# TEACHER NONVERBAL IMMEDIACY: A STUDY OF ITS EFFECT ON STUDENT ACADEMIC PROGRESS AND END OF COURSE TEST PERFORMANCE IN A RURAL ALTERNATIVE HIGH SCHOOL

by

Jan Richardson Singletary

Liberty University

A Dissertation Proposal Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

Liberty University, Lynchburg, VA

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## ABSTRACT

TEACHER NONVERBAL IMMEDIACY: A STUDY OF ITS EFFECT ON STUDENT ACADEMIC PROGRESS AND END OF COURSE TEST PERFORMANCE IN A RURAL ALTERNATIVE HIGH SCHOOL. (under the direction of Dr. Jose Puga) School of Education, Liberty University, June, 2013,

Meeting the needs of all students is a continuing challenge for educators. Schools across the nation are designing programs to foster student achievement and graduation. Alternative education programs are gaining in popularity among students who have not succeeded in traditional schools and would previously have dropped out of school. It is essential that teachers connect with students so that students believe teachers care about them and their education. In this quantitative study, a significant correlation was found between students' perception of teacher immediacy, determined with the Nonverbal Immediacy Scale – Observer Report (NIS-O), and their rate of academic progress as measured by the number of hours he/she was academically engaged in earning a Carnegie unit. A significant correlation was not found between teacher immediacy and a student's End of Course Test (EOCT) score. Spearman correlations of each of the two variables of interest with individual items of the NIS-O showed significant negatives correlations of the hours required to earn a Carnegie unit with several survey items.



*Keywords*: alternative education, dropout prevention, facilitating graduation, Georgia End of Course Test (EOCT), nonverbal immediacy, quantitative research

## Dedication

With a grateful and humble heart, I dedicate this dissertation to my family. My parents, Tom and Sheila, have always pushed me to rise to higher and higher levels of the ladder, but have been a soft place to land when I fell back. My brother and sister-in-law, Jim and Haley, have cheered me onward from the sidelines. I come from a long line of educators, but the one who had the most impact on my life is my grandmother, Bettie Ross. She has always managed to see the best in me even when I haven't always seen it in myself. She is my rock, my advocate, and my confidant. My grandfather, Bo, taught me the power of carefully chosen and crafted words. My dearest friends, Linda Beth and Dwain Gilreath, love my crazy ideas and me unconditionally. My sister, Laura, patiently listened to countless hours of "doctoral talk". My daughter, Sarah Elizabeth, who continues to grow into the most beautiful and intelligent young lady I know is truly my most precious gift. My stepson, Daniel, is showing me the joys of raising a son into a responsible, well-rounded young man. My husband, David, has lifted me up in prayers, supported me with his kind words, and never wavered in his belief in me. I am blessed beyond measure and I love you all very much!

Finally, I dedicate this work to the Master, for without him I would be nothing. "With men it is impossible, but not with God: for with God all things are possible" (Mark 10:27, KJV).

**Acknowledgements**

This dissertation is the product of the input, guidance, and feedback of a great many people. I would like to express my sincere and deepest gratitude to those who helped me in this long journey. Dr. Jose Puga, my committee chair, was always quick to respond to my numerous questions and pleas for help. He never failed to end each of our exchanges with words of encouragement that kept me motivated and focused. Dr. Daphne Washington pushed me to think about my study in ways I never would have been able to without her assistance. Dr. Libby Bicknell encouraged me to apply for the doctoral program and helped me through every step of this long process. Deb Price provided invaluable editing assistance. There are far too many of my past and present colleagues in Lumpkin County Schools and the Mountain Education Charter High School to name them individually, but I would not have been able to complete this journey without their encouragement, smiles, and advice.

I have been blessed to have two of the most wonderful parents in the world. Their love and support have been a constant source of strength in my life. My father, Dr. Tom Richardson, spent countless hours assisting me in this endeavor without a word of complaint. My mother, Sheila Richardson, has always set high expectations for me and given me the tools to accomplish all my goals professionally and personally.

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## List of Abbreviations

End of Course Test (EOCT)

Georgia Department of Education (GaDOE)

Georgia High School Graduation Test (GHSGT)

Georgia Testing Identification number (GTID)

General Educational Development (GED)

Institutional Review Board (IRB)

King James Version (KJV)

National Defense Education Act (NDEA)

New American Standard Bible (NASB)

National Center for Education Statistics (NCES)

*No Child Left Behind (NCLB)*

Nonverbal Immediacy Scale – Observer Report (NIS-0)

Piedmont Central High School (PCHS).

Standard Error of Measurement (SEM)

Statistical Package for the Social Sciences (SPSS)

# CHAPTER ONE: INTRODUCTION

The educational system in the United States is charged with serving a diverse student body. Teachers and administrators are continuously challenged to adapt to the constantly changing needs of todays learners so that they maintain sufficient interest during the years of school to graduate. Quality instruction and engagement of the learner are essential elements in facilitating students' high school graduations. The earning potential of high school graduates is far greater than that of those students who drop out of school. Given the current state of the economy and the scarcity of available jobs, it is becoming increasingly more critical that schools provide multiple pathways to graduation that meet the diverse needs of today's students. Alternative education programs are striving to meet those needs by providing nontraditional means to graduation such as self-paced instruction, classes during evening hours, and a decreased emphasis on extracurricular activities. Students who choose an alternative education setting often do so because of frustration with the traditional educational system based on their previous school experiences. It is incumbent upon teachers to relate to students in a convincing and caring manner to stimulate students' efforts towards their own learning.

## Background

A nationwide emphasis on educational reform began with the passage of the National Defense Education Act (NDEA) in 1958, which Congress enacted in response to the Soviet Union's launch of the first man-made satellite, Sputnik. The impression was created among Americans that the education system was deficient in preparing

students in science and math. This prompted increased federal funding in science and math education and began the expanding role of the federal government in education that continues today. Previously each state had complete autonomy in establishing educational policies and practices, since no federal educational funding was provided to supplement state and local government funding sources (Zhao, 2009).

The NDEA authorized funding for states' education systems that was not contingent on nationally normed academic achievement. State legislatives have long espoused the need for accountability in education in an effort to measure the effectiveness of their educational systems. This accountability has most often been determined by adherence to student performance standards as measured by standardized test scores. Both the standards and the consequences of failure to achieve them have varied widely among states (Rubenstein, Ballal, Stiefel, & Schwartz, 2008).

Federal education reform was central to George W. Bush's 2000 presidential campaign. Upon his election, the federal government became much more heavily involved in establishing measurable standards which state governments were required to meet in order to receive federal education grants. The No Child Left Behind Act (NCLB) tied federal monies to states' abilities to meet proficiency standards. However, since each state was allowed to establish both the proficiency standards and the tests by which the standards were measured, the level of expected proficiency varied widely among states (Derthick & Dunn, 2009).

The current state of education in the United States has been influenced by an emphasis on accountability, measured primarily by standardized test scores, and by competition among states for federal funds. This culture in education, coupled with the

stringent requirements of NCLB, has created ethical conflicts for schools attempting to find a balance between educating all students and avoiding being labeled a failing school. This balance has become even more difficult when students have not progressed through school and excelled in a manner that has allowed them to influence school statistics positively.

**Financial pressures**

School systems have continued to be deeply affected by the developing economic situation in the United States. According to Jacobson (2008), many states have struggled to continue support of multiple education initiatives, including expanded programs for pre-K students and teacher raises. She found that fifteen states reported deficits in their state budgets during the 2008 fiscal year. Furthermore, this decrease in revenues was predicted in December 2007 in reports from the National Conference of State Legislatures, National Governors Association, and the National Association of State Budget Officers (Jacobson, 2008). Budget shortfalls in many states have resulted in significant reductions in the funds allocated to education. A reported 26.3 billion dollar shortfall in California in 2009 caused legislators to consider suspension of Proposition 98 that provides for a specified percentage of the state's overall budget to be spent on education (Maxwell, 2009). A concerted effort by the California Teachers Association and the Education Coalition prevented suspension of Proposition 98, but educational funding was still cut by 17 billion over the previous two years resulting in the loss of over 20,000 teaching positions (Danitz, 2001). In the 2010 budget, education funding in Kansas was reduced by 84 million dollars for a cumulative decrease of 153 dollars per pupil from fiscal year 2008 (Ash, 2009).

Teacher furlough days, increased class sizes and decreased funding for instructional resources have become increasingly commonplace as schools attempt to compensate for dramatically reduced budgets. The Redlands Unified School District in California drastically reduced the number of teachers and support personnel to implement a budget reduction plan that eliminated a total of nine million dollars from the 2009 budget (Gill, 2009). Due to budget constraints, Georgia, Virginia, and Washington were forced to cut funding designated for reduced class sizes resulting in a greater pupil to teacher ratio. During the 2009-2010 school year, Hawaii decreased the required number of instructional days by 17 days and furloughed teachers for these days as well (Johnson, Oliff, &Willams, 2011).

The fiscal year 2011 budgets of at least 34 states and the District of Columbia were decreased from the previous year according to Johnson et al. (2011). Funding decreases for public education from the previous year included Colorado with 5% or $400 per student, Georgia with 5.5%, Illinois with 4%, Michigan with $165 per student, and Mississippi by 7.2%. Decreases in funding have resulted in curtailment or elimination of programs for disadvantaged children and high-needs or at-risk students. Also cut were funds for after-school programs, transportation, and social services. School systems' funding has traditionally primarily been based on student enrollment numbers, so a decrease in enrollment proportionally decreases state and local funding (Johnson et al., 2011).

Hanushek (1986) reviewed 187 studies to determine the relationship between student achievement and expenditures, but a significant correlation was not found. However, in a review of the same studies, Hedges, Laine, and Greenwald (1994) stated,

"Reanalysis with more powerful analytic methods suggests strong support for at least some positive effects of resource inputs and little support for the existence of negative effects" (p. 14). Spending more money on instruction does not fully equate with increased student performance, but it does contribute to better teaching practices, reduced class size, and more cohesive schools (Rumberger & Thomas, 2000).

**Dropout phenomenon**

The severe budget pressures have resulted in policy makers being forced to reevaluate funding designed to address low performing high schools and initiatives designed to curtail dropouts. Student dropout has continued to be a critical problem with only 68.8 percent of the nations' high school students graduating on time with a regular diploma in 2007. An estimated 1.3 million students in the class of 2010 did not graduate in the expected four years (Swanson, 2010).

A significant amount of research has been conducted on dropout prevention and many programs are in place throughout the nation that are designed for just this purpose. Students who remain in school and make adequate academic progress are likely to graduate from high school.

**Alternative schools**

Schools must choose either to stay the course by continuing to provide a quality education for those students, or to find other means such as alternative school settings or discharging them from school without making every possible attempt to keep them engaged in the learning process. Riehl (1999) posits two theories on the latter. In the rational systems theory, students who performed poorly on standardized tests were dismissed from school in order to show an improvement in the school's overall test

scores. He took this one step further with the application of the institutional theory, which advanced the idea that schools dismissed not only the students whose scores decreased overall school performance, but also those students with educational challenges. He defined these students as those who reflected negatively on the school's image due to their unconventional attitudes and behaviors.

While there has been a need for alternative settings in education for many years, the relatively new increased emphasis on graduation rates and on academic achievement for all groups of students has forced educators to explore alternative settings more fully. By placing students in an alternative setting, schools may be able to provide additional help and academic support for those students who have not been successful in the regular setting and who could potentially cause the school to be labeled as "Needs Improvement".

**Teacher immediacy**

Extensive research has been conducted on the effect of students' perceptions of teacher immediacy over the past several decades. Witt, Wheeless, and Allen (2004) conducted a meta-analytical review that studied the relationship between teacher immediacy and student learning. Hess and Smythe (2001) examined 35 research papers supporting the theory that increased teacher immediacy has led to increased student cognitive learning. They concluded that the research has been deficient in that: "a) it lacks cognitive theoretical foundation, b) it uses self-report measures that may be flawed or ill-suited, and c) it founds causal claims on inappropriate data" (p. 197).

Hess and Smythe (2001) conducted research to address the perceived deficiencies in previous research studies. Their research indicated that: a) perceived

teacher immediacy was related to perceived cognitive learning (r=-.41, p< .001, n=286), b) perceived teacher immediacy was positively related to liking of the instructor (r=. 66, p< .001, n=288), and c) perceived cognitive learning and liking of the instructor were related (r=-.41, p< .001, n=286).

The relationship between teacher immediacy and the factors that influence academically at-risk students' academic motivations was investigated by Ruiz (2006). She concluded that teacher immediacy creates social capital that affects student attitudes and orientations towards school. Composite scores showed a positive correlation between teacher immediacy and the degree to which students valued education and moderate correlation to student affect about school. Teacher immediacy was positively correlated to teacher support. An analysis of individual survey items showed that teachers who encouraged students to respond to questions in class, called students by name, gave students feedback on their academic performances, used appropriate touch, and while teaching moved about the classroom and used vocal variety were perceived as being concerned for the students and believing in their abilities to be successful (Ruiz, 2006).

Richmond and McCroskey (2000) stressed the importance of immediacy by stating that "the more communicators employ immediate behaviors, the more others will like, evaluate highly, and prefer such communicators; and the less communicators employ immediate behaviors the more others will dislike, evaluate negatively, and reject such communicators" (p. 212). Positive correlation has been shown between use of immediacy behaviors and overall student learning (Allen & Shaw, 1990; Christophel, 1990; Menzel & Carrell, 1989; Rodriguez, Plax & Kearney, 1996).

A study of 179 high school students found that teacher nonverbal immediacy and verbal feedback sensitivity made them more receptive to teacher criticism of their writing (Martin, 2009). A study by Comstock, Rowell, and Bowers (1995) showed that a moderately high level of teacher immediacy was more effective than low or very high levels for improving student learning. Harrigan (2010) found that students' affective learning explained 36 percent of the variance in the relationship between teacher nonverbal immediacy and student cognitive learning.

While there is considerable research on the effect of immediacy, the correlation between students' rate of academic progress and their perceptions of teacher immediacy has not been researched exclusively in the alternative education setting. Additionally, the relationship between alternative education students' perceptions of teacher immediacy and these same students' scores on the End of Course Test (EOCT) has not been investigated. Thus, this study was designed to address these gaps in the literature.

**Problem Statement**

The problem addressed in this study is that alternative education students often have academic difficulties and mindsets that interfere with their abilities to achieve academic progress at the same rate as their peers in traditional schools. Educational success has not been the norm for many of these students and they have often lacked motivation and focus to complete required course work. Rumberger and Lim (2008) state that one of the most important predictors of a student dropout is lack of engagement including active involvement in academics and extracurricular activities. This lack of involvement has led to frustration with the educational process and often these students have dropped out of school and forfeited a high school diploma. Job

opportunities and earning potential have been greatly reduced for adults who did not graduate from high school.

An improved understanding of alternative education students' perceptions of teacher nonverbal immediacy was needed in order to determine if teacher nonverbal immediacy could be a factor in facilitating students' academic progress rates. Using college freshmen and sophomores enrolled in an agriculture class, Velez and Cano (2008) concluded that teachers should consciously and repeatedly offer encouraging gestures and expressions to students. Hoyer (2011) found that when students and their teachers were given time to develop a relationship, the midterm scores were significantly correlated with teacher immediacy. While this is only one factor among many that potentially affect student achievement, it could play a vital role in helping students feel comfortable and valued in the school setting. Investigating this relationship can provide information that may be used to improve how teachers interact with their students, strengthening the relationship for the benefit of improving overall academic functioning.

**Purpose Statement**

The purpose of this quantitative correlational study was to test the dual-process theory of supportive communication outcomes that compares the predictor variable, alternative education students' perceptions of nonverbal teacher immediacy, to the variables of interest, alternative education students' rates of academic progress and End of Course Test (EOCT) scores, in an alternative educational setting at Piedmont Central High School (PCHS). By using a correlational design, it was possible to determine if a statistically significant relationship existed between the study variables. The predictor

variable, alternative education students' perceptions of nonverbal teacher immediacy, was defined as stated by Mehrabian (1969) as "the degree of directness and intensity of interaction between a communicator and the object of his communication" (p. 414). One variable of interest, rate of academic progress, was defined as the number of instructional hours students were academically engaged in earning one Carnegie unit. The Georgia Department of Education (GaDOE) defined a Carnegie unit as a unit earned once a student has completed a state-approved course and spent a minimum of 150 hours in the course (Georgia Department of Education website, n.d.,a). Due to the self-paced instructional model utilized at PCHS, a waiver for seat hours was issued by the GaDOE for this alternative school. The other variable of interest, EOCT scores, was defined as the alternative education students' scores on the standardized EOCT.

Alternative education students' perceptions of nonverbal teacher immediacy were determined using a survey. Composite rating scores from the survey were correlated with the alternative education students' course completion rates to determine if there is a relationship between the alternative education students' feelings of teacher immediacy and number of hours spent earning a Carnegie unit. Composite rating scores were also correlated with the students' standardized test scores on the EOCT to determine the strength of the relationship, if it existed.

The study took place in a nontraditional high school in a rural county in Georgia that meets in the evenings and was populated with students who ranged in age from 14 to 21 and were considered to be at high risk for dropping out of school. By determining if alternative education students' perceptions of teachers' nonverbal immediacy affected achievement, it will be possible to improve the school's programs and climate to better

suit the needs of its population. Though it is not possible with a correlational study to prove causation, the researcher was able to determine that a relationship existed and the strength of the relationship. The results of this study may assist educators to find ways that are more effective to intervene and prevent dropping out of high school for at-risk students.

**Significance of the Study**

In a meta-analysis of 119 studies from 1943 – 2004, Cornelius-White (2007) found positive correlation between learner-centered teacher variables and increases in student self-esteem, social connectiveness and skills, and higher order thinking skills. Furthermore, positive correlations were found in decreases in destructive behavior, absences, and dropout. Teacher nonverbal immediacy can be a key component of a learner-centered environment. This study added to a small but growing body of literature that examines the relationship between student feelings of teacher nonverbal immediacy and student success in school.

The unique contribution of this study to the literature was the alternative school setting in which the study was conducted. The results, if a positive correlation were to be revealed, have the potential to give school and system administrators information on how to enhance the learning experience for students in a nontraditional setting. The GaDOE mandated the administration of the EOCT and the score counted 15% or 20% depending on the year of entry into ninth grade, towards the final grade, thereby making this single assessment an important component of courses that required an EOCT (Georgia Department of Education website, n.d.,b). The results of this study may provide insight for teachers and administrators to assist in increasing EOCT scores by

improving overall school climate and the relationship between student and teacher.

**Research Questions**

A research study on the relationships between alternative education students' perceptions of teachers' nonverbal immediacy and their rate of academic progress as well as performance on the EOCT needed careful design. Nonverbal immediacy was measured using the Nonverbal Immediacy Scale – Observer Report (NIS-0), developed by Richmond, McCroskey, & Johnson (2003). The authors have granted unrestricted and free use of the instrument for research purposes.

The study will address two research questions:

**Research question 1:** Is there is a relationship between alternative education students' perceptions of teachers' nonverbal immediacy, as measured by the Nonverbal Immediacy Scale – Observer Report (NIS-O), and the same students' rates of academic progress, defined as the number of hours students were academically engaged in earning a Carnegie unit?

**Research question 2:** Is there is a relationship between alternative education students' perceptions of teachers' immediacy, as measured by the Nonverbal Immediacy Scale – Observer Report (NIS-O), and the same students' scores on the End of Course Tests?

**Hypotheses**

**Research hypothesis 1:** A statistically significant negative correlation will exist between alternative school students' perceptions of teachers' nonverbal immediacy as measured by the Nonverbal Immediacy Scale – Observer Report (NIS-O) and the same students' rates of academic progress, defined as the number of hours students were

academically engaged in earning a Carnegie unit.

**Null hypothesis 1:** There is no statistically significant relationship between alternative education students' perceptions of teachers' nonverbal immediacy, as measured by the Nonverbal Immediacy Scale – Observer Report (NIS-O) and the same students' rates of academic progress. The null hypothesis will be rejected if the Pearson Product Moment Correlation Coefficient is statistically significant. This null hypothesis will not be rejected if the Pearson Product Moment Correlation Coefficient is not statistically significant.

**Research hypothesis 2:** A statistically significant positive correlation will exist between alternative education students' perceptions of teachers' nonverbal immediacy as measured by the Nonverbal Immediacy Scale – Observer Report (NIS-O) and the same students' End of Course Test (EOCT) scores.

**Null hypothesis 2:** There is no statistically significant relationship between alternative education students' perceptions of teachers' nonverbal immediacy, as measured by the Nonverbal Immediacy Scale – Observer Report (NIS-O), and the same students' scores on End of Course Tests. If the correlation is statistically significant between the survey results and EOCT scores, the null hypothesis will be rejected. If the correlation is too small to be significant, the null hypothesis will not be rejected.

**Identification of Variables**

One continuous variable of interest, rate of academic progress, was operationally defined as the number of hours students were academically engaged in earning a Carnegie unit. A Carnegie unit was earned once a student completed all requirements for a given course and had a passing grade in the course. The other continuous variable

of interest, EOCT score, was operationally defined as a scale score ranging from zero to one hundred on a subject matter competency test developed and validated by the Georgia Department of Education (2011a). The continuous predictor variable, teacher nonverbal immediacy, was operationally defined using Meherabin's 1969 and 1971 studies, was measured using Richmond, McCroskey, and Johnson (2003) Nonverbal Immediacy Scale – Observer Report (NIS-O), and was expressed as a composite survey score.

Students' ratings of teachers' nonverbal immediacy were correlated with both the students' rates of course completion and their EOCT scores. These relationships were examined to determine if the predictor variable, students' perceptions of teacher immediacy, had a statistically significant impact on the variable of interests: student achievement as measured by course completion rates and EOCT scores. The strength of these relationships should guide further discussion and research about the role of perceived immediacy in student achievement.

**Definitions of Core Terms**

It is important to clarify definitions of terms that will be used throughout this study.

Carnegie Unit: According to Georgia code IHF (1) 160-4-2-.48 High School graduation requirements "A unit of credit for graduation shall be awarded to students only for successful completion of state-approved courses of study based on minimum of 150 clock-hours of instruction provided during the regular school year." (Georgia Department of Education website, n.d.,a). However, PCHS received a waiver for this requirement, as the instruction was all self-paced; therefore, completion rate was

entirely dependent on a student's motivation, achievement level, and previous knowledge.

Dropouts: Students who were not enrolled in school, were beyond the age requirements for compulsory attendance laws, and had not earned a high school diploma.

End of Course Tests (EOCT): Georgia Department of Education mandated standardized tests designed to help student identify strengths and areas of need in learning, therefore improving performance in all high school courses and on other assessments such as the Georgia High School Graduation Tests (GHSGT). The EOCT also provided data to evaluate the effectiveness of classroom instruction at the school, system, and state levels. In 2011-2012, the EOCT became Georgia's high school accountability assessment as part of the College and Career Readiness Performance Index. Tests were required in: Mathematics I: Algebra/Geometry/Statistics, Mathematics II: Geometry/Algebra II, Statistics, Georgia Performance Standards Algebra, Georgia Performance Standards Geometry, United States History, Economics/Business/Free Enterprise, Biology, Physical Science, ninth grade Literature and Composition, and American Literature and Composition. Due to changes in graduation requirements, Georgia was in a transition phase during which the EOCT counted either 15% or 20% of students' final grade. For students who entered ninth grade in the fall of 2011, the Georgia Department of Education no longer administered the previously mandated Georgia High School Graduation Tests (GHSGT) in any content area except writing. EOCT scores counted towards 20% of the final grade for these students. For students who entered ninth grade in the fall of 2010 or previous

years, the EOCT scores counted 15% of the final grade. Passage of the GHSGT was still being required for graduation for these students. A minimum final course grade of 70 was required to receive credit toward graduation requirements (Georgia Department of Education website, n.d.,b).

Immediacy: This was defined by Mehrabian (1971) as the principle that "people are drawn toward persons and things they like, they evaluate highly, and prefer; they avoid or move away from things they dislike, evaluate negatively, or do not prefer" (p. 1). For this study, immediacy measured the students' feelings about their teachers' interactions and whether those interactions were positive and open or negative and closed.

Immediate Communication: Richmond and McCroskey (2000) applied Mehrabian's principal of immediacy to communication, coining the term immediate communication, and stated "the more communicators employ immediate behaviors, the more others will like, evaluate highly, and prefer such communicators; and the less communicators employ immediate behaviors the more others will dislike, evaluate negatively, and reject such communicators" (p. 212).

Nonverbal immediacy: Andersen (1979) defined nonverbal immediacy as "behaviors that reduce physical and psychological distance between teachers and students" (p. 543). Examples of nonverbal immediacy include gestures, touch, and proximity.

Rate of academic progress: The number of hours a student was academically engaged in earning a Carnegie unit.

## CHAPTER TWO: REVIEW OF THE LITERATURE

The review of literature was conducted using multiple sources of peer-reviewed research journals, professional literature, and previously completed studies related to this study. Several themes emerged, and gaps in the current research were identified. This literature review is comprehensive, but it could not possibly include all related studies and information considering the wealth of material that exists on school culture and student motivation.

### Introduction/Historical Background

The role of the teacher has changed throughout United States history from teaching only the children of upper class parents who could afford tuition to teaching all students as compulsory education laws were enacted across the nation. By 1918, all 48 states had legislation requiring that students of certain ages, specific by state, attend school (Baker, 2004). This altered the make-up of the classroom and created new challenges for teachers. Because of their changing roles and what is expected of teachers, their relationships with students have also changed. Esteve (2000) summed up the new, very challenging role that teachers face in modern American education by stating:

> In addition to knowing their subjects well, today teachers are expected to facilitate learning, be an efficient educator, and organize work groups. Teachers must also teach, care for the psychological equilibrium of the pupils,

> help their social integration and attend to the sexual education. We ask them to do intercultural education, education for health, prevention of drugs taking. Often, they have to care for a pair of pupils with special needs who are integrated into the class and who need very specific attention. (p. 199)

This newfound role for teachers has required they forge a stronger, more personal relationship with students if influence is to be achieved. Larsen (2010) warned that the current state of education, in which the teacher is viewed as the most important factor for success of students, schools, and society as a whole, has an unintended consequence of placing such value on the teacher that students do not engage in healthy discourse and debate in the classroom out of respect for the position. This inflated importance foisted on the teacher, has caused students to be afraid to think for themselves. It has been difficult for teachers to balance the massive role described by Esteve (2000) and not be viewed as pivotal to societal change and therefore, above questioning, as described by Larsen (2010). Teachers, students, and modern society have created an educational system that may not be capable of meeting the needs of all students in the typical setting.

While there has been a need for alternative settings in education for many years, an increased emphasis on graduation rates and on academic achievement for all groups of students has forced educators to explore alternative settings more fully. By placing students in an alternative setting, schools may be able to provide additional help for those students who are not successful in the regular setting and who could potentially cause the school to be labeled as "Needs Improvement".

Alternative schools have often faced the daunting task of addressing problems

that have been developing for many years as students have been moved through school. Often these students have not been academically successful for many years, if ever. Hickman, Bartholomew, Mathwig, and Heinrich (2008) found that differences in academic performance between students who would ultimately graduate or dropout first appeared in kindergarten and became more pronounced in all academic subjects as the students struggled through school. A longitudinal study conducted by Bowers (2010) indicated a strong correlation between a student's non-cumulative grade point average and the probability of dropping out.

Alternative schools began in the 1960s in both urban and suburban settings. Urban schools were designed to serve students who were unsuccessful in the traditional setting. Suburban alternative schools were innovative and forward thinking in their approach to education (Raywid, 1999). However, in our current society many alternative education programs have been viewed as substandard and as a place merely to house delinquent students. Sagor (1999) stated that many alternative schools discriminate against at-risk students since the schools segregate these students, thereby violating the intent of *Brown v. Board of Education* (1954). In these instances, the education provided to alternative education students was both separate from and not equal to that of their mainstreamed peers.

For those students whose needs are not being met in traditional classrooms, school systems have created various types of alternative settings. Modern day alternative schools have typically been used to educate students who have not been successful in the regular school setting. This lack of success may have been a result of the student's own behavior or may have stemmed from issues with teachers who

were not properly trained or equipped to deal with challenging learners.

A new era for alternative schools began over 50 years during which they have been at the forefront of educational reform. Raywid (1994) viewed them as educational innovators and has stated,

> Amid all the current talk of school restructuring, alternatives are the clearest example we have of what a restructured school might look like. They represent our most definitive departure from the programmatic, organizational, and behavioral regularities that inhibit school reform. Moreover, many of the reforms currently pursued in traditional schools – downsizing the high school, pursuing a focus or theme, students and teachers choice, making the school a community, empowering staff, active learner engagement, authentic assessment – are practices that alternative schools pioneered. (p. 26)

The school in this study was different from typical alternative schools, where students have usually been placed following disciplinary proceedings. It was founded as an independent charter school to provide a means to high school diplomas for students unlikely to be successful in a traditional program. The program has grown rapidly from three graduates during the year of its inception in 1993 to graduating over 300 students in 2011. Most of the students have not been placed at the school because of disciplinary proceedings, but rather have been given the opportunity to enroll in the school if they have expressed a willingness to attend evening classes and complete the required coursework. Students who have been expelled from traditional, public or private schools have not been excluded from the possibility of attendance at this alternative school that has provided a setting for some students at the highest risk

to drop out of school. Students have often chosen the alternative education setting for its innovative instructional delivery models, flexible scheduling, and credit recovery.

## Theoretical or Conceptual Framework

The conceptual framework through which one views and interprets the world is the researcher's paradigm. The researcher must clearly delineate his/her paradigm to reveal mindset and resulting biases. According to Williams (2010), paradigms influence our perception of the world and are supported by our professional contacts. A researcher's paradigm affects research design, data collection and analysis, and presentation of research results. Denzin and Lincoln (1994) defined a paradigm as, "the nature of the world, the individual's place in it, and the range of possible relationships to that world" (p. 107).

### Post-positivist, critical realism

The researcher's paradigm is post-positivist, critical realism, in that it is acknowledged that observations may contain error and theories may be revised throughout the research process. Quantitative research evolved from the theory of positivism that viewed reality as independent of human constructs in both the physical and social worlds. This philosophical approach held that phenomenon in the social sciences could best be explained by objectively obtained data (Ary, Jacobs, Razavieh, & Sorensen, 2006).

Post-positivism is a major revision to the positivist theory because while the positivist theory holds that the truth is discernible, post-positivism recognizes that errors occur in measurements and observations. The truth can be approached, but not

fully disclosed, due to these errors in measurements and observations (Trochim, 2006).

Within the research paradigm of post-positivism is the philosophy of critical realism that holds that there is an independent reality that can be investigated. Thus, the post-positivist, critical realism approach seeks to discover closer approximations to reality but recognizes that errors in observations and lack of objectivity of scientists will prevent a full understanding of reality (Trochim, 2006).

**Christian worldview**

This researcher's paradigm includes the Christian worldview that God exists and is actively concerned with and involved in our daily lives (Colossians 1:17, NASB). Christians are called to treat others with kindness and compassion, forgiving each other as they have been forgiven by God through Christ (Ephesians 4:32, NASB). In the course of examining teachers' immediacy behaviors towards their students, the researcher may be biased to perceive immediacy as more effective than it really is because it models Christian ideals.

**Dual-process theory**

Burleson's (2009) dual-process theory of supportive communication stated that the effects of supportive interaction depended on the intrinsic properties of the interaction and on how the interaction was processed cognitively by the recipient. The intrinsic properties of the interaction have two contributing factors: the quality of the advice and the level of empathy with the recipient. Lowest quality advice attempts to diffuse the situation quickly by distraction. In contrast, carefully crafted advice can lead the recipient to reevaluate his/her beliefs, goals, or perceptions.

While this latter approach is more likely to incur negative reactions from the recipient, it is also more likely to result in a resolution to the problem. Furthermore, advice that is highly personalized for the recipient recognizes and legitimizes his/her feelings, and seeks to reconcile these feelings within a broader context.

Additionally, two factors also influence how the recipient cognitively processes advice: the ability of the recipient to understand and utilize the advice, as well as cues that affect how the recipient interprets the advice. The recipient must be able not only to understand the message but also have the motivation to seriously evaluate its applicability to his/her current situation. Cues from the speaker may include non-content portions of the message or nonverbal actions. Environmental cues may trigger associations or sensations that can aid or hinder acceptance of the message (Burleson, 2009).

Among the elements that facilitate a supportive interpretation by the recipient are nonverbal clues that foster immediacy, such as involvement and pleasantness (Miczo & Burgoon, 2004) or eye contact and smiling (Jones & Wirtz, 2007; Lewis, Clarke, Sanchez-Hucles, Derlega, & Winstead, 1992). Thus, immediacy is perceived in a very personal context and is interpreted differently by each individual.

## Related Literature

### Dropout phenomenon

Within the literature, the definition of dropout has not been consistent so statistical reports cannot be easily compared. In reports of the National Center for Education Statistics (NCES), students who earned a General Educational Development (GED) credential were not included in the calculation of graduation

rates, but instead were included in the calculation of the status completion rate. Omission of GED statistics from the graduation rate may have been justified because students who have earned a GED generally earn lower wages and are less likely to be employed than students who earned high school diplomas (Tyler & Loftstrom, 2009). While the use of two graduation rates may be appropriate, it may also be misleading if the rate used is not clearly identified. Heckman and LaFontaine (2010) stated that NCES status completion rates are shifted upward by seven to eight percent because they include GED holders as high school graduates. The report, *Diplomas Count: An Essential Guide to Graduation Policy and Rates*, conducted by the Editorial Projects in Education Research Center counted any ninth grader who did not receive a diploma in four years as a dropout (Cook, 2006). The state of Georgia has followed its lead and has now been calculating the graduation rate using a four-year completion requirement. Students who do not graduate on time, even if still actively enrolled and taking classes are counted as dropouts.

**Participation-identification model**

Two models have been advanced to explain the phenomenon of school dropout. Finn (1989) proposed the participation-identification model (Figure 2.1) to replace the frustration-self-esteem model.

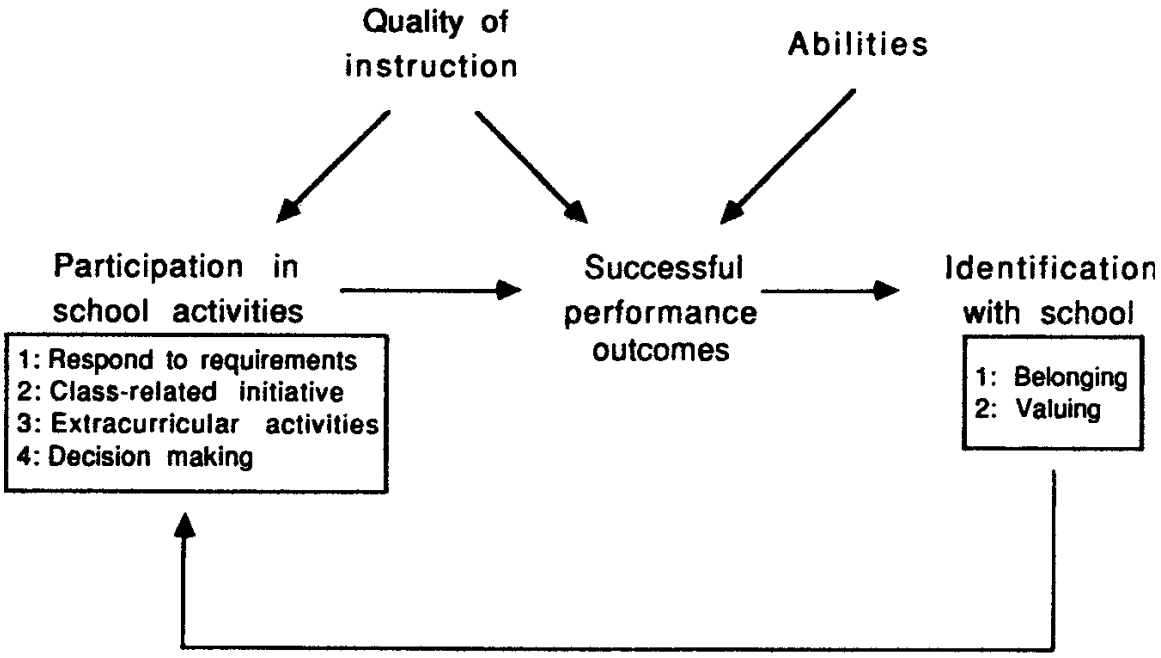


**Figure 2.1: Participation-Identification Model (Finn, 1989)**

Finn's model posits that students who are engaged in the schooling process are less likely to become dropouts. Participation has been seen to develop into more complex forms as students mature. Level one student participation involved only being willing to attend, respond to teachers' directions and questions, and to complete assigned work responsibly. Students at level two initiated questions and dialogue with their teachers; spent extra time in the classroom before, during, and/or after school; did more classwork and homework than required; and perhaps joined subject related clubs or perform community service. Level three students engaged in social, extracurricular, and athletic activities. These activities may have augmented or supplanted extensive academic work. This maturation of student participation may signify that the student was taking increasing responsibility for his/her own education. Student identification with school involved both developing an internalized sense of

belonging and coming to value success at school related goals. Students who felt they belonged at school believed they are a distinct part of the environment and found school to be an important component of their lives. This is a global theory applying to all students and not specific subgroups based on different races/ethnicity, gender, socioeconomic status, etc.

While engagement in schoolwork is stressed by many studies, Mahoney and Cairns (1997), McNeal (1995), and Randolph, Rose, Fraser, and Orthner (2004) indicated participation in extracurricular activities decreased the risk of dropping out. The design of the alternative education school in this study did not allow for extracurricular activities, which put these students at greater risk of dropping out. It was necessary to determine other important factors for student success in order to capitalize on them to offset the lack of extracurricular opportunities for alternative education students.

**Risk factors**

Alexander, Entwisle, and Kabbani (2001) identified being a male, living in a household with a single parent, being born to a teenage mother, or being in a family with a high level of stress as early risk factors for dropping out of school. Other factors that contribute to high school dropouts included low income, low academic achievement, and behavior problems. Parental involvement and support were high predictors of graduation rates (Englund, Egeland, & Collins, 2008). Additional contributors that were identified by Tyler and Lofstrom (2009) include loss of interest in school, poor performance on tests and course work, and grade retention. Students who assumed adult responsibilities, such as marriage and parenting at an early age,

were more likely to leave school (Tyler & Lofstrom, 2009).

Sparks, Johnson, and Akos (2010) found nine risk factors for dropping out in a sample of 17,735 ninth grade North Carolina students and reduced these to three groupings which were most significantly correlated with dropout. Most important were: a) failing English I or scoring below grade level on grade 8 standardized reading test, b) being retained in any grade, kindergarten through ninth grade, or c) scoring below grade level on the North Carolina end-of-grade math test in 8$^{th}$ grade or failing Algebra I.

**Consequences**

The consequences of dropping out have included higher unemployment rates, lower lifetime earning potential, and higher societal costs from incarceration and public assistance. Sum, Khatiwada, and McLaughlin (2009) stated that the 2008 employment rate among high school graduates was 68.1%, but that of dropouts was only 45.7%. Furthermore, dropouts were almost twice as likely to be unemployed for an entire year. The mean annual earnings of dropouts were only 57% that of graduates and they were less likely to receive formal training from their employers.

A report released by the Bureau of Labor Statistics indicated that students without a high school diploma in 2010 had a median income of $444 per week, while students with a diploma earned $626 per week (United States Department of Labor, 2011). When comparing median incomes of high school graduates and dropouts, ages 18 to 67, Rouse (2007) found a difference of approximately $19,000 per year. Assuming a person worked from ages 18 to 66, when he/she could retire with full social security benefits, this difference over his/her lifetime of working would be

$912,000. The problem of high school dropouts has been particularly acute in Georgia, which ranked 48th in state graduation rates in 2009 according to the National Center for Higher Education Management Systems (2009).

Students who have dropped out of high school potentially affect not only school systems negatively, but also society as a whole. High school dropouts generally earn less money, resulting in lower tax revenues and an increased need for financial assistance for basic needs including housing, food and health care. The difference between the amount a high school graduate and a dropout pays in income taxes is $2,200 a year according to Rouse (2007). Sum et al., (2009) predicted, using 2007 data, that the lifetime net fiscal contribution of adults 18-64 years old was negative $5,191 for high school dropouts, but $287,384 for high school graduates. The average high school dropout generated lower tax revenues, required greater government assistance, and incurred higher incarceration costs compared to an average high school graduate.

A follow up study conducted by Sum, Khatiwada, McLaughlin and Palma (2011) utilized 2009-2010 data to examine the social and economic consequences of dropping out of high school. The estimated lifetime net fiscal contributions of 18-64 year old adults in the United States was negative $70,850 for high school dropouts with no general equivalency diploma (GED) contrasted to $236,060 for high school graduates or GED recipients. The change in mean net lifetime contribution of dropouts from the these two reports was even more dramatic than it appeared since the first figure of negative $5,191 included incarceration costs while the second figure of negative $70,850 did not.

According to the United States Bureau of Labor Statistics (2011), the unemployment rate for high school dropouts was 14.1 percent while that of high school graduates was 9.4 percent in 2011. Furthermore, the median weekly earnings for high school dropouts were $451 compared to $638 for high school graduates.

While causation has not been proven, using inmates' surveys, Harlow (2003) found that 41% of state inmates and 27% of federal inmates were high school dropouts. In 2006-2007, the number of 16-24 year olds who were institutionalized was 3.6 times higher for high school dropouts than for high school graduates. In 2006-2007 women between the ages of 16 and 24 who were high school dropouts were 1.3 times more likely to be single mothers than were high school graduates (Sum et al., 2009). The part of the study by Sum et al,. (2011) examining native born high school dropouts in Illinois reported that male high school dropouts were 4.9 times more likely to be incarcerated than male high school graduates and 29 times more likely to be incarcerated than males with an associate's degree. According to Amos (2008), "Increasing the high school graduation rate and college matriculation for male students by only five percent would lead to combined savings and revenue [of incarceration] of almost 8 billion each year".

According to Steinberg, Blinde, and Chan (1984), "For the individual, failure to complete high school is associated with limited occupational and economic prospects, disenfranchisement from society and its institutions, and substantial loss of personal income over his or her lifetime" (p. 113). Dropping out of high school has had long lasting repercussions for society as a whole, school systems, and the individual student (Day & Newberger, 2002).

### Prevention

Oakland (1992) suggested that the relationship between the adult (teacher) and the student is a crucial component to a student's success in completing high school. He concluded that students could not achieve success without their social, emotional, and cognitive needs being met. Oakland (1992) stated that the social connection can be fostered by the teacher and "Socialization is enhanced through programs that promote strong adult attachment, rewards that recognize suitable behaviors, and mutual trust and respect" (p. 205). Sparks, Johnson, and Akos (2010) pointed out that research has shown 10 positive contacts between teachers and alienated students can realign their attitudes and establish trusting relationships.

## Alternative Education

### Background

At the beginning of American education, all schools were alternative as there existed a variety of educational programs based on race, gender, religion and social class (Lang & Sletten, 2002). In the early 1830s, public education began to be organized to provide a unifying education that would overcome cultural diversity and personal uniqueness to produce a more effective work force. School attendance became mandatory in all states in 1918. A tension has persisted between those who have advocated compulsory public schools and those who have desired private schools based on race or religion or homeschools (Quaqua website, n.d.).

The growth of, what are now commonly thought of as alternative schools, was nurtured by the civil rights movement of the late 1950s and early 1960s, as racism and inequality were acknowledged (Young, 1990). Raywid (1981) described the

mainstream public schools as "cold, dehumanizing, irrelevant institutions, largely indifferent to the humanity and the 'personhood' of those within them" (p. 551). By the late 1960s, alternative schools were developing both outside and inside the public education system. Those outside were products of the Freedom Schools and Free School Movements (Lang & Sletten, 2002). According to Graubard (1972), in the Freedom School Movement "groups of people sought control of the oppressive educational process to which they and their children were being subjected" (p. 353). The Free School Movement stressed individualized programs to allow students to develop their intellect and interests. The schools had no set curriculum or discipline, no morals were taught other than each student had the right to fulfillment as they defined it, and the students were not evaluated in terms of reaching learning goals. Formalized teaching was avoided and the only value of academic achievement was its contribution to self-fulfillment. While most nonpublic alternatives were relatively short lived, they did promote efforts to develop educational programs within the public school system in the latter part of the 1960s that were more varied and responsive to students' needs and abilities (Lang & Sletten, 2002).

Public alternative schools began with Open Schools that emphasized "parent, student, and teacher choice; autonomy in learning and pace; non-competitive evaluation; and a child-centered approach" (Lang & Sletten, 2002, p. 4). Open Schools led to a number of approaches that Young (1990) has characterized as: Schools without Walls, Schools within a School, Multicultural Schools, Continuation Schools, Learning Centers, Fundamental Schools, and Magnet Schools.

During the 1980s, there was some retrenchment from the more progressive to

more conservative schools. Young (1990) cited as evidence of increased conservatism the rise of Continuation and Fundamental Schools and the decline of Open Schools. Further, he noted the increasing use of alternative schools to serve disruptive or failing students. Raywid (1994) asserted that during this period alternative schools became increasingly focused on teaching basics and decreased emphasis on collective decision making which involved teachers and students.

**Characteristics**

Alternative education today has been characterized as: a) maintaining a small size (Arnove & Strout, 1980; Tobin & Sprague, 1999; Young, 1990), b) emphasizing one-on-one interaction between teachers and students (Barr, 1981; Tobin & Sprague, 1999), c) creating a supportive environment (Bryk & Thum, 1989; Case, 1981), d) allowing opportunities for student success relevant to the students' future (Armove & Strout, 1980; Barr, 1981), e) allowing flexibility in structure and emphasis on student decision-making (Barr, 1981; Gold & Mann, 1984).

**Importance**

Alternative education has become a viable means to earn a high school diploma. Earning a high school diploma has become increasingly important for a student's economic and social successes. The alternative high school has become often the last chance for some students to earn a high school diploma due to personal choices (children, employment or preference) or to being expelled from the traditional school. Although the opportunity to attend an alternative high school may be available for students who are unable or unwilling to attend a traditional high school, some students do not attend regularly or do not apply themselves when attending and

therefore they do not make sufficient academic progress to graduate in a timely manner or at all. Identifying and addressing barriers to success has become vitally important for the students and for the community.

**Immediacy**

The concept of immediacy was introduced into communication research by Mehrabian (1969) who defined it as behaviors that communicate approachability. Immediacy theory held that immediacy results in psychological closeness and this facilitated communication between individuals. Mehrabian (1969) posited that while some verbal behaviors may contribute to immediacy, nonverbal behaviors are the main contributors. Later, he refined the immediacy principle by stating that, "people are drawn toward persons they like, evaluate highly, and prefer; and they avoid or move away from things they dislike, evaluate negatively, or do not prefer" (Mehrabian, 1971, p. 1).

Immediacy was extended to the educational setting by Frymier (1994) to examine the relationship between teacher immediacy and student learning. She developed the Learning Model to demonstrate the direct causal relationship between teacher immediacy and student affective and cognitive learning. Andersen (1979) defined nonverbal as "behaviors that reduce physical and/or psychological distance between teachers and students" (p. 543). The idea was that by improving the relationship between student and teacher, the student would want to interact with the teacher more, thus enhancing the overall educational experience. She proposed that teacher nonverbal immediacy directly led to positive student outcomes, increased affect toward course material, and increases in cognitive learning. Her research

showed positive correlation of nonverbal immediacy and the first two items, but not with increases in cognitive learning. This lack of correlation was substantiated in subsequent studies (Andersen, Norton, & Nussbaum, 1981; Andersen & Withrow, 1981).

Gorham (1988) defined teachers' verbal contribution to learning as "messages that convey the use of pro-social (based on reward, expert, and referent power) as opposed to antisocial (based on coercive and legitimate power) messages to alter student behavior" (p. 41). The use of these prosocial messages has been linked to increases in perceptions of teacher immediacy leading to greater affective learning (Plax, Kearney, McCroskey & Richmond, 1986) and cognitive learning (Richmond, McCroskey, Kearney & Plax, 1985).

While Andersen (1979) created the first nonverbal immediacy scale, it was nine years later when the first verbal immediacy scale was developed by Gorham (1988). This scale was criticized by Robinson and Richmond (1995) who held that the mechanism of verbal immediacy item creation caused them to measure teacher effectiveness and that teacher effectiveness and immediacy, while related, are not interchangeable. Gorham (1988) showed a positive correlation between nonverbal immediacy and affective learning, as well as verbal immediacy and affective learning, although the latter result is questionable due to the work of Robinson and Richmond (1995). Kelley and Gorham (1988) devised the Arousal Model that posited the effect of immediacy on cognitive learning was mediated by arousal, attention, and memory.

Christophel (1990) found a positive correlation between nonverbal immediacy and student learning affected by state motivation; i.e. nonverbal immediacy increases

a student's motivation to study in general. This motivational model was also studied by Richmond (1990), Christophel and Gorham (1995) and Frymier (1994).

The Affective Model, proposed by Rodriguez, Plax, and Kerney (1996), held that the observed positive correlation between immediacy and cognitive learning was mediated by affective learning. They proposed that nonverbal immediacy increased cognitive learning because it increased interest in the specific subject, not just study in general. The research showed a positive correlation of affective learning with verbal immediacy but no correlation with nonverbal immediacy.

Nonverbal communicative behaviors are largely spontaneous and not dictated by conscious control. Rather, they arise from different communicative styles that Thomas, Richmond, & McCroskey (1994) have labeled soci-communicative style. Immediacy has been shown to be significantly related to teachers' soci-communicative style, involving both responsiveness and assertiveness (Thomas et al., 1994). Assertiveness has been associated with behaviors such as independence, dominance, competitiveness, and forcefulness; while responsiveness has been associated with helpfulness, sympathy, compassion, sincerity, and friendliness. They concluded that teachers demonstrating immediacy are both appropriately assertive (demanding) and responsive to the needs of their students (supportive). Further that immediacy behaviors have been a key contributor to effective instructional communication and should be taught to pre-service and in-service teachers. If these teachers develop better immediacy skills, they can foster assertiveness and responsiveness in their students, improving their communication skills and producing more motivated, conscientious individuals.

Extensive research has been conducted on the effect of students' perceptions of teacher immediacy over the past several decades. Witt, Wheeless, and Allen (2004) conducted a meta-analytical review that studied the relationship between teacher immediacy and student learning. Hess and Smythe (2001) examined 35 research papers supporting the theory that increased teacher immediacy has led to increased student cognitive learning. They concluded that the research has been deficient in that: "a) it lacks cognitive theoretical foundation, b) it uses self-report measures that may be flawed or ill suited, and c) it founds causal claims on inappropriate data" (p. 197).

Hess and Smythe (2001) conducted research to address the perceived deficiencies in previous research studies. Their research indicated that: a) perceived teacher immediacy was related to perceived cognitive learning ($r=-.41$, $p< .001$, $n=286$), b) perceived teacher immediacy was positively related to liking of the instructor ($r=. 66$, $p< .001$, $n=288$), and c) perceived cognitive learning and liking of the instructor were related ($r=-.41$, $p< .001$, $n=286$).

The relationship between teacher immediacy and the factors that influence academically at-risk students' academic motivations was investigated by Ruiz (2006). She concluded that teacher immediacy creates social capital that affects student attitudes and orientations towards school. Composite scores showed a positive correlation between teacher immediacy and the degree to which students valued education and moderate correlation to student affect about school. Teacher immediacy was positively correlated to teacher support. Analysis of individual survey items showed that teachers who encouraged students to respond to questions in

class, called students by name, gave students feedback on their academic performances, used appropriate touch, and while teaching moved about the classroom and used vocal variety were perceived as being concerned for the students and believing in their abilities to be successful (Ruiz, 2006).

Richmond and McCroskey (2000) stressed the importance of immediacy by stating that "the more communicators employ immediate behaviors, the more others will like, evaluate highly, and prefer such communicators; and the less communicators employ immediate behaviors the more others will dislike, evaluate negatively, and reject such communicators" (p. 212). Positive correlation has been shown between use of immediacy behaviors and overall student learning (Allen & Shaw, 1990; Christophel, 1990; Menzel & Carrell, 1989; Rodriguez, Plax & Kearney, 1996).

A study of 179 high school students found that teacher nonverbal immediacy and verbal feedback sensitivity made them more receptive to teacher criticism of their writing (Martin, 2009). A study by Comstock, Rowell, and Bowers (1995) showed that a moderately high level of teacher immediacy was more effective than low or very high levels for improving student learning. Harrigan (2010) found that students' affective learning explained 36 percent of the variance in the relationship between teacher nonverbal immediacy and student cognitive learning.

While there is considerable research on the effect of immediacy, the correlation between students' rate of academic progress and their perceptions of teacher immediacy has not been researched exclusively in the alternative education setting. Additionally, the relationship between alternative education students'

perceptions of teacher immediacy and these same students' scores on the End of Course Test (EOCT) has not been investigated. Thus, this study was designed to address these gaps in the literature.

**Standardized Testing**

With the current push for accountability in schools, the use of standardized testing has dramatically increased. Danitz (2001) reported combined state spending on standardized testing was estimated to be more than 400 million dollars in 2001. In contrast, Chingos (2012) estimated the cost to states for standardized testing in 2012 was 1.7 billion dollars, an increase of 325 percent.

Standardized testing has been used for a variety of purposes, such as promotion and retention decisions, teacher evaluation, and instructional improvement. Williams (2010) valued standardized testing as a means to determine areas of strength and weakness for students but warned strongly against using them for teacher evaluation purposes. He cautioned that unintended consequences would result, such as: instruction aimed only at teaching low-level test content, higher anxiety for students, and teachers who feel demoralized. Standardized testing may be able to yield excellent information for a teacher who is seeking to improve instruction and push his/her students to higher levels of performance, but when tied to evaluation of that teacher, the test loses its value as an instructional tool and becomes the driving force behind the curriculum.

**Summary**

Alternative schools have become viable choices for students whose learning styles are incompatible with those utilized in traditional schools. Alternative

education students' perceptions of teachers' immediacy may have influenced their academic success in all educational settings. Although this phenomenon has been studied in traditional K-12 and post-secondary schools, research has been lacking in alternative education settings. A high school diploma has become increasingly essential in modern society. Educators must explore numerous approaches to reach a variety of students in an attempt to facilitate high school completion. Several studies have shown a strong correlation between students perceived teacher immediacy and various measures of academic success in the traditional school setting (Allen & Shaw, 1990; Christophel, 1990; Menzel & Carrell, 1989; Rodriguez, Plax & Kerney, 1996; Ruiz, 2006). This study explored the efficacy of teacher immediacy on academic success in the alternative education setting.

# CHAPTER THREE: METHODOLOGY

A significant number of students leave high school having never earned a high school diploma. This has resulted in a significant potential earning loss over a lifetime, affecting both society and the individual. Many potential dropouts have attended alternative education schools in a final attempt at earning a high school diploma before they ultimately leave formal schooling. Students who did not make adequate academic progress in a timely manner often became disengaged with the system. Thus, strategies for engaging students so they will be able to graduate have become essential (Finn, 1989). Research has shown that students are more likely to experience success in school if they feel a personal connection with the faculty and the school itself (Somers, Owens, & Piliawsky, 2009).

Thornton and Sanchez (2010) found through a review of literature on dropout prevention that resiliency is a factor that students who drop out of school are unlikely to possess. They further stated that schools are crucial in helping students build the resiliency that will help them deal with adversity. If teachers are able to provide this tool, which is not a part of the required standards or the general job description of teachers, it will help students cope with the stress of schooling and can lead to success after graduation. To provide such personal guidance for students, teachers must be available and able to connect with students, creating feelings of immediacy. The purpose of this study was to determine if there is a statistically significant relationship between

alternative education students' perceptions of teacher immediacy and their rates of academic progress. Additionally, the relationship between alternative education students' perceptions of teacher immediacy and their scores on the End of Course Tests was explored. Students who experienced academic success were more likely to continue to be engaged in school and therefore graduate.

This chapter will describe in-depth the participants, the setting, and the instruments used to gather and analyze data. Methods of data analysis and design will also be explored.

**Research Design**

According to Ary, Jacobs, Razavieh, & Sorensen (2006) "correlational research is a type of nonexperimental research that investigates whether there is an association between two or more variables" (p. 376). A correlational study was used for this research as it is appropriate for determining if a relationship exists between two variables.

Correlational studies are common in the literature. To determine if a statistically significant relationship exists between parental involvement and student achievement, Wilson (2009) conducted a correlational study. Parental involvement was expressed in terms of the percentage of parents participating in conferences and student achievement in terms of grade point average and standardized test performance. A correlational study by Larson (2010) examined the relationship between students' self-efficacies and their perceptions of social support by faculty members. Likert scale surveys were used to measure self-efficacy and learner satisfaction. Ermold (2011) conducted a correlational study to determine the existence of a relationship between student achievement and

school climate. Student achievement was measured using standardized test scores, while school climate was assessed using a staff aspiration survey with a 5 point Likert scale.

This research explored possible correlations between alternative education students' perceptions of nonverbal immediacy towards their teachers and their rates of academic progress as well as End of Course Test scores to determine if student achievement was affected by feelings of psychological availability of their teachers to them. Two score sets containing two data types each were analyzed. One set contained the results from the Nonverbal Immediacy Scale – Observer Report (Richmond et al., 2003) and rates of course completion, while the other set contained the results from the Nonverbal Immediacy Scale – Observer Report (Richmond et al., 2003) and the End of Course Test scores.

This study also sought to determine if a relationship exists between student achievement and a specific aspect of school climate, students' perceptions of teachers' immediacy. The research examined correlation in each of the two sets of data: alternative education students' perceptions of immediacy for their teachers and the number of hours students were academically engaged in earning a Carnegie unit or performance on End of Course Tests. The purpose of this correlational research was to establish whether a relationship exists between these two sets of variables. It is important to note that the results will only determine the strength of the relationship that exists and not prove causation. (Statistical Assessment Service, n.d.). Because of the many factors that influence students on a daily basis, it is impossible to determine with any degree of certainty that one factor causes a result. A significant correlation between

each of the two sets of variables would suggest the need for further research to explore the relationship between immediacy and academic performance more completely.

**Research Questions**

The study attempted to address the following research questions:

**Research question 1** Is there is a relationship between alternative education students' perceptions of teachers' nonverbal immediacy, as measured by the Nonverbal Immediacy Scale – Observer Report (NIS-O), and the same students' rates of academic progress, defined as the number of hours students were academically engaged in earning a Carnegie unit?

**Research question 2** Is there is a relationship between alternative education students' perceptions of teachers' immediacy, as measured by the Nonverbal Immediacy Scale – Observer Report (NIS-O), and the same students' scores on the End of Course Tests?

**Hypotheses**

**Research hypothesis 1** A statistically significant negative correlation will exist between alternative school students' perceptions of teachers' nonverbal immediacy as measured by the Nonverbal Immediacy Scale – Observer Report (NIS-O) and the same students' rates of academic progress, defined as the number of hours students were academically engaged in earning a Carnegie unit.

**Null hypothesis 1** There is no statistically significant relationship between alternative education students' perceptions of teachers' nonverbal immediacy, as measured by the Nonverbal Immediacy Scale – Observer Report (NIS-O) and the same

students' rates of academic progress. The null hypothesis will be rejected if the Pearson Product Moment Correlation Coefficient is statistically significant. This null hypothesis will not be rejected if the Pearson Product Moment Correlation Coefficient is not statistically significant.

**Research hypothesis 2** A statistically significant positive correlation will exist between alternative education students' perceptions of teachers' nonverbal immediacy as measured by the Nonverbal Immediacy Scale – Observer Report (NIS-O) and the same students' End of Course Test (EOCT) scores.

**Null hypothesis 2** There is no statistically significant relationship between alternative education students' perceptions of teachers' nonverbal immediacy, as measured by the Nonverbal Immediacy Scale – Observer Report (NIS-O), and the same students' scores on End of Course Tests. If the correlation is statistically significant between the survey results and EOCT scores, the null hypothesis will be rejected. If the correlation is too small to be significant, the null hypothesis will not be rejected.

**Participants**

The majority of the students at PCHS have enrolled on their own accord either as full time students with PCHS or for credit recovery while remaining enrolled in their traditional, day high schools. A small number of students have been enrolled due to behavioral infractions at their previous schools that resulted in them being expelled from school. These students have been declared ineligible to attend traditional schools, generally for one or two semesters. However, this has remained a school of choice, as no students have been required to attend this specific school.

The ethnic backgrounds of the students at this site were 95% White, 2% Black, 1% Hispanic, and 2% other ethnic backgrounds. This is a reflection of the overall demographics of the service area. Since a school meal was not provided when the research study began, the percentage of students qualifying for free or reduced cost meals, the only source of socioeconomic status available to schools, was not obtainable. After the inception of the research study, the school did begin to administer a meal program for the students. However, some of the students in the study did not enroll in the meal program or had withdrawn from the school so socioeconomic status was not available for all participating students.

The study participants were drawn from the population of students enrolled in the PCHS in EOCT courses. Students were given the opportunity to participate and were offered a small incentive, an entry into a drawing for a Walmart gift card with a 50 dollar value. Since the survey was not time-consuming, requiring on average ten minutes to complete, and the other measures (course completion and test scores) required no additional effort for the students, most of the population was expected to participate.

Based on current enrollment and historical data, it was expected that during the five month data collection period, approximately thirty students would complete an EOCT course and of these students, approximately 20 of these students would participate in the research study. In actuality, 39 students completed an EOCT course and were offered the opportunity to participate in the study. Of these students, 24 provided signed consent to participate and completed the survey. Students who were legal adults and therefore could provide their own consent comprised 28% of students completing an

EOCT during the data collection period and all of these students participated in the study. The remaining 72% were required to obtain parental consent before participation and of these 46% qualified to complete the survey. Parental permission was obtained for any student under the age of 18, and if parental permission was not granted, those students were excluded from any data collection and analysis. By using convenience sampling, no one was excluded unless they chose to be.

According to Ary et al., (2006) convenience sampling is "the weakest of all sampling procedures" (p. 174); however, it is the most appropriate method for this study. Because of the limited number of students in the population, a maximum percentage of participants from the population were needed in the sample to have a valid study. Since participation in the study is voluntary, students were able to self-select based on their willingness to improve the education environment. EOCTs were not required for all courses so the population of students who completed courses was larger than the population of students with EOCT scores which limited the sample pool.

**Setting**

The PCHS began as a collaborative effort in three school systems in North Georgia, serving students from thirteen different counties. At the time of the study, the program encompassed seven locations and served students throughout the entire North Georgia region. This study was conducted at one of the sites in the collaborative. The mission of the school has been to increase graduation rates and encourage students to become lifelong learners. The curriculum used is self-paced and teachers serve as

facilitators of information acquisition rather than dispensers of knowledge (Piedmont Central High School, website, n.d.).

At the onset of the research study two administrators, 42 teachers, 11 paraprofessionals, a registrar, and two secretaries staffed PCHS. Personnel has always been a fluid factor at this school based on current students' needs. One of the administrators was a retired teacher and an administrator with 32 years of experience. The other was employed as a graduation coach at a neighboring high school during the day. Twelve of the teachers were retired teachers with one having 13 years of experience and the rest at least 30. The remaining teachers were currently working as either teachers or administrators in traditional schools. Their range of experience was five to 27 years. All but one of the paraprofessionals were employed in area schools during the day. The teachers worked one to three nights per week.

Subjects offered were all core classes required for graduation: English, math, science and social studies, as well as Spanish I and II, Business Communications I and II, Financial Literacy, Workplace Readiness I, II and III, health, and personal fitness. Limited vocational classes were available but vocational laboratories such as automotive and health occupations were not.

**Instrumentation**

For measuring the predictor variable, feelings of immediacy, a 26-item instrument was given to study participants. The Nonverbal Immediacy Scale – Observer Report (NIS-O), developed by Richmond et al., (2003) was used to measure nonverbal behaviors associated with immediacy, such as touch cues, proximity, and eye contact. The authors

of the instrument have granted blanket permission for its use in educational research. On a 5-point Likert scale (i.e. 4 = very often, 3 = often, 2 = occasionally, 1 = rarely, 0 = never) students were asked to rank behaviors exhibited by their teachers that were associated with the field definition of immediacy. Of the 26 items, 13 are worded positively and 13 are worded negatively. The negatively worded items were reflected prior to data analysis (Richmond et al., 2003). The maximum composite score range was 26 – 130. In the norming of the NIS-O Richmond et al. (2003) found a maximum composite score range of 79-109 for men and women combined.

Through extensive data analysis Richmond et al. (2003) determined the reliability estimates were .90 and above for the NIS-O. They further concluded the content validity to be very strong since the instrument contains 13 different nonverbal components. The total sample and the four subsets had validity estimates ranging from moderate to very high (Richmond et al., 2003).

To measure the variable of interest, student achievement, the State of Georgia's End of Course Tests were used for the subject in which the participant is enrolled. These high stakes tests were developed by the Georgia Department of Education in compliance with the *Standards for Educational and Psychological Testing (1999)* promulgated by the American Educational Research Association, the American Psychological Association, and the National Council on Measurement in Education. Test developers were particularly vigilant to safeguard content/curricular, construct, and criterion-referenced validities. Content validity was assured by alignment of the EOCT and the state's prescribed curriculum, Georgia Performance Standards, as well as using feedback from

Georgia educators. Construct validity was monitored using item point-biserial correlations and Rasch fit statistics. Reliability was assessed using Cronbach's alpha values and standard error of measurement (SEM) calculations (Georgia Department of Education, 2011a). Results are shown in Tables 3.1 and 3.2.

Table 3.1

*Summary of Coefficient Alpha Across EOCT Administrations*

**SUMMARY OF COEFFICIENT ALPHA ACROSS ADMINISTRATIONS**

| | Summer 2010 | Winter 2010 Form 1/Form 2 | Spring 2011 Form 1/Form 2 |
|---|---|---|---|
| GEOMETRY (QCC) | 0.90 | | |
| NINTH GRADE LITERATURE AND COMPOSITION | 0.91 | 0.93/0.92 | 0.93/0.93 |
| AMERICAN LITERATURE AND COMPOSITION | 0.92 | 0.91/0.91 | 0.91/0.90 |
| BIOLOGY | 0.88 | 0.92/0.91 | 0.93/0.93 |
| PHYSICAL SCIENCE | 0.85 | 0.89/0.90 | 0.90/0.89 |
| U.S. HISTORY | 0.92 | 0.93/0.92 | 0.93/0.93 |
| ECONOMICS | 0.88 | 0.92/0.91 | 0.92/0.92 |
| MATHEMATICS I | 0.78 | 0.90/0.89 | 0.90/0.90 |
| MATHEMATICS II | 0.72 | 0.89/0.89 | 0.84/0.84 |

Table 3.2

*Summary of SEMS Across EOCT Administrations*

**SUMMARY OF SEMS ACROSS ADMINISTRATIONS**

| | Summer 2010 | Winter 2010 Form 1/Form 2 | Spring 2011 Form 1/Form 2 |
|---|---|---|---|
| GEOMETRY (QCC) | 3.81 | | |
| NINTH GRADE LITERATURE AND COMPOSITION | 3.59 | 3.32/3.39 | 3.25/3.25 |
| AMERICAN LITERATURE AND COMPOSITION | 3.64 | 3.44/3.36 | 3.39/3.38 |
| BIOLOGY | 3.72 | 3.70/3.66 | 3.60/3.64 |
| PHYSICAL SCIENCE | 3.78 | 3.75/3.72 | 3.67/3.64 |
| U.S. HISTORY | 3.69 | 3.61/3.64 | 3.46/3.49 |
| ECONOMICS | 3.72 | 3.58/3.53 | 3.56/3.53 |
| MATHEMATICS I | 3.42 | 3.26/3.29 | 3.27/3.26 |
| MATHEMATICS II | 3.38 | 3.32/3.32 | 3.37/3.37 |

Alpha values were within industry standards for criterion-referenced tests and SEM values indicated generally high reliability (Georgia Department of Education, 2011a). Scale scores promote test reliability as the translation of raw to scale scores corrects for small, inadvertent differences in test difficulty from one version to another and allow meaningful comparisons (Georgia Department of Education, 2011b). Scale scores, a continuous variable, were used for the purpose of data analysis. The other variable of interest was the number of hours students were academically engaged in earning a Carnegie unit and was a continuous variable. Students who did not complete a

course were not asked to complete a Nonverbal Immediacy Scale – Observer Report and were not included in the research study.

**Procedures**

The researcher gained approval of the study by submitting a written request to the chairman of the PCHS board (see Appendix A) and then coordinated with the superintendent and site administrators to ensure minimal disruption of the learning environment. Subsequently, Institutional Review Board (IRB) approval was obtained (see Appendix B). Students who completed an EOCT course were encouraged to participate in the study and were offered an incentive in the form of a drawing for a Walmart gift card valued at 50 dollars for returning a signed informed consent form and completing the Nonverbal Immediacy Scale – Observer Report.

A parent recruitment letter (see Appendix C) was written using language designed to facilitate understanding of the intent and objectives of the research study. The formal language that is necessary for an informed consent form may be difficult for some parents to understand or interpret. An informed consent letter (see Appendix D) was sent home to parents requesting permission for their child to participate in the study if the child was under 18 years of age. The letter outlined the relevant details of the study, such as the types of data obtained from the survey, the measures taken to ensure anonymity, and the purpose of the study. A student recruitment letter (see Appendix E) was written using language designed to enhance student understanding of the purpose of the research study. The language was casual so the students would feel comfortable with the content of the

student consent form. If 18 or older, the student provided his/her own consent using the student consent form (see Appendix F).

The researcher provided a copy of the Nonverbal Immediacy Survey – Observer Report (see Appendix G) to each student after they had completed the course and the corresponding EOCT. The researcher maintained an updated list of students who had returned the informed consent form in order to ensure that no student participated in the study without parental permission for minors and a complete understanding of the purpose of the study. To ensure confidentiality the student's Georgia Testing Identification (GTID) number was written on each survey. Upon completion of the survey, the student returned it to the school secretary or the researcher and the student's name was entered in the drawing for a Walmart gift card valued at 50 dollars. The survey directions reiterated the importance of the study and his/her participation, the procedures for gathering data and how it will be used, and an assurance of anonymity for all participants.

The number of instructional hours each student needed to complete required coursework was obtained from the registrar and the school testing coordinator. These hours and the students' EOCT scores were entered into a spreadsheet with the students' GTID. Students' responses to each item were entered into the spreadsheet and each student's total score was calculated by a formula embedded in the spreadsheet.

A Pearson Product-Moment Correlation Coefficient was calculated for immediacy scores and hours required for course completion. A correlation coefficient was calculated for immediacy scores and EOCT scores.

**Data Collection**

The researcher trained the school testing coordinator and a school administrator on the procedure for explaining the purpose of the study, the incentive for participation, and the procedures for completing the survey. The students then completed the surveys and returned them to the school secretary or the researcher. The school's registrar provided EOCT data from the state score reports. At the conclusion of the data collection period, the school's registrar shared with the researcher the number of instructional hours each student took to complete each course (the school already gathers this information on the students). The work required of the school's registrar was minimal and she graciously agreed to facilitate data gathering in order to contribute to the research study in the hope that results will be useful for future planning for the school.

**Data Analysis**

For this quantitative study, two data sets with two variables each were analyzed to test the two hypotheses. One data set was comprised of Nonverbal Immediacy Scale – Observer Report (NIS-O) composite score for each student and that same student's rate of academic progress. The other data set was comprised of Nonverbal Immediacy Scale – Observer Report (NIS-O) composite score for each student and that same student's End of Course Test score. Descriptive statistics will be calculated for these research variables using Statistical Package for the Social Sciences (SPSS) version 15.0. All inferential tests will be conducted with a .05 alpha level.

**Research hypothesis 1**

A statistically significant negative correlation will exist between alternative school students' perceptions of teachers' nonverbal immediacy as measured by the Nonverbal Immediacy Scale – Observer Report (NIS-O) and the same students' rates of academic progress, defined as the number of hours students were academically engaged in earning a Carnegie unit.

The predictor variable, Nonverbal Immediacy Scale – Observer Report (NIS-O) scores, used a Likert scale to collectively determine a teacher's placement on a continuum of not creating a feeling of immediacy for students to making students feel strongly about immediacy in his/her classrooms. Although item Likert scores are discrete variables, composite survey scores are continuous. The variable of interest in this correlation was students' rates of academic progress as measured by the number of hours students were academically engaged in earning a Carnegie unit. This variable is also continuous. A Pearson Product-Moment Correlation Coefficient was calculated to determine if the relationship between alternative education students' perceptions of teacher immediacy and rate of academic progress was statistically significant.

**Research hypothesis 2**

A statistically significant positive correlation will exist between alternative education students' perceptions of teachers' nonverbal immediacy as measured by the Nonverbal Immediacy Scale – Observer Report (NIS-O) and the same students' EOCT scores.

Academic achievement was also considered in relation to alternative education students' feelings of teacher immediacy. A Pearson Product-Moment Correlation Coefficient was also calculated to compare the Nonverbal Immediacy Scale – Observer Report scores with the students' End of Course Test scores. The purpose was to determine if there was a statistically significant relationship between EOCT scores and feelings of teacher nonverbal immediacy. If the relationship exists, it should be further explored in subsequent studies on the efficacy of nonverbal teacher immediacy.

**Statistical test description**

The Pearson Product-Moment Correlation was chosen because it is the simplest statistical test that will yield valid results for this type of assessment. According to Howell (2008) a Pearson Product-Moment Correlation Coefficient is the appropriate statistical test when the primary research interest is the degree of relationship between continuous variables when there is only one predictor variable. Furthermore, a Pearson Correlation should be used when the data is quantitative and the research examines the relationship between the variables rather than the differences between them (Howell, 2008). There was only one sample with two measures that the researcher was attempting to correlate. The Pearson Product-Moment Correlation Coefficient examines correlational data to compare the two sets of data and determine the significance of the relationship. The Pearson Product-Moment Correlation Coefficient "indicates both the direction and the strength of the relationship between two variables without needing a picture to show it" (Ary et al., 2006, p. 148). They suggest that using the Pearson Correlation, one can predict outcomes. Specifically, the Pearson Correlation determines

whether students' feelings of immediacy predict End of Course Tests success and rate of academic progress.

The Pearson Product-Moment Correlation Coefficient varies from -1 to 1 with zero being a lack of correlation. The closer the result is to -1 or 1, the stronger the relationship between the two variables, in this study, students' feelings of teacher immediacy as measured by the Nonverbal Immediacy Scale – Observer Report (NIS-O) results and either rate of academic progress or EOCT scores. If the coefficient were to be positive, a positive correlation would be suggested, meaning that as alternative education students' perceptions of teacher immediacy improve, so do End of Course Test scores; conversely, a negative coefficient would mean that test scores decreased as alternative education students' perceptions of teacher nonverbal immediacy increased (Laerd Statistics, n.d.). A negative correlation between alternative education students' perceptions of teacher nonverbal immediacy and the number of hours students were academically engaged in earning a Carnegie unit would imply that teacher immediacy facilitated course completion.

While statistical analysis using the Pearson Product-Moment Correlation Coefficient provides useful data analysis, Ary et al. (2006) implored the reader to understand that: a) correlation does not always mean that a change in one variable is caused by a change in another variable, b) restricting the range of scores may result in an artificially low correlation that would otherwise not exist if the restriction were not imposed, c) correlation coefficients cannot be interpreted as a percentage of perfect correlation but rather can be used to calculate a coefficient of determination that does

give a percentage of variance between two variables, and d) correlation coefficient results should not be applied to an individual.

**Data processing**

Both groups of variables in the paired data set, composite NIS-O survey scores and number of hours students were academically engaged in earning a Carnegie unit, were screened for outliers. Data points were removed if the absolute value of their standardized residual was greater than 3. A residual plot was used to assess model linearity and homoscedasticity. Model descriptive statistics, model coefficients, and a scatterplot were calculated. The same set of calculations was performed on the groups of variables in the paired set, composite NIS-O survey scores and EOCT scaled scores.

**Exploratory Analyses**

Several bivariate Spearman correlations were conducted to determine if there were significant relationships among the individual items of the NIS-O, hours in course, and students' EOCT scores. The Spearman correlation is the non-parametric (i.e., assumption and distribution free) equivalent of the bivariate Pearson correlation. A correlation matrix was displayed.

# CHAPTER FOUR: FINDINGS

Alternative education students are often at greater risk of dropping out of school than students in traditional schools and yet there has been limited research on the effect of nonverbal teacher immediacy on student academic success in the alternative education setting. The purpose of this quantitative correlational study was to determine the relationships, if any, between alternative education students' perceptions of nonverbal teacher immediacy and their rates of academic progress and EOCT scores.

This study addressed the following research questions and hypotheses:

## Research Question 1

*Research Question 1.* Is there is a relationship between alternative education students' perceptions of teachers' nonverbal immediacy, as measured by the Nonverbal Immediacy Scale – Observer Report (NIS-O), and the same students' rates of academic progress, defined as the number of hours students were academically engaged in earning a Carnegie unit?

*Research Hypothesis 1.* A statistically significant negative correlation will exist between alternative school students' perceptions of teachers' nonverbal immediacy as measured by the Nonverbal Immediacy Scale – Observer Report (NIS-O) and the same students' rates of academic progress, defined as the number of hours students were academically engaged in earning a Carnegie unit.

*Null Hypothesis 1.* There is no statistically significant relationship between alternative education students' perceptions of teachers' nonverbal immediacy, as

measured by the Nonverbal Immediacy Scale – Observer Report (NIS-O) and the same students' rates of academic progress. The null hypothesis will be rejected if the Pearson Product Moment Correlation Coefficient is statistically significant. This null hypothesis will not be rejected if the Pearson Product Moment Correlation Coefficient is not statistically significant.

**Data Analysis**

The data were examined using SPSS version 15.0 for adherence to the assumptions underlying the Pearson's Product-Moment Correlation statistical analysis. According to Laerd Statistics (n.d) there are five assumptions that are made with respect to Pearson's Correlation. Each of these assumptions follow along with the application to this specific research study. First, the data must be either interval or ratio measurements. The data in this study were interval. Individual nonverbal immediacy survey items were scored on a five point Likert scale and were discontinuous, but composite survey scores were continuous. Second, the variables must be approximately normally distributed. The Shapiro-Wilk test was used to test for normality and it showed that hours spent in the course data were not normally distributed, but data derived from EOCT scores and survey scores were normally distributed at significance levels of 0.802 and 0.100, respectively. Third, there is a linear relationship between the two variables. Linearity was demonstrated by figures 4.2 and 4.4. Fourth, outliers must either be kept to a minimum or be removed entirely. The data analysis revealed no outliers in either of the data sets. Fifth, there must be homoscedasticity of the data. Heteroscedasticity was demonstrated for the data pertaining to the first research question and homoscedasticity was demonstrated for the data pertaining to the second research

question. While heteroscedasticity pertaining to the first data set is a concern, large variations occurred for students who rated their instructors low on the immediacy scale but small variations occurred for students who rated their instructors high on the immediacy scale. Students who rated their instructors low on the immediacy scale might not view a positive relationship with teachers as a significant factor in completing courses in a timely manner so that other factors could add variation to the hours required to earn a Carnegie unit. Generally speaking, the higher the level of immediacy perceived by students in their instructors the greater the homoscedasticity of the data.

**Data Analysis for Research Question 1**

A simple linear regression was conducted to address hypothesis 1. Nonverbal immediacy was the predictor variable, and numbers of hours engaged in earning a Carnegie unit was the variable of interest. The following testing procedures were utilized (Howell, 2010; Stevens, 2002). First, the data were screened for outliers by calculating the participants' standardized residuals. A data point was considered an outlier when the absolute value of its standardized residual was greater than 3 and it would be removed from the data set. This process did not reveal any outliers in the data. Second, a residual plot (Figure 4.2) was created to assess model linearity and homoscedasticity. The residual plot indicated a linear model; however, there was clear evidence of model heteroscedasticity. This indicates that the size of the error (i.e., the residuals) was not consistent across levels of the criterion. In this case, the model was a better predictor for participants who spent fewer hours earning a Carnegie unit compared to those who spent more time.

The scatterplot is displayed in Figure 4.3. The descriptive statistics and regression coefficients are listed in Tables 4.3 and 4.4, respectively. The regression indicated that nonverbal immediacy was a significant negative predictor of hours in the course, $F(1, 22) = 5.86$, $\beta = -0.46$, $r^2 = .21$, $p = .024$. This indicates that the number of hours required earning a Carnegie unit decreased as nonverbal immediacy increased. The scatterplot shows the downward sloping regression line that is indicative of the negative relationship. Any practical considerations should be addressed cautiously because of the model heteroscedasticity. The value, $p = 0.024$, shows that there is only a 2.4 percent chance of getting $\beta = -0.46$ due to random variation if the null hypothesis is true. This exceeds the confidence limit usually assumed for rejection of the null hypothesis ($p \leq 0.05$). The coefficient of determination, $r^2 = 0.21$, shows that 21 percent of the variation in hours required to earn a Carnegie unit can be attributed to the one predictor variable, NIS-O survey composite score. Given the large number of variables that could affect the hours required to earn a Carnegie unit, the model size, and the sample size, this result shows that the NIS-O score is a particularly robust predictor. Tables 4.3 and 4.5 show the mean and standard deviation of the NIS-O survey scores are close to the norm values obtained by Richmond, et. al (2003) and support the external validity of the study data. The mean was 119.75 and the standard deviation was 113.43. Three of the students required significantly more hours to complete their courses than the mean. These students required 484 hours, 367 hours and 305 hours. Although these data points did not exceed three standard deviations from the mean they still resulted in a relatively large standard deviation.

Figure 4.2

*Residual Plot for Comparison of Hours in Course and Nonverbal Immediacy Scores*

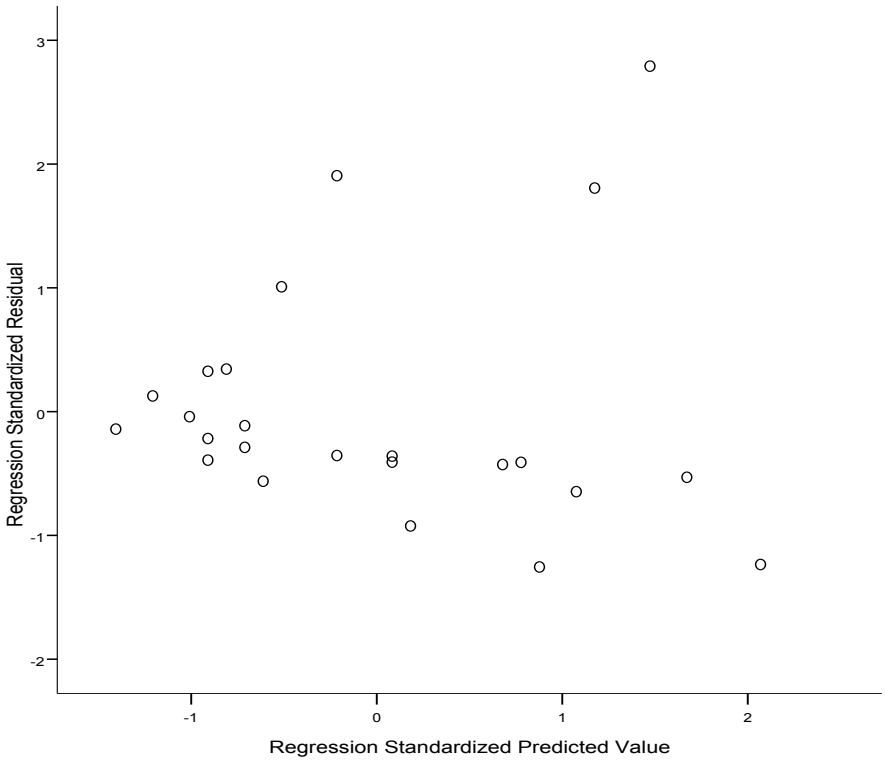

Figure 4.3

*Scatterplot for Comparison of Hours in Course and Nonverbal Immediacy Scores*

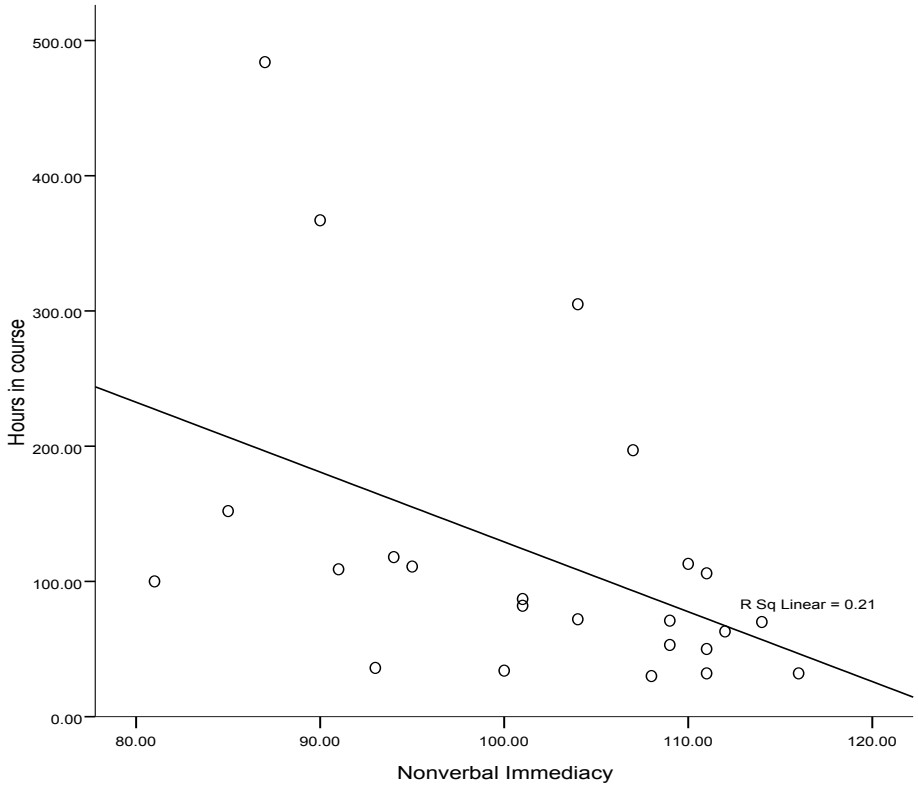

Table 4.3

*Descriptive Statistics for Comparison of Hours in Course and Nonverbal Immediacy Scores*

| Variable | N | M | SD |
|---|---|---|---|
| Hours in course | 24 | 119.75 | 113.43 |
| Nonverbal Immediacy | 24 | 101.83 | 10.07 |
| Norm Values | | 94.2 | 15.6 |

Table 4.4

*Regression Coefficients for Comparison of Hours in Course and Nonverbal Immediacy Scores*

| | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|
| Predictor | *B* | *SE* | $\beta$ | *T* | *Sig.* |
| Nonverbal Immediacy | -5.16 | 2.13 | -0.46 | -2.42 | .024 |

**Research Question 2**

*Research Question 2.* Is there is a relationship between alternative education students' perceptions of teachers' immediacy, as measured by the Nonverbal Immediacy Scale – Observer Report (NIS-O), and the same students' scores on the End of Course Tests?

*Research Hypothesis 2.* A statistically significant positive correlation will exist between alternative education students' perceptions of teachers' nonverbal immediacy as measured by the Nonverbal Immediacy Scale – Observer Report (NIS-O) and the same students' EOCT scores.

*Null Hypothesis 2.* There is no statistically significant relationship between alternative education students' perceptions of teachers' nonverbal immediacy, as measured by the Nonverbal Immediacy Scale – Observer Report (NIS-O), and the same students' scores on End of Course Tests. If the correlation is statistically significant between the survey results and EOCT scores, the null hypothesis will be rejected. If the correlation is too small to be significant, the null hypothesis will not be rejected.

**Data Analysis for Research Question 2**

A simple linear regression was conducted to address hypothesis 2. Nonverbal immediacy was the predictor variable, and students' scores on the End of Course Tests was the variable of interest. First, the data were screened for outliers by calculating the participants' standardized residuals. A data point was considered an outlier when the absolute value of its standardized residual was greater than 3. This process did not reveal any outliers in the data. Second, a residual plot (Figure 4.4) was created to assess model linearity and homoscedasticity. The residual plot (Figure 4.4) indicated a linear model

and homoscedasticity. Unlike the previous model, the size of the error (i.e., residuals) was consistent across levels of the criterion. The scatterplot is displayed in Figure 4.5. The descriptive statistics and regression coefficients are listed in Tables 4.5 and 4.6, respectively. The regression indicated that nonverbal immediacy was not a significant predictor of students' EOCT scores, $F$ (1, 22) = 2.07, $\beta = 0.29$, $r^2 = .09$, $p = .165$.

Figure 4.4

*Residual Plot for Comparison of EOCT Scores and Nonverbal Immediacy Scores*

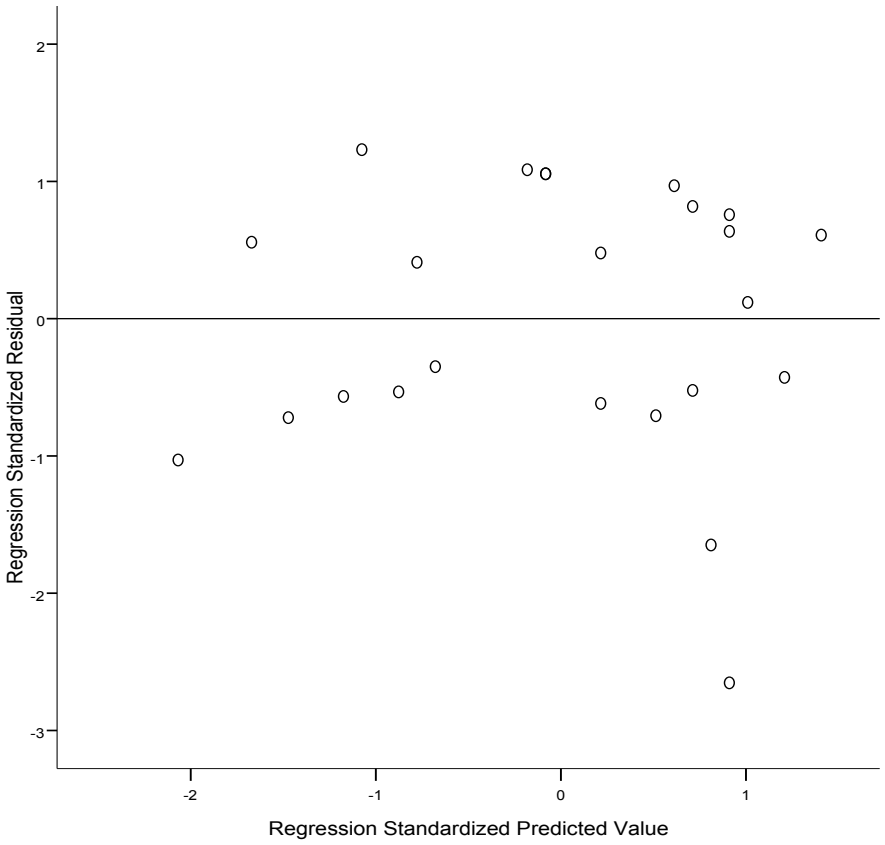

Figure 4.5

*Scatterplot for Comparison of EOCT Scores and Nonverbal Immediacy Scores*

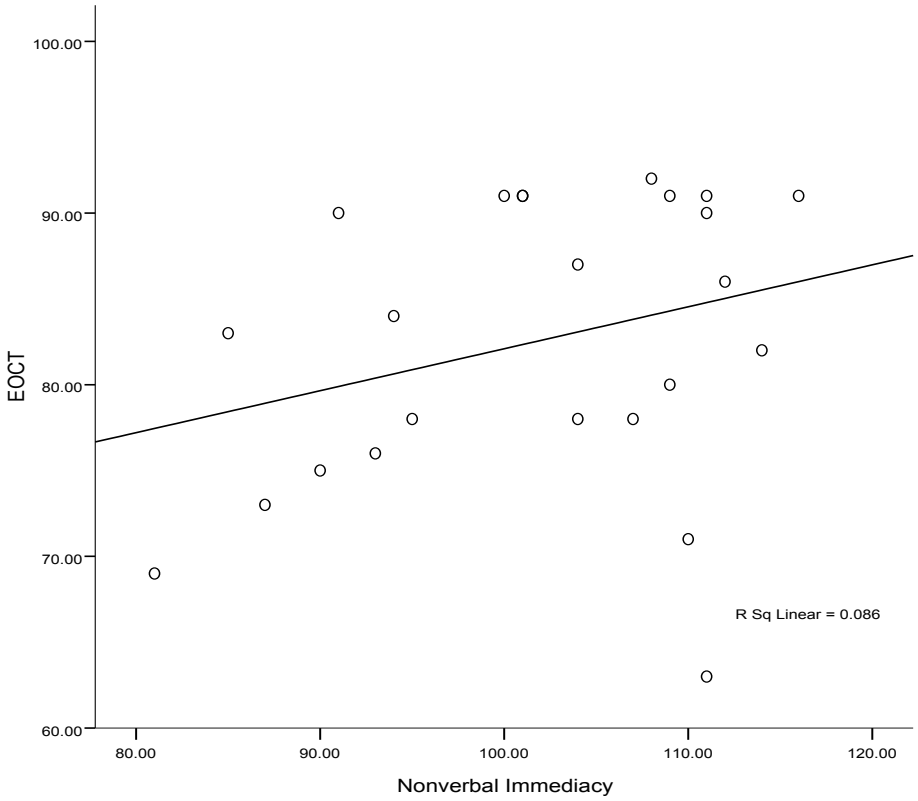

Table 4.5

*Descriptive Statistics for Comparison of EOCT Scores and Nonverbal Immediacy Scores*

| Variable | N | M | SD |
|---|---|---|---|
| EOCT | 24 | 82.54 | 8.40 |
| Nonverbal Immediacy | 24 | 101.83 | 10.07 |
| Norm Values | | 94.2 | 15.6 |

Table 4.6

*Regression Coefficients for Comparison of EOCT Scores and Nonverbal Immediacy Scores*

| | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|
| Predictor | *B* | *SE* | *b* | *T* | *Sig.* |
| Nonverbal Immediacy | 0.24 | 0.17 | 0.29 | 1.44 | .165 |

**Exploratory Analysis**

Several Spearman correlations were calculated to determine if there was a significant relationship among the individual items of the NIS-O, number of hours in a Carnegie unit, and students' EOCT scores. The descriptive statistics for the NIS-O items are listed in Appendix H. The correlations of the two variables of interest, number of hours required to earn a Carnegie unit and EOCT score with NIS-O items 1 – 9, NIS-O items 10 – 18, and NIS-O items 19-26 are presented in Tables 4.7, 4.8, and 4.9, respectively.

Table 4.7

*Bivariate Correlations for Exploratory Analysis – Items 1-9*

| | NIS-O Item | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Number of Hours | -.29 | -.00 | .15 | .32 | -.14 | **-.46*** | **.41*** | .34 | .32 |
| EOCT | -.02 | -.22 | -.40 | -.14 | -.20 | .33 | -.01 | .03 | -.28 |

Table 4.8

*Bivariate Correlations for Exploratory Analysis – Items 10-18*

| | NIS-O Item | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Variable | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| Number of Hours | .12 | .31 | **-.50*** | -.35 | -.28 | .35 | .04 | **-.46*** | .33 |
| EOCT | .15 | -.27 | .27 | .21 | .31 | -.16 | .00 | .19 | .05 |

*Note. *p< .05, **p< .01*

Table 4.9

*Bivariate Correlations for Exploratory Analysis – Items 19-26*

| | NIS-O Item | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Variable | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| Number of Hours | **-.63*** | -.05 | -.09 | -.42 | -.08 | -.11 | **-.55**** | -.17 |
| EOCT | **.42*** | .28 | .08 | .06 | .00 | .23 | **.48*** | .07 |

*Note. *p< .05, **p< .01*

# CHAPTER FIVE: DISCUSSION

## Summary

A correlational study was conducted to determine if a statistically significant relationship existed between alternative education students' scores given to their teacher on the Nonverbal Immediacy Scale – Observer Report (NIS-O) and their End of Course Test (EOCT) scores. Additionally, this study sought to determine if a statistically significant relationship existed between students' perceptions of teacher immediacy and their course completion rates. As students who participated in the research study finished a course, they completed the Nonverbal Immediacy Scale – Observer Report (NIS-O). Analysis showed that NIS-O survey scores were a significant negative predictor of the number of hours required to earn a Carnegie unit, $F(1,22) = 5.86$, $\beta = -0.46$, $r^2 = 0.21$, $p = 0.024$. Standardized residuals revealed no outliers and while a residual plot indicated data linearity, it also showed heteroscedasticity. Similar analysis did not show a significant correlation between NIS-O survey scores and EOCT scores, $F(1,22) = 2.07$, $\beta = 0.29$, $r^2 = 0.09$, $p = 0.165$. This data set contained no outliers and the residual plot showed both linearity and homoscedasticity.

## Discussion

The strong relationship found to exist between students' perceptions of teacher immediacy and their rate of course completion, indicates that further studies would be necessary to determine if this relationship leads to an increased graduation rate. Since

course completion is a requirement for graduation, these students should be more likely to finish high school.

The self-paced instruction employed by the study school can lead to more efficient use of the instructor's time because students only seek adult interaction to clarify areas of difficulty specific to that student's weaknesses or areas of concern. This more intimate, one-on-one interaction should be particularly facilitated and enhanced by teacher immediacy behaviors. Many of these students who have assumed the adult responsibilities of a job and a family are attracted to the opportunity to acquire the credentials to enter the job market or attend college and thus increase their earning potential as quickly as possible. The correlation between students' perceptions of teacher immediacy and rates of academic progress is consistent with the research of Ruiz (2006) who found that teacher immediacy created social capital among academically at risk students that positively affected their attitudes and orientations towards school.

The heteroscedasticity observed in this data indicates that NIS-O composite survey scores are not a good predictor of the hours required to earn a Carnegie unit for low NIS-O composite survey scores. A possible reason is that if students do not perceive that a teacher is demonstrating immediacy behaviors then there should be little effect on the hours required to earn a Carnegie unit and more scatter in the data would be expected. In contrast, students' perceptions of teacher immediacy are a good predictor of hours required to earn a Carnegie unit when students rank teachers high on the NIS-O.

The lack of correlation of students' perceptions of teacher immediacy and EOCT scores is at odds with most previous research which has shown a positive correlation of students' perceptions of teacher immediacy with cognitive learning (Harrigan, 2010;

Hess & Smythe, 2001) and overall student learning (Allen & Shaw, 1990; Christophel, 1990; Menzel & Carrell, 1989; Rodriguez, Plax & Kerney, 1996). Earlier research dealt with students in traditional schools rather than alternative education schools and the lack of agreement between the results of this study and earlier research points to the need for further research in the alternative education setting.

Because a higher percentage of the students in the alternative school plan to enter the job market upon graduation than students in the traditional school, it would be expected that grade point average (GPA) is not as valued. Generally speaking, potential employers want workers who are high school graduates, but there is no set criterion for final class ranking or GPA. However, institutes of higher learning require a minimum grade point average for admittance. Therefore, it is more likely that students in a traditional school will value a higher GPA.

Positive correlation would support the adjustment of teacher evaluation systems to reflect incorporation of nonverbal immediacy techniques, and placement of greater emphasis on improving teacher-student relationships during teacher training and professional learning. It would also reinforce the idea that teachers' interactions with their students can promote student success. The increased rate of academic progress shown in this study has the potential to change the way teachers interact with students and to change the value that is placed on personal relationships in the classroom as keys to student academic success.

It was assumed that immediacy could be measured using the same instrument in an alternative education setting as a traditional setting. In traditional classrooms, teacher movement has helped to facilitate student involvement through proximity control.

Movement has enabled the teacher to engage students in classroom discussions and activities. In contrast, instruction for alternative education students has been generally self-directed and independent of teacher involvement unless specific tutoring was requested by the students or deemed appropriate by the teacher. Teachers at PCHS did not explicitly teach material to the whole class. Instead, each student worked at his/her own pace and the teacher facilitated understanding through individualized tutoring and skill gap remediation.

Although widely used, the NIS-O survey contains some items that may not be appropriate for the self-paced instruction model, augmented by one-on-one instructor assistance. An exploratory analysis of bivariate correlations of the individual NIS-O survey items with the number of hours students were academically engaged in earning a Carnegie unit and with EOCT scores was conducted to determine if some survey items were better predictors than others.

Statistically significant negative correlations were found between the number of hours students were academically engaged in earning a Carnegie unit and items 6, 12, 17, 19, and 25. A negative correlation shows that a survey item successfully predicts more rapid course completion. These items referred to the instructor's relaxed body position, use of a variety of vocal expressions, making direct eye contact, and smiling. These instructor behaviors should facilitate one-on-one interactions with students and may be more effective than when used in a traditional, group setting.

A statistically significant positive correlation was found between the number of hours students were academically engaged in earning a Carnegie unit and item 7. This item referred to an instructor frowning when talking to students. A positive correlation

here indicates that students who believe their teachers frown are more likely to spend more hours earning a Carnegie unit. This result would be expected since students who feel they are not liked by their instructors are unlikely to work diligently in their classes thus completing them less quickly than their peers.

Statistically significant positive correlations between students' EOCT scores and two survey items were found. Items 19 and 25 referred to the instructor's use of vocal variety and smiling when talking to people. These results would also be expected because students who are engaged with instructors and have positive feelings about the engagements should perform better in the course and thus score higher on the EOCT.

Although interpretation of items that did not significantly correlate with the variables of interest is problematic because of the larger error when correlation coefficients are small, items 16, 21, and 23, that had the smallest correlation coefficients with both variables of interest, addressed the instructor's physical distance from the student. While decreasing distance could foster immediacy in the traditional classroom, distance has already been decreased to a comfortable level in the one-on-one situation. Further decrease in distance could invade the student's personal space and actually detract from the quality of the interaction. A lack of variability in one variable leads to a lack of correlation between predictor and variable of interest.

**Assumptions**

This study assumed that all teachers involved were certified educators who were highly qualified in the content areas in which they were teaching. It was also assumed that the Georgia Department of Education's requirements for teacher certification were

stringent enough to ensure that all teachers were competent and well prepared for their profession.

It was assumed that the Georgia End of Course Tests were valid assessments because they were designed to measure understanding of the Georgia Performance Standards that are mandated in the course content. The Georgia Department of Education has approved the tests and used content area experts to examine the tests for accuracy and adherence to content. It was also assumed that no bias existed in which any student group would have an advantage over another student group when taking the test. Students who have disabilities that affect access to testing had accommodations provided as specified in their Individualized Education Plan to ensure equal access to the tests.

Also assumed was that students understood that good performance on the tests was critical to passing a course, since they counted 15% or 20% of the final course grade. The percentage that the EOCT counted towards the final course grade was determined by the year in which the student entered ninth grade. The EOCT score counted 15% for students who entered ninth grade in the fall of 2010 or before. The EOCT score counted 20% for students who entered ninth grade in the fall of 2011 or later. It was assumed that students understood the importance of the assessment and therefore they were likely to put forth a quality effort and provided a valid measure of content knowledge acquisition through their EOCT scores.

It was assumed that the sample of students used in the study was representative of the population because it was expected that most students would choose to participate in the study. Since the survey took minimal effort on the part of the participants, was anonymous, and did not adversely affect the participants' grades, it was assumed the

students would be serious in their assessments of the teachers' nonverbal immediacy. Furthermore, since the participants' responses did not impact the teachers' job performance evaluations and subsequent continued employment, it was assumed that the participants responded thoughtfully to the survey questions because they were not in a position to help or hinder teachers they may have liked or disliked.

**Limitations**

There are multiple factors that may have affected students on a daily basis that could not be controlled in any study and could have potentially affected internal validity. Influences such as family values regarding education, socio-economic status, racial and ethnic pressures, etc. may have had a profound effect on students that may have affected their performances in the classroom. While it is impossible to limit or control these influences, it was appropriate to assume that most of the students in the alternative education setting had multiple factors that make education difficult for them. Although these factors limit internal validity, they allowed the results to be generalized to the student population, thereby improving external validity. The multitude of potentially negative factors affecting most alternative education school students was a limitation; however, this study added a new perspective to the current research on immediacy that previously had only been addressed in traditional settings.

Another threat to internal validity was the honesty with which students responded to the nonverbal immediacy scale survey; i.e. self-report bias. If they had positive feelings towards their teachers, they may have rated the results more positively than what was actually occurring in the classroom. Conversely, they may have rated a teacher lower than what was reality because of negative feelings for that teacher. The researcher

attempted to control for this by assuring student participants that their responses would remain confidential and that the survey results would not be incorporated into the teachers' job evaluations, but would only be used to gather information about their teaching styles.

A possible threat to the internal validity was concerns over various teacher immediacy testing instruments. Smythe and Hess (2005) compared student responses on a nonverbal immediacy scale developed by Andersen (1979) with observer-coded videotapes of instructors and found a non-significant association ($r = -.15$, $n = 311$). They concluded that student reports were not a valid measure of teacher immediacy. The instrument used in this research, Nonverbal Immediacy Scale –Observer Report, developed by Richmond, McCroskey and Johnson (2003), was not available before Smythe and Hess collected their data but they claimed the shorter Andersen (1979) instrument contained all the items in the NIS-O instrument except touch.

While the NIS-O is the most widely used instrument to measure teacher immediacy, it was not designed to evaluate teacher immediacy in an instructional self-paced classroom. Thus, the instrument contains items that are not applicable to this educational setting, but the correlations of these items with the variables of interest were low. Bivariate correlations of individual survey items with the number of hours required to earn a Carnegie unit indicated several significant negative correlations among items that were not solely appropriate in the traditional classroom. For example, the survey item with the highest correlation (- .50), item 12, states, "He/she uses a variety of vocal expressions when he/she talks to people" (Richmond, et al., 2003). This statement would

apply equally to teachers in a traditional, lecture classroom, as well as, teachers facilitating learning in a self-paced environment.

Wilson and Locker (2007/2008) found the immediacy scale developed by Gorman and Christophel (1990) was a valid measure of immediacy but was in need of revision to omit some items in order to focus on the items most closely related to immediacy. They suggested removing these survey items: a) 'asks questions or encourages students to talk', b) 'refers to class as "our" class or what "we" are doing', and c) 'invites students to telephone or meet outside of class if they want to discuss something'. The survey items were 12, 9, and 13, respectively. The current study uses the NIS-O instrument, so it is not clear that their criticism is applicable in this case.

Internal validity was further threatened by the complexity and non-quantitative nature of interpersonal interactions. As noted by Finestein and Peck (2008),

> . . . data associated with designs that imply complex interactions rarely contain sufficient cell sizes and multivariate-normal distributions to estimate such interaction terms with statistical confidence. Even where such statistical support is present, interaction terms are a weak mathematical approximation to the complexity of the dynamic processes of real interaction between persons and contexts that they are often used to represent. (p. 12)

The somewhat limited number of participants and the use of a single school potentially compromised external validity. The aim of this research was to evaluate the effectiveness of teacher immediacy on student achievement in a school where the researcher was knowledgeable. If the research conclusions support the efficacy of

nonverbal teacher immediacy, future research should be extended to study other alternative education schools with similar demographics.

An incentive was offered for students to participate in the study. The students had the chance to win a 50 dollar Walmart gift card for completion of the survey. All of the students eighteen or older read and signed consent to participate at the time they were approached by the researcher. These eleven students completed the survey as soon as they finished taking the EOCT. Although participation was voluntary for all students, it was required that students under eighteen years old return signed parental consent in order to participate in the study and therefore be eligible for the Walmart gift card drawing. All of the minor students who took an EOCT during the collection period were provided with a copy of the parental consent form and it was requested that they return it if they were willing to participate in the study. Of these twenty-eight minors 54% did not return the parental consent form and therefore could not be included in the research study. The resulting small sample size may diminish internal validity, as the limited sample may not adequately represent the population. The self-exclusion of these minor students may have introduced bias because the sample was not the entire population that it could have been. However, removing themselves from the study may have strengthened the study as only students concerned enough to return the consent form participated, thus eliminating input from students who might not have given thoughtful survey responses.

Because this study used a correlational design, the discussion of findings will be limited to examining the strength of the relationship between both pairs of variables. The results cannot be used to infer causation since the data analysis was limited to the

determination of a pattern existence and not the reason for the pattern. Howell (2008) succinctly stated, "Just because two variables are correlated doesn't mean that one caused the other" (p. 189). It would be tempting to assume that if teacher immediacy ratings are high and students' EOCT scores and course completion rates are high that the teachers' immediacy caused the increased student achievement; however, this would be overstating the case. A statistically significant relationship between the variables shows that for this data one is a good predictor of the other.

**Recommendations for Future Research**

This study adds to the growing body of literature on the relationship between students' perceptions of teacher immediacy and rate of academic progress as well as End of Course Test scores. It is recommended that further research be conducted to more fully explore this relationship as it relates to alternative education settings.

The NIS-O instrument contains items that are not appropriate for many educational approaches commonly used in alternative education settings. The curriculum delivery model is often self-paced and teachers serve as facilitators of learning rather than dispensers of knowledge as in a traditional school setting. Some of the survey items investigate teacher behaviors that can be used with only extreme caution with the age group studied; e.g. survey items 2 and 26 that deal with physical contact between facilitator and student. Unfortunately, current societal perceptions force teachers to be very circumspect about physical contacts with students so that their intentions are not misconstrued. Other survey items, such as 10, 16, 21, and 23 that address the physical distance between the facilitator and student, are not likely to yield meaningful information in this educational setting. The one-on-one nature of facilitator-student

interactions in the classrooms while other students are present necessitates that the two be close together. The lack of variability in the predictor variable would cause the correlations of these survey items with either variable of interest to be low.

Based on a somewhat limited enrollment of students in EOCT courses at the study location there was a relatively small number of students who completed a course requiring an EOCT and also took their EOCT in a timely manner so their data could be used in the study. By expanding the length of the data collection period the opportunity to gain more data would be increased. The more students who are eligible to participate in the survey and the subsequently do participate in the study, the greater the potential strength of the study.

The research site is only one school in a collaborative of eight sites spread throughout Northeast Georgia. Replicating the study at the other seven sites would allow for comparison between the schools on an individual basis. It is not appropriate to assume that higher scoring schools on the EOCTs and higher levels of teacher immediacy represent a cause and effect relationship because the research design is not able to eliminate all other possible contributing variables. However, this relationship should be examined at the other sites to see if there are similarities in the data comparisons to the original findings in this research study.

Due to the limited number of students who were able to participate in the research study and the subsequent data, the EOCT scores were examined as a group and not examined based on individual subject test score results. However, if the study were expanded over a longer data collection period and more data were gathered at the original site or if the study were expanded to include the other seven sites, it would be beneficial

to do so. By exploring either of these two correlations, the researcher may be able to determine a stronger correlation exists in a specific subject. This knowledge may lead to further research to isolate unique features of specific subjects that promote students' feelings of immediacy.

This research study gathered data on specific teachers, but no identifying information was gathered. The data collection was designed in this way so students would feel comfortable sharing their opinions without fear of repercussions from their instructors if they ranked them low. Data from future research with identifying information on the instructors in order to determine which teachers are ranked with high immediacy scores could show what immediacy behaviors are effective. The researcher cautions against using this information as part of the teachers' evaluation process but rather use it as a tool to facilitate a better understanding of teacher immediacy and its possible effect on students' academic success.

The curriculum at all of the eight sites is self-paced and learner centered. Teachers are to serve as facilitators and tutors for knowledge acquisition rather than providing direct instruction in the form of class discussion or lectures. Students are encouraged and expected to manage their own learning process. Further research that replicates the current research in an alternative education setting, but in a school where a more traditional approach is taken would be beneficial.

**Implications for Practitioners**

In the non-traditional, self-paced learning environment students have more control over their rate of academic progress than in the traditional setting. This research suggests a significant correlation between students' perceptions of teacher immediacy

and their rates of academic progress. Alternative education students have a tendency to become frustrated quickly when faced with academic challenges. Positive and supportive relationships with instructors can help students manage frustrations and their academic productivity. When students experience success they become more confident in their ability to earn Carnegie units toward a high school diploma. Teacher immediacy is a vehicle for establishing these supportive relationships.

While content area competency is vital, teachers should not lose sight of the importance of students' perceptions of their instructors' concern for their academic success. Many alternative school students have had frequent negative experiences in the academic setting, thus positive and caring engagement with supportive adults is particularly beneficial. Teachers who are able to utilize immediacy behaviors with their students may be able to promote a positive attitude towards academics that can foster a desire to complete high school.

**Conclusions**

The effects of immediacy in the educational setting have been studied extensively for more than thirty years. However, little research has been conducted in the alternative education setting. This study sought to deepen the understanding of the effects of alternative education students' perceptions of teachers' immediacy on rate of course completion and EOCT scores in a self-paced learning environment.

This study indicated a significant negative correlation linking teacher immediacy scale scores and hours that students were academically engaged in earning a Carnegie unit. Due to previous difficulties in the traditional school setting, many alternative education students need prompt success to provide motivation to continue schooling.

Finishing courses in a timely manner provides this. While no significant relationship was determined between teacher immediacy scale scores and EOCT scores, the alternative school students in this study were more concerned with earning credits towards high school graduation than with test scores.

Extension of non-verbal teacher immediacy studies in to the alternative education setting also has shown the need for a revised survey instrument with items that more closely reflect the self-paced learning environment. Vocabulary should be updated to reflect more common usage of key terms.

Incorporating understanding of the importance of immediacy behaviors and strategies for fostering immediacy need to become an integral part of pre-service instruction for all teachers. Additionally, the evaluation tools used to assess teachers' effectiveness should be modified to reflect the importance of teacher immediacy. Inclusion of immediacy behaviors in teachers' evaluations will emphasize its importance in the classroom.

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**APPENDIX A**

**Chairman of the Board of PCHS Approval Letter**


Lumpkin County Schools

56 Indian Drive

Dahlonega, Georgia 30533

Phone: (706) 864-3611
Fax: (706) 864-3755
(706) 864-5965

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Superintendent
Dewey W. Moye

Assistant Superintendent
J. Allen Seabolt

Board of Education Member
Bobby Self, Chairma
Claude Gilstrap, V. Chairma
Mike Pierc
Jim McClur
Dr. Susan Sockwe


July 17, 2012

Liberty University
Institutional Review Board
Campus North Suite 1582
1971 University Boulevard
Lynchburg, VA 24502

Dear Members of the Institutional Review Board,

Jan Singletary, a doctoral candidate at Liberty University, serves as an Assistant Principal at Lumpkin County Middle School and as a Curriculum Specialist at the Mountain Education Center High School. I am the Superintendent of Lumpkin County Schools as well as the Chairman of the Mountain Education Center High School Board. Mrs. Singletary has my permission to access student data that will be utilized in her proposed correlational study of the effect of teacher immediacy on students' rate of academic performance and End of Course Test scores.

I look forward to seeing the results of the study and the potential impact on instruction and student achievement. Please feel free to contact me if needed.

Sincerely,

Superintendent, Lumpkin County School System
Chairman, Mountain Education Center High School

**APPENDIX B**
**IRB Approval Letter**

LIBERTY
UNIVERSITY

The Graduate School at Liberty University

September 25, 2012

Jan R. Singletary
IRB Approval 1405.092512: Teacher Immediacy: A Study of the Effect on Student Academic Progress and End of Course Test Performance in a Rural Alternative High School

Dear Jan,

We are pleased to inform you that your above study has been approved by the Liberty IRB. This approval is extended to you for one year. If data collection proceeds past one year, or if you make changes in the methodology as it pertains to human subjects, you must submit an appropriate update form to the IRB. The forms for these cases were attached to your approval email.

Thank you for your cooperation with the IRB and we wish you well with your research project.

Sincerely,

**Fernando Garzon, Psy.D.**
Professor, IRB Chair
**Counseling**
**(434) 592-4054**

LIBERTY
UNIVERSITY.

*Liberty University | Training Champions for Christ since 1971*

## APPENDIX C

**Parent Recruitment Letter**

Dear Parents/Guardians,

Your student is currently enrolled in at least one course that requires a state mandated End of Course Test when the coursework is completed. I am currently enrolled in a doctoral program at Liberty University. Through this program I am conducting a research study to determine if students who feel they have a strong connection and a positive relationship with their teachers are more likely to score better on their EOCT and finish their coursework faster than their peers who do not feel these positive feelings. In order to measure the feelings of the students they will be given the opportunity to complete a brief survey when they finish their EOCT. The survey contains 26 items and should take no more than ten minutes to complete. The survey is confidential and individual students' responses will not be shared with teachers. The survey forms, EOCT results and instructional hours required to finish the course will only be connected by a code number so that I will not know the identity of the students. It is my hope that the results of this study will help to improve the teachers' and administrators' understanding of alternative education students and make your student more successful in school.

Attached to this letter is a more detailed description of the design and purpose of the research study. You are welcome to email me at jsingletary@mymec.org for further information.

If you are willing for your son or daughter to help me with this study by completing the brief survey please sign and date the last page and then return to the front office. I really appreciate your time and thank you in advance for assisting me by allowing your student to complete the survey.

Sincerely,

Jan R Singletary

Doctoral student, Liberty University

## APPENDIX D

**Parent Consent Form**

Consent Form

Teacher Nonverbal Immediacy:

A Study Of Its Effect On Student Academic Progress

And End Of Course Test Performance

In A Rural Alternative High School

Jan R. Singletary

Liberty University

School of Education

Your child is invited to participate in a research study on the effect of students' perceptions of their teachers' attitudes toward them. Your child was selected as a possible participant because he/she has recently completed an EOCT course. Please read this form and ask any questions you may have before agreeing for your child to participate in the study.

This study is being conducted by Jan R. Singletary, School of Education, Liberty University.

**Background Information:**

The purpose of this study is to determine if there is a relationship between students'

perceptions of teacher immediacy and their rate of academic progress and EOCT scores in an alternative educational setting. For this study, immediacy measures the students' feelings about their teachers' interactions and whether those interactions are positive and open or negative and closed. By determining if students' perceptions of teachers' immediacy effects achievement, it will be possible to improve the school's programs and climate to better suit the needs of its population. The results of this study may facilitate educators in identifying students who are at risk for dropping out of high school and provide early intervention.

**Procedures:**

If you agree for your child to be in this study, I would ask he/she to do the following: Complete a short survey with questions designed to determine how much he/she feels his/her teachers care about him/her and his/her progress towards graduation (teacher immediacy).

**Risks and Benefits of being in the Study:**

The risks associated with participating in this study are minimal and are no more than your child would encounter in everyday life. The only perceived risk to the participant might be if a survey question triggered the participant to remember a negative experience with a teacher that resulted in some anxiety.

**Benefits for Participation:**

There are no benefits to the individual student to participate in the study.

**Compensation:**

To compensate your child for his/her time his/her name will be entered into a drawing for a $50 Walmart gift card.

**Confidentiality:**

The records of this study will be kept private. In any sort of report I might publish, I will not include any information that will make it possible to identify a subject. Research records will be stored securely and only the researcher will have access to the records. The researcher will not be given student names but only their Georgia Testing Identification (GTID) number. Data will be stored in a locked file cabinet in the researcher's home office and will be shredded three years after the completion of the study.

**Voluntary Nature of the Study:**

Participation in this study is voluntary. Your decision whether or not to allow your child to participate will not affect his/her current or future relations with the high school where he/she is a student. If you decide to allow your child to participate, your child is free to not answer any question or withdraw at any time without affecting those relationships.

**Contacts and Questions:**

The researcher conducting this study is Jan R. Singletary. You or your child may ask any questions either of you have now. If you have questions later, you or your child are encouraged to contact her at 706-864-0229 or jrdeblois@liberty.edu or her advisor, Dr. Jose Puga at 956-543-3224 or japuga@liberty.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher or her advisor, you or your child are encouraged to contact the Institutional Review Board, Dr. Fernando Garzon, Chair, 1971 University Blvd, Suite 1582, Lynchburg, VA 24502 or email at fgarzon@liberty.edu.

You will be given a copy of this information to keep for your records.

Signature of student:_____ Date: _____

Signature of parent or guardian:_____ Date: _____

Signature of investigator:_____ Date: _____

## APPENDIX E

**Student Recruitment Letter**

Dear Student,

As you know, you are currently enrolled in at least one course that requires that you take an End of Course Test once you have finished all the module, bookwork and USA Test Prep material. I am currently enrolled in a doctoral program at Liberty University. Through this program I am conducting a research study to try to figure out if students who feel they have a strong connection and a positive relationship with their teachers are more likely to score better on their EOCT and finish their classes faster. To measure your feelings I would like you to complete a brief survey when you finish taking your EOCT. The survey contains 26 items and should take no more than ten minutes to complete. The survey is confidential and your teachers will not know what responses you gave. The survey responses will be identified with a code number to connect it with your EOCT score and the hours you needed to complete the course so that even I won't know what responses each student gave. I hope that by studying this it will help to improve our school.

Attached to this letter is a more detailed description of the design and purpose of the research study. You are welcome to email me at jsingletary@mymec.org for further information.

If you are willing to complete the brief survey, please sign and date the last page of the attached form and then return to the front office. If you return the form signed I will give your name to Ms. Greene so she will know you will take the survey when you finish your EOCT. To thank you for your time and help, I am going to have a drawing for a $50 Walmart gift card for all those that complete the survey. If you are not at school the day we draw the winner I will call you so you can get your gift card.

Sincerely,

Jan R Singletary

Doctoral student, Liberty University

## APPENDIX F

**Student Consent Form**

Consent Form

Teacher Nonverbal Immediacy:

A Study Of Its Effect On Student Academic Progress

And End Of Course Test Performance

In A Rural Alternative High School

Jan R. Singletary

Liberty University

School of Education

You are invited to participate in a research study on the effect of students' perceptions of their teachers' attitudes toward them. You were selected as a possible participant because you have recently completed an EOCT course. Please read this form and ask any questions you may have before agreeing to be in the study.

This study is being conducted by Jan R. Singletary, School of Education, Liberty University.

**Background Information:**

The purpose of this study is to determine if there is a relationship between students' perceptions of teacher immediacy and their rate of academic progress and EOCT scores in an alternative educational setting. For this study, immediacy measures the students' feelings about their teachers' interactions and whether those interactions are positive and open or negative and closed. By determining if students' perceptions of

teachers' immediacy effects achievement, it will be possible to improve the school's programs and climate to better suit the needs of its population. The results of this study may facilitate educators in identifying students who are at risk for dropping out of high school and provide early intervention.

**Procedures:**

If you agree to be in this study, I would ask you to do the following:

Complete a short survey with questions designed to determine how much you feel your teachers care about you and your progress towards graduation (teacher immediacy).

**Risks and Benefits of being in the Study:**

The risks associated with participating in this study are minimal and are no more than you would encounter in everyday life. The only perceived risk to the participant might be if a survey question triggered the participant to remember a negative experience with a teacher that resulted in some anxiety.

**Benefits for Participation:**

There are no benefits to the individual student to participate in the study.

**Compensation:**

To compensate you for your time your name will be entered into a drawing for a $50 Walmart gift card.

**Confidentiality:**

The records of this study will be kept private. In any sort of report I might publish, I will not include any information that will make it possible to identify a subject. Research records will be stored securely and only the researcher will have access to the records. The researcher will not be given student names but only their Georgia Testing Identification (GTID) number. Data will be stored in a locked file cabinet in the researcher's home office and will be shredded three years after the completion of the study.

**Voluntary Nature of the Study:**

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with the high school where you are a student. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

**Contacts and Questions:**

The researcher conducting this study is Jan R. Singletary. You may ask any questions you have now. If you have questions later, you are encouraged to contact her at 706-864-0229 or jrdeblois@liberty.edu or her advisor, Dr. Jose Puga at 956-543-3224 or japuga@liberty.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher or her advisor, you are encouraged to contact the Institutional Review Board, Dr. Fernando Garzon, Chair, 1971 University Blvd, Suite 1582, Lynchburg, VA 24502 or email at fgarzon@liberty.edu.

You will be given a copy of this information to keep for your records.

**Statement of Consent:**

I have read and understood the above information. Any questions I have had have been satisfactorily answered. I consent to participate in the study.

Signature:_____ Date: _____

Signature of investigator:_____ Date: _____

## APPENDIX G

Nonverbal Immediacy Scale-Observer Report (NIS-O)
developed by Richmond, McCroskey, and Johnson (2003).

Directions: The following statements describe the ways some people behave while talking with or to others. Please indicate in the space at the left of each item the degree to which you believe the statement applies to the teacher(s) of the EOCT course you have just finished. Please complete a different survey for each of your teachers that you had for this EOCT course. Please use the following 5-point scale:

**Never = 1 Rarely = 2 Occasionally = 3 Often = 4 Very Often = 5**

_____ 1. He/she uses her/his hands and arms to gesture while talking to people.

_____ 2. He/she touches others on the shoulder or arm while talking to them.

_____ 3. He/she uses a monotone or dull voice while talking to people.

_____ 4. He/she looks over or away from others while talking to them.

_____ 5. He/she moves away from others when they touch her/him while they are talking.

_____ 6. He/she has a relaxed body position when he/she talks to people.

_____ 7. He/she frowns while talking to people.

_____ 8. He/she avoids eye contact while talking to people.

_____ 9. He/she has a tense body position while talking to people.

_____ 10. He/she sits close or stands close to people while talking with them.

_____ 11. Her/his voice is monotonous or dull when he/she talks to people.

_____ 12. He/she uses a variety of vocal expressions when he/she talks to people.

_____ 13. He/she gestures when he/she talks to people.

_____ 14. He/she is animated when he/she talks to people.

_____ 15. He/she has a bland facial expression when he/she talks to people.

_____ 16. He/she moves closer to people when he/she talks to them.

_____ 17. He/she looks directly at people while talking to them.

_____ 18. He/she is stiff when he/she talks to people.

_____ 19. He/she has a lot of vocal variety when he/she talks to people.

_____ 20. He/she avoids gesturing while he/she is talking to people.

_____ 21. He/she leans toward people when he/she talks to them.

_____ 22. He/she maintains eye contact with people when he/she talks to them.

_____ 23. He/she tries not to sit or stand close to people when he/she talks with them.

_____ 24. He/she leans away from people when he/she talks to them.

_____ 25. He/she smiles when he/she talks to people.

_____ 26. He/she avoids touching people when he/she talks to them.

**Thank you for your participation! Please turn this survey in to the teacher giving you your EOCT.**

Nonverbal Immediacy Scale-Observer Report (NIS-O)

**Scoring:**

Step 1 – Add the scores from the following items: 1, 2, 6, 10, 12, 13, 14, 16, 17, 19, 21, 22, and 25.

Step 2 – Add the scores from the following items: 3, 4, 5, 7, 8, 9, 11, 15, 18, 20, 23, 24, and 26.

Total Score = 78 plus Step 1 minus Step 2

**Norms:**

| | | | |
|---|---|---|---|
| Females | Mean = 96.7 | S.D. = 16.1 | High = >112 Low =<81 |
| Males | Mean = 91.6 | S.D. = 15.0 | High = >106 Low =<77 |
| Combined | Mean = 94.2 | S.D. = 15.6 | High = >109 Low =<79 |

**Source:**

Richmond, V. P., McCroskey, J. C., & Johnson, A. E., (2003). Development of the Nonverbal Immediacy Scale (NIS): Measures of self- and other-perceived nonverbal immediacy. *Communication Quarterly, 51*(4)*,* 502-515.

## APPENDIX H

Table A

*Descriptive Statistics for NIS-O Items*

| Item | *n* | *Min.* | *Max.* | *M* | *SD* |
|---|---|---|---|---|---|
| He/she uses her/his hands and arms to gesture while talking to people. | 24 | 1.00 | 5.00 | 3.50 | 1.14 |
| He/she touches others on the shoulder or arm while talking to them. | 24 | 1.00 | 4.00 | 2.42 | 1.02 |
| He/she uses a monotone or dull voice while talking to people. | 24 | 1.00 | 5.00 | 1.83 | 1.31 |
| He/she looks over or away from others while talking to them. | 24 | 1.00 | 3.00 | 1.38 | 0.65 |
| He/she moves away from others when they touch her/him while they are talking. | 24 | 1.00 | 5.00 | 1.79 | 1.06 |
| He/she has a relaxed body position when he/she talks to people. | 24 | 1.00 | 5.00 | 3.63 | 1.35 |
| He/she frowns while talking to people. | 24 | 1.00 | 4.00 | 1.88 | 0.90 |
| He/she avoids eye contact while talking to people. | 24 | 1.00 | 2.00 | 1.29 | 0.46 |

| | | | | | |
|---|---|---|---|---|---|
| He/she has a tense body position while talking to people. | 24 | 1.00 | 4.00 | 1.67 | 0.82 |
| He/she sits close or stands close to people while talking with them. | 24 | 1.00 | 5.00 | 3.25 | 1.11 |
| Her/his voice is monotonous or dull when he/she talks to people. | 24 | 1.00 | 4.00 | 1.67 | 1.13 |
| He/she uses a variety of vocal expressions when he/she talks to people. | 24 | 2.00 | 5.00 | 3.92 | 1.02 |
| He/she gestures when he/she talks to people. | 24 | 1.00 | 5.00 | 3.50 | 1.22 |
| He/she is animated when he/she talks to people. | 24 | 1.00 | 5.00 | 3.46 | 1.53 |
| He/she has a bland facial expression when he/she talks to people. | 24 | 1.00 | 3.00 | 1.71 | 0.69 |
| He/she moves closer to people when he/she talks to them. | 24 | 1.00 | 4.00 | 2.83 | 0.87 |
| He/she looks directly at people while talking to them. | 24 | 2.00 | 5.00 | 4.21 | 0.78 |
| He/she is stiff when he/she talks to people. | 24 | 1.00 | 3.00 | 1.63 | 0.58 |

| | | | | | |
|---|---|---|---|---|---|
| He/she has a lot of vocal variety when he/she talks to people. | 24 | 1.00 | 5.00 | 3.58 | 1.25 |
| He/she avoids gesturing while he/she is talking to people. | 24 | 1.00 | 5.00 | 1.92 | 0.93 |
| He/she leans toward people when he/she talks to them. | 24 | 1.00 | 5.00 | 3.17 | 1.20 |
| He/she maintains eye contact with people when he/she talks to them. | 24 | 2.00 | 5.00 | 4.38 | 0.82 |
| He/she tries not to sit or stand close to people when he/she talks with them. | 24 | 1.00 | 5.00 | 2.08 | 0.97 |
| He/she leans away from people when he/she talks to them. | 24 | 1.00 | 3.00 | 1.46 | 0.59 |
| He/she smiles when he/she talks to people. | 24 | 2.00 | 5.00 | 4.33 | 0.87 |
| He/she avoids touching people when he/she talks to them. | 24 | 1.00 | 5.00 | 2.79 | 0.98 |