

1994

Academic Achievement Motivation in Hispanic Students

Lisa A. Schuck

This research is a product of the graduate program in [School Psychology](#) at Eastern Illinois University. [Find out more](#) about the program.

Recommended Citation

Schuck, Lisa A., "Academic Achievement Motivation in Hispanic Students" (1994). *Masters Theses*. 2074.
<https://thekeep.eiu.edu/theses/2074>

This is brought to you for free and open access by the Student Theses & Publications at The Keep. It has been accepted for inclusion in Masters Theses by an authorized administrator of The Keep. For more information, please contact tabruns@eiu.edu.

THESIS REPRODUCTION CERTIFICATE

TO: Graduate Degree Candidates who have written formal theses.

SUBJECT: Permission to reproduce theses.

The University Library is receiving a number of requests from other institutions asking permission to reproduce dissertations for inclusion in their library holdings. Although no copyright laws are involved, we feel that professional courtesy demands that permission be obtained from the author before we allow theses to be copied.

Please sign one of the following statements:

Booth Library of Eastern Illinois University has my permission to lend my thesis to a reputable college or university for the purpose of copying it for inclusion in that institution's library or research holdings.

3/31/94

Date

Author

I respectfully request Booth Library of Eastern Illinois University not allow my thesis be reproduced because _____

Date

Author

Academic Achievement Motivation

in Hispanic Students

(TITLE)

BY

Lisa A. Schuck

THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF

Specialist in School Psychology

IN THE GRADUATE SCHOOL, EASTERN ILLINOIS UNIVERSITY
CHARLESTON, ILLINOIS

1994

YEAR

I HEREBY RECOMMEND THIS THESIS BE ACCEPTED AS FULFILLING
THIS PART OF THE GRADUATE DEGREE CITED ABOVE

3-30-94

DATE

3/31/94

DATE

TABLE OF CONTENTS

	<u>Page</u>
List of Tables.....	ii
Acknowledgements.....	iii
Abstract.....	iv
Introduction and Review of Literature.....	1
Purpose of Study.....	21
Hypotheses.....	23
Method.....	25
Subjects.....	25
Instruments.....	26
Procedure.....	34
Results.....	37
Discussion.....	59
References.....	74

LIST OF TABLES

<u>Table</u>		<u>Page</u>
1	Means and Standard Deviations for TRAAM Factors and Total Score, AMS Subscales and Total Score, OLSAT Scores, SAT Scores, and Grades.....	38
2	Correlations Between TRAAM Factors and Total Score and AMS Subscale and Total Score.....	41
3	Correlations Between TRAAM Factors and Total Score and Group Achievement Scores and Grades.....	42
4	Regressions Predicting Group Achievement Scores and Grades; TRAAM and AMS as Predictors.....	44
5	Regressions Predicting Group Achievement Scores and Grades; TRAAM, AMS, and IQ as Predictors..	49
6	Regressions Predicting Group Achievement Scores and Grades; TRAAM, AMS, IQ, and Achievement Scores as Predictors.....	56

ACKNOWLEDGEMENTS

I would like to thank the principal, Mr. John Hoekstra, the teachers, and the students of Kerr Intermediate School in Blue Island Illinois for their cooperation, time and effort in participating in this study.

I would like to thank my thesis committee, Dr. Judy Oehler-Stinnett, Dr. Terry Stinnett, and Dr. Linda Leal, for their direction and assistance. Special thanks for sharing their knowledge with me and for showing me how enjoyable and exciting it is to conduct research. I would like to especially acknowledge Dr. Judy Oehler-Stinnett whose time and encouragement was greatly appreciated.

I would like to express my sincere admiration and respect for Dr. Luis Felipe Clay-Mendez whose kindness and wisdom is truly an inspiration. My deepest gratitude for introducing me to the Spanish language and Hispanic culture, and for assisting me with the translations for this study.

I would like to thank my parents, Edward and Blanche Schuck, and my sister, Linda Minas, for their endless love and support, for their faith in me, and for always making me feel proud of my accomplishments.

Abstract

There is a lack of research on academic achievement motivation in Hispanic students, and instruments which measure achievement motivation have not been validated with Hispanic students. Fifteen regular-education teachers rated 67 third through fifth grade Hispanic students on the Teacher Rating of Academic Achievement Motivation (TRAAM). Students completed the Achievement Motivation Scale (AMS). Construct validity was investigated by examining the relationship of the TRAAM with the AMS. Criterion-related validity was established by examining the relationship of the TRAAM with Stanford Achievement Test (SAT) scores and grades. The TRAAM, AMS, Otis-Lennon School Ability Test (OLSAT) scores, and grades were used to predict academic achievement. Pearson product-moment correlations indicate that the TRAAM is a valid measure of academic achievement when used with Hispanic students. Stepwise multiple regression analysis revealed that the TRAAM was the best predictor of grades and it accounted for a significant portion of variance in standardized achievement scores.

CHAPTER 1

Introduction

According to the U.S. Bureau of Census, it is estimated that by the year 2020 as much as 37% of the total population in this country could be Hispanic (cited in Figueroa, 1990). The annual growth rate for Hispanics exceeds the annual growth rate for Blacks and Whites, and school-age Hispanic children may be the largest growing group in the United States (Geisinger, 1992). It is imperative that school psychologists and educators have knowledge of the patterns of achievement motivation in Hispanic children, the factors that motivate Hispanic children to achieve, and ways to measure and promote achievement motivation in these students. Achievement motivation is believed to be an important factor in children's personalities that affects functioning, especially in educational setting. How children develop the desire to undertake certain tasks and to do well in school should be of extreme interest to school psychologists. There is currently a lack of research concerning academic achievement motivation in Hispanic students. The Teacher Rating of Academic Achievement Motivation (TRAAM), developed by Stinnett and Oehler-Stinnett (1993), may be a useful instrument for identifying Hispanic students with low academic achievement motivation.

Literature Review

Academic Achievement Levels of Hispanic Students

There is little debate over the fact that Hispanic students fail to do well on standardized tests of academic achievement, generally achieve at a lower rate than white students, experience grade repetitions more frequently than white students, and have disproportionately high drop out rates compared to white students (Carter & Segura, 1979; Cervantes & Bernall, 1977; Stevenson, Chen, & Uttal, 1990). According to Costantino (1992) Hispanic students have the highest high school dropout rate of all ethnic-racial groups. After conducting an extensive review of the literature on the school achievement of Mexican Americans, Cervantes and Bernall (1977) concluded that as a group, Mexican Americans achieve considerably below the level of white students and some other minority groups. Carter and Segura (1979) report that although there is evidence that Hispanic students start school fairly close to white students in the areas of measured achievement, patterns of low achievement in Hispanic children tend to appear in elementary school and persist throughout high school. According to Figueroa, Sandoval, and Merino (1984), Hispanic pupils may continue to be overrepresented in classes for the mentally handicapped and underrepresented in classes for the learning disabled and gifted.

Some recent research suggests that minority children's

performance in school has improved over the past 15 years. However, other studies support the notion that the differences in achievement among ethnic groups are still large. Humphreys (1988), in his summary of results of national surveys, has documented considerable evidence that there has been and continues to be differences in the academic achievement of Hispanic students and white students.

Historically, low levels of achievement in Hispanic children have been attributed to numerous factors. The most recent and acceptable perspective is that low achievement is not attributed to innate ability or characteristics of Hispanic individuals, or factors inherent in the Hispanic culture. It is believed that underachievement in Hispanic students is a result of inappropriate educational practices due to limited funding and/or the failure of schools to adapt to the needs of Hispanic students (Anderson & Safar, 1971; Cervantes & Bernall, 1977; Hernandez, 1973). However, the investigation of individual and cultural factors has lead to contradictory and inconclusive studies.

Familial and Cultural Variables

Numerous studies have attempted to link low achievement with various familial and cultural variables. One variable that has perhaps received the most amount of attention is socioeconomic status (SES). Baral (1977), and White (1982) reviewed many studies that have confirmed a strong

relationship between SES and academic achievement. However, some researchers conclude that SES is not a significant predictor for achievement in Mexican American students, and that correlations between SES and academic achievement are moderate to very weak (Hernandez, 1973; White, 1982).

Baral (1977) reports that several studies indicate a relationship between the education level of Mexican American parents and the academic achievement of their children. One popular traditional notion is that Hispanics hold unfavorable attitudes toward education. After reviewing the literature, Cervantes and Bernall (1977) conclude that findings with respect to the school attitudes of Mexican Americans are inconclusive. In a study of beliefs toward academic achievement, Stevenson and Uttal (1990) found that beliefs of Mexican American children and their mothers are similar to those associated with higher, not lower levels of achievement. Anderson and Johnson (cited in Hernandez, 1973) found that Mexican-American children revealed a significantly strong desire to achieve, and reported experiencing the same degrees of encouragement at home as their Anglo peers. Fyans, Maehr, Slili, and Desai (1983) report a variation in the meaning of achievement across cultural groups. However, the idea that Hispanics hold a different meaning of achievement in comparison to other Americans has not been substantiated.

In an extensive review of the literature, Hernandez

(1973) discusses many cultural variables such as values, acculturation and gender roles. However, it is reported that no clear relationship exists between these variables and achievement. One variable that has received a considerable amount of attention is native language. The primary language for many Hispanic people in this country is Spanish. For most of the century, bilingual education was denounced as contrary to American patriotism, and was regarded as a source of underachievement (Figueroa, 1990; Chamberlin & Medinos-Landurand, 1991). However, the relationship between use of a native language and lowered achievement has not been established. Furthermore, use of native language does not appear to interfere with other cognitive processes such as acquiring a second language. The majority of current empirical literature supports the notion that instruction in the primary language is the most appropriate and effective way for educating bilingual children (Figueroa, 1990).

Another cultural variable that has been given a considerable amount of attention, and relates directly to the concept of intrinsic and extrinsic motivation is locus of control. It has been proposed and widely accepted that Hispanics stress fate over individual responsibility and therefore lack a sense of control over the environment and their academic achievement (Grossman, 1984; Chamberlin & Medinos-Landurand, 1991). However, after a review of the

literature, Baral (1977) concluded that studies concerning locus of control are not consistent. There may be little if any relationship between Mexican American's sense of control over the environment and their academic achievement.

Psychological Variables

Another line of research attempted to link individual or psychological variables to achievement. The earliest researchers attempted to link low achievement of minority students to inferior cognitive abilities or low IQ's. Lavin (cited in Baral, 1977) conducted an extensive survey and concluded that ability accounts for less than half of the variation in school achievement among students. This notion may have led researchers to focus on the non-intellectual characteristics of individuals that correlate with academic achievement. According to Cervantes and Bernal (1977), considerable theoretical attention has been given to these variables but there is a lack of empirical studies researching the relationship between psychological variables and achievement. Furthermore, is it often difficult to distinguish psychological variables from cultural variables.

Numerous studies have investigated the notion that Hispanic children have negative self-concepts compared to their peers and that this low self esteem leads to low achievement. The precise relationship between self-concept and achievement has not been established, and there has not been enough evidence to substantiate the claim that Hispanic

students have negative self-concepts (Baral, 1977; Cervantes, & Bernall, 1977; Hernandez, 1973). Significant negative relationships between anxiety in minority students and performance in school have been reported. Few studies have investigated anxiety as a factor that affects achievement of Hispanic pupils (Hernandez, 1973). However, Willig, Harnish, Hill and Maehr (1983) found that Hispanic students demonstrated higher test anxiety than other groups of students, and concluded that high anxiety is predictive of negative attributions and low school performance.

Studies have indicated that differences exist between the cooperative and competitive behaviors of Hispanic children and white children, with Hispanic children being significantly less competitive than white children of comparable ages (McClintock, 1974). These results may be applied to achievement motivation since schools in this country generally value, encourage, and reward competitive behavior. On the contrary, Kagen, Zahn, and Gealy (1977) report that the less competitive social orientation of Mexican-American children is not necessarily a disadvantage with regard to school achievement.

Motivation has proven to be one of the most critical psychological or non-intellectual factors related to achievement (Atkinson, 1964; Bandura, 1969; Maehr, 1974; McClelland, 1965). However, few studies have investigated academic achievement motivation in Hispanic children. In an

attempt to identify differences in motivation between Mexican-American and Anglo-American students, Johnson (cited in Hernandez, 1973) concluded that overall differences in motivational levels between these two groups are not significant.

Theories of Motivation

Drive Theory

An abundance of literature has focused on motivation. Most contemporary theories of achievement motivation have developed from the earlier drive theories which celebrated their popularity in the 1950's and early 1960's. The tenant of the early drive theories was that behavior is organized by powerful yet basic needs such as hunger and thirst. Later, researchers such as McClelland and Atkinson expanded on this theory to include learned drives and psychological motives such as the need for approval, belongingness, and achievement. According to the learned-drive theory of achievement motivation, need for achievement results from a conflict between striving for success and avoiding failure. Resolution of this conflict depends to a large degree on the individual's childhood experiences; primarily patterns of rewards and punishments delivered by parents and teachers, and the development of positive self-regard (Covington, 1984). Research has shown that parents of achievement-oriented children reward performances that are successful, and remain neutral toward performances that

fall short of success. Parents of failure-avoidant children tend to punish their children's failures while remaining neutral in the event of success (cited in Covington, 1984).

Social Learning Theory

Social learning theorists such as Bandura and Rotter generally agree that determinants of behavior are learned and that the learning processes is influenced by perceptions of the actions of others. External situations play an important role in determining behavior, and an individual's behavior varies greatly depending on the situation. Rotter has expanded on this notion, and proposes that behavior is determined by the expectancy of goal attainment and by the value of the reinforcer. What an individual expects in a particular situation is based on prior reinforcement received in that situation. On the basis of a variety of learning experiences, belief systems develop within the individual. These beliefs influence behavior in specific situations (Weiner, 1985).

An area of research that has developed from Rotter's idea and has received a great deal of attention is locus of control. Rotter has argued that an internal locus of control is a feeling that one is self-determining, and competent. This orientation develops as a result of positive successful encounters with the environment. According to this view, an external locus of control is developed as a defense to failure (Harter, 1978).

A related area of research that has grown out of Rotter's theory is the study of intrinsic versus extrinsic motivation (Weiner, 1985). It has been suggested that individuals who are primarily intrinsically motivated as opposed to extrinsically motivated are more confident in their abilities. This has important implications for children in academic settings. Theorists suggest that some children engage in activities that are novel and that enhance their competence and effectiveness in the environment. These children obtain a greater level of satisfaction through interacting with the environment and are therefore more motivated to engage in challenging activities (Atkinson, 1964; Das, Schokman-Gates, & Murphy, 1985; Kagen 1972). Some researchers claim that extrinsic rewards may undermine intrinsic motivation. Harter has found that school grades attenuate intrinsic motivation by decreasing the pleasure derived from challenge, reducing the degree of challenge chosen by the child, and evoking concern and anxiety over possible failure (cited in Harter, 1978).

Self-efficacy Theory

White challenged the drive theorists and argued that certain behaviors that are pertinent to achievement motivation such as curiosity, mastery, play, and the need to deal competently with one's environment could not be adequately explained in terms of the drive theories (White, 1959; Harter, 1978). Self-efficacy theorists have expanded

on White's ideas and contend that motivation is based on a feeling of confidence that is developed within the individual while he/she masters tasks in the environment. They stress the importance of satisfaction and enjoyment in mastering these tasks as an underlying component of competence (Bandura, 1982; White, 1959). The feeling of efficacy associated with mastery of the environment leads to continuing interest in a task, or motivation. White (1959) suggests that motivation develops through the intrinsic need to deal effectively with the environment. When this need is gratified it produces inherent pleasure for the individual.

Attribution Theory

In the 1970's, researchers such as Weiner brought a great deal of attention to the role of attributions in achievement motivation (Covington, 1984). Attribution theorists investigate the perception of causality, or the judgment of why a particular event occurred. Attribution theory contends that an individual perceives causes for personal success and failure, and that future actions are determined by the previous attributions made by the perceiver. Perceptions of these causal factors have important implications for academic achievement. Common ascriptions for success and failure include ability, effort, task difficulty, and luck. Reduced academic performance, and expectations for the future can be due to past

experiences of failure, especially if this failure is attributed to some unchangeable factor such as ability. Empirical findings suggest a relationship between causal ascription and achievement striving. For example, low achievers tend to attribute their failure to lack of ability rather than effort, and attribute success to luck rather than ability or effort (Wagner, Powers & Irwin, 1985; Wiener, 1974, 1979).

Cognitively oriented theorists such as Fontaine, Valle and Frieze (cited in Covington, 1984), expanded on these ideas and placed heavy emphasis on the role of effort in achievement motivation. It is proposed that perceptions of one's effort is the most important cause of future achievement motivation. Research has shown that individuals who try hard and fail are more likely to remain optimistic about future success, and have increased pride in the event of success. Additionally, Omelich and Covington (cited in Covington, 1984) found that regardless of whether students are considered to be bright, students who are perceived by teachers as having tried hard are rewarded more when they succeed and are punished less when they fail than students who are perceived as not trying hard.

Covington (1984) has proposed a self-worth theory of achievement motivation which combines elements of the cognitive approach and the drive theory. In contrast to the cognitively oriented theory which proposes that positive

feelings toward accomplishments are based on effort, this theory assumes that the need for students to protect their sense of worth is the central part of all classroom achievement. This theory stresses that personal worth depends on one's accomplishments, that ability is a prime component of success, and that inability is a prime component of failure. Students are driven to approach success, and to avoid failure since failure causes feelings of worthlessness and social disapproval. Therefore, students who exhibit achievement behavior do so in order to maintain a reputation of competency. This sense of competency leads to self-worth. Effort is also important to the development of the feeling of self-worth. For example, research has indicated that a combination of high effort and failure leads to suspicions of low ability. Although high effort reduces guilt, it increases humiliation in the event of failure. According to this theory, students are likely to endure guilt (not trying) rather than being humiliated (trying hard and failing) (cited in Covington, 1984).

Behavioral Perspectives

Maehr (1974) suggests that since a desire or motive is not something that can be directly observed, we must look at the aspects of behavior that elicit concern with motivation. Activity, direction, and persistence are the three behavioral categories related to motivation. What determines these patterns of activity, direction, and

persistence depends on personality, situation, and interaction between the two.

Some researchers have used this behavioral approach to study achievement motivation in terms of acquiring and performing necessary skills. Bandura has underlined the difference between problems in acquiring a behavior and problems with performing a behavior. He has described and differentiated these two concepts. Skills (acquisition) deficits occur when the actual skills needed to successfully perform a task are not present. Performance deficits occur when the skill is in the individual's behavioral repertoire, but the individual fails to perform what is necessary to successfully complete the task (Bandura, 1969, 1977). The distinction between skill and performance deficits has important implications for academic achievement motivation and should be made in academic settings prior to diagnostic and treatment procedures. It is appropriate to approach problems with academic achievement motivation in terms of academic performance deficits (Stinnett, Oehler-Stinnett, & Stout, 1990).

Achievement Motivation

It is difficult to separate motivation and achievement. It is widely assumed that achievement is not just a function of intellectual capacity, opportunity, or good fortune. While there is no commonly accepted definition of achievement motivation, researchers have tended to agree

that achievement is associated with some type of performance that occurs in a situation in which there is a standard of excellence. The behavior is therefore measurable and typically involves some uncertainty as to the outcome or quality of the accomplishment (Maehr, 1974; McClelland, 1965). Achievement motivation has typically been viewed as an important developmental personality variable, and an enduring characteristic of the individual (Atkinson, 1964; Maehr, 1974; McClelland, 1965). According to Smith (1969), achievement related motives refers to the personality factors that are necessary and utilized when an individual undertakes a task at which he/she will be evaluated, enters into any competitive situation with other people, or strives to attain some standard of excellence.

Murray was one of the earliest researchers to focus on achievement motivation. In 1938 he devised a taxonomy that included twenty basic human needs and was the first to call attention to the fact that achievement is a basic human need. He recognized the importance of assessing need states and developed the Thematic Apperception Test (TAT); a projective test used to infer individual's motivational concerns (Weiner, 1985).

Atkinson (1962) developed an early theory of achievement motivation. His theory stresses that achievement related behavior is the result of a conflict of a between a hope of success (approach motivation) and a fear

of failure (avoidance motivation). Humans feel a need for achievement while they feel anxiety about failure. Atkinson suggests that the incentive value of a task is determined by the probability of success. Therefore, whether an individual approaches or avoids a task depends on a combination of the need for achievement, anxiety about failure, the probability of success, and the incentive value of the task.

McClelland has contributed a great deal of research to the area of achievement motivation and economic development, and has placed a great deal of stress upon learned inner drives and culturally derived personality patterns. His ideas have led to numerous sociological and anthropological investigations of achievement motivation. He noted that various societal groups exhibit differential degrees of drive and productivity. This is partly due to the variable opportunities presented to these groups as well as their capacities to capitalize on them. According to McClelland, families and child rearing practices that emphasize independence, mastery of tasks, and competition with standards of excellence produce children with high achievement motivation (McClelland, 1965). McClelland has shown that an increase in achievement motivation leads to economic growth. Conversely, a decrease in achievement motivation leads to economic decline. Maehr (1974) contends that this theory has given limited attention to the

situational contexts that affect achievement, and it has been too readily concluded by researchers that certain cultural groups are lacking in motivation as far as achievement is concerned.

Academic Achievement Motivation in Children

Many researchers have focused on academic achievement motivation in children, and some important developmental trends have been noted. Harter's findings (1981) indicate that there is a gradual shift from intrinsic motivation in younger children to extrinsic motivation in older children when considering academic behaviors that children like to and prefer to do. Covington (1984) suggests that the importance of ability and effort depends on the age of the learner. Young children perceive trying hard (effort) as the most important factor in a successful performance. In fact, simply trying hard in and of itself constitutes a successful performance for many young children. However, as individuals grow older, competency (ability) becomes the central component of a successful performance. Research has indicated that younger children tend to judge themselves by comparing their performance to their own prior performance (cited in Covington, 1984). Young children are pleased with their own performance if their achievement improves over time. However, as children get older, they begin to make self-comparisons and their sense of worth comes from doing better than others (Covington, 1984).

Some researchers suggest that sex differences exist in terms of attributional tendencies. Boys are more likely to attribute failure to unstable factors such as lack of effort, or bad luck. These attributions lead to increased effort in the event of failure. However, girls tend to attribute failure to lack of ability which leads to a lack of persistence in the event of failure (cited in Dweck and Gilliard, 1975).

Assessment of Academic Achievement Motivation

Information regarding a student's level of academic achievement motivation and orientation toward academic achievement motivation can be an important resource in designing interventions to enhance academic success. Various self-report measures of academic achievement motivation have been developed to gather such information. Gottfried (1985) has developed the Children's Academic Intrinsic Motivation Inventory (CAIMI). This scale is based on the theory that academic intrinsic motivation involves enjoyment of school learning characterized by an orientation toward mastery, curiosity, persistence, task-endogeny, and the learning of challenging, difficult, and novel tasks. It not only assesses academic intrinsic motivation, but also assesses motivation in four subject areas: reading, math, social studies, and science. Gottfried (1985, 1988) found that academic intrinsic motivation was significantly and positively correlated with children's school achievement and

perceptions of academic competence. Findings also suggest that academic intrinsic motivation is differentiated into school subject areas of math, reading, science, and social studies.

Harter (1978, 1981) has constructed the Scale of Intrinsic versus Extrinsic Orientation in the Classroom (SIEOC) that purports to measure the level of a child's motivational orientation in the classroom setting. This scale is based on the effectance motivation theory. Harter views effectance motivation as a continuum from intrinsic to extrinsic, and this instrument was designed to reflect both poles of this continuum. Five specific dimensions of intrinsic versus extrinsic academic achievement motivation have been identified, and findings suggest that the motivation construct includes two separate components: motivation, and cognitive/information. Curiosity, challenge, and mastery dimensions reflect what the child wants to do, likes to do and prefers to do (motivation). Judgement and criteria dimensions reflect what the child knows, the basis for his/her decision making, and what the child has learned about the rules of school (cognitive/information).

Bracken (1990) developed the Achievement Motivation Scale (AMS). This scale was designed to combine three major areas of motivation and is comprised of three motivations subdomains. The subdomains assess an individual's

perceptions of attribution, reinforcement, and efficacy.

Teacher ratings can be accurate, reliable, and expedient ways to collect information concerning academic achievement motivation (cited in Stinnett, Oehler-Stinnett, and Stout, 1990). The Teacher Rating of Academic Achievement Motivation (TRAAM) was developed by Stinnett and Oehler-Stinnett (1993). All items were devised to reflect major dimensions of academic achievement motivation and are based on a skill versus performance deficit model. Factor analysis of the original scale revealed four factors, School Performance, Mastery, Work Orientation, and Academic Skills, which accounted for 68% of the variance in teacher ratings of white middle-class children (Stinnett, Oehler-Stinnett, and Stout, 1990). The current TRAAM is a modified version of the original TRAAM which includes a larger sample size than the original scale, and yields a factor structure that is different from the original scale. Factor analysis of the revised scale revealed six factors, Mastery-Effort, Work Completion, Academic Skill-Ability, Competition, Cooperation, and High Effort-Low Ability that accounted for 66.5% of the variance in teacher ratings (Stinnett, Oehler-Stinnett, & Stout, 1993). (For a more extensive review of the TRAAM, see Method section).

The TRAAM has been successful in predicting achievement level of students and in identifying students with low academic achievement motivation (Stinnett, Oehler-Stinnett,

and Stout, 1990). Based on the factors that have been revealed, the TRAAM can provide educators with insight into a child's orientation toward motivation. It may also be used to reveal deficit areas which can assist educators in intervention and remediation.

Purpose of the Study

This study will focus on achievement motivation in academic settings displayed by Hispanic children. The word "hispanic" is often loosely and inappropriately used to specify race. In this country, Hispanic individuals are a cultural group, comprised of a diverse group of people. A cultural group is a group of individuals whose attitudes, customs and beliefs are distinguished from other groups of people (Hirsch, Kett, & Trefil, 1988). Hispanic is a broad term that should be used to refer to people of Latin American (Mexican, Central American, West Indian, and South American) origin who are usually Spanish-speaking, and live in the United States. It is suggested that professionals working with Hispanic children be knowledgeable about Hispanic culture, but also keep in mind that many traits attributed to the culture are broad generalizations that may not be accurate in terms of individuals or specific families (Grossman, 1984).

Most of the research on academic achievement motivation has been done on white middle-class children, and there is currently a lack of research concerning academic achievement

motivation in Hispanic children. In fact, there are no reliable and valid instruments that measure academic achievement motivation in Hispanic students. Therefore, effective intervention strategies that may be used with Hispanic students have not been developed, and there are no reliable ways to measure treatment effects of these strategies even if they were available. Hispanic children can achieve if we recognize patterns of low motivation and respond to variables that will enhance academic achievement motivation. Consistent with current ideation, the assumption should be that Hispanic children as a group do not display a lack of motivation, or atypical motivational styles, but that schools are unable to identify Hispanic children that display low motivation, and are not responding to the factors that motivate these children.

The purpose of this study is to validate the Teacher Rating of Academic Achievement Motivation (TRAAM) using a sample of Hispanic children. The Hispanic students in this study, as is the case with most studies (Hernandez & Nagel, 1993), are of Mexican-American origin. Construct validity will be examined by answering the following question: Are teacher ratings of motivation (TRAAM) related to student's self reports of academic achievement motivation as measured by the Achievement Motivation Scale (AMS)? Criterion-related validity will be examined by answering the following questions: 1. Will the TRAAM be useful for predicting

achievement levels (Stanford Achievement Test scores and grades) of Hispanic students? **2.** Is the TRAAM a better predictor of academic achievement (Stanford Achievement Test scores and grades) than the AMS? **3.** When an IQ measure (Otis-Lennon School Ability Test) is included with motivational variables, can the TRAAM account for variance in academic achievement? **4.** When an IQ measure (Otis-Lennon School Ability Test) and group achievement (Stanford Achievement Test) scores are included with motivational variables, can the TRAAM account for variance in student grades? If the TRAAM proves to be valid when used with Hispanic students, teachers may be able to use the scale to identify Hispanic students who display low academic achievement motivation. School psychologists and teachers can then intervene by providing appropriate educational experiences and programs that meet the child's needs.

Hypotheses

It is hypothesized that there will be significant correlations between the ratings on the TRAAM and the AMS, and that the TRAAM will be successful at predicting group achievement scores (SAT) and grades. It is predicted that the TRAAM will be a better predictor of the student's SAT scores and grades than will the AMS. It is also hypothesized that the TRAAM will be a significant predictor of SAT scores and grades even with OLSAT scores included in the prediction equation, and that the TRAAM will be a significant predictor

of student grades even when OLSAT scores and SAT scores are included in the prediction equation.

CHAPTER 2

Method

Subjects

Sixty-seven students from grades three through five participated in the study. The students were enrolled in a public school located in a south suburb of Chicago. There were 16 third graders (7 male, 9 female), 29 fourth graders (13 male, 16 female), and 22 fifth graders (10 male, 12 female). The average age of the students was 10.01 yrs., S.D. = .79. Only students who were enrolled in regular education classrooms were included. The students reported devoting an average of 2 hours and 18 minutes of time per day to homework.

Only students who have at least one biological Hispanic parent were included (Hispanic individuals from this area are of Mexican origin). Twenty-four (35.8%) of the children were born outside of the United States. The children born outside of the United States had been in this country an average of 5.37 years. Sixty-four (91.2%) of the children lived with both parents, and twenty-nine (42.6%) of the children had one or more extended family members living in their home. Fifty-two (76.4%) of the children had between 1 and 3 siblings in their home, and 15 (22%) of the children had between 4 and 9 siblings in their home. Fifty-four (80.5%) of the children reported that their fathers were employed, 39 (58.2%) of the children reported that their

mothers were employed outside of the home.

For the purposes of this study, students who were considered to be proficient in English (according to district criteria) participated. However, some of the students were bilingual. English was the primary language for fifty-eight (85.3%) of the students. Forty-eight (70.6%) of the students reported they were bilingual. Eighteen (26.5%) of the students reported being able to speak "some" Spanish. Fifty-eight (85.3%) of the students reported that Spanish was the primary language spoken at home by their parents, and 34 (50%) of the children reported that they had received help at school in learning how to speak English, and are now proficient in English. An Analysis of Variance computed on the TRAAM and AMS yielded no significant differences on the two motivation scales between students who had received help learning to speak English and those who had not.

Instruments

Teacher Rating of Academic Achievement Motivation (TRAAM). The TRAAM is a 50-item rating scale that is still in research form. The TRAAM purports to measure six factors: Mastery-Effort (Factor 1), Work Completion (Factor 2), Academic Skill-Ability (Factor 3), Competition (Factor 4), Cooperation (Factor 5), and High-Effort-Low Ability (Factor 6). Factors 1 through 6 contributed to 50%, 6.6%, 3%, 2.6%, 2.4% and 1.9% of the variance respectively in teacher's

ratings. The scale also yields a Total Score (Stout, Stinnett, & Oehler-Stinnett, 1993).

Factor 1 (Mastery-Effort) reflects student behaviors that are critical to the maintenance of effort even when the student is confronted with a difficult task. These behaviors include persistence, direction, and attention. Factor 1 reflects the student's level of curiosity and tendency to approach new and difficult tasks. Students who are confident in their abilities are likely to take on challenging tasks (Bandura, 1982; White, 1959). Therefore, it is suggested that mastery is related to the student's perception of competence and self-efficacy (Stinnett & Oehler-Stinnett, 1993).

Factor 2 (Work Completion) reflects a range of school performance behaviors such as a student's tendency to work to the best of his or her ability, give good effort, and complete assignments without teacher prompting. This factor may assist educators in differentiating between skills deficits and performance deficits, and identifying children that have performance deficits. If a student is viewed as having the skills to perform a task and does not perform the task, then it is likely that the child has a performance deficit and will be rated low on this factor (Stinnett & Oehler-Stinnett, 1993).

Factor 3 (Academic Skill-Ability) items reflect the child's academic and cognitive skill. Scores on this factor

indicate the child's ability to keep up with classroom tasks and instruction, and to succeed. If a child lacks the knowledge necessary to complete a task, then he/she is considered to have a skill deficit (Bandura, 1969; 1977). It is suggested that this factor be used to identify children who have skill deficits as opposed to performance deficits. Therefore, this factor is considered to be less motivational in nature (Stinnett & Oehler-Stinnett, 1993).

Factor 4 (Competition) reflects the child's preference for competitive tasks, while Factor 5 (Cooperation) reflects the child's preference for cooperative tasks. Covington (1984) suggested that children develop a sense of self worth from doing better than their peers. In competitive situations, students tend to attribute success to stable internal traits and attribute failure to external sources. It is suggested that successful students enter into competitive classroom situations in order to increase their sense of self worth, which leads to increased effort on future tasks. However, for children who are frequently unsuccessful, competitive classroom situations may lead to a reduced sense of self worth, and lowered effort. It has been suggested that children who have low achievement motivation should be in cooperative classroom settings, and be encouraged to attribute failure to changeable factors such as effort. Factor 6 (High Effort-Low Ability) reflects whether a student gives good effort even when he/she lacks

the skills that are required to complete school related tasks (Stinnett & Oehler-Stinnett, 1993).

The TRAAM is designed for use by teachers to rate students grades three through six on academic achievement motivation. Some items on the TRAAM reflect motivated behavior and other items reflect a lack of motivated behavior toward academic achievement. The teacher rates each student on each item using a five point (1-5) Likert format. Raw scores for the six factors on the scale, and the Total Score are computed by summing the items. High scores reflect motivated behavior. Norms for standard scores have not been established.

In a study that examined the technical qualities of the original scale, it was revealed that the TRAAM has excellent internal consistency reliability: School Performance (.95), Mastery (.97), Work Orientation (.79), Academic Skills (.98), and Total score (.98) (Stinnett, Oehler-Stinnett, & Stout, 1990). The TRAAM is also reliable in terms of stability across time and agreement between raters. Test-retest reliability coefficients ranged from .85 to .96. Inter-rater reliability was .74, .70, .46, .72, and .77 for TRAAM factors 1 through 4 and the Total Score respectively (Stinnett, Pitcher, & Oehler-Stinnett, 1992). These results are based on research done on the original 44-item TRAAM.

There is also evidence that the original scale has construct and criterion-related validity. Construct

validity was demonstrated by investigating the relationship between the TRAAM and the SIEOC, CAIMI, and the Social Skills Rating System-Teacher (SSRS-T). Correlations between the TRAAM scores and the SIEOC ranged from .17 to .48 and were significant ($p < .001$). Correlations between the TRAAM scores and the CAIMI ranged from .17 to .49 and were also significant ($p < .001$). Correlations between the TRAAM scales and the SSRS-T Social Skills scales revealed a positive relationship. Coefficients ranged from .42 to .88 and were significant ($p < .001$). Correlations between the TRAAM scales and the SSRS-T Problem Behavior scales revealed a negative relationship. Coefficients ranged from -.32 to -.71 and were significant ($p < .001$) (Sinnett & Oehler-Stinnett, 1991; Stinnett, Pitcher & Oehler Stinnett, 1992).

Criterion related validity was initially investigated by correlating the TRAAM with teacher judgements of student academic performance, and with the Wide Range Achievement Test-Revised (WRAT-R). Correlation coefficients for the TRAAM factors and teacher judgements ranged from .41 to .78 and were significant ($p < .001$). Correlation coefficients for the TRAAM factors and the WRAT-R subtests ranged from .33 to .42 ($p < .001$). Criterion-related validity was further demonstrated by correlating TRAAM factor and Total Score with CAIMI, SIEOC, and specific subtest of the SSRS-T in an attempt to predict problem behaviors and academic achievement. The TRAAM was a strong predictor of problem

behaviors and academic achievement (Stinnett & Oehler-Stinnett, 1991; Stinnett, Pitcher & Oehler-Stinnett, 1992). Further studies that provide reliability and validity data on the current version of the TRAAM are needed.

Achievement Motivation Scale. The AMS developed by Bracken (1990), is a 90-item self report measure of academic achievement motivation that is still in research form. Standardization information is not yet available. This scale is comprised of three subscales. The Reinforcement subscale assesses the child's perception of reinforcement that he/she receives from parents and teachers for engaging in academically oriented tasks. The Attribution subscale assesses the student's feeling of personal responsibility for outcomes of school tasks. The Efficacy subscale assesses the student's academic skills that are critical to success in school such as persistence, organization and study habits, willingness to follow directions and complete assignments (Wanat, 1993).

A modified Likert-type format, with no neutral point is used. Items are presented as statements with either positive or negative connotations. Item raw scores are summed for the three subscales which include Reinforcement, Attribution, and Efficacy, and the Total Test.

According to Bracken (1993) raw score means and standard deviations are consistent across the three subscales: Reinforcement (M = 95.41; SD = 12.93),

Attribution ($M = 96.37$; $SD = 12.93$), Efficacy ($M = 91.04$; $SD = 13.70$). Concurrent validity of the AMS was investigated by correlating the AMS with the CAIMI-General score. Correlations were positive and significant ($.49$, $p < .01$). Intercorrelations of the AMS subscales Reinforcement, Attribution, and Efficacy range from $.56$ to $.61$ respectively ($p < .001$). The shared variance among the subscales ranges from 31 to 37%. The specific variance for each subscale is approximately 63%. This indicates that each subscale is making a unique contribution to the total test score (Wanat, 1993). In a recent study of high achieving eighth grade students, Coefficient alphas for each scale were calculated: Reinforcement ($.95$), Attribution ($.93$), Efficacy ($.94$), and Total Scale ($.97$) (Bracken, 1990).

Student Profile. The Student Profile is a twelve-item self report questionnaire that was developed for use with this study. Items reflect demographic variables such as age, sex, and parent's occupation. It also reflects language factors such as the language (English or Spanish) that is used in the child's home, if the child is bilingual, and the child's primary language. A multiple choice and open-ended format is used.

Otis-Lennon School Ability Test. The OLSAT, developed by Otis and Lennon (1979), is a group intelligence test designed for use in grades 1 through 12. Abilities assessed by the OLSAT include detecting similarities and differences,

defining words, following directions, classifying, sequencing, solving arithmetic problems, and completing analogies. Performance may be reported in standard scores, percentile ranks, and stanines by age and grade level. The standardization of the OLSAT was adequate and was based on the 1979 U.S. Census ($n = 130,000$).

Internal-consistency reliability coefficients reported for age and grade level exceed .90. Test-retest reliability coefficients for students in grades 1, 2, 4, 7 and 10 ranged from .84 to .92. Correlations between the OLSAT and teacher assigned grades and Metropolitan Achievement Test (MAT) scores are acceptable and suggest concurrent and predictive validity (Cohen, Montague, Nathanson, & Swerdlik 1988).

Stanford Achievement Test-Eighth Edition. The SAT Eight Edition is a standardized group achievement test. There are two forms (J and K), and eight levels of the SAT: Primary (1, 2, 3), Intermediate (1, 2, 3), and Advanced (1, 2). Subjects in this study were administered levels Primary 2 (appropriate for children grades 2.5 to 3.5), Primary 3 (appropriate for children grades 3.5 to 4.5), Intermediate 1 (appropriate for children grades 4.5 to 5.5), and Intermediate 2 (appropriate for children grades 5.5 to 6.5). Among the scores yielded by these four levels of the test are Reading (includes Word Study Skills, and Reading Comprehension), Listening (includes Vocabulary and Listening Comprehension) Language (includes Spelling and Language

Usage), Mathematics (includes Concepts of Numbers, Math Computation, and Math Application), Social Science, and Science. Performance is described by percentile ranks, stanines, scaled scores, normal curve equivalents, grade equivalents, and ability/achievement comparisons.

The standardization sample was representative of the U.S. population in terms of school district size, geographic area, and socioeconomic status ($n = 215,000$). Reliability coefficients for each test and subtest, and for each form and level are all .80 or higher. Correlations between SAT and the Otis-Lennon School Ability Test are .60 or higher and provide some support of construct validity (Conoley, Kramer, & Murphy 1989).

Procedure

Parent permission forms were sent home with students; only students who returned parent permission forms were included. Data were collected the second semester of the 1992-1993 school year to insure that teachers had adequate experience with the students. Each teacher who participated in the study completed a TRAAM on each Hispanic child in their classroom who was included in the study. Students at each grade level who participated in the study were administered the AMS during school hours by their classroom teachers. Each child also completed a Student Profile. OLSAT scores, SAT scores, and grades were collected by reviewing each child's school records. SAT scores used in

this study include Total Reading, Total Mathematics, Language, Listening, Social Science, and Science. Students were administered the SAT with the OLSAT in the spring, and the 1993 results were used in this study. The grades used in this study were final semester (4th quarter) grades that were assigned by the student's classroom teacher. Grades were reported in academic subjects areas of Reading, Language, Spelling, Math, Social Studies, and Science. Grades were converted to numerical grade points using a 4.0 scale.

Data Analysis.

Pearson-product moment correlations of the six TRAAM factors and Total Score, and the three AMS subscales and Total Score were calculated to investigate construct validity and to determine if teacher ratings of academic achievement motivation (TRAAM) are related to student's self-reports of academic achievement motivation (AMS). Pearson product moment correlations were also calculated between the TRAAM and children's group achievement scores (SAT) and grades to examine the scale's criterion-related validity. Multiple regression analysis was also used to support criterion-related validity and to determine which instrument (TRAAM or AMS) could best predict SAT scores and grades. Multiple regression analysis of the TRAAM, AMS, and Otis-Lennon (OLSAT) scores was conducted to determine if the TRAAM would contribute significantly in predicting

achievement with OLSAT scores also entered into the equation. Additionally, multiple regression analysis of the TRAAM, AMS, OLSAT, and SAT were conducted to determine if the TRAAM contributes significantly in predicting grades when OLSAT scores and SAT scores were entered into the equation.

CHAPTER 3

Results

Table 1 presents all raw score means and standard deviations for TRAAM factors and the Total Score, AMS subscales and the Total Score, and means and standard deviations for OLSAT Test scores, SAT scores and grades.

Construct Validity

Correlations among the TRAAM scores and the AMS scores are presented in Table 2. Inspection of the Pearson product-moment correlations among the TRAAM and AMS revealed that teacher ratings of motivation (TRAAM) were minimally related to student's self reports of academic achievement motivation as measures by the AMS. Correlations among the TRAAM Factors and the AMS subscales range from .27 to .31, $p < .05$ and .31 to .34, $p < .01$. The correlation between the TRAAM Total Score and the AMS Total Score was .26, $p < .05$.

Criterion-Related ValidityPearson Product-Moment Correlations

Pearson product-moment correlations between the TRAAM Factors and Total Score and SAT scores (presented in Table 3) were moderate. TRAAM Factors 1 and 3 were related to Reading, Language, Math, and Social Studies achievement scores: r 's ranged from .34 to .46, and .39 to .47 respectively. Correlations were also significant between TRAAM Factor 4 and Language achievement scores ($r = .39$), TRAAM Factor 6 and Reading ($r = .38$), Language ($r = .37$),

Table 1

Means and Standard Deviations for TRAAM Factors and Total Score, AMS Subscales and Total Score, OLSAT Scores, SAT Scores and Grades

	TRAAM						
	F1	F2	F3	F4	F5	F6	TS
<u>n</u> = 67							
<u>M</u>	47.67	35.37	39.97	13.87	14.44	13.28	195.49
<u>SD</u>	12.47	10.22	9.85	7.44	9.85	8.38	47.23
	AMS						
	Reinforcement	Attribution	Efficacy	TS			
<u>n</u> = 67							
<u>M</u>	108.19	97.43	100.68	299.12			
<u>SD</u>	84.45	13.74	32.46	53.51			

Note. All TRAAM and AMS Means and Standard Deviations are based on raw scores.

Table 1 continued

Otis- Lennon School Ability Test
(OLSAT)

n = 62
M 101.36
SD 9.54

Stanford Group Achievement Test Scores
(SAT)

	Read	List	Lang	Math	Soc	Sci
--	------	------	------	------	-----	-----

<u>n</u> = 62						
<u>M</u>	621.52	616.93	637.46	628.10	619.77	624.66
<u>SD</u>	25.84	23.95	32.00	38.00	26.03	26.58

Note. OLSAT Means and Standard Deviation are based on Standard Scores (M = 100, SD = 16), SAT Means and Standard Deviations are based on Standard Scores (M = 500, SD = 100).

Table 1 Continued

	Grades					
	Read	Lang	Spell	Math	Soc	Sci
<u>n</u> = 62						
<u>M</u>	3.21	3.13	3.35	3.15	3.31	3.19
<u>SD</u>	1.40	1.38	1.40	1.41	1.37	1.39

Note. Grades are based on a 4-point scale.

Table 2

Correlations Between TRAAM Factors and Total Score and
AMS Subscales and Total Score

	RFT	ATTRB	EFFIC	AMSTS
TRAAM 1	.34**	.27*	.15	.31*
TRAAM 2	.14	.05	.10	.14
TRAAM 3	.27*	.16	.15	.24
TRAAM 4	.13	-.09	-.04	.01
TRAAM 5	-.05	-.06	-.07	-.07
TRAAM 6	.15	.13	.08	.14
TRAAM TS	.31 **	.18	.14	.26*

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

RFT (AMS Reinforcement subscale), ATTRB (AMS Attribution subscale), EFFIC (AMS Efficacy subscale), AMSTS (AMS Total Score). TRAAM 1 (Mastery-Effort), TRAAM 2 (Work Completion), TRAAM 3 (Academic Skill-Ability), TRAAM 4 (Competition), TRAAM 5 (Cooperation), TRAAM 6 (High Effort-Low Ability), TRAAM TS (Total Score).

Table 3

Correlations Between TRAAM Factors and Total Score and SAT Scores and Grades

	F1	F2	F3	F4	F5	F6	TS
SAT SCORES							
Read	.3493*	.2799	.3900*	-.1321	-.1002	.3766*	.3425*
List	.1212	.1405	.1737	-.1373	-.1243	.1388	.0978
Lang	.4641**	.3971*	.4687*	-.1366	-.1216	.3657*	.4642**
Math	.3364*	.2399	.4097**	-.1897	-.2189	.2358	.2995
Soc	.3429*	.2906	.4139**	-.0190	.0255	.4914**	.3970*
Sci	.2118	.2734	.2742	-.1229	-.0463	.3588*	.2514
GRADES							
Read	.4185**	.3603*	.4665**	.0382	-.0780	.1536	.4823**
Lang	.6307**	.6203**	.6794**	.0052	-.1007	.3442*	.7217**
Spel	.4787**	.3944*	.4918**	.0646	.0634	.4341**	.5331**
Math	.6396**	.5107**	.6122**	-.1312	-.2004	.2126	.6344**
Soc	.5725**	.4550**	.5916**	-.0977	-.1674	.1937	.5713**
Sci	.4885**	.3597*	.4415**	-.1319	-.1603	.0307	.4504**

Note. 1-tailed significance: * = $p < .01$, ** = $p < .001$

F1= Mastery-Effort, F2= Work Completion, F3= Academic Skill-Ability, F4= Competition, F5= Cooperation, F6= High Effort-Low Ability

Social Studies ($\underline{r} = .49$) and Science ($\underline{r} = .38$) achievement scores, and TRAAM Total Score and Reading ($\underline{r} = .34$), Language ($\underline{r} = .46$), and Social Studies ($\underline{r} = .39$) achievement scores.

Pearson product-moment correlations (presented in Table 3) revealed a significant relationship between TRAAM Factors 1, 2, 3 and Total Score and Reading, Language, Spelling, Math, Social Studies and Science grades: \underline{r} 's range from .42 to .64, .36 to .62, .44 to .68, and .45 to .72 respectively. There was also a relationship between TRAAM Factor 4 and Language ($\underline{r} = .34$) and Spelling ($\underline{r} = .43$) grades.

Multiple Regression Analysis

TRAAM and AMS as predictors of SAT Scores.

When the TRAAM and the AMS were used as predictor variables, the TRAAM proved to be a better predictor of SAT scores than the AMS (See Table 4).

TRAAM Factor 3 was the best predictor of Reading achievement scores and accounted for 15% of the variance. The next best predictor of Reading achievement scores was the TRAAM Factor 6 which accounted for an additional 9% of the variance. The two predictors combined accounted for 24% of the variance in Reading achievement scores. No other variables were statistically significant predictors of Reading achievement scores.

Table 4

Regressions Predicting SAT Scores and Grades; TRAAM and AMS
as Predictors

	<u>R</u> ²	<u>R</u> ²	<u>R</u> ²	<u>F</u>	<u>p</u>	Overall
		Adj	change	to-enter		<u>F*</u>
<u>SAT Reading</u>						
Steps/Predictors						
TRAAM 3	.39	.15	-	3.11	.003	9.67
TRAAM 6	.50	.24	.09	2.59	.0005	8.70
<u>SAT Listening</u>						
Steps/Predictors						
ATTR	.35	.12	-	2.74	.008	7.56
<u>SAT Language</u>						
Steps/Predictors						
TRAAM 3	.47	.22	-	3.89	.0003	15.19
TRAAM 6	.55	.30	.08	2.45	.0001	11.32
<u>SAT Math</u>						
Steps/Predictors						
TRAAM 3	.41	.17	-	3.30	.0017	10.89
<u>SAT Soc. Sci.</u>						
Steps/Predictors						
TRAAM 6	.49	.24	-	4.15	.0001	17.19
TRAAM 3	.59	.35	.11	2.95	.0000	14.17
ATTR	.64	.40	.05	2.21	.0000	11.77

Table 4 Continued

SAT Science

Steps/Predictors

TRAAM 6	.39	.15	-	3.07	.0033	9.44
TRAAM 5	.51	.26	.11	-2.78	.0004	9.17

Reading Grades

Steps/Predictors

TRAAM TS	.48	.23	-	4.05	.0002	16.37
AMS TS	.54	.30	.07	2.11	.0001	10.92

Language Grades

Steps/Predictors

TRAAM TS	.72	.52	-	7.66	.0000	58.70
EFFIC	.74	.56	.04	2.08	.0000	33.05

Spelling Grades

Steps/Predictors

TRAAM TS	.53	.28	-	4.63	.0000	21.44
TRAAM 6	.60	.35	.07	2.43	.0000	14.65

Math Grades

Steps/Predictors

TRAAM 1	.64	.41	-	6.11	.0000	37.38
---------	-----	-----	---	------	-------	-------

Social St. Grades

Steps/Predictors

TRAAM 3	.59	.35	-	5.39	.0000	29.07
---------	-----	-----	---	------	-------	-------

Science Grades

Steps/Predictors

TRAAM 1	.49	.24	-	4.11	.0000	16.92
---------	-----	-----	---	------	-------	-------

Table 4 Continued

Note. RFT (AMS Reinforcement subscale), ATTRB (AMS Attribution subscale), EFFIC (AMS Efficacy subscale), AMSTS (AMS Total Score). TRAAM 1 (Mastery-Effort), TRAAM 2 (Work Completion), TRAAM 3 (Academic Skill-Ability), TRAAM 4 (Competition), TRAAM 5 (Cooperation), TRAAM 6 (High Effort-Low Ability), TRAAM TS (Total Score).

TRAAM Factor 3 was the best predictor of Language achievement scores and accounted for 22% of the variance. TRAAM Factor 6 was the next best predictor of Language achievement scores accounting for an additional 8% of the variance. Combined the two factors accounted for 30% of the variance in Language achievement scores. No other variables were statistically significant predictors of Language achievement scores.

TRAAM Factor 3 was also the best predictor of Math achievement scores and accounted for 17% of the variance. No other variables were statistically significant predictors of Social Studies achievement scores.

TRAAM Factor 6 was the best predictor of Social Science achievement scores and accounted for 24% of the variance. TRAAM Factor 3 was the next best predictor of Social Science achievement scores and accounted for an additional 11% of the variance. AMS Attribution subscale was the third best predictor of Social Studies achievement score accounting for an additional 5% of the variance. Combined the three predictors accounted for 40% of the variance in Social Studies achievement scores. No other variables were statistically significant predictors of Social Studies achievement scores.

TRAAM Factor 6 was also the best predictor of Science achievement scores, accounting for 15% of the variance. TRAAM Factor 5 was the next best predictor of Science

achievement scores and accounted for an additional 11% of the variance. The two predictors combined accounted for 26% of the variance in Science achievement scores. No other variables were statistically significant predictors of Science achievement scores.

AMS Attribution subscale was the best predictor of Listening achievement scores accounting for 12% of the variance. No other variables were statistically significant predictors of Listening achievement scores.

TRAAM, AMS, and OLSAT scores as predictors of SAT scores. Using OLSAT scores, TRAAM factors, and AMS subscales as predictors of SAT scores, OLSAT scores were the best predictor of SAT scores. However, the TRAAM still accounted for a significant portion of the variance in SAT scores (See table 5).

The OLSAT was the best predictor of Reading achievement accounting for 36% of the variance. TRAAM Factor 6 and Factor 4 were the next best predictors of Reading achievement scores accounting for an additional 11% and 6% of the variance. Combined the predictor variables accounted for 52% of the variance. No other variables were statistically significant predictors of Reading achievement.

The OLSAT was the best predictor of Listening achievement scores accounting for 46% of the variance. No other variables were statistically significant predictors of Listening achievement scores.

Table 5

Regressions Predicting SAT Scores and Grades; TRAAM, AMS,
and OLSAT Scores as Predictors

	<u>R</u> ²	<u>R</u> ²	<u>R</u> ²	<u>F</u>	<u>p</u>	Overall
		Adj	change	to-enter		<u>F</u> *
<u>SAT Reading</u>						
Steps/Predictors						
OLSAT	.59	.36	-	5.60	.0000	31.14
TRAAM 6	.68	.46	.10	3.30	.0000	23.76
TRAAM 4	.72	.52	.06	-2.48	.0000	19.37
<u>SAT Listening</u>						
Steps/Predictors						
OLSAT	.68	.46	-	6.90	.0000	47.71
<u>SAT Language</u>						
Steps/Predictors						
OLSAT	.62	.38	-	5.91	.0000	34.96
TRAAM 6	.69	.47	.09	3.08	.0000	24.82
TRAAM 1	.73	.53	.06	2.73	.0000	20.94
<u>SAT Math</u>						
Steps/Predictors						
OLSAT	.66	.46	-	6.86	.0000	47.00

Table 5 Continued

SAT Soc. Sci.

Steps/Predictors

OLSAT	.54	.30	-	4.86	.0000	23.57
TRAAM 6	.70	.49	.19	4.51	.0000	26.05
AMS TS	.73	.53	.04	2.11	.0000	19.95

SAT Science

Steps/Predictors

OLSAT	.59	.34	-	5.43	.0000	29.45
TRAAM 6	.67	.46	.12	3.35	.0000	23.01
TRAAM 4	.71	.51	.05	-2.47	.0000	18.79

Reading Grades

Steps/Predictors

TRAAM TS	.32	.10	-	2.61	.0114	6.81
AMS TS	.40	.16	.06	2.03	.0057	5.64

Language Grades

Steps/Predictors

TRAAM TS	.39	.16	-	3.33	.0015	11.08
----------	-----	-----	---	------	-------	-------

Spelling Grades

Steps/Predictors

TRAAM TS	.36	.13	-	2.97	.0043	8.82
----------	-----	-----	---	------	-------	------

Math Grades

Steps/Predictors

TRAAM TS	.39	.15	-	3.31	.0016	10.92
----------	-----	-----	---	------	-------	-------

Table 5 continued

Social St. Grades

Steps/Predictors

TRAAM TS	.35	.12	-	2.88	.0055	8.31
----------	-----	-----	---	------	-------	------

Science Grades

Steps/Predictors

TRAAM 1	.30	.09	-	2.45	.0173	5.99
---------	-----	-----	---	------	-------	------

Note. RFT (AMS Reinforcement subscale), ATTRB (AMS Attribution subscale), EFFIC (AMS Efficacy subscale), AMSTS (AMS Total Score). TRAAM 1 (Mastery-Effort), TRAAM 2 (Work Completion), TRAAM 3 (Academic Skill-Ability), TRAAM 4 (Competition), TRAAM 5 (Cooperation), TRAAM 6 (High Effort-Low Ability), TRAAM TS (Total Score).

The OLSAT was the best predictor of Language achievement scores accounting for 38% of the variance. TRAAM Factor 6 was the next best predictor of Language achievement accounting for an additional 9% of the variance, and TRAAM Factor 1 was the next best predictor of Language achievement accounting for an additional 6% of the variance. The three predictor variables combined accounted for 53% of the variance in Language achievement scores. No other variables were statistically significant predictors of Language achievement.

The OLSAT was the best predictor of Math achievement scores and accounted for 46% of the variance. No other variables were statistically significant predictors of Math achievement.

The OLSAT was the best predictor of Social Science achievement scores accounting for 30% of the variance. TRAAM Factor 6 was the second best predictor accounting for an additional 19% of the variance in Social Studies achievement scores. AMS Total Score was the next best predictor accounting for 4% of the variance. Combined the three predictors accounted for 53% of the variance in Social Studies achievement scores. No other variables were statistically significant predictors of Social Studies achievement.

The OLSAT was the best predictor of Science achievement accounting for 34% of the variance. TRAAM Factor 6 and

TRAAM Factor 4 accounted for an additional 12% and 5% of the variance in Science achievement scores. The three predictors combined accounted for 51% of the variance in Science achievement scores. No other variables were statistically significant predictors of Science achievement scores.

TRAAM, and AMS as predictors of grades. As previously mentioned, the TRAAM was the best predictor of SAT scores when the TRAAM and the AMS were used as predictor variables. Additionally, when these same two instruments were used as predictor variables, the TRAAM was also the best predictor of grades (See Table 4).

TRAAM Total Score was the best predictor of Reading grades, accounting for 23% of the variance. AMS Total Score was the next best predictor of Reading grades and accounted for an additional 7% of the variance. Combined, the two predictors accounted for 30% of the variance in Reading grades. No other variables were statistically significant predictors of Reading grades.

TRAAM Total Score was also the best predictor of Language grades and accounted for 52% of the variance. AMS Efficacy subscale was the second best predictor of Language grades and accounted for an additional 4% of the variance. The two predictors combined accounted for 56% of the variance in Language grades.

TRAAM Total Score was also the best predictor of Spelling grades, accounting for 28% of the variance. TRAAM

Factor 6 was the next best predictor of Spelling grades, accounting for an additional 7% of the variance. Combined the two predictors accounted for 35% of the variance in Spelling grades. No other variables were statistically significant predictors of Spelling grades.

TRAAM Factor 1 was the best predictor of Math grades, accounting for 41% of the variance. No other variables were statistically significant predictors of Math grades. TRAAM Factor 1 was also the best predictor of Science grades and accounted for 24% of the variance. No other variables were statistically significant predictors of Science grades.

TRAAM Factor 3 was the best predictor of Social Studies grades, accounting for 35% of the variance. No other variables were statistically significant predictors of Social Studies grades.

TRAAM, AMS, and OLSAT scores as predictors of grades.

Not only did the TRAAM account for a significant portion of the variance in SAT scores when OLSAT scores were in the equation, but the TRAAM was still the best predictor of all grades (See Table 5).

The TRAAM Total Score was the best predictor of Reading grades accounting for 10% of the variance. AMS Total Score was the next best predictor of Reading grades accounting for an additional 6% of the variance. These predictor variables combined accounted for 16% of the variance in Reading grades. No other variables were statistically significant

predictors of Reading grades.

TRAAM Total Score was also the best predictor of Language, Spelling, Math, and Social Studies grades and accounted for 16%, 13%, 15%, 12% of the variance. No other variables were statistically significant predictors of Social Studies grades.

TRAAM Factor 1 was the best predictor of Math grades accounting for 9% of the variance. No other variables were statistically significant predictors of Math grades.

TRAAM, AMS, OLSAT scores, and SAT scores as predictors of grades. When the TRAAM, AMS, OLSAT scores, and SAT scores were used as predictor variables, the TRAAM was still the best predictor of grades (See Table 6).

TRAAM Total Score was the best predictor of Reading grades accounting for 26% of the variance. The OLSAT was the second best predictor of Reading grades accounting for an additional 12% of the variance. AMS Efficacy subscale was the next best predictor and accounted for 5% of the variance. Combined the three predictor accounted for 43% of the variance in Reading grades.

TRAAM Total Score was the best predictor of Language grades accounting for 54% of the variance. Language achievement score was the next best predictor of Language grades accounting for an additional 9% of the variance. TRAAM Total Score and Language achievement score combined accounted for 63% of the variance in Language grades.

Table 6

Regressions Predicting Grades; TRAAM, AMS, OLSAT Scores, and SAT Scores as Predictors

	R^2	R^2	R^2	F	p	Overall
	Adj change			to-enter		F^*
<u>Reading Grades</u>						
Steps/Predictors						
TRAAM TS	.51	.26	-	4.42	.0000	19.49
OLSAT	.62	.38	.12	3.35	.0000	17.15
EFFIC	.65	.43	.05	2.06	.0000	13.52
<u>Language Grades</u>						
Steps/Predictors						
TRAAM TS	.73	.54	-	8.17	.0000	66.73
SAT LANG	.79	.63	.09	3.64	.0000	47.17
<u>Spelling Grades</u>						
Steps/Predictors						
SAT LANG	.42	.41	-	6.39	.0000	40.80
TRAAM TS	.70	.50	.09	3.06	.0000	28.07
<u>Math Grades</u>						
Steps/Predictors						
TRAAM 1	.66	.44	-	6.59	.0000	43.54

Table 6 Continued

Social St. Grades

Steps/Predictors

TRAAM 3	.58	.34	-	5.41	.0000	29.27
OLSAT	.64	.42	.08	2.60	.0000	19.54

Science Grades

Steps/Predictors

TRAAM 1	.48	.23	-	4.14	.0001	17.15
---------	-----	-----	---	------	-------	-------

Note. RFT (AMS Reinforcement subscale), ATTRB (AMS Attribution subscale), EFFIC (AMS Efficacy subscale), AMSTS (AMS Total Score). TRAAM 1 (Mastery-Effort), TRAAM 2 (Work Completion), TRAAM 3 (Academic Skill-Ability), TRAAM 4 (Competition), TRAAM 5 (Cooperation), TRAAM 6 (High Effort-Low Ability), TRAAM TS (Total Score). SAT LANG (SAT Language score).

SAT Language score was the best predictor of Spelling grades accounting for 44% of the variance. TRAAM Total Score was the next best predictor of Spelling grades and accounted for 9% of the variance. Combined the two variables accounted for 50% of the variance in Spelling grades. No other variables were statistically significant predictors of Spelling grades.

TRAAM Factor 1 was still the best predictor of Math and Science grades accounting for 43% and 23% of the variance. No other variables were statistically significant predictors of Math and Science grades.

TRAAM Factor 3 was the best predictor of Social Studies grades accounting for 34% of the variance. The OLSAT was the next best predictor of Social Studies grades accounting for an additional 8% of the variance. Combined the predictors accounted for 42% of the variance in Social Studies grades. No other variables were statistically significant predictors of Social Studies grades.

CHAPTER 4

Discussion

Correlations Between TRAAM and AMS

The hypothesis that there would be significant correlations between the ratings on the TRAAM and the AMS was supported. The correlation between the TRAAM Total score and the AMS Total Score was positive and significant ($r = .26, p < .05$). While statistically significant, this low correlation contributes little evidence for the construct validity of these two scales. The TRAAM and the AMS purport to measure the same construct (academic achievement motivation) but differ in their theoretical orientation. Therefore, the low correlations between the TRAAM scores and the AMS scores may reflect this theoretical difference. Low correlations between the TRAAM and the AMS are consistent with previous findings. Wanat (1993) reported moderate correlations between the AMS and the CAIMI. Additionally, Stinnett and Oehler-Stinnett (1991) reported that correlations among the TRAAM, SIEOC, and CAIMI are small to moderate.

Correlations Between TRAAM, SAT Scores and Grades

Criterion related validity was supported through Pearson product-moment correlations between the TRAAM Factors and SAT scores, and between TRAAM Factors and grades. The hypothesis that the TRAAM would be successful at predicting group SAT scores was supported. Inspection of

the correlations reveals that Factors 1 (Mastery-Effort) and 3 (Academic Skill-Ability) appear to be important Factors on the scale due to their significant relationship with the standardized achievement scores across four of the six subject areas. These two Factors both had significant low-to-moderate positive correlations with Reading, Language, Math, and Social Studies achievement scores (\underline{r} 's ranged from .34 to .39, $\underline{p} < .01$ and .41 to .46 $\underline{p} < .001$). It is likely that children who score higher on these Factors have higher achievement scores. This is not surprising given that these Factors reflect effort, and academic and cognitive skill. It is expected that students who give good effort, and who are bright will perform well on standardized tests of achievement. Factor 3 had the highest correlations with the areas of Reading, Language ($\underline{r} = .39, .46, \underline{p} < .01$ respectively) and Math ($\underline{r} = .41, \underline{p} < .001$) indicating that on standardized tests of achievement, these subject areas are affected by a child's cognitive and academic skill. Factor 6 (High Effort-Low Ability) had the highest correlation with Social Studies ($\underline{r} = .49, \underline{p} < .001$) indicating that on standardized tests of achievement, this subject area is related to effort as opposed to ability. There were no significant correlations between Factor 4 (Competition), Factor 5 (Cooperation) and any of the achievement subject areas. Behaviors associated with being either competitive or cooperative appear to have no

relationship with a child's performance on standardized achievement tests. Additionally, there were no significant correlations between any of the Factors with the Listening and Science achievement score areas. Academic skills manifested in the Listening and Science subtests of this standardized achievement test appear to be unrelated to any of the motivation-oriented behaviors reflected by the TRAAM.

The hypothesis that the TRAAM would be successful at predicting grades was supported. Consistent with correlations between the TRAAM and SAT scores, TRAAM Factors 4 (Competition) and 5 (Cooperation) were not related to grades in any subject area. Competitive and cooperative behaviors appear unrelated to the actual grade that a child earns. Factors 1 (Mastery-Effort), 2 (Work Completion), 3 (Academic Skill-Ability), and the Total Score were related to student grades in all subject areas (Reading, Language, Spelling, Math, Social Studies, and Science). Correlations ranged from .34 to .39, $p < .01$ and .41 to .72, $p < .001$.

Closer inspection reveals that the Total Score had the highest correlation with Reading, Language and Spelling grades, $r = .48, .72, .53, p < .001$ respectively. Children who score high overall on the TRAAM and who possess many of the achievement motivation-related behaviors reflected by the TRAAM are likely to have good grades in these areas. TRAAM Factor 1 (Mastery-Effort) has the strongest relationship with Math and Science grades, $r = .64, .49, p < .001$

respectively. These two subject areas are usually challenging to children in that they require a good amount of reasoning skills, attention and concentration. It is not surprising that there is a relationship between a child's grades in these areas and his/her level of curiosity and maintenance of effort when confronted with difficult tasks. Factor 3 (Academic Skill-Ability) had the strongest relationship with Social Studies grades, $r = .59$, $p < .01$. While a child's Social Studies achievement score seems related to effort, a child's Social Studies grades appears related to cognitive and academic skill.

The TRAAM was more strongly related to grades than SAT scores. Higher correlations between the TRAAM with grades than the TRAAM with standardized achievement scores are expected and can be explained in terms of the fact that both TRAAM scores and grades are based on teacher judgement. Overall, the TRAAM is useful for predicting achievement levels (both standardized scores and grades) of Hispanic students.

TRAAM and AMS as Predictors of SAT Scores and Grades

Criterion-related validity was also strongly supported through stepwise multiple regression analysis using the TRAAM and the AMS as predictor variables. The hypothesis that the TRAAM would be a better predictor of student's SAT scores and grades than the AMS was supported. The TRAAM outperformed the AMS in prediction of all SAT areas with the

exception of Listening achievement. Additionally, the TRAAM outperformed the AMS in prediction of all grades.

Factors 3 (Academic Skill-Ability) and 6 (High Effort-Low Ability) appear to be very important Factors in predicting achievement test scores. The recurrence of Factors 3 and 6 in the prediction of SAT scores suggests that on standardized group achievement tests, bright children will succeed as well as children who have low ability yet remain motivated. Both Factors were good predictors of Reading and Language achievement. Combined with the AMS Attribution subscale, they were very strong predictors of Social Science achievement test scores. Factor 3 was a fair predictor of Math achievement test scores with no other Factor or AMS subscale contributing to the variance. This indicates that cognitive and academic skill is important in predicting Math achievement test scores. Factor 6 combined with Factor 5 (Cooperation) were good predictors of Science achievement test scores indicating that low-ability children who remain cooperative and motivated do well in the area of Science on standardized achievement tests.

TRAAM Total Score was the best predictor of Reading, Language and Spelling grades. TRAAM Total Score combined with the AMS Total Score were good predictors of Reading grades indicating that teachers' overall perception of achievement motivation combined with students' overall self-

perception of achievement motivation are good indicators of anticipated Reading grades. TRAAM Total Score combined with the AMS Efficacy subscale were very strong predictor of Language grades indicating that teachers' perception of achievement motivation combined with how a child feels about his/her ability to master the environment are related to grades in the area of Language. TRAAM Total Score combined with Factor 6 (High Effort-Low Ability) were good predictors of Spelling. This indicates that teachers' perceptions of overall achievement motivation combined with their perceptions of how well low-ability children are at remaining motivated, are useful at predicting Spelling grades.

Factor 1 (Mastery-Effort) was a strong predictor of Math grades and a good predictor of Science grades with no other Factors or AMS subscales contributing to the variance. This indicates that children who maintain effort, are curious, and approach new and challenging tasks will receive good math grades. Interestingly, effort and mastery of school-related demands (Factor 1) was meaningful in predicting Math grades whereas cognitive and academic skill (Factor 3) was meaningful in predicting Math achievement test scores. As discussed previously, teacher perception of student effort may have an influence on the grades they assign.

Factor 3 was a good predictor of Social Studies grades

with no other Factors or AMS subscales contributing to the variance. This suggests that academic and cognitive skill is meaningful in predicting a child's Social Studies grades. TRAAM, AMS, and OLSAT Scores as Predictors of SAT Scores and Grades

Additional support for the criterion related validity of the TRAAM was provided through stepwise multiple regression analysis using the TRAAM, AMS, and the OLSAT as predictors of SAT scores and grades. The hypothesis that the TRAAM would be a significant predictor of SAT scores and grades even with OLSAT scores included in the prediction equation was supported. When the OLSAT was included with the motivational variables, the TRAAM still accounted for a significant portion of variance (15 to 19%) in SAT scores. Additionally, with the OLSAT scores in the equation, the TRAAM alone was the best predictor of grades. It is not surprising that a standardized measure of ability (OLSAT) would best predict standardized achievement scores (SAT), and that teacher ratings of achievement motivation (TRAAM) would best predict teacher assigned grades.

The OLSAT was the best predictor of all SAT subject areas and was the only significant predictor of the Math and Listening achievement test scores. However, with the exception of Math and Listening achievement, Factor 6 (High Effort-Low Ability) was consistently the second-best predictor of achievement test scores. The OLSAT, Factors 6

and 4 (Competition) were very strong predictors of Reading and Science achievement. OLSAT scores, Factors 6 and 1 (Master-Effort) were very strong predictors of Language achievement. OLSAT scores, Factors 6 and the AMS Total Score were very strong predictors of Social Science achievement. This interesting pattern suggests that cognitive ability is important, but it is not the only meaningful variable in predicting achievement test scores. A child's ability to try hard and put forth effort (reflected in Factor 6), even when ability is lacking, is also a crucial component of achievement test scores.

The current results suggest that in terms of the actual grades that a child earns, the TRAAM Total Score alone was a fair predictor of Language, Spelling, Math, and Social Studies grades. The TRAAM Total Score and the AMS Total Score were fair predictors of Reading grades, and TRAAM 1 (Mastery-Effort) was a fair predictor of Science grades. The OLSAT was not a meaningful variable in predicting achievement in terms of grades.

TRAAM, AMS, OLSAT Scores, and SAT Scores as Predictors of Grades

The hypothesis that the TRAAM would be a significant predictor of student grades, even with OLSAT scores and SAT scores included in the prediction equation, was supported. This also lends further support to the criterion related validity of the scale. With the exception of Spelling

grades, the TRAAM was consistently the best predictor of all grades.

TRAAM Total Score, OLSAT scores and AMS Efficacy were strong predictors of Reading grades, suggesting that motivation, ability and a feeling of efficacy are important behaviors that predict Reading grades. TRAAM Total Score and Language achievement scores were excellent predictors of Language grades, and were strong predictors of Spelling grades.

Factor 1 (Mastery-Effort) alone was a strong predictor of Math grades, and a good predictor of Science grades. Factor 1 has consistently shown up through the multiple regressions as a predictor of Math and Science grades. It appears that behaviors such as maintenance of effort, curiosity and a desire to engage in challenging activities are important in predicting grades in these subjects. Factor 3 (Academic Skill-Ability) and OLSAT scores were strong predictors of Social Studies grades indicating that cognitive and academic skill is important in predicting Social Studies grades.

Consistent with previous research, ability seems to be an important predictor of academic achievement (Wanant, 1991). Based on her findings, Wanant (1991) concluded that self-report measures of achievement motivation do not meaningfully contribute to the explanation of achievement, and that ability remains the strongest and clearest variable

in predicting academic achievement. However, results of this study strongly support previous findings that indicate that teachers' judgements of achievement motivation are valid and useful ways to collect information concerning academic achievement motivation (Stinnett, Oehler-Stinnett, and Stout, 1990). Additionally, the results of this study indicate that the combination of teacher ratings of student motivation (TRAAM), and ability (OLSAT), is a crucial component of predicting a child's achievement test scores. Both of these variables must be taken into account when explaining and predicting the achievement levels of a child. Furthermore, when concerned with predicting the actual grades that a child will earn, teachers' perceptions of student motivation as apposed to cognitive ability, appears to be the most important variable.

Based on the theoretical orientation of the TRAAM, it is the intention of the authors to not only predict academic achievement motivation, but to differentiate skill from performance deficits (Stinnett, Oehler-Stinnett & Stout, 1990). The results of this study suggest that the TRAAM is useful at providing information about a student's overall level of academic achievement motivation. Additionally, the individual Factors appear useful in providing information about a student's orientation toward academic achievement motivation. It is quite possible that based on the scores obtained on the TRAAM, educators will be able to determine

if low achievement is due to lack of motivation (performance deficit), or a lack of knowledge acquisition (skill deficit). For example, high scores on the TRAAM Total Score (reflective of motivated behavior) combined with continued low academic achievement would imply that the student does not have the skills to complete the academic work. Only when a performance deficit is confirmed, it is appropriate to approach problems in terms of academic achievement motivation. This type of information is a crucial component to any assessment. However, further factor analytic data is needed to support this notion.

The TRAAM is currently recommended for research purposes only (Stinnett & Oehler-Stinnett, 1991). Limitations of this study support this recommendation, especially in terms of using the scale with Hispanic students. One limitation of this study is that the sample is very regionalized. Additionally, the Hispanic students in this study are all English-proficient Mexican-American children. The majority of the children were born in the United States. These facts do not allow generalizability of the findings to other Hispanic children (i.e. Puerto Rican, Cuban etc.), Hispanic children who have limited English proficiency, and Hispanic children who are foreign-born and/or have not become acculturated. Another limitation of this study is that no exceptional children were included in the sample. Furthermore, the sample was

not randomized; only students who were given permission to participate were included in the study.

In spite of these limitations of this study, the TRAAM is currently the only device that promises to be a reliable and valid instrument for use in assessing academic achievement motivation in Hispanic students. The results of this study indicate that once norms for standard scores are established the TRAAM will be an appropriate and essential instrument for assessing motivation. School psychologists may be able to use the scale to differentiate between skill deficits and performance deficits in Hispanic students, to identify Hispanic students who display low academic achievement motivation, to predict future academic success, to assist in intervention plans, and to measure the treatment effects of intervention programs. Based on the estimated growth rate of the Hispanic population and the fact educators continue to struggle with ensuring that they succeed, it is essential that we have the means to properly assess academic achievement motivation in Hispanic students.

References

- Atkinson, J. (1964). An introduction to motivation.
Princeton, NJ: Van Nostrand.
- Anderson, J. G., & Safar, D. (1971). The influence of differential community perceptions on the provisions of equal education opportunities. In N.N. Wagner, & M.J. Haug, Chicanos: Social and psychological perspectives (pp.244-252). St. Louis: C.V. Mosby Company.
- Bandura, R. (1969). Principles of behavior modification.
New York: Holt, Rinehart, & Winston.
- Bandura, R. (1977). Social learning theory. Eglewood Cliffs, NJ: Prentice Hall.
- Bandura, A. (1982). Self-efficacy mechanism in human agency. American Psychologist, 2, 122-147.
- Baral, D. P. (1977). Achievement levels among foreign-born Mexican-American students. San Francisco CA: R & E Research Associates.
- Bracken, B. A. (1991). Achievement Motivation Scale.
Unpublished test, Memphis State University.
- Bracken, B. A. (1992). [Achievement Motivation Scale scores]. Unpublished raw data.
- Carter, P. T., & Segura, R. D. (1979). Mexican Americans in school: A decade of change. New York: College Entrance Examination Board.

- Cervantes, R. A., & Bernal, H. H. (1977). Psychosocial growth and academic achievement motivation in Mexican-American students. San Antonio, TX: Developmental Associates.
- Chamberlin, P., & Medinos-Landurand, P. (1991). Practical considerations for the assessment of LEP students with special needs. In E. V. Hamayan & J. S. Damico, Limiting bias in the assessment of bilingual students (pp. 112-155). Austin, TX: Pro-ed.
- Conoley, J. C., Kramer, J. J., Murphy L. L. (Eds.). (1989). The tenth mental measurements yearbook. University of Nebraska Press.
- Cohen, R. J., Montague, P., Nathanson, L. S., Swerdlik, M. E. (1988). Psychological testing: An introduction to tests & measurement. Mountain View, California: Mayfield Publishing Company.
- Costantino, G. (1992). Overcoming bias in the educational assessment of Hispanic students. In K. F. Geisinger (Ed.), Psychological testing of Hispanics (pp. 89-99). Washington, DC: American Psychological Association.
- Covington, M. V. (1984). The self-worth theory of achievement motivation: Findings and implications. The Elementary School Journal, 85(1), 5-20.

- Das, J. P., Schokman-Gates, K., & Murphy, D. (1985). The development of intrinsic and extrinsic motivational orientation in normal and disabled readers. Journal of Psychoeducational Assessment, 4, 297-312.
- Dweck, C. S., & Gilliard, D. (1975). Expectancy statements as determinants of reactions to failure: Sex differences in persistence and expectancy change. Journal of Personality and Social Psychology, 32(6), 1077-1084.
- Fayans, L. J., Maehr, M. L., Slili, F., & Desai, K. A. (1983). A cross-cultural exploration into the meaning of achievement. Journal of Personality and Social Psychology, 44, 1000-1117.
- Figuroa, R. A. (1990). Best practices in the assessment of bilingual children, in A. Thomas & J. Grimes (Eds.), Best Practices in School Psychology, Washington D.C.: National Association of School Psychologists.
- Figuroa, R. A., Sandoval, J., & Mereno, B. (1984). School Psychology and limited-English-proficient children: New competencies. Journal of School Psychology, 22, 131-144.
- Geisinger, K. F. (1992). Fairness and selected psychometric issues in the psychological testing of Hispanics. In K. F. Geisinger (Ed.). Psychological testing of Hispanics (pp. 17-43). Washington, DC: American Psychological Association.

- Gottfried, A. E. (1985). Academic intrinsic motivation in elementary and junior high school students. Journal of Educational Psychology, 77(6), 631-645.
- Gottfried, A. E. (1988), Academic intrinsic motivation in young elementary school children. Journal of Educational Psychology, 82, 525-532.
- Grossman, H. (1984). Educating Hispanic students. Springfield, IL: Thomas Books.
- Harter, S. (1978). Effectance motivation reconsidered: Toward a developmental model. Human Development, 21, 34-64.
- Harter, S. (1981). A new self-report scale of intrinsic versus extrinsic orientation in the classroom: Motivational and informational components. Developmental Psychology, 17(3), 300-312.
- Hernandez, N. G. (1973). Variables affecting achievement of middle school Mexican-American students. Review of Educational Research, 43, 1-39.
- Hernandez, M. E., Nagel, R. J. (1993, April). Methodological critique of articles on Hispanics in school psychology journals. Paper presented at the National Association of School Psychologists annual convention, Washington DC.
- Hirsch, E. D., Kett, J. F., & Trefil, J. (1988). The Dictionary of Cultural Literacy. Boston: Houghton Mufflin Company.

- Humphreys, L. G. (1988). Trends in levels of academic achievement of blacks and other minorities. Intelligence, 12, 231-260.
- Kagan, J. (1972). Motives and development. Journal of Personality and Social Psychology, 22, 51-66.
- Kagan, G., Zahn, L., & Gealy, J. (1977). Competition and school achievement among Anglo-American and Mexican-American children. Journal of Educational Psychology, 69(4), 432-441.
- Maehr, M. L. (1974). Culture and achievement motivation. American Psychologist, 29, 87-97. Maehr, M. L. (1974). Sociocultural origins of achievement. Monterey, CA: Brooks/Cole Publishing Company.
- McClelland, D. C. (1965). Toward a theory of motive acquisition. American Psychologist, 20, 321-333.
- McClintock, C. G. (1974). Development of social motives in anglo-american and mexican-american children. Journal of Personality and Social Psychology, 29(3), 348-354.
- Phillips, R., Stinnett, T. A., & Oehler-Stinnett, J. J. (1992). Test-retest reliability of the Teacher Rating of Academic Achievement Motivation (TRAAM). Unpublished master's thesis, Eastern Illinois University, Charleston.
- Smith, C. P. (1969). Achievement-related motives in children. New York: Russell Sage Foundations.

- Stevenson, H. W., Chen, C., & Uttal, D. H. (1990). Beliefs and achievement: A study of Black, White, and Hispanic children. Child Development, 61, 508- 523.
- Stinnett, T. A., Oehler-Stinnett, J. J. (1991). Validation of the Teacher Rating of Academic Achievement Motivation. Journal of Educational Psychology, 10, 276-290.
- Stinnett, T. A., & Oehler-Stinnett, J. J. (1993). Teacher Rating of Academic Achievement Motivation. Unpublished test, Eastern Illinois University, Charleston.
- Stinnett, T. A., & Oehler-Stinnett, J. J. (1993). Purpose of the TRAAM and scale description. Unpublished manuscript, Eastern Illinois University, Charleston.
- Stinnett, T. A., Oehler-Stinnett, J. J., & Stout, L. J. (1990). Development of the Teacher rating of Academic Achievement Motivation: TRAAM. School Psychology Review, 20, 609-622.
- Stout, L. J., Stinnett, T. A., & Oehler-Stinnett, J. J. (1993, April). Derived factors of the Teacher Rating of Academic Achievement Motivation: TRAAM-50. Paper presented at the National Association of School Psychologists annual convention, Washington DC.
- Wanat, M. (1993). The combined roles of achievement motivation and intelligence in the explanation of academic achievement. Unpublished master's thesis, Memphis State University, TN.

- Wagner, M. J., Powers, S., & Irwin, P. (1985). The prediction of achievement motivation using performance and attributional variables. The Journal of Psychology, 119, 595-598.
- Weiner, B. (1979). A theory of motivation for some classroom experiences. Journal of Educational Psychology, 1, 3-25.
- Weiner, B. (1985). Achievement motivation and attribution theory. New Jersey: General Learning Corporation.
- White, R. W. (1959). Motivation reconsidered: the concept of competence. Psychological Review, 5, 297-331.
- White, K. R. (1982). The relation between socioeconomic status and academic achievement. Psychological Bulletin, 91 (3), 461-481.
- Willig, A. C., Harnish, D.L., Hill, K. T., & Maehr, M. L. (1983). Sociocultural and educational correlates of success-failure attributions and evaluation of anxiety in the school setting for Black, Hispanic, and Anglo children. American Educational Research Journal, 20, 385-410.