" symbols for later interpretative purposes.

A second recommendation would be to limit the number of behaviors on the instrument to 6 or 7 per observation. Having fewer behaviors to observe at a given time minimizes the intense concentration required and maximizes the opportunity for greater

accuracy of the data gathered. A limitation to having fewer behaviors to observe at a given time prevents the opportunity to record behaviors which may occur because they were omitted from the instrument. Another limitation is the fact that fewer behaviors on the instrument per observation would increase the number of observations needed.

A third recommendation is to use a blank instrument (no pre-determined behaviors) to observe and record the non-verbal behaviors displayed by effective teachers with targeted at-risk students. This method would capture those non-verbal behaviors used by effective teachers which may fall beyond the realm of those (behaviors) scripted on an instrument. A limitation to using an open-ended (blank) instrument is the potential difficulty in determining the most or least frequently used behaviors.

Future research should be conducted with a large, equal sample of white and African-American effective teachers in an effort to collect data from a balanced sample.

Future research should be conducted to determine how students receive non-verbal behaviors from teachers. The emphasis of such a study would focus on students' behaviors when they interact with effective teachers.

Future research should look at the use of a different category system other than positive, negative, and neutral. Some of the findings in this study appeared illogical due to the use of these three categories. For example, frowning as positive, smiling in a negative manner, and staring in a positive manner.

Future research should be conducted to replicate this study using students other than at-risk students. What similarities and differences would such a findings yield?

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## Appendix A

### Seven Domains of Non-verbal Behavior

Kinesics--Behaviors through body actions such as head movements, postures, body movements, and facial expressions are referred to as kinesics. In reference to teaching behaviors, posture, which includes leaning toward someone, is generally seen as expressing warmth or positive feelings; leaning away expresses more negative or cold feelings (Mehrabian, 1969). Head nodding is seen as acceptance, while shaking the head suggests less acceptance.

Proxemics--The use of space or distance for communication is referred to as proxemics. Teachers and students tend to define their territory and then protect it. Such territorial arrangements for a classroom environment generally prove to be counterproductive and may result in a breakdown of positive communication. When a teacher circulates about the room and "invades" students' territories, a greater percentage of students complete their seatwork. This type of non-verbal behavior lets students know that the teacher is interested in their performance.

Haptics--Non-verbal behavior through touching is known as haptics. It is a common method of communicating among early childhood and elementary school teachers and their students. Unfortunately, when interacting with adolescents, touching is often reserved for the display of extreme emotions. While touching is a basic means of non-verbal communication, difficult interpretation makes its use awkward in some teaching situations. Teachers are advised not to be afraid to touch but to be alert to the various interpretations that touching may evoke. Through haptics teachers can display extreme warmth and caring to students.

Oculesics--The use of the eyes and eye movement behavior is known as oculesics. The eyes most assuredly do influence communication. The teacher can improve communication channels by establishing good eye contact with students. When students are speaking, eye contact from the teacher should be evident. This tells students that the

teacher is interested. No eye contact communicates disinterest. Eye messages can serve the teacher in many ways. The two most significant ways are to promote positive relationships in the classroom and to communicate some form of teacher dissatisfaction to the students in order to influence behavior change.

Vocalics--The use of the voice and how it can communicate various types of messages is termed vocalics. It is important that teachers have a working knowledge of just what can be done and communicated with the voice. Students prefer listening to voices that change in inflection. Changes in pitch, volume, and rate of speech create interesting communication transactions with more favorable student reactions (Crale, 1979). The use of the pause in a speech pattern is definitely a communicator in a non-verbal sense. When pauses are few and not obvious, the teacher is seen as being extroverted and outgoing, perhaps even confident. The intended use of the pause in teaching, sometimes called wait time when following a question, also can be used to the teacher's advantage in provoking student thought (Rowe, 1972). Effective teachers occasionally tape-record their classroom interaction to analyze their abilities in vocalics. The effective teacher develops an exciting voice and is lively, sincere, and motivating through vocalics.

Environmental factors--Environmental factors in non-verbal communication refers to the setting established in the classroom. Bright, colorful, decorated surroundings tend to draw students into the environment. It is important for teachers to be cognizant that the display of student work can be a very significant part of an inviting atmosphere. Students whose work or contributions have a place in the environment become a greater part of the classroom themselves.

Facial expressions—The human face is a primary source in determining an individual's feelings and attitudes. Momentary facial expressions are indicative of feelings and attitudes such as raising the eyebrows, wrinkling the brow, or curling the lips (Miller, 1988, p. 9). Miller pointed out that facial expressions may be voluntary or involuntary. Fear is an example of an involuntary facial expression, because when an individual is truly frightened, no thought is given to how to move the facial muscles. On

the other hand a facial expression can be voluntary when an individual tries to deliberately hide his true feelings.

## **Appendix B**

### Identification Criteria for Effective Teachers of At-Risk African-American Male Middle School Students

Effective teachers display competency in planning, communicating, performing, instructing, managing behavior, and evaluating. It is not uncommon to “find at the core of effective teachers’ behaviors personal qualities such as nurturance, empathy, initiative, personal warmth, and child orientation” (Bedwell et al. 1991, p. 13).

In addition to the five personal qualities mentioned above, effective teachers of at-risk African-American male students may be identified with the following criteria:

1. Accepts at-risk African-American male students as they are.
2. Accepts ideas and feelings of at-risk African-American male students.
3. Listens to students for feelings as well as facts.
4. Employs control skills for classroom management, which implies the ability to deal with problems and to avoid behavior problems.
5. Paces the lesson and plans for the entire period.
6. Uses facial expressions to show impatience, concern, patience, or anger.
7. Models enthusiasm to motivate students.
8. Uses humor in class.
9. Establishes and develops class routines and procedures.

Lessons of effective teachers should:

1. Be appropriate to the developmental level of the students.
2. Address the stated objectives in the lesson.
3. Have a motivational aspect, that will stimulate the African-American male student’s desire to attend to the lesson.
4. Have opportunities for all learners to be actively involved in the learning activities.
5. Allow at-risk African-American male students to function at least at the application level of learning.
6. Be designed so as to allow all students feedback concerning their level of competency ( Bedwell et al., 1999, pp. 100-111).



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