A Profile of Achievement Motivation Among Ninth Grade Students at a Diverse Suburban High School

Pamela Taylor
St. John Fisher College

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A Profile of Achievement Motivation Among Ninth Grade Students at a Diverse Suburban High School

Abstract
Although high achievement motivation in high school students is linked to reduced dropout rates and academic success, very little is known about the motivation of ninth graders. Therefore, this study examined the motivational characteristics of 380 ninth grade students using The Achievement Motivation Profile (AMP). Interrelationships between Student Motivation to Achieve and Achievement-Related Work Habits and Inner Resources and Interpersonal Strengths among ninth grade students were examined using canonical correlation analyses. The present study revealed that male and female ninth grade students with high achievement motivation (high scores on achievement motivation, competitiveness, goal-orientation) and high achievement-related work habits (high scores on planning & organization, initiative, team player) reported less tension, impatience, unhappiness, and display more self-confidence, cooperation, assertiveness, diplomacy skills and extraversion. Conversely, male and female ninth grade students with weak achievement motivation (low scores on achievement motivation, competitiveness, goal-orientation) and weak achievement-related work habits (low scores on planning & organization, initiative, team player) reported more tension, impatience, unhappiness, and less self-confidence, cooperation, assertiveness, diplomacy skills and extroversion. No gender differences were found. Based on these interrelationships, ninth graders might benefit from interventions and relationships that strengthen their inner resources and strengths including assertiveness and self-confidence workshops, individual achievement plans, mentoring, group and individual counseling.

Document Type
Dissertation

Degree Name
Doctor of Education (EdD)

Department
Executive Leadership

First Supervisor
Byron Hargrove

Second Supervisor
Nicole Adams

Subject Categories
Education
A Profile of Achievement Motivation Among Ninth Grade Students
at a Diverse Suburban High School

By

Pamela Taylor

Submitted in partial fulfillment
of the requirements for the degree
Ed.D. in Executive Leadership

Supervised by
Dr. Byron Hargrove, Dissertation Chair

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Ralph C. Wilson Jr. School of Education
St. John Fisher College

August 2012
Dedication

It is in loving memory of my parents, the late Grady and Maggie Sharp that I dedicate this work. They will always be the wind beneath my wings.

♥

I give thanks to God for the peace, perfect time and timing He provided me in this journey. To my mentor and spiritual father Rev. Dr. A.R. Bernard, Sr., Pastor of Christian Cultural Center and his wife Elder Karen Bernard for consistently teaching and demonstrating the word of God directly to me and my family each Sunday (in the mist of 30,000+ membership) for over 22 years. His consistent teaching has encouraged me to rise above my circumstances to design the life that I want to live. Thank you.

I would like to express my sincerest appreciation to my loving husband Brad and our wonderful teenagers Bradley and Briana for understanding the sacrifices I needed from them to complete this work. You have encouraged, supported, and motivated me every step of the way. I love you always and forever. W.W.A.B. Thank you.

This dissertation is dedicated to my siblings Mit-Mit, Beverly, and Richard. Your unconditional love makes my heart sing. I love you. Thank you.

To my countless sorority sisters and friends, if I am ever judged by the company I keep, I have no fear. Thank you.

I give recognition and an abundance of gratitude to Dr. Byron Hargrove, my Chair for guiding me. His expertise, mentorship, and optimism provided me with a calmness that I truly needed. His positive outlook was phenomenal. I would also like to
recognize Dr. Nicole Adams, my Committee Member. She balanced my journey with an abundance of constructive criticism that pushed me to the next level. Her guidance was God sent. Additionally, I am grateful to Dr. Jerry Willis, my Advisor for accepting all of my “after hours” calls in my countless moments of need. I truly appreciate Drs. Hargrove, Adams and Willis for their time, energy and commitment to see me through.

Thank you.

I am eternally appreciative to Dr. Janice Kelly, my Professor and neighbor for her continuous encouragement, proficiency, wit, insight, and friendship. Having her literally “by my side” was no coincidence. Thank you.

Lastly, I extend gratitude to Freeport Union Free School District for allowing me the opportunity to enter the high school for the purpose of conducting this study. To all the staff that worked so diligently to support my mission. To the parents and ninth grade students, you are the heart of this study and without your participation my vision would not have come to fruition.

Thank you.
Biographical Sketch

Pamela Taylor is currently the Director of Special Education in Franklin Square UFSD. Mrs. Taylor has served as the Assistant Director of Pupil Personnel Services in Freeport UFSD. Prior to these administrative positions, Mrs. Taylor was a school psychologist and elementary school teacher.

Mrs. Taylor graduated from Queens College with a Bachelor of Arts degree in Elementary Education in 1989. She graduated with a Master of Sciences degree in School Psychology from Long Island University in 1994. She successfully completed the School Administration and Leadership program at Massachusetts College of Liberal Arts and earned her School District Administrative (SDA) Certification in 1998.

Mrs. Taylor came to St. John Fisher College in the spring of 2009 and began her doctoral studies in the Executive Leadership program. Mrs. Taylor pursued her research on student motivation specifically within ninth grade students under the direction of Dr. Byron Hargrove and Drs. Nicole Adams and Jerry Willis. Mrs. Taylor received her Ed.D. in Executive Leadership in 2012.
Abstract

Although high achievement motivation in high school students is linked to reduced dropout rates and academic success, very little is known about the motivation of ninth graders. Therefore, this study examined the motivational characteristics of 380 ninth grade students using The Achievement Motivation Profile (AMP). Interrelationships between Student Motivation to Achieve and Achievement-Related Work Habits and Inner Resources and Interpersonal Strengths among ninth grade students were examined using canonical correlation analyses. The present study revealed that male and female ninth grade students with high achievement motivation (high scores on achievement motivation, competitiveness, goal-orientation) and high achievement-related work habits (high scores on planning & organization, initiative, team player) reported less tension, impatience, unhappiness, and display more self-confidence, cooperation, assertiveness, diplomacy skills and extraversion. Conversely, male and female ninth grade students with weak achievement motivation (low scores on achievement motivation, competitiveness, goal-orientation) and weak achievement-related work habits (low scores on planning & organization, initiative, team player) reported more tension, impatience, unhappiness, and less self-confidence, cooperation, assertiveness, diplomacy skills and extraversion. No gender differences were found. Based on these interrelationships, ninth graders might benefit from interventions and relationships that strengthen their inner resources and strengths including assertiveness and self-confidence workshops, individual achievement plans, mentoring, group and individual counseling.
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Chapter 1: Introduction

This chapter states the problem and gives the theoretical rationale, purpose and significance to the present research study. Researchers (Gay, 2000; Tileston, 2010; McCombs & Whisler, 1997) believe that achievement motivation to be the heart of the learning process. The intent of the present descriptive study was to examine the profile of achievement motivation of ninth grade students enrolled at one diverse, low achieving suburban high school. The study explored the extent and manner in which ninth grade student motivation to achieve and achievement-related work habits were associated with ninth grader students’ inner resources and interpersonal strengths. Additionally, this study also explored gender differences among ninth grade student motivation to achieve and achievement related work habits. The researcher integrated a developmental stage from Erikson’s psychosocial model and Achievement Motivation Theory to better understand ninth grade achievement concerns. The researcher used a reliable multi-dimensional achievement motivation survey instrument, The Achievement Motivation Profile (AMP), to capture a comprehensive description of ninth grade student motivational characteristics.

Statement of the Problem

Considerable research has shown a decline in motivation and performance as students move from grade to grade (Caine & Caine, 1997; Gewertz, 2006). Furthermore, the transition from middle school to high school continues to be difficult for many students (Alspaugh, 1998). Many ninth grade students, often overwhelmed with the
inevitable physiological and psychological changes associated with puberty, find themselves in a new high school environment struggling to navigate large, impersonal, and competitive situations (Black, 2004; Chute, 1999; Gewertz, 2006). Researchers (e.g., Black, 2004; Chute, 1999; Jonsson, 2004) describe the ninth grade as a pivotal year where students often make life changing decisions. Caldwell (2007) asserted that the ninth grade experience to be the determining predictor as to whether a student will have a successful high school experience or lose his or her motivation and eventually fail and dropout. Over one third of all dropouts fail in the ninth grade (National Center for Education Statistics (NCES, 2010). Dropping out of school is a developmental occurrence and societal problem that often occurs during ninth grade (Balch, 1989; Reinhard, 1997). The proportion of ninth grade students who repeat the grade is also a significant indicator of future dropout rates (Caldwell, 2007). In general, it appears that too many ninth grade students are performing poorly in school and short-circuiting their future options (NCES, 2010; Thernstrom & Thernstrom, 1997).

One promising line of research which may offer some insights into ninth grade academic problems and drop-out trends seem to be to the role of achievement motivation. Research shows that low test scores, low grades, high drop-out rates, poor attendance, and low motivation usually top the list of the reasons as to why students fail in high school (Noguera, 2003). High achievement motivation among high school students in general is linked to reduced dropout rates and increased levels of academic success (Alspaugh, 1998; Caldwell, 2007; Chmelynski, 2004; Haycock, 2001). Everyone is motivated by something (Eccles, Wigfield, & Schiefele, 1998; Hootstein, 1998). The question remains as to what leads to high or low achievement motivation among the ninth
grade students during this critical adjustment year. There is a void in the literature that focuses on the specific motivational characteristics of ninth grade students (Cox, 2001). If achievement motivation is linked to academic persistence and reduced dropout rates and the ninth grade is a pivotal transition year, what do we know about achievement motivation characteristics of most ninth grade students? Although achievement motivation has received some attention in the educational and psychological literature, the studies to date have been outdated or inconsistent (Eccles et al., 1998; McCombs & Whisler, 1997). More importantly, many of these high school studies failed to focus only on ninth grade students in particular.

The present study used a descriptive quantitative method to describe the array of motivational characteristics of these ninth grade students attending one of the largest public at-risk suburban high schools in Long Island. For the past two years, the public high school in the present study has been targeted by the state as a school in need of improvement based on students’ academic performance data. This target group of ninth grade students transferred from a small middle school of seventh (7th) and eighth (8th) graders to a much larger and seemingly complex high school. This factor may contribute to ninth grade achievement motivation. What other factors are associated with high or low ninth grade student achievement motivation? Thus, the present research context provided a good backdrop to conduct an empirical study on achievement motivation targeting ninth grade students.

**Theoretical Rationale**

Rooted in the Latin word “to move,” motivation generally describes the relationship between the internal processes of beliefs, values and goals with the external
expression of action, such as choice, persistence and performance (Eccles et. al., 1998). Popular theories in motivation describe achievement motivation as the most relevant to the field (Eccles et. al., 1998). The present study used theoretical ideas about motivation by Erikson (1963) and McClelland (1961) who both agreed that people are generally motivated by satisfied needs. It is based on the assumption that achievement and motivation are determined by factors that interact (positively or negatively) and affect performance for ninth grade students in an academic setting. The ninth grader students’ needs are compounded with issues that will be discussed in greater detail in Chapter 2.

Case (2006) found that because teenagers face monumental developmental, social, physical, and academic challenges at this age and stage, early adolescence can be a difficult time because students are searching for their identity and desire autonomy, as well as support and guidance from adults. In what is considered Stage 5 (Identity vs. Role Confusion) in Erikson’s 8 Stages of Psychosocial Development, adolescents (ages 12-19) are in search of an identity that can lead them to early adulthood (Erikson, 1963). Their strong effort to answer “Who am I?” is related to their early stages of conflicts and outcomes of resolutions. Erikson theorized that healthy resolution of earlier conflicts help to develop the basic sense of trust and industry to believe in themselves. Erikson was convinced that in earliest years of life, patterns develop that regulate, or at least influence, a person’s actions and interactions for the rest of their life. According to Erikson (1963), adolescences need affection, inclusion, caring, and relationships with others. When the need for caring has not met, adolescences within this stage can become highly motivated to move toward others. Thus, many ninth graders struggle to fulfill their needs within the complex nature of achievement motivation while adjusting to new expectations, tougher
academic challenges, and the high school environment (Caldwell, 2007; Erikson, 1963; McClelland, 1961).

Within his framework to understand achievement motivation, McClelland (1961) proposed that regardless of culture or gender, people are driven by: achievement, power, and affiliation. He proposed that these needs were socially acquired and the extent to which these motivators are learned varies from person to person, and depends on the individual and his or her background. Achievement Motivation Theory recognizes the need for Achievement, the need for Power, and the need for Affiliation as common themes to explain and predict behavior and performance acquired during an individual’s lifetime. The need for achievement is characterized by the wish to take responsibility for finding solutions to problems, set goals and get feedback on levels of success. McClelland (1961) described the need for Achievement as victory or accomplishment with some standard of excellence. Phelan and Davidson (1994) explained the need for achievement to be an unconscious concern for excellence through a person’s efforts. When defining the need for affiliation, McClelland (1961) uses the word friendship. It is the unconscious concern for developing, maintaining, and restoring close personal relationships. The need for affiliation is characterized by a desire to belong, to be a part of a team and consider interpersonal relationships. Lastly, the need for power is characterized by a drive to control and influence other people, a need to win arguments, persuade and prevail. According to McClelland, the presence of these drives in an individual indicates a predisposition to behave in certain ways. McClelland (1961) defined the need for Power as discomfort with the control or means to influence others. Similarly, Phelan and Davidson (1994) defined the need for power as the desire to be
responsible and/or have authority over others. Thus, as ninth grade students create their sense of the world based upon life experiences, perceptions of their ability and self-regulatory activities, this theory and framework influences the understanding of their achievement motivation (Hootstein, 1998; Jensen, 2003).

McClelland proposed that an individual’s specific needs are acquired over time and shaped by their life experiences. They have a need for regular feedback to know achievement and how to monitor their own. Additionally, they have a need to feel in control of their surroundings. Consequently, ninth graders need to feel they are a part of a family or group, or otherwise have a place, or a sense of being at home. They seek identification with the group and its goals and accomplishments (Osterman, 2000). There is a strong desire for affiliation. They want to feel connected to significant others. The feelings of isolation, unloved or unliked, rejection or exclusion, may motivate either positively to seek inclusion or negatively to seek sulk, withdrawal, and even revenge against those whom they believe have rejected them. The AMP was initially designed to fill the need for a multidimensional personality test specifically designed to gain self-reported data to further explore and contribute to research on achievement motivation.

Mandel, Friedland, and Marcus (1996) believe achievement and motivation to be determined by many factors that interact to produce desired or less than desired performance. These motivation factors need to be measured using multi-dimensional measures. Based on my review the literature, the best multi-dimensional measure consistent with Erikson’s psychosocial model and McClelland’s Achievement Motivation Theory was the AMP.
The AMP was designed specifically for use with high school students and is one of best psychometrically-valid choices available to measure achievement motivation particularly for ninth grade students. Mandel, Friedland, and Marcus (1996) stated that the AMP is a multi-dimensional achievement motivation measure based on a theory of personality development derived from the work of Erik Erikson (1963) and elaborated by Mandel and Marcus (1988). The AMP incorporates contemporary language, relevant test items, and a wide range of self-descriptive statements that enable students to describe their achievement motivational characteristics.

Significance of the Study

Ninth graders have unique needs and concerns that differentiate them from other aged students in other grade levels (Black, 2004). As this researcher considers this challenge with ninth grade students, it is important that educators involved in any type of educational reform be cognizant of the multi-faceted issues underlying achievement motivation. Significantly, when ninth grade students are motivated to perform competently on academic tasks they will learn in accordance with their abilities (Love, 2008). Therefore, understanding achievement motivation among ninth grade students can lead to better educational interventions that reduce dropout rates and increase the likelihood of academic success (e.g., Alspaugh, 1998; Caldwell, 2007; Chmelynski, 2004; Haycock, 2001). Once we have a better idea of the factors correlated with high achievement motivation, educators can design better counseling, workshops, mentoring, and educational interventions specifically designed for ninth graders. Furthermore, the present study makes a contribution to the limited achievement motivation literature particularly using ninth graders.
Purpose of the Study

The purpose of this quantitative descriptive study was to examine the motivational characteristics of the ninth grade students attending a diverse, suburban, low-ranking high school in the Long Island, New York. More specifically, the present study investigated the degree of interrelationships between ninth grade Student Motivation to Achieve and Achievement-Related Work Habits (outcome variables) and Inner Resources and Interpersonal Strength (predictor variables) as measured by the AMP (see Figure 1.1). The goal is to identify positive attributes and trends that are detrimental to academic achievement for ninth grade students that will be amenable to intervention and future program and development. Results from this study will give a picture of the personal factors that might predict the student’s academic performance and provide recommendations for overall improvement.
### Conceptual Framework

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*Figure 1.1. Conceptual framework of the AMP motivation variables.*

**Research Questions**

The present study analyzed the relationship between student motivation to achieve and achievement related work habits and factors pertaining to student’s inner resources.
and interpersonal strengths among ninth grade students. Additionally, each relationship was analyzed with respect to gender. The following is a list of the key research questions that guided the present study:

1a. Is there a relationship between ninth grade student motivation to achieve and their inner resources as measured by their AMP subscale score on (a) level of relaxation or tension; (b) level of happiness or sadness; (c) degree of patience; and (d) degree of self-confidence?

1b. Are there gender differences in the relationship between ninth grade student motivation to achieve and their inner resources as measured by their AMP subscale score on (a) level of relaxation or tension; (b) level of happiness or sadness; (c) degree of patience; and (d) degree of self-confidence?

2a. Is there a relationship between ninth grade student motivation to achieve and their interpersonal strengths as measured by their AMP subscale score on (a) degree of assertiveness; (b) willingness to act diplomatically; (c) tendency to show an external or internal orientation; and (d) degree of cooperativeness in relationships?

2b. Are there gender differences in the relationship between ninth grade student motivation to achieve and their interpersonal strengths as measured by their AMP subscale score on (a) degree of assertiveness; (b) willingness to act diplomatically; (c) tendency to show an external or internal orientation; and (d) degree of cooperativeness in relationships?

3a. Is there a relationship between ninth grade student achievement–related work habits and their inner resources as measured by their AMP subscale score on (a)
level of relaxation or tension; (b) level of happiness or sadness; (c) degree of patience; and (d) degree of self-confidence?

3b. Are there gender differences in the relationship between ninth grade student achievement-related work habits and their inner resources as measured by their AMP subscale score on (a) level of relaxation or tension; (b) level of happiness or sadness; (c) degree of patience; and (d) degree of self-confidence?

4a. Is there a relationship between ninth grade student achievement-related work habits and their interpersonal strengths as measured by their AMP subscale score on (a) degree of assertiveness; (b) willingness to act diplomatically; (c) tendency to show an external or internal orientation; and (d) degree of cooperativeness in relationships?

4b. Are there gender differences in the relationship between ninth grade student achievement-related work habits and their interpersonal strengths as measured by their AMP subscale score on (a) degree of assertiveness; (b) willingness to act diplomatically; (c) tendency to show an external or internal orientation; and (d) degree of cooperativeness in relationships?

Definitions of Terms

The following terms include definitions of subscales with abbreviations as presented in the AMP manual:

Achievement (ACH): is the act of succeeding as a result of hard work

Assertiveness (AST): is behaving in a confident way in which one is quick to express their opinions and feelings.

Competitiveness (COMP): is the ability to always try to be more successful than other people.
Cooperativeness (COOP): is a willingness to do what is asked of you.

Degree of Happiness or Sadness (HAP): is the extent of which one is pleased and satisfied or not.

Dropout: a student that leaves school or fails to complete requirements for a high school diploma within the four year timeframe.

Extrovert (EXT): is being confident, lively and in favor of social situations as opposed to being introverted and concentrating on one’s own feelings and refraining from communicating with others.

Goal oriented (GOAL): is the ability to plan ahead based on a desired result.

Initiative (INI): is the ability to decide in an independent way what to do and when to do it.

Motivation (MOT): the feeling of enthusiasm or interest that makes a person determined to do something.

Ninth Grader: a student that entered high school for the first time in September 2011 or a student that has not obtained enough credits (has 4 or less credits) and is repeating some or all 9th grade courses.

Patience (PAT): is the ability to keep doing something for a long time without losing interest.

Personal diplomacy (DIPL): is the ability to negotiate one’s matters.

Planning & Organizing (PLAN): is the process of deciding how to do something before you start it and putting it into a sensible order or system in which all parts work well together.

Relaxed-Style (RLX): is the state of being calm and not worried.
Self-Confidence (SCN): is the feeling that you can do things well and that people respect you.

Team player (TEAM): is someone who works well with other people as part of a group.

**Summary of Remaining Chapters**

This chapter introduced and provided background information to the study. It set the stage to survey the ninth grade students in one suburban high school. It presented the problem, gave a theoretical framework, explored areas of concern and gave significance to the importance of this study. It introduced the Achievement Motivation Profile as the survey to be used to bring forth quantitative data. This chapter has prepared the reader for the selective review of literature in Chapter 2. It identified the method of research, gave the questions, and defined the terms that will be reiterated in Chapter 3. It presented a conceptual framework of the AMP motivation variables to support the findings in Chapter 4. Overall, it set the stage for a meaningful discussion of the results in Chapter 5.
Chapter 2: Review of the Literature

Introduction and Purpose

This chapter examines the empirical research literature of achievement motivation and ninth grade students. The literature provides a comprehensive understanding of each focus. This chapter provides the reader with the groundwork that links motivation and achievement. Additionally, it identifies the motivational characteristics that will be categorized and described in Chapter 3.

American society measures the success of schools and its personnel on test scores – often single test scores (Thernstrom & Thernstrom, 1997). Factors, such as limited resources, and the complex challenges of teaching a diverse population of students from ethnic and language minority backgrounds are usually not considered. Educators have the daunting task of identifying the motivational characteristics in each student to successfully deliver the information. Many educators specifically working with ninth grade students grapple with the reality of having to start where their students are before they can take them to where they want or need to be. This particular high school has been cited for the past two years by the state as a school in need of improvement based on students’ academic performance data. This further propels the significance of this study and the need to use quantitative analyses to examine achievement motivation with the AMP, a self-reporting assessment tool.
Motivation

Within a diverse community, students experience school differently and can connect or disconnect through multiple spheres of influence (Wallis, 2007; Wren, 2003; Saegert, Thompson, & Warren, 2001). Motivation to achieve in school has been shown to be impacted by values attached to success by students and their expectancies for success (Love, 2008). Love (2008) further stated that researchers have greatly differed in their assumptions about which is more important, values or expectancies. Nevertheless, investigators have concluded the student values impact academic achievement far more than expectancies because values affect selection of courses and whether or not the student will receive exposure to higher-level concepts in various subject areas. Ninth grade students are of particular interest within this phenomenon because of their distinct needs and the transitions during this distinctive period within their lives. This researchers’ review of literature called attention to three specific areas: Motivation, Ninth Grade, and Achievement.

The AMP was designed specifically to measure student motivation (Mandel, Friedland, & Marcus, 1996). Student motivation is essential to academic success (Stipek, 2002). Ryan and Deci (2000) found motivational characteristics, as well as self-concept and self-esteem to be shaped by student’s history of success and failure in and out of school. Jensen (2003) found that poorly motivated students were generally inefficient learners and did not possess the usual repertoire of independent learning strategies. Kamaura (2000) describe motivation as a value and desire for learning. McCombs and Whisler (1997) examine the core of education and believe that more significant than the attainment of specific contents taught in schools is the growth within each student of an
interest and curiosity about the world around him or her and the development of a confidence and sense of competence in learning. Tileston (2010) describes it as the drive to do something. Motivation causes one to get up in the morning. This scaffolding recognizes that achievement in school is a short-term goal whereas the enhancement of the motivation to learn is an ongoing lifelong one.

Brophy (1997) examined motivation in two essential components: the trait and state of motivation. The first, he defined as an enduring disposition to strive for skill mastery and content in a learning situation. However, state was when a student engaged in a particular activity that is guided by the intention of acquiring the knowledge or learning the skill that the activity is designed to teach. Both interrelate to become motivation to learn. This research aligns with Erikson (1963) and McClelland’s Achievement Motivation Theory in that, an acquired competence developed through general experience, the attainment of needs, and stimulated by school policies and teaching strategies. The research suggests there to be a possible relationship between student motivation and academic achievement. Based on the vulnerable state of the ninth grade student, this research can be suitably narrowed to focus on their specific issues. Significant differences in student performance, motivation, and participation, as well as life experiences, attitudes and perceptions of the learning environment has shown to depend not just on school policy and procedures, but on teaching strategies, activities and relationships developed (Osterman, 2000; Waxman & Huang, 1997).

Jensen (2003) studied achievement motivation and concluded learning does not begin with the cognitive system of the brain. Rather, learning begins in the self-system of the brain, and it is this system that decides whether the learning is worthy of the attention.
Tileston (2010) says one cannot “give” motivation to someone else unless one can tap into the motivation already present. Poorly motivated students have special needs and may require remediation (Kamaura, 2000).

According to Kamaura (2000), *Intrinsic Motivation* refers to motivation that comes from inside an individual. The pleasure one gets from the task itself or from the sense of satisfaction in completing or even working on a task (Covington, 2002). An intrinsically motivated person will work on a math problem, for example, because the process is enjoyable and provides a sense of pleasure. On the contrary, *Extrinsic Motivation* refers to motivation that comes from outside an individual. An extrinsically motivated person will work on a task even when they have little interest in it because of the anticipated satisfaction they will get from some reward. For example, an extrinsically motivated person may not like math equations but work hard because of the award of completing it and/or the possibility of receiving a good grade (Kamaura, 2000).

A number of studies have been conducted to explore the role of student motivation towards student achievement. Stipek (2002) studied students’ involvement towards education and sources of their motivation. Hootstein (1998) viewed student’s motivation as a force beneficial to the learner. Ryan and Deci (2000) stated that motivation to learning is dependent on long-term, quality attachment in learning and pledge to the process of learning. Tileston (2010) has suggested student motivation as student willingness, need, desire and obligation to participate and be active in the learning process. Haycock (2001) found that minority students that experience long-term patterns of classroom failure often stop trying. Nevertheless, he concluded that students do not need easy successes; they need to be appropriately challenged.
Hootstein (1998) examines locus of control by the degree to which students feel that events they experience are under their own control (internal control), rather than under the control of other people or forces outside of themselves (external control). Stavans (2001) speaks of every child, no matter the place and time, begins to acquire a sense of uniqueness the moment he/she begins to distinguish what is and isn’t his. But, Stavans (2001) further states this understanding motivation is not only the result of personal development—of his or her becoming of an individual; it arises as a hierarchy of social values and one’s frame of reference. The personal references obtain from immediate surroundings such as: I am not like my neighbors because I live in a smaller house, have a single-parent household, attend a different school, and so on (Tileston, 2004).

Additionally, researchers say divorce became more acceptable in the 1970’s. With this came the breakdown of the family unit and the way of life that was associated with two parent households (Senge, 2000). In a poll among Superintendents of Schools (Yin, 2003) reported dysfunctional families were the number one concern plaguing society, hence our schools today. Some of the symptoms include withdrawal and depression, indifference, resignation, cynicism, aggression, truancy, poor grades, drug and alcohol abuse, and other negative behaviors (Tileston, 2004). More and more, it has become the role of the educator to build in students a resiliency so that they can overcome their circumstances (Tileston, 2004).

Within their high school experience, teenagers typically report interpersonal features as critical to their motivation (Gewertz, 2006). While researchers examine this assertion, there is mounting evidence that students’ experience of belonging significantly
facilitates motivation and achievement (Ryan & Deci, 2000). Student-teacher relations, peer relations, and involvement in school activities are key social experiences that align adolescents to their schools in ways that enhance motivation and achievement (Osterman, 2000). Kunjufu (2005) reports the minority youth’s perceptions of respect for their ethnic group membership may be related to students’ attachment or alienation from school. Queen (2002), asserts an “oppositional culture” has developed among mostly inner city minority students and has become a strong influence on many, especially with respect to achievement motivation. Achievement motivation appears to be a complex, multi-faceted issue. Ohanian (2012) reported that many factors seem to affect a student’s motivation to work and to learn interest in the subject matter, perception of its usefulness, general desire to achieve, self-confidence and self-esteem, as well as patience and persistence. Additionally, not all students are motivated by the same values, needs, desires, or wants. Thus, the AMP is unique in its ability to measure the complexity of achievement motivation which includes an array of inner resources and interpersonal strength variables. The present study will examine their correlations to student’s motivation to achieve and achievement related work habits variables.

**Ninth Graders**

Ninth grade is a critical year in the lives of these students. Wallis (2007) reported students’ decision to drop out typically begins to manifest in ninth grade when life hits a particularly nasty patch and racking up credits in class doesn’t seem especially compelling or plausible. Research shows that attrition among ninth graders is far more pronounced in urban, high-poverty schools, with 40 percent of low-income high school dropouts leaving school while in ninth grade (Williams & Richman, 2007). Adolescents
who have deep doubts about who or what they are may feel misplaced (Harvey & Byrd, 1998).

Ninth grade is a pivotal year (Black, 2004). It is the year that many have referred to as the “make-it or break-it year.” Walt Haney of Boston College’s Center for the Study of testing, Evaluation, and Educational Policy reported nationwide in the mid-1990s almost a quarter of ninth-graders (23%) didn’t pass enough courses to be promoted to tenth grade. These students are being written off as unmotivated, lacking the drive to do what is necessary to complete a task. Ninth graders experience many “new” things simultaneously and their experiences can help or hinder their choices.

The ninth grade student in this particular high school enters a new environment. The ninth grader is expected to learn their way around a significantly larger building. Students within this environment can range from 13 to 21 years old. There is an unwritten rule that ninth grader are expected to act mature and be responsible in their interactions. Yet, theoretically, many struggle and come with significant unresolved issues that play out in various ways. Adolescents who have deep doubts about who or what they are tend to feel lost, confused, and alienated from themselves as well as other (Harvey & Byrd, 1998). Ninth graders who set unrealistic goals or no goals at all will most likely develop inferiority feelings and possibly blame others. The negative feeling can cause either overcompensation in attempt to maintain some power and control or avoidance of competition with others altogether.

Williams and Richman (2007) documented ninth grade students to make up the “highest percentage of the overall high school population because students in disproportionate numbers are failing to be promoted out of ninth grade” (Table 2.1). This
‘ninth grade bulge’ typically results in a tenth grade dip, when students do not advance to
the next grade (Wheelock, 1993). Data from this targeted high school is in Table 2.1.
Table 2.1

*Student Enrollment by Grade and Percentage in the Local, District Public School for the 2011-2012 School Year*

<table>
<thead>
<tr>
<th>Grade</th>
<th>8th</th>
<th>9th</th>
<th>10th</th>
<th>11th</th>
<th>12th</th>
<th>Total</th>
</tr>
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<tr>
<td></td>
<td>490</td>
<td>582</td>
<td>579</td>
<td>408</td>
<td>363</td>
<td>2,437</td>
</tr>
<tr>
<td>Percent</td>
<td>20%</td>
<td>24%</td>
<td>22%</td>
<td>18%</td>
<td>16%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Based on research regarding the “ninth grade bulge”, this researcher includes newcomers and repeaters within this cohort group. The “Newcomers” are those who have graduated from eighth grade in June 2011 to begin ninth grade in this high school for the first time. The “Repeaters” have been in the high school for more than a year, but have not accumulated enough credits to move from their ninth grade status. Based on previous data, students that have struggled and fell behind in their ninth grade experience are more likely to dropout. For far too many ninth graders, dropping out has become a immediate solution to a stressful situation.

Shadowing ninth grader students and observing their daily school experiences, Lounsbury and Johnston (2002) discovered a disconcerting mismatch between school policies and practices and 14-year olds’ developmental needs. Wheelock (1993) describes ninth grade as a “minefield for the most vulnerable students,” especially those who come with multi-conflicting issues and who fail to develop bonds with teachers and their school. The Kerr (2002) case of ninth grade students noted teacher centered instruction with teachers lecturing and students taking notes and completing assignments; ability grouping, tracking and 40 to 50 minute class schedules are all developmental nightmares.
for ninth grade students in this category. Additionally, Lounsbury and Johnston (2002) found, most high schools offered little or no guidance to help ninth graders adjust academically and socially. As a result, many have fallen by the wayside, feeling that school is pointless and endless.

Over one third of all dropouts fail in the ninth grade. According to updates within the U.S. Department of Education: American Youth Policy (2010): Every nine seconds in America a student becomes a dropout. The transition to high school is a critical period in the lives of most teenagers as they adjust to new expectations, programs and environment. Many experience the fear and anxiety of assimilating with their peers. Research bears out that ninth grade is a crucial time when students decide whether or not to stay in school and that decision is usually based on their academic success. According to Walsh (2002) more than 60% of high school dropouts failed at least 25% of credits in ninth grade. There also tends to be a decline in attendance and an increase in discipline problems among ninth grade students (Hootstein, 1998). Therefore, it seems that more focus is needed on the motivation needs to be ninth graders in high schools across the country.

Achievement

There is extensive research conducted on achievement. Early attempts to measure academic achievement led to the development of laws in hopes of ensuring equity. Yet, many of the assessments developed (as a result of these laws) did not consider the diverse factors that could influence results. As a whole, in the past couple of decades, as test scores drop and the Unites States falls farther behind other countries in math and science, the idea that schools should follow a business model has been dominant, stressing
competition, choice and accountability, raising teacher pay for higher test scores, and closing schools that fail (Bernstein, 2010). More and more urban and suburban school districts are adopting “teacher-proof” curricula to address low test scores. That goes along with school consultants whose sole purpose is to police teacher’s adherence to scripted lessons, mandated classroom management strategies, and strict instructional timelines that ignore the natural rhythms of teaching and learning (Delpit, 2006). Three decades of mounting academic and testing requirements are snagging a growing number of students in the ninth grade (Jonsson, 2004). Consequently, this approach adds to the complexity of achievement motivation for ninth grade students.

Considering the influence that student’s motivation to achieve has on academic achievement, it is important to gain a better understanding of factors associated with motivation to achieve, specifically among ninth grade students. Cooper and Slavin (2001) found the relationship between psychological factors and academic achievement to be far more complex than previously believed (Bruner, 1996). Gardner (1993) disputes the idea that standardized test encourage teachers to become better at helping individual children; in fact, he states some studies show that the tests protect bad teachers by hiding their lack of skill behind narrow goals and rigid scripts. That being said, there is hardly any data to suggest that punishing schools with low test scores and rewarding schools with high ones improve anything (Senge, 2000). The only notable feature of our current approach is that these tests are relatively easy to administer to every student in every school, easy to score and easy to relatively understand. But expediency should not be our main priority when it comes to student achievement (Bernstein, 2010). Especially since educational achievement is a dominant value of advanced culture and American society.
The motivation and drive to achieve to a certain degree is present in all individuals. It is embodied as a need to strive towards standards of performance encountered in situations such as the school environment (Cokley, 2002; Haycock, 2001). However, the strength and duration of the achievement drive varies greatly from one individual to another. This drive is influenced by many factors that interact to produce desired or less than desired performance. McCombs and Whisler (1997) discussed the demands placed on the ninth grade student to multitask and complete assignments on time, to present the need to improve note-taking, critical thinking, listening, classroom questioning, organizational skills, test taking strategies, time management, and planning. The formulation of academically related work habits play an important role in achievement, and the motivation to achieve. A unique aspect of the AMP is that it measures specific factors that can enhance or diminish achievement such as work-habits, inner resources, and interpersonal characteristics.

Summary

In summary, this chapter examined the literature on motivation, ninth grade, and achievement as they connect to this target group of ninth grade students in this quantitative study. The literature review spoke to the multi-facet and complex nature of achievement motivation for this ninth grade cohort. Careful and informed training of student motivational needs can raise the levels of support that will consequently raise levels of achievement.

Motivation is essential to academic achievement. Most educators believe motivation is critical for effective learning (Hootstein, 1998; Tileston, 2010). This study of achievement motivation will delineate the characteristics of this targeted population.
Tileston (2010) speaks of motivation as the drive to do something. Kamura (2000) refer to motivation as a value and desire for learning. Most teachers believe the lack of motivation displayed by students is hindering the learning process (Eccles, et. al.1998; Tileston, 2010).

Motivation is widely acknowledged to be essential for meaningful learning (Ryan & Deci, 2000). In this study, student motivational characteristics were reviewed as they related to the person. The self-reporting assessment from the AMP provided a unique approach to measuring achievement motivation.

Many ninth graders are overwhelmed with the transition from middle school to high school (Wheelock, 1993). Ninth grade is a pivotal year and research bears it to be the most critical time when struggling students begin to decide whether or not to dropout (Jonsson, 2004). U.S. Department of Education: American Youth Policy (2010) reports over one third of all dropouts fail in the ninth grade. Chapter 3 will reiterate the problem statement and research questions as well as provide detailed information regarding the research methodology. Chapter 4 will clearly answer the research questions and analyze the results of the findings. Achievement motivation theory asserts student motivation as an important influence on learning (McClelland, 1961). The lack of motivation has consequently been a means of short-circuiting future options (Thernstorm & Thernstorm, 1997). This research will specially measure the motivational characteristics of ninth grade students’ drive to learn in this one diverse school district. There is an absence in the research that measures the motivational profile of ninth grade students.
Chapter 3: Research Design Methodology

General Perspective

This quantitative descriptive study examined the interrelationships between student motivation to learn and achievement-related work habits and inner resources and interpersonal strengths among ninth grade students at one high school in Long Island, New York. Motivation is greatly valued because motivation drives people to do new things and encourages people to try again, even after repeated failures (Tileston, 2010; Ryan & Deci, 2000). Although the educational pipeline loses many students during the transition from middle school to high school, the literature continues to be sparse when it comes to providing data on the specific motivational characteristics of ninth grade students related to success or failure or how their motivation relate to ninth grade persistence onto the next grade. In fact, researchers (e.g., Black, 2004; Chute, 1999; Jonsson, 2004) describe the ninth grade as a pivotal year where students often make life changing decisions. Therefore, in order to address this gap in the literature, the present study examined the motivational characteristics of ninth grade students in the 2011 – 2012 school year in one specific ethnically and socio-economically diverse suburban high school. The Achievement Motivation Profile (AMP) (Mandel, Friedland, & Marcus, 1996) is a self-reporting validated research instrument that was chosen because of its ability to give very specific information of the motivational characteristics of the ninth grade students.
The present quantitative empirical study addressed the following research questions:

1a. Is there a relationship between ninth grade student motivation to achieve and their inner resources as measured by their AMP subscale scores on (a) level of relaxation or tension; (b) level of happiness or sadness; (c) degree of patience; and (d) degree of self-confidence?

1b. Are there gender differences in the relationship between ninth grade student motivation to achieve and their inner resources as measured by their AMP subscale scores on (a) level of relaxation or tension; (b) level of happiness or sadness; (c) degree of patience; and (d) degree of self-confidence?

2a. Is there a relationship between ninth grade student motivation to achieve and their interpersonal strengths as measured by their AMP subscale scores on (a) degree of assertiveness; (b) willingness to act diplomatically; (c) tendency to show an external or internal orientation and (d) degree of cooperativeness in relationships?

2b. Are there gender differences in the relationship between ninth grade student motivation to achieve and their interpersonal strengths as measured by their AMP subscale scores on (a) degree of assertiveness; (b) willingness to act diplomatically; (c) tendency to show an external or internal orientation; and (d) degree of cooperativeness in relationships?

3a. Is there a relationship between ninth grade student achievement–related work habits and their inner resources as measured by their AMP subscale scores on (a) level of relaxation or tension; (b) level of happiness or sadness; (c) degree of patience; and (d) degree of self-confidence?
3b. Are there gender differences in the relationship between ninth grade student achievement–related work habits and their inner resources as measured by their AMP subscale scores on (a) level of relaxation or tension; (b) level of happiness or sadness; (c) degree of patience; and (d) degree of self-confidence?

4a. Is there a relationship between ninth grade student achievement-related work habits and their interpersonal strengths as measured by their AMP subscale scores on (a) degree of assertiveness; (b) willingness to act diplomatically; (c) tendency to show an external or internal orientation; and (d) degree of cooperativeness in relationships?

4b. Are there gender differences in the relationship between ninth grade student achievement-related work habits and their interpersonal strengths as measured by their AMP subscale scores on (a) degree of assertiveness; (b) willingness to act diplomatically; (c) tendency to show an external or internal orientation; and (d) degree of cooperativeness in relationships?

Research Context

This study used a descriptive method to describe the motivational characteristics of the ninth grade students attending one of the largest public suburban high schools in Long Island. For the past two years, this public high school has been targeted by the state as a school in need of improvement based on students’ academic performance data. Based on the 2011 budget vote, this suburban school district is one of the lowest districts in the county in per pupil spending (42nd out of 56 school districts). The average home in the community is approximately $300,000.00. There are sections of lower-income housing within the community. Within this entity 42% of the student body have been reported (through free and reduced lunch programs) as low income.
The high school has 1,947 students enrolled in ninth, tenth, eleventh, and twelve grades. There were 363 twelve graders, 408 eleventh graders, 579 tenth graders, and 582 ninth graders currently attending the high school. The most recent 2009 – 2010 high school report card for this specific high school indicated a high representation of students of color - 52% Latinos, 39% African Americans, 7% whites, and 2% others. Additionally, 13% of the student body is categorized as English Language Learners (ELL).

Researchers report the ninth grade enrollment “bulge” to have nearly tripled since the late 1960’s (Wheelock, 1993). The “bulge” is the name education researchers gave to the percentage increase in student in the ninth grade over the number who was enrolled in the eighth grade. The eighth grade graduating class of June 2011 was 490 students. Consequently, if we subtract the current number of ninth graders (582) by the number of students that graduated from eighth grade and entered the ninth grade for the first time (490), an estimated 92 students are considered “Repeaters”. Furthermore, a review of the 2010 – 2011 school year internal data of eighth grade records indicated 19% of the ninth grade student cohort were suspended once or more before entering high school. The enrollment for ninth grade at this high school has historically been the largest further exemplifying the ninth grade bulge that often occurs at many other high schools. This bulge identifies a point of difficulty for some of the ninth grade cohort and consequently gives further significance of the value of this particular case study. The present study attempted to identify the current motivational profile of these 582 ninth grade students. Within an economy where the financial needs continue to be challenged, the goal of the present study was to begin identifying key areas of student motivation that can potentially help or hinder academic achievement.
Research Participants

With permission from the Superintendent of Schools, the total population of ninth grade students was given the opportunity to participate in this survey. The researcher worked with the principal of the high school to target all ninth grade classes from a master list. That included ninth grade students in the high school for the first time also known as “Newcomers” and students that have not moved from ninth grade status (receiving less than 5 credits) after entering in the high school before September 2011, also known as “Repeaters.” All potential ninth grade student participants were between the ages of 13 and 16.5 years old. Students older than 16.5 without 5 credits were generally placed in the districts’ night school or classified and placed in an out of district special education program. The final sample obtained will be discussed in Chapter 4: Results.

Instrument Used in Data Collection

The Achievement Motivation Profile (AMP; Mandel, Friedland, & Marcus, 1996). The AMP is a self-report inventory consisting of 140 items intended to measure a student’s motivation to achieve. The AMP was initially developed in 1982 to fill the need for a multi dimensional personality test specifically designed for educational evaluation. The AMP is designed for use with students ages 14 and older, in high school, junior college, and college settings. As shown in Table 3.1, the AMP specifically measures five general motivation themes or areas and sixteen motivational subscales. The motivation areas and subscales are as follows: (1) Response Style, with subscale (a) Inconsistent Responding (INC); (2) Motivation for Achievement, with subscales (a) Achiever (ACH), (b) Motivation (MOT), (c) Competitiveness (COMP), and (d) Goal Orientation (GOAL);
(3) *Inner Resources*, with subscales (a) *Relaxed Style* (RLX), (b) *Happiness* (HAP), (c) *Patience* (PAT), (d) *Self-Confidence* (SCN); (4) *Interpersonal Strengths*, with subscales (a) *Assertiveness* (AST), (b) *Personal Diplomacy* (DIPL), (c) *Extroversion* (EXT), (d) *Cooperativeness* (COOP); (5) *Work Habits*, with subscales (a) *Planning & Organization* (PLAN), (b) *Initiative* (INI), (c) *Team player* (TEAM). All definitions were provided in the Definition of Terms section in Chapter 1. For the purpose of this study, *Student Motivation for Achievement* and *Achievement-Related Work Habits* served as latent outcome constructs (or essentially the dependent variables). *Inner Resources* and *Interpersonal Strengths* served as latent predictor constructs (or essentially the independent variables).

The AMP’s 140 item stems are short, self-descriptive statements, and total test time is about 30 minutes. Respondents use a 5-point Likert scale response represented by (1) Always True, (2) Mostly True, (3) Sometimes True and Sometimes False, (4) Mostly False, and (5) Always False.” An AMP Answer Sheet Sample is provided in Appendix A. Some of the sample statements measuring *Student Motivation to Achieve* included “I find life boring”, “I like this period of my life”, “I take risks”, and “I am at ease talking to people”. *Achievement-Related Work Habits* was represented by statements such as “I finish what I start”, “I am well organized”, and “I get my work in on time”. Additionally, statements measuring *Inner Resources* were “I trust myself”, “I can handle stress or pressure”, and “I find it easy to relax.” Finally, *Interpersonal Strengths* were represented by statements like “I let others influence my decisions”, “I do things to attract attention”, and “My temper gets out of hand”.

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Interpretation of all AMP scores was considered in light of the style of self-description that is indicated in the Response Style scores. The Response Style scale was used to determine if the respondents’ answers were truly reflective of their experiences. Thus, this scale assessed whether the validity scores were within normal limits. An inconsistency responding subscale (INC) identified and removed the survey data that was not consistent or reliable (see Table 3.1).

According to a review of the AMP conducted at the Buros Institute by Steven V. Owens, Senior Biostatistician, Department of Preventive Medicine and Community Health, University of Texas Medical Branch, Galveston, Texas, the AMP primarily assesses achievement motivation. Within the works of Spies, R. and Plake, B. (2005), Owens acknowledged that the causal functions may actually be reversed, that is, poor school achievement may influence achievement motivation. However, the AMP authors, Mandel, Friedland, and Marcus (1996) are careful in the manual to say the AMP should not be used as the sole assessment tool for evaluating underachievement.

The AMP was standardized in the United States and Canada on 1,738 students, 14 years or older, in high school, junior college, or university settings. Fifty-five percent of the students were female and ten percent were ethnic minorities. Because the authors felt that there were only relatively minor differences among subgroups of students as to ethnic group, gender, and country of residence, the AMP norms were based on the entire sample. Reliability data were gathered for the AMP scales. The AMP scales are generally considered reliable (alpha score = .84, with a median of .75).

A number of AMP scales discriminated significantly among students who were identified with low academic achievement in one of the following groups: (a) academic
problems, (b) conduct disorders, (c) overanxious, or (d) both anxious and depressed. Their motivational characteristics differentiated between achievers and underachievers (Mandel & Marcus, 1988). Thus, the AMP can be a valuable tool in assessing students who show indications of academic underachievement. The wording of the test items is sufficiently simple to allow most students to complete the assessment tool accurately. Mandel, Friedland, and Marcus (1996) maintained that their AMP survey has construct, concurrent, and discriminant validity. Construct validity may be secondary when a positive correlation is seen between the instrument in question and other measures intended to reflect a similar characteristic, and when relatively weaker or negative correlations are seen with measures intended to reflect substantially different characteristics. Concurrent validity is claimed to present when a positive relationship is observed between a measure of a particular characteristic and a standard criterion measure of that characteristic made at the same time. Discriminant validity is demonstrated when groups known to differ in the characteristics supposedly measured by a test are, in fact, observed to perform differently on the text in expected ways (Mandel, Friedland, & Marcus, 1996). Taking into account, academic underachievement can result from a combination of student choice, medical status, and mental disorders (such as depression). The AMP provides valuable information on motivational factors contributing to underachievement.

**Procedures for Data Collection**

Based on enrollment and the master list, there was a total population of 582 ninth grade students enrolled in this suburban high school. Initially, the principal made a morning announcement on the intercom regarding this study and parental consent forms
were posted on the bulletin board of the main lobby. Additionally, on the day of the principal’s announcement, parental consent forms (Appendix B) were hand delivered by the present researcher to all the ninth grade students’ classes. The present researcher took approximately three minutes to introduce herself, share the voluntary nature, goals, confidentiality, and purpose of the study, and hand out the parental consent forms with the details for participation. Informed consent was obtained from all the participants.

Participation in the survey was completely voluntary. Students did not have to participate in the survey if they did not want to. Parental permission to do the survey was mandatory. The consent forms were returned with parent’s and student’s signature for students to participate in the survey. The form included a statement of assent for the student. Signing the form let this researcher know that an agreement existed with parent and student to complete the survey. Completing or not completing the survey had no effect on grades.

This research did not place students “At-Risk” in any way and was held in strict confidence. All surveys were strictly confidential and only an ID number was utilized on front for tracking. Research on this targeted group was voluntary, confidential and did not involve stress to the subjects.

Three full days were set up during school hours for the ninth grade students with signed parental consent forms to come to the testing center in the high school during their lunch, special, and/or free periods. The staff collected the consent forms for six days and delivered them to the researcher daily.

The present researcher administered all surveys in a paper and pencil format. Two guidance counselors who were trained by the present researcher were available each day to check student schedules and proctor the surveys. The present researcher interacted
with staff and students and oversaw all exchanges to ensure the fidelity of the survey. Within the three day administration period, the present researcher was able to obtain 391 surveys, yielding an approximate 67% completion rate. All of the surveys were stored in a locked cabinet in this researchers’ office and will be held in a secure location for seven years (2019).

**Procedures for Data Analysis**

The data collected from this study was entered into the SPSS (PASW 18) software program. The first step was to determine which surveys were consistent or reliable enough to use for the testing. The next section then discussed the results of the testing using the canonical correlation analysis. The correlation coefficient is a statistic that measures the strength and direction of a linear relationship between two variables. Its value tells us something about the predictive ability of a linear relationship. Correlation does not imply causation. When there is more than one variable in an equation, the grouping is called a variate. When the variate represent real world values, the mathematical relation between the variates can describe the relationship between two or more real world phenomena.

**AMP Inconsistency Scale Analysis**

Out of 391 respondents, 11 had a score on the inconsistency scale of the AMP of eight or greater. The frequency is how many times each participant answered in a way that contradicted a previous response. Since this scale is a count of inconsistency in responding to 15 pairs of items, eight was used as a cutoff because it represents greater than 50% of the item pairs in this measure. Consequently, 3 people had inconsistency in responding to 8 statements; 5 people had inconsistency in responding to 9 statements; 2
people had inconsistency in responding to 10 statements; and 1 person had inconsistency in responding to 11 statements. The 3, 5, 2, and 1 people total 11. Table 3.1 reflects the extent to which a student gave different responses to AMP items that had similar content. Thus, out of the 391 surveys completed, 380 ninth grade students comprised the present study sample.
Table 3.1

The Inconsistency Frequencies of Response Style Scores of the Ninth Grade Students

<table>
<thead>
<tr>
<th>INC Score</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>42</td>
<td>10.7</td>
</tr>
<tr>
<td>1</td>
<td>58</td>
<td>14.8</td>
</tr>
<tr>
<td>2</td>
<td>67</td>
<td>17.1</td>
</tr>
<tr>
<td>3</td>
<td>82</td>
<td>21</td>
</tr>
<tr>
<td>4</td>
<td>59</td>
<td>15.1</td>
</tr>
<tr>
<td>5</td>
<td>36</td>
<td>9.2</td>
</tr>
<tr>
<td>6</td>
<td>29</td>
<td>7.4</td>
</tr>
<tr>
<td>7</td>
<td>7</td>
<td>1.8</td>
</tr>
<tr>
<td>8</td>
<td>3</td>
<td>0.8</td>
</tr>
<tr>
<td>9</td>
<td>5</td>
<td>1.3</td>
</tr>
<tr>
<td>10</td>
<td>2</td>
<td>0.5</td>
</tr>
<tr>
<td>11</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>12</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>13</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>14</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>15</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>391</td>
<td>100</td>
</tr>
</tbody>
</table>

Note: There was no score for an INC Score for 12, 13, 14, or 15.

Canonical Correlation Analysis

In order to address the questions, a canonical correlation analysis was run using SPSS. Each research question was tested via canonical correlation analysis procedures.

For the purpose of this study the set of variables measuring Student Motivation to Achieve and Achievement-Related Work Habits served as Outcome Variables, while the set of variables measuring Inner Resources and Interpersonal Strengths served as the Predictor Variables. Canonical correlation analysis was used to identify and measure the associations among two sets of variables (Nicol & Pexman, 2010). Canonical correlation is appropriate in the same situations where multiple regression would be, but where there are multiple intercorrelated outcome variables. Nicol and Pexman (2010) reported the canonical correlation to be used to measure the linear relationships between two sets of
variables. Nicol and Pexman (2010) reported that the goal of the analysis is to compute a new variable (*a canonical variate or root*) made from linear combinations of the original variables, such that the correlation of the original and new variables is maximized. The SPSS (PASW 18) software program performed canonical correlation using the ANOVA command. The present study analyzed data on two psychological variables (*Inner Resources and Interpersonal Strengths*), two academic variables (*Student Motivation to Achieve and Achievement Related Work Habits*) and gender.

The statistical significance of the canonical correlation between each variate pair, the shared variance between each variate pair and the variation in the outcome constructs (i.e., motivation to achieve and achievement related work habits) were accounted for by each of the predictor variates. The canonical correlations were useful in this study because it eliminated the collinearity that exists when you have constructed various scales out of a single set of response items.

**Conclusion**

This chapter described the method and design used to conduct this study and the rationales for the chosen methods. The setting and population of the research was described and descriptive information of the identification process explained. Additionally, the research procedures with a description of the instrument were summarized.
Chapter 4: Results

This study examined the extent and manner in which Student Motivation to Achieve and Achievement Related Work Habits were associated with variables measuring student Inner Resources and Interpersonal Strengths. Also of interest to this researcher was whether or not the relationship between each individual outcome variable and each set of predictor variables differed with respect to gender. These relationships were examined via canonical correlation analysis procedures. The chapter will begin with some preliminary analyses – the descriptive demographic frequency profile of the 380 ninth grade students who voluntarily completed the AMP survey (see Table 4.1) and the estimates of reliability for each AMP subscale. Finally, the canonical correlation results with respective tables addressing each research question are provided in this chapter.
Table 4.1

The Demographic Profile of the Ninth Grade Students

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male (Code = 1)</td>
<td>187</td>
<td>49.2</td>
</tr>
<tr>
<td>Female (Code = 2)</td>
<td>193</td>
<td>50.8</td>
</tr>
<tr>
<td>Total</td>
<td>380</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Race</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>5</td>
<td>1.3</td>
</tr>
<tr>
<td>Black</td>
<td>105</td>
<td>27.6</td>
</tr>
<tr>
<td>Hispanic</td>
<td>232</td>
<td>61.1</td>
</tr>
<tr>
<td>Native American</td>
<td>3</td>
<td>0.8</td>
</tr>
<tr>
<td>White</td>
<td>22</td>
<td>5.8</td>
</tr>
<tr>
<td>Other</td>
<td>13</td>
<td>3.4</td>
</tr>
<tr>
<td>Total</td>
<td>380</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age ( X =14.65, SD=.767)</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>3</td>
<td>0.8</td>
</tr>
<tr>
<td>14</td>
<td>193</td>
<td>50.8</td>
</tr>
<tr>
<td>15</td>
<td>119</td>
<td>31.3</td>
</tr>
<tr>
<td>16</td>
<td>65</td>
<td>17.1</td>
</tr>
<tr>
<td>Total</td>
<td>380</td>
<td>100</td>
</tr>
</tbody>
</table>
Demographic Profile

According to Table 4.1, almost an equal number of male (49.2%) and female (50.8%) ninth graders participated in the study. Ages ranged from 13 to 16 years old. A little over half (50.8%) of the participating ninth grade students were 14 years old. The three 13 year old students suggest that .8% may have skipped a grade with their academic experience. Since sixty-five ninth grade students reported that they were 16 years old, we can assume that 17.1% of this population has repeated a grade or more within their academic experience. A majority of the students self-identified as Hispanic (61.1%) followed by Black (27.6%).

Table 4.2

AMP Means, Standard Deviations, and Reliability Estimates Using a Sample of Ninth Grade Students

<table>
<thead>
<tr>
<th>Scale Name</th>
<th># Items</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACH</td>
<td>13</td>
<td>371</td>
<td>50.19</td>
<td>11.410</td>
<td>.829</td>
</tr>
<tr>
<td>MOT</td>
<td>11</td>
<td>375</td>
<td>50.23</td>
<td>10.759</td>
<td>.692</td>
</tr>
<tr>
<td>COMP</td>
<td>15</td>
<td>371</td>
<td>50.41</td>
<td>9.919</td>
<td>.687</td>
</tr>
<tr>
<td>GOAL</td>
<td>7</td>
<td>376</td>
<td>51.03</td>
<td>10.344</td>
<td>.655</td>
</tr>
<tr>
<td>RLX</td>
<td>12</td>
<td>373</td>
<td>49.97</td>
<td>9.393</td>
<td>.662</td>
</tr>
<tr>
<td>HAP</td>
<td>9</td>
<td>377</td>
<td>52.24</td>
<td>10.303</td>
<td>.771</td>
</tr>
<tr>
<td>PAT</td>
<td>12</td>
<td>378</td>
<td>51.50</td>
<td>10.061</td>
<td>.652</td>
</tr>
<tr>
<td>SCN</td>
<td>11</td>
<td>374</td>
<td>51.65</td>
<td>9.568</td>
<td>.732</td>
</tr>
<tr>
<td>AST</td>
<td>8</td>
<td>379</td>
<td>51.09</td>
<td>9.391</td>
<td>.358</td>
</tr>
<tr>
<td>DIPL</td>
<td>14</td>
<td>379</td>
<td>50.16</td>
<td>10.639</td>
<td>.643</td>
</tr>
<tr>
<td>EXT</td>
<td>10</td>
<td>379</td>
<td>49.62</td>
<td>9.498</td>
<td>.671</td>
</tr>
<tr>
<td>COOP</td>
<td>10</td>
<td>378</td>
<td>52.11</td>
<td>7.825</td>
<td>.180</td>
</tr>
<tr>
<td>PLAN</td>
<td>7</td>
<td>376</td>
<td>50.84</td>
<td>11.090</td>
<td>.721</td>
</tr>
<tr>
<td>INI</td>
<td>14</td>
<td>371</td>
<td>51.05</td>
<td>10.126</td>
<td>.661</td>
</tr>
<tr>
<td>TEAM</td>
<td>10</td>
<td>376</td>
<td>46.12</td>
<td>10.245</td>
<td>.739</td>
</tr>
</tbody>
</table>

Table 4.2 provides a summary of the means, standard deviations, and internal consistency estimates of the AMP subscales. The AMP has four Motivation for
Achievement scales that can be used to estimate a student’s view of his or her actual level of attainment, need to achieve, available energy for mental activity, competitiveness, and anticipated future attainment (Mandel, Friedland, & Marcus, 1996). As shown in Table 4.2, the # Items demonstrate how many statements were assigned to the subscale (see chart in Chapter 3, figure 3.1). Mandel, Friedland, & Marcus (1996) reported the 13-item Achiever (ACH) scale to reflect the degree to which students perceive themselves as actually achieving. This scale contains items that assess a student’s view of his or her academic achievement and attitudes toward school and work. The scale is highly correlated with scholastic achievement. Student’s who scored high tended to get better grades. The 11-item Motivation (MOT) scale evaluated energy level, optimism, effort, and degree of follow-through. Students who scored high on this scale report a high need to achieve. The Competitiveness (COMP) scale contains 15-items that reflect a student’s need to win, to perform better than others, or to surpass standards of achievement or performance. The 7-item Goal Orientation (GOAL) scale was designed to measure a student’s sense of purpose as well as the degree of his or her satisfaction with goal attainment. The 12-item Relaxed Style (RLX) scale measured a student’s perceived level of relaxation or tension. Students who score in the average range perceive themselves as neither predominantly relaxed nor tense. The Happiness (HAP) scale contained 9 items that measured the perceived level of happiness or sadness that a student is experiencing. Scores in the average range denote students who do not perceive themselves as either predominantly happy or sad, and who often experience a balance of these emotions. The 12-item Patience scale measured the degree to which students perceived themselves as being steady and persistent on tasks or in relationships. It also reflected the tendency to
think about consequences before acting. Students who scored high tended to be methodical and persistent in attaining goals even when faced with delays or difficulties. The Self-Confidence (SCN) scale was comprised of 11-items that measured the degree of perceived self-confidence in a student. Students who scored high perceived themselves to be self-confident while those who scored low admitted to general feelings of insecurity. The 8-item Assertiveness (AST) scale measures the degree to which a student believes he or she acts assertively. Students with high AST scores tended to be perceived by themselves and by others as socially assertive, whereas those with low scores tended to be perceived as more submissive, compliant, or passive. The Personal Diplomacy (DIPL) scale was comprised of 14-items that measured the degree to which a student is willing and able to act diplomatically in person-to-person contacts. Students with a high DIPL score tended to be perceived by others as being socially tactful and artful in interpersonal situations. An excessive high score may reflect someone who is overly skilled in, and perhaps overly concerned about, interpersonal situations, using diplomacy to the exclusion of other approaches. The 10-item Extroversion (EXT) scale measures whether a student tends to be externally or internally oriented when interacting with the environment. High scores tend to be interested in external objects, actions, and interacting with others, and may be perceived by others as being more outgoing than most. Students who scored low tend to be inwardly directed, have a pronunity for finding satisfactions within their own thoughts, and may be perceived as being less outgoing than most. The Cooperativeness (COOP) scale contains 10-items that measure the degree to which a student perceives himself or herself to be cooperative or resistive in relationships. Students with high scores tend to work well with others, whereas those
with low scores tend to be uncooperative. The Planning and Organization (PLAN) scale contained 7-items that measured the extent to which a student values planning, organization, self-discipline, attention to detail, and follow-through. This measure is strongly related to scholastic achievement and high scores may reflect someone who is a workaholic, whereas an excessively low score reflects someone who admits to very poor work habits. The 14-item Initiative (INI) scale measured the degree to which students perceived themselves as having the energy or aptitude to initiate action across a range of situations. An elevated score reflected high initiative self-ratings, whereas a low score reflected the relative lack of self-rated initiative. Lastly, the Team Player (TEAM) scale containing 10-items measured the extent to which a student perceived himself or herself as able to perform cooperatively as an effective member of a team. Students who performed high perceived themselves as good “team players,” who liked people in general. Students with low scores perceived themselves as not being interested in or effective at working with others.

The Mean is a measure of central tendency. It is also called the average (Nicol & Pexman, 2010). Within this column, the Mean (see Table 4.2) tells the reader that this sample was adequate and overall, the ninth graders took the survey seriously. The SD (standard deviation) tells how spread out the examples were from the Mean. It reassures that the Mean was solid and coming from a norm distribution. The values for all subscales measured ranged from (7.8) COOP to (11.4) ACH. COOP (7.8) was closer to the Mean while, ACH (11.4) was a little more spread out.
Internal Consistency Estimates

The AMP survey data were entered into SPSS in accordance with the authors’ instructions. Then the data were reverse scored and converted to the authors’ normed “t-scores.” The instrument’s inconsistency measure was examined for extreme cases of inconsistency (see Table 3.1). Out of 391 respondents, the 11 respondents who had a score on this scale of eight or greater and were excluded from all analysis, resulting in a total sample of 380 respondents.

The examination of test reliability involves determining the extent to which test results can be expected to remain stable from administration to administration. The AMP has been fully tested with large samples by the authors (Mandel, Friedland, & Marcus, 1996). Almost all of the subscales reach an acceptable level of reliability based on the Cronbach alphas. However, there were two subscales with very low internal consistency estimates - AST (.358) and COOP (.180). The Cronbach’s alpha reported in the AMP manual revealed that these two scales were typically reliable - AST (.58) and COOP (.70). We can assume that the Assertiveness and Cooperativeness have items that usually hang together to an acceptable reliability level. Nonetheless, we must conclude that the ninth graders in the current study either misunderstood the items involved in these scales or otherwise struggled while they were answering these particular items, leading to the unusually low consistency measures depicted by the Cronbach’s alpha values (see Table 4.2). Next, we will review the research questions addressed by the present study.

Research Question 1

The canonical correlation analysis addressed the following research questions:
1a. Is there a relationship between ninth grade student motivation to achieve and their inner resources as measured by their AMP subscale scores on (a) level of relaxation or tension; (b) level of happiness or sadness; (c) degree of patience; and (d) degree of self-confidence?

1b. Are there gender differences in the relationship between ninth grade student motivation to achieve and their inner resources as measured by their AMP subscale scores on (a) level of relaxation or tension; (b) level of happiness or sadness; (c) degree of patience; and (d) degree of self-confidence?

Canonical correlation analysis was used to identify and measure the associations among two sets of variables (Nicol & Pexman, 2010). For the purpose of this study the set of variables measuring Student Motivation to Achieve served as the Outcome Variables, while the set of variables measuring Inner Resources served as the Predictor Variables. A canonical correlation analysis was conducted using the four inner resource variables plus gender as predictors of the four motivation to achieve variables to determine the relationship between the two variable sets (i.e., Inner Resources and Motivation). The scales were grouped together to form variates for use in canonical correlations (see Table 4.3).
Table 4.3

*Canonical Variates and Corresponding AMP Scales Using a Sample of Ninth Graders*

<table>
<thead>
<tr>
<th>Variate Name</th>
<th>Scale Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outcome Variables</td>
<td></td>
</tr>
<tr>
<td>Motivation to Achieve</td>
<td>ACH</td>
</tr>
<tr>
<td></td>
<td>MOT</td>
</tr>
<tr>
<td></td>
<td>COMP</td>
</tr>
<tr>
<td></td>
<td>GOAL</td>
</tr>
<tr>
<td>Achievement-Related Work Habits</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PLAN</td>
</tr>
<tr>
<td></td>
<td>INI</td>
</tr>
<tr>
<td></td>
<td>TEAM</td>
</tr>
<tr>
<td>Predictor Variables</td>
<td></td>
</tr>
<tr>
<td>Inner Resources</td>
<td>RLX</td>
</tr>
<tr>
<td></td>
<td>HAP</td>
</tr>
<tr>
<td></td>
<td>PAT</td>
</tr>
<tr>
<td></td>
<td>SCN</td>
</tr>
<tr>
<td>Interpersonal Strengths</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AST</td>
</tr>
<tr>
<td></td>
<td>DIPL</td>
</tr>
<tr>
<td></td>
<td>EXT</td>
</tr>
<tr>
<td></td>
<td>COOP</td>
</tr>
</tbody>
</table>

*Note.* Achievement (ACH); Motivation (MOT); Competiveness (COMP); Goal Orientation (GOAL); Planning and Organizing (PLAN); Initiative (INT); Team Player (TEAM); Relaxed-Style (RLX); Degree of Happiness (HAP); Patience (PAT); Self-Confidence (SCN); Assertiveness (AST); Personal Diplomacy (DIPL); Extrovert (EXT); Cooperativeness (COOP).

The analysis yielded four functions with squared canonical correlations ($R^2_c$) of .583, .227, .109, and .024 for each consecutive function (see Table 4.4). The full model across all functions was statistically significant using Wilks’ $\lambda = .280, \chi^2 = 28.780,$
df = 20, 1,231 $p < .001$). Because Wilks’s $\lambda$ represents the variance unexplained by the model, $1 - \lambda$ provides the full model effect size in terms that are comparable to the utility of $r^2$. Therefore, for the overall model, the effect size was .720, which indicates that the model explained 72% of the variance between the variable sets.

The dimension reduction analysis tested the hierarchal arrangement of the four functions for statistical significance. All four functions were statistically significant. (Functions 2 to 4, 3 to 4, and 4 to 4, respectively: $F = 13.269, df = 12, 985 p < .001$, $F = 8.995, df = 6, 746, p < .001$, $F = 4.549, df = 2, 374, p < .05$).

Given the $R^2_c$ effects for each function, only the first two functions—with 58.3% and 22.7% of shared variance, respectively—were considered noteworthy for evaluation in this study. The last two functions only explained 10.9% and 2.4%, respectively, of the remaining variance in the variable sets.

Table 4.4 presents the standardized canonical function coefficients (“Coef”) and structure coefficients (“$r_s$”) for Functions 1 and 2. Additionally, squared structure coefficients and communalities ($h^2$) are provided.
Table 4.4

Canonical Solution for Inner Resources Predicting Student Motivation to Achieve for Functions 1 and 2 using Ninth Grade Students

<table>
<thead>
<tr>
<th>Variable</th>
<th>Function 1</th>
<th></th>
<th></th>
<th>Function 2</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coef</td>
<td>$r_s$</td>
<td>$R_s^2$ (%)</td>
<td>Coef</td>
<td>$r_s$</td>
<td>$R_s^2$ (%)</td>
</tr>
<tr>
<td>ACH</td>
<td>0.069</td>
<td>-0.723*</td>
<td>0.523</td>
<td>-0.059</td>
<td>-0.108</td>
<td>0.012</td>
</tr>
<tr>
<td>MOT</td>
<td>-0.475</td>
<td>-0.900*</td>
<td>0.809</td>
<td>0.835</td>
<td>0.236</td>
<td>0.056</td>
</tr>
<tr>
<td>COMP</td>
<td>-0.207</td>
<td>-0.682*</td>
<td>0.465</td>
<td>-1.146</td>
<td>-0.692*</td>
<td>0.479</td>
</tr>
<tr>
<td>GOAL</td>
<td>-0.531</td>
<td>-0.905*</td>
<td>0.82</td>
<td>0.08</td>
<td>0.045</td>
<td>0.002</td>
</tr>
<tr>
<td>RLX</td>
<td>-0.373</td>
<td>-0.792*</td>
<td>0.627</td>
<td>-0.43</td>
<td>-0.144</td>
<td>0.021</td>
</tr>
<tr>
<td>HAP</td>
<td>-0.707</td>
<td>-0.946*</td>
<td>0.895</td>
<td>-0.037</td>
<td>0.021</td>
<td>0</td>
</tr>
<tr>
<td>PAT</td>
<td>-0.037</td>
<td>-0.512*</td>
<td>0.261</td>
<td>1.19</td>
<td>.790*</td>
<td>0.624</td>
</tr>
<tr>
<td>SCN</td>
<td>-0.032</td>
<td>-0.685*</td>
<td>0.469</td>
<td>-0.311</td>
<td>0.082</td>
<td>0.007</td>
</tr>
<tr>
<td>Gender</td>
<td>-0.042</td>
<td>0.13</td>
<td>0.017</td>
<td>0.149</td>
<td>0.164</td>
<td>0.027</td>
</tr>
</tbody>
</table>

Note. Coef = standardized canonical function coefficient; $r_s$ = structure coefficient; $R_s^2$ = squared structure coefficient; $h^2$ = communality coefficient. * Indicates structure coefficients ($r_s$) greater than $|0.45|$ and communality coefficients ($h^2$) greater than 45%.

Judging from the structure coefficients for Function 1, all dependent measures showed strong relationships within the canonical correlational analysis (CCA) model. This conclusion was supported by the squared structure coefficients that can be interpreted as a percentage of the variance between the two variable sets. Those that had the strongest effects were MOT (0.809) and GOAL (0.82). Meaning, Motivation and Goal-Oriented had the greatest impact on the model, accounting for 80% and 82% of the
variance between themselves and all the predictor variables. However, though relatively smaller, ACH (0.523) and COMP (0.465) were still major contributors to the model. This means that Achievement and Competitiveness were major contributors in the model explaining the variance between itself and all the predictor variables. While MOT and GOAL also had large function coefficients, ACH and COMP did not. This occurred due to multicollinearity between these two variables and the other criterion variables. In any event, using structure coefficients, it is possible to determine the contribution of each variable to the model regardless of this phenomenon.

Again judging from the coefficients for Function 1, all predictor variables except PAT (0.261) and Gender (0.017) showed strong relationships within the model. In other words, Patience and Gender of the ninth graders showed moderate strength in their contribution to the model. Those that had the strongest effects were HAP (0.895) and RLX (0.627). The Happiness and Relaxed-Style of the ninth graders had strong relationship to the model. However, though relatively smaller, SCN or Self-Confidence (0.469) was still a major contributor to the model. Meaning, SCN did not achieve the magnitude of HAP and RLX, but SCN in and of itself is a significant contribution to the model. PAT or Patience (0.261) showed moderate strength in its contribution to the model as well. Similar to the phenomenon that occurred for the criterion variables under Function 1, HAP (0.895) also had a large function coefficient, but RLX (0.627), PAT (0.261), and SCN (0.469) did not. Meaning, HAP had the greatest impact on the model.

However, using structure coefficients, it is possible to determine the contribution of each variable to the model regardless of this phenomenon. It is evident from the uniform (negative) signs of the structure coefficients under Function 1 that, with the
exception of gender, all of the criterion and predictor variables are positively related to one another. In other words, ninth grade students who scored high on measures of HAP or Happiness (0.895) and RLX or Relaxed Style (0.627) also tended to score high on MOT(0.809) and GOAL(0.82). Conversely, 9\textsuperscript{th} graders who scored low on happiness and relaxed style also scored lower on motivation and goal-oriented items.

Judging from the coefficients for Function 2, the variable COMP or Competitiveness (0.479) was the only strong criterion in the model. Also under Function 2, the predictor variable PAT or Patience (0.624) was the only strong predictor in the model. While the sign for the structure coefficient of COMP (-.692*) is negative—similar to those under Function 1—the sign for PAT (.790*) is positive under Function 2. Therefore, under Function 2, PAT (.790*) is negatively related to COMP (-1.146). In other words, the ninth grade students who were impatient were also more competitive.

Because of this difference in direction, PAT or Patience (.790*) stands out from the other predictors with which it has been grouped under the variate concept, Inner Resources. Possibly, patience, when considered individually, has an inverse relationship with competitiveness. Meaning, ninth graders who tended to express more patience also tend to be less competitive in nature. Otherwise, when combined with the other concepts under Inner Resources, Patience has a positive relationship with the criterion variate for motivation to achieve. Thus, ninth graders who tend to be comfortable with patience also tend to have the motivation to achieve as measured by various questions on the AMP.

Finally, in regard to Question 1b, gender emerges as the sole variable that did not make a substantial contribution to the model according to the $h^2$ statistics. Therefore, both
male and female ninth graders tended to answer the AMP motivation items in a similar rather than a dissimilar manner.

Among the dependents, COMP (.944*), MOT (.865*), and GOAL (.822*) rise to the top in this model. Among the predictors, HAP (.895*) and PAT (.885*) are relatively the strongest in the model.

In conclusion, there was a statistically significant relationship between student motivation to achieve and each of the factors related to a student’s inner resources for the ninth grade students: (a) level of relaxation or tension; (b) level of happiness or sadness; (c) degree of patience; and (d) degree of self-confidence. Male and female ninth grade students who reported a high level of motivation to achieve also tended to report more relaxation, higher levels of happiness, more patience, and more self-confidence. No gender differences were found among the male and female ninth graders.

**Research Question 2**

2a. Is there a relationship between ninth grade student motivation to achieve and their interpersonal strengths as measured by their AMP subscale scores on (a) degree of assertiveness; (b) willingness to act diplomatically; (c) tendency to show an external or internal orientation and (d) degree of cooperativeness in relationships?

2b. Are there gender differences in the relationship between ninth grade student motivation to achieve and their interpersonal strengths as measured by their AMP subscale scores on (a) degree of assertiveness; (b) willingness to act diplomatically; (c) tendency to show an external or internal orientation; and (d) degree of cooperativeness in relationships?
A canonical correlation analysis was conducted using the four interpersonal strengths variables plus gender as predictors of the four motivation to achieve variables to determine the relationship between the two variable sets (i.e., interpersonal strengths and motivation). The analysis yielded four functions with squared canonical correlations ($R_c^2$) of .531, .269, .037, and .004 for each consecutive function. The full model across all functions was statistically significant using Wilks’ $\lambda = .329$ ($F = 24.546$, $df = 20, 1,231$, $p < .001$). The effect size was .671, which indicates that the model explained 67% of the variance between the variable sets.

The dimension reduction analysis tested the hierarchal arrangement of the four functions for statistical significance. The first three functions were statistically significant (Functions 2 to 4 and 3 to 4, respectively: $F = 11.797$, $df = 12, 985$, $p < .001$, $F = 2.634$, $df = 6, 746$, $p < .05$). The fourth function, Function 4 to 4, was not statistically significant ($F = 0.827$, $df = 2, 374$, $p > .05$). Given the $R_c^2$ effects for each function, only the first two functions—with 53.1% and 26.9% of shared variance, respectively—were considered noteworthy for evaluation in this study. The last two functions only explained 3.7% and 0.4%, respectively, of the remaining variance in the variates.

The following table presents the standardized canonical function coefficients (in the table: “Coef”) and structure coefficients (in the table: “$r_s$”) for Functions 1 and 2. Additionally, squared structure coefficients and communalities ($h^2$) were provided.
Table 4.5

*Canonical Solution for Interpersonal Strengths Predicting Student Motivation to Achieve*
*for Functions 1 and 2 Using Ninth Grade Students*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Function 1</th>
<th>Function 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coef</td>
<td>$r_s$</td>
</tr>
<tr>
<td>ACH</td>
<td>0.123</td>
<td>-0.689*</td>
</tr>
<tr>
<td>MOT</td>
<td>-0.448</td>
<td>-0.868*</td>
</tr>
<tr>
<td>COMP</td>
<td>-0.501</td>
<td>-0.839*</td>
</tr>
<tr>
<td>GOAL</td>
<td>-0.343</td>
<td>-0.805*</td>
</tr>
<tr>
<td>AST</td>
<td>-0.44</td>
<td>-0.702*</td>
</tr>
<tr>
<td>DIPL</td>
<td>-0.51</td>
<td>-0.803*</td>
</tr>
<tr>
<td>EXT</td>
<td>-0.248</td>
<td>-0.836*</td>
</tr>
<tr>
<td>COOP</td>
<td>-0.112</td>
<td>-0.467*</td>
</tr>
<tr>
<td>Gender</td>
<td>0.123</td>
<td>0.172</td>
</tr>
</tbody>
</table>

*Note.* * Indicates structure coefficients ($r_s$) greater than |.45| and communality coefficients ($h^2$) greater than 45%. Coef = standardized canonical function coefficient; $r_s$ = structure coefficient; $R_s^2$ = squared structure coefficient; $h^2$ = communality coefficient.

Judging from the structure coefficients for Function 1, all dependent measures showed strong relationships within the CCA model. Those that had the strongest effects were MOT, COMP, and GOAL. In other words, Motivation, Competitiveness and Goal-Oriented had the greatest impact on the model, accounting for 75%, 70%, and 81% respectively of the variance between themselves and all the predictor variables. However, though relatively smaller, ACH (.475) was still a major contributor to the model. This
conclusion was supported by the squared structure coefficients. All but ACH also had large function coefficients. This occurred due to multicollinearity between this variable and the other criterion variables. In any event, using structure coefficients, it is possible to determine the contribution of each variable to the model regardless of this phenomenon.

Again judging from the coefficients for Function 1, the predictor variables, AST (.493), DIPL (.645), EXT (.699), and COOP (.219) showed notable relationships within the model. Gender showed a weak and practically insignificant relationship within the model. Those that had the strongest effects were DIPL and EXT; however, though relatively smaller, AST was still a major contributor to the model. COOP shows moderate strength in its contribution to the model as well. Meaning, COOP did not achieve the magnitude of AST, DIPL, or EXT, COOP in and of itself is significant contribution to the model. Similar to the phenomenon that occurred for the criterion variables under Function 1, while AST, DIPL, and COOP had commensurately sized function coefficients, EXT did not. However, using structure coefficients, it is possible to determine the contribution of each variable to the model regardless of this phenomenon.

It is evident from the uniform (negative) signs of the structure coefficients under Function 1, all of the criterion and predictor variables are positively related to one another (with the exception of gender).

Judging from the coefficients for Function 2, the variable COMP was the only strong criterion in the model. Also under Function 2, the predictor variables AST and DIPL were the only strong predictors in the model. While the sign for the structure coefficient of AST is negative—similar to those under Function 1—the sign for DIPL is
positive under Function 2. Therefore, under Function 2, COMP is negatively related to DIPL. In other words, the ninth grade students that could negotiate their environment were also more competitive.

Because of this difference in direction, DIPL (.583*) stands out perhaps as somehow different from the other predictors with which it has been grouped under the variate concept, interpersonal strengths. Possibly, willingness to act diplomatically, when considered individually, has an inverse relationship with competitiveness. Otherwise, when combined with the other concepts under interpersonal strengths, willingness to act diplomatically has a positive relationship with the criterion variate, motivation to achieve.

Finally, referring to the \( h^2 \) statistics, COOP and gender emerged as those variables that did not make substantial contributions to the model. Among the dependents, MOT and COMP rise to the top in this model. Among the predictors, AST and DIPL are relatively the strongest in the model.

In conclusion, there was statistically significant relationship between student motivation to achieve and each of the factors related to interpersonal strengths for the ninth grade students: (a) degree of assertiveness; (b) willingness to act diplomatically; (c) whether a student is externally or internally oriented; and (d) degree of cooperativeness in relationships. Male and female ninth grade students who reported a high level of motivation to achieve also tended to report a high degree of assertiveness, ability to act diplomatically, more externally oriented, and more cooperative. No gender differences were found among the male and female ninth graders.
Research Question 3

3a. Is there a relationship between ninth grade student achievement–related work habits and their inner resources as measured by their AMP subscale scores on (a) level of relaxation or tension; (b) level of happiness or sadness; (c) degree of patience; and (d) degree of self-confidence?

3b. Are there gender differences in the relationship between ninth grade student achievement–related work habits and their inner resources as measured by their AMP subscale scores on (a) level of relaxation or tension; (b) level of happiness or sadness; (c) degree of patience; and (d) degree of self-confidence?

A canonical correlation analysis was conducted using the four inner resources variables plus gender as predictors of the three achievement-related work habits variables to determine the relationship between the two variable sets (i.e., inner resources and work habits). The analysis yielded three functions with squared canonical correlations ($R_c^2$) of .434, .164, and .054, for each consecutive function. The full model across all functions was statistically significant using Wilks’ $\lambda = .447$ ($F = 23.165, df = 15, 1,027, p < .001$). The effect size was .553, which indicates that the model explained 55% of the variance between the variable sets.

The dimension reduction analysis tested the hierarchal arrangement of the three functions for statistical significance. All three functions were statistically significant. (Functions 2 to 3, and 3 to 3, respectively: $F = 11.652, df = 8, 746, p < .001$, $F = 7.226, df = 3, 374, p < .001$).

Given the $R_c^2$ effects for each function, only the first two functions—with 43.4% and 16.4% of shared variance, respectively—were considered noteworthy for evaluation.
The last function only explained 5% of the remaining variance in the variates.

The following table presents the standardized canonical function coefficients (in the table: “Coef”) and structure coefficients (in the table: “$r_s$”) for Functions 1 and 2. Additionally, squared structure coefficients and communalities ($h^2$) are provided.

Table 4.6

*Canonical Solution for Inner Resources Predicting Achievement-Related Work Habits for Functions 1 and 2 using Ninth Grade Students*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Function 1</th>
<th>Function 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coef</td>
<td>$r_s$</td>
</tr>
<tr>
<td>PLAN</td>
<td>-0.181</td>
<td>-0.610*</td>
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<tr>
<td>INI</td>
<td>-0.702</td>
<td>-0.957*</td>
</tr>
<tr>
<td>TEAM</td>
<td>-0.282</td>
<td>-0.773*</td>
</tr>
<tr>
<td>RLX</td>
<td>-0.434</td>
<td>-0.694*</td>
</tr>
<tr>
<td>HAP</td>
<td>-0.77</td>
<td>-0.875*</td>
</tr>
<tr>
<td>PAT</td>
<td>0.478</td>
<td>-0.093</td>
</tr>
<tr>
<td>SCN</td>
<td>-0.129</td>
<td>-0.544*</td>
</tr>
<tr>
<td>Gender</td>
<td>-0.142</td>
<td>0.005</td>
</tr>
</tbody>
</table>

*Note.* * Indicates structure coefficients ($r_s$) greater than |.45| and communality coefficients ($h^2$) greater than 45%. Coef = standardized canonical function coefficient; $r_s$ = structure coefficient; $R_s^2$ = squared structure coefficient; $h^2$ = communality coefficient.

Judging from the structure coefficients for Function 1, all dependent measures showed strong relationships within the CCA model. The one that had the strongest effect
was INI (.917); however, though relatively smaller, PLAN (.372) and TEAM (.597) were still major contributors to the model. This conclusion was supported by the squared structure coefficients. While INI also had a large function coefficient, PLAN and TEAM did not. This occurred due to multicollinearity between these two variables and the other criterion variables. In any event, using structure coefficients, it is possible to determine the contribution of each variable to the model regardless of this phenomenon.

Again judging from the coefficients for Function 1, the predictor variables, RLX, HAP, and SCN, showed strong relationships within the model. PAT and gender did not show strong relationships within the model. In other words, Patience and Gender of the ninth graders did not have significant contribution to the model. HAP had the strongest effect; however, though relatively smaller, RLX and SCN were still major contributors to the model. Similar to the phenomenon that occurred for the criterion variables under Function 1, while RLX and HAP also had commensurate function coefficients, SCN did not. However, using structure coefficients, it is possible to determine the contribution of each variable to the model regardless of this phenomenon.

It is evident from the uniform (negative) signs of the structure coefficients under Function 1, all of the criterion and predictor variables are positively related to one another (with the exception of gender).

Judging from the coefficients for Function 2, the variable PLAN was the only strong criterion in the model. Also under Function 2, the variable PAT was the only strong predictor in the model. The sign for the structure coefficient for each is positive. Therefore, under Function 2, PAT is positively related to PLAN.
Finally, referring to the $h^2$ statistics, PAT, SCN, and gender emerged as the variables that did not make substantial contributions to the model. Among the dependents, INI rose to the top in this model. Among the predictors, HAP was relatively the strongest in the model.

In conclusion, there was statistically significant relationship between achievement-related work habits and each of the factors related to a student’s inner resources for the ninth grade students: (a) level of relaxation or tension; (b) level of happiness or sadness; (c) degree of patience; and (d) degree of self-confidence. Male and female ninth grade students who reported a high level of achievement-related work habits also tended to report more relaxation, higher levels of happiness, more patience, more self-confidence. No gender differences were found among the male and female ninth graders.

**Research Question 4**

4a. Is there a relationship between ninth grade student achievement-related work habits and their interpersonal strengths as measured by their AMP subscale scores on (a) degree of assertiveness; (b) willingness to act diplomatically; (c) tendency to show an external or internal orientation; and (d) degree of cooperativeness in relationships?

4b. Are there gender differences in the relationship between ninth grade student achievement-related work habits and their interpersonal strengths as measured by their AMP subscale scores on (a) degree of assertiveness; (b) willingness to act diplomatically; (c) tendency to show an external or internal orientation; and (d) degree of cooperativeness in relationships?
A canonical correlation analysis was conducted using the four interpersonal strengths variables plus gender as predictors of the three achievement-related work habits variables to determine the relationship between the two variable sets (i.e., interpersonal strengths and work habits). The analysis yielded three functions with squared canonical correlations ($R_c^2$) of .598, .222, and .046 for each consecutive function. The full model across all functions was statistically significant using Wilks’ $\lambda$ = .298 ($F$ = 37.685, $df$ = 15, 1,027, $p < .001$). The effect size was .702, which indicates that the model explained 70.2% of the variance between the variable sets.

The dimension reduction analysis tested the hierarchal arrangement of the three functions for statistical significance. All three functions were statistically significant. (Functions 2 to 3 and 3 to 3, respectively: $F$ = 15.025, $df$ = 8, 746, $p < .001$, $F$ = 6.055, $df$ = 3, 374, $p < .001$).

Given the $R_c^2$ effects for each function, only the first two functions—with 59.8% and 22.2% of shared variance, respectively—were considered noteworthy for evaluation in this study. The last function only explained 4.6% of the remaining variance in the variates.

The following table presents the standardized canonical function coefficients (in the table: “Coef”) and structure coefficients (in the table: “$r_s$”) for Functions 1 and 2. Additionally, squared structure coefficients and communalities ($h^2$) are provided.
Table 4.7

Canonical Solution for Interpersonal Strengths Predicting Achievement-Related Work Habits for Functions 1 and 2 Using Ninth Grade Students

<table>
<thead>
<tr>
<th>Variable</th>
<th>Function 1</th>
<th>Function 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coef</td>
<td>$r_s$</td>
</tr>
<tr>
<td>PLAN</td>
<td>-0.089</td>
<td>-0.542*</td>
</tr>
<tr>
<td>INI</td>
<td>-0.724</td>
<td>-0.961*</td>
</tr>
<tr>
<td>TEAM</td>
<td>-0.323</td>
<td>-0.794*</td>
</tr>
<tr>
<td>AST</td>
<td>-0.409</td>
<td>-0.741*</td>
</tr>
<tr>
<td>DIPL</td>
<td>-0.41</td>
<td>-0.710*</td>
</tr>
<tr>
<td>EXT</td>
<td>-0.476</td>
<td>-0.916*</td>
</tr>
<tr>
<td>COOP</td>
<td>0.132</td>
<td>-0.228</td>
</tr>
</tbody>
</table>
| Gender   | -0.067     | -0.002     | 0           | 0.107      | 0.147      | 0.021       | 0.021   

*Note. * Indicates structure coefficients ($r_s$) greater than |.45| and communality coefficients ($h^2$) greater than 45%. Coef = standardized canonical function coefficient; $r_s$ = structure coefficient; $R_s^2$ = squared structure coefficient; $h^2$ = communality coefficient.

Judging from the structure coefficients for Function 1, all dependent measures showed strong relationships within the CCA model. INI (.961) had the strongest effect; however, though relatively smaller, PLAN (.294) and TEAM (.630) were still major contributors to the model. This conclusion was supported by the squared structure coefficients. While INI also had a large function coefficient, PLAN and TEAM did not. This occurred due to multicollinearity between these two variables and the other criterion.
variables. In any event, using structure coefficients, it is possible to determine the contribution of each variable to the model regardless of this phenomenon.

Again judging from the coefficients for Function 1, the predictor variables, AST (.550), DIPL (.504), and EXT (.838) showed strong relationships within the model. EXT had the strongest effect; however, though relatively smaller, AST and DIPL were still major contributors to the model. Meaning, EXT had the greatest impact on the model. Each predictor variable also had a large function coefficient.

It is evident from the uniform (negative) signs of the structure coefficients under Function 1, all of the criterion and predictor variables are positively related to one another.

Judging from the coefficients for Function 2, the variable PLAN was the only strong criterion in the model. Also under Function 2, the predictor variables AST and DIPL were the only strong predictors in the model. The sign for the structure coefficients of PLAN and DIPL is positive, while the sign for that of AST is negative. Therefore, under Function 2, AST is negatively related to PLAN and DIPL.

Because of this difference in direction, AST stands out perhaps as somehow different from the other predictors with which it has been grouped under the variate concept, inner resources. Possibly, assertiveness, when considered alone with willingness to act diplomatically, has an inverse relationship with planning and organization, when considered individually; whereas otherwise, when combined with the other concepts under interpersonal strengths, it has a positive relationship with the criterion variate for achievement-related work habits. In other words, the ninth grade students who demonstrated assertiveness did not necessarily have a plan.
Finally, referring to the $h^2$ statistics, COOP and gender emerged as the variables that did not make substantial contributions to the model. Among the dependents, INI rose to the top in this model. Among the predictors, AST, DIPL, and EXT are all relatively the strongest in the model.

In conclusion, there was a statistically significant relationship between achievement-related work habits and each of the factors related to interpersonal strengths for the ninth grade students: (a) degree of assertiveness; (b) willingness to act diplomatically; (c) whether a student is externally or internally oriented; and (d) degree of cooperativeness in relationship. Male and female ninth grade students who reported a high level of achievement-related work habits also tended to have a degree of assertiveness, could act diplomatically, demonstrated an extroverted orientation, and had a degree of cooperativeness. No gender differences were found among the male and female ninth graders.

**Summary of Results**

In summary, the demographic frequency profile of the 380 ninth grade students was presented and the estimates of reliability for each subscale were also reviewed. This chapter summarized the results that addressed the extent to which *Student Motivation to Achieve* and *Achievement Related Work Habits* were associated with variables measuring student *Inner Resources* and *Interpersonal Strengths*. The canonical correlation analyses addressed each research question. Finally, the canonical correlation results addressing each research question were provided and summarized in respective tables. The discussion in Chapter 5 will elaborate further on the meaning of these results.
Chapter 5: Discussion

Introduction

The intent of this research was to examine the quantity and manner in which student motivation to achieve and achievement related work habits were associated with psychological factors pertaining to a student’s inner resources, as well as interpersonal strengths – specifically among ninth grade students. Also of particular interest was whether or not a relationship between each of the outcome variables measuring the student’s motivation to achieve and achievement related work habits and each set of predictor variables measuring the students’ inner resources and interpersonal strengths were statistically different with respect to gender. The Achievement Motivation Profile (AMP) was the instrument chosen to provide quantitative data from a self-reporting student survey, specifically for high school students and designed to be a measure of a student’s motivation to achieve. As a result, four research questions were investigated using canonical correlation analyses. This chapter will begin with a discussion of the findings presented in the previous chapter. It will first elaborate on the findings from each canonical correlation analyses conducted, as per each research question. Building on this discussion of the findings from the study, the related literature will then be further examined with respect to the findings of the study. The study will then address the implications from the AMP results for the ninth grade students, as well as the limitations of the findings. Finally, recommendations for further research will be discussed.
Q1: Student motivation to achieve and inner resources. The first research question addressed in the present study was: Is there a significant relationship between ninth grade student motivation to achieve and their inner resources as measured by their (a) level of relaxation or tension; (b) level of happiness or sadness; (c) degree of patience; and (d) degree of self-confidence? According to the results, male and female ninth grade students who reported a higher level of motivation to achieve (achievement motivation, competitiveness, goal-orientation) also tended to report more relaxation, higher levels of happiness, more patience, and more self-confidence. In addition, no gender differences were found between ninth grade student motivation to achieve and their inner resources.

Q2: Student motivation to achieve and interpersonal strengths. The second question was as follows: Is there a relationship between ninth grade student motivation to achieve and their interpersonal strengths? The results revealed that male and female ninth grade students who reported higher levels of motivation to achieve (achievement motivation, competitiveness, goal-orientation) also tended to report a higher degree of assertiveness, more ability to act diplomatically, more of an external orientation, and more cooperation. No gender differences were found between male and female ninth grade student motivation to achieve and their interpersonal strengths.

Q3: Achievement-related work habits and inner resources. The third question was as follows: Is there a relationship between ninth grade student achievement–related work habits and their inner resources? The results revealed that male and female ninth grade students who reported a high level of achievement-related work habits (planning & organization, initiative, team player) also tended to report more relaxation, higher levels of happiness, more patience, and more self-confidence. No gender differences were found
between male and female ninth grade student achievement–related work habits and their inner resources.

**Q4: Achievement-related work habits and interpersonal strengths.** The fourth question was as follows: Is there a relationship between ninth grade student achievement-related work habits and their interpersonal strengths as measured by their (a) degree of assertiveness; (b) willingness to act diplomatically; (c) tendency to show an external or internal orientation; and (d) degree of cooperativeness in relationships? The results revealed that male and female ninth grade students who reported a higher level of achievement-related work habits (planning & organization, initiative, team player) also tended to report a higher degree of assertiveness, a higher likelihood of acting diplomatically, a stronger extroverted orientation, and a higher degree of cooperativeness. No gender differences were reported between ninth grade student achievement-related work habits and their interpersonal strengths as measured by their (a) degree of assertiveness; (b) willingness to act diplomatically; (c) tendency to show an external or internal orientation; and (d) degree of cooperativeness in relationships.

**Implications of Findings**

The profile of a low motivated ninth grade student may reflect a pattern of chronically low grades or negative attitude about success. Collectively, these results suggest that male and female ninth grade students with weak achievement motivation (low scores on achievement motivation, competitiveness, goal-orientation) and weak achievement-related work habits (low scores on planning & organization, initiative, team player) tend to report more tension, impatience, unhappiness, and display less self-confidence, cooperation, assertiveness, diplomacy skills and extraversion. I believe self-
confidence is implied when I see “happy” and “patient” together, because I think of the
types of people who know what their goals are, are sure they will reach their goals, and
do what they need to get there. It just seems self-confidence is implicit in that process.
However, the negative relationship between patience and competitiveness in Function 2
indicated more patient respondents who were not necessarily happier or possessing any
other particular inner resources showed a tendency to be less competitive. Ninth graders
who were more impatient showed a tendency to be more competitive. I believe the ninth
grade students reported extremely high motivation and goal orientation because they have
dreams and aspirations. The tension that is resulted in this data rest in their ability to
exercise the patience needed to wait and allow the educational process to work for and
with them. There is an absence of the need to achieve or it may reflect a student’s
resignation about the lack of past achievement. This ninth grader does not value
competitiveness for positive/healthy outcomes. This ninth grader may indicate confusion
regarding goals, or unhappiness and self-doubt regarding goal attainment. They may
present with heightened tension that negatively impacts on performance and social
situations. There could be sadness, hostility, or poor self-discipline. This could reflect a
clinical depression that has negative impact on performance. The presence, nature, and
effect of depression should be carefully explored by a clinician. A low motivated ninth
grade student can be extremely insecure. However, the author’s of the AMP (Mandel,
Friedland, & Marcus, 1996) are clear to note that this could be a realistic reflection of a
chronically unpredictable school or home environment. Additionally, a low motivated
ninth grader may reflect someone who is not concerned about and may even exhibit a
disdain for the role of tact and diplomacy in interpersonal relationships. This student is in
need of interventions and would benefit from the recommendations to follow. In particular, competitiveness and personal diplomacy had a negative relationship that lead me to look at students that are struggling with interpersonal skills and how they could possibly get into difficulties because of their relative inability to be socially diplomatic and negotiate their environment. Scores suffering in this area may reflect someone who is not concerned about and may even exhibit a disdain for the role of tact and diplomacy in interpersonal relationships. Either extreme tends to produce its own difficulties. Coupled with the skills of competitiveness, these students may often find themselves in detention. This makes me think of the benefits of clubs and/or groups that are student driven while supervised by adults to produce optimal involvement and interests. Diplomacy and assertiveness work hand-in-hand as some very useful tools for people who are goal-oriented, motivated, and therefore competitive.

Erikson discussed identification and role confusions to have major responsibility within this stage of development. The ninth grade student with immediately added demands and accountability factors cannot be socially promoted any longer and is forced to actually produce. This is frightening and if tackled without the necessary tools a set up for failure. I wonder how many have resolved the early conflicts to adapt healthy resolutions to conflict. Their groups and affiliations may be lacking and in need of intervention to help him or her assess the value. This is very consistent with the literature regarding a sense of belonging for ninth grade students. The potentially awkwardness of this stage in their lives can be awkward and alter judgment if not supported. Although a healthy part of development, it comes with scratches and bruises because he or she is actually discovering what it takes to prepare, how much energy and time it takes to
produce work and based on their experience of the two – how they will decide to analysis their participation in that process. These students have not only taken on more responsibility in school but, at home they are “finally” high school students and parents’ may tend to let go a little more so that this age can learn to bring about results for themselves. This philosophy is reflective in the historical lower parent attendance during parent/teacher conferences.

In contrast, the profile of a highly motivated ninth grade student is one that has a very positive attitude toward school and academic achievement. For ninth graders, the happier and more patient respondents showed a tendency to be more competitive, motivated and goal-oriented. The happier respondents showed a tendency to show initiative. Students who constantly take initiative may be functional in certain contexts. If the student is highly competent in many areas, he or she could take on a leadership role. However, such behavior may also prevent others from having an opportunity to initiate and may be indicative of an excessive sense of responsibility or need to control events. He or she has developed and used effective strategies for success. They perceive themselves to be competitive and value that trait. They have a strong sense of purpose and personal satisfaction. They may perceive themselves as relaxed and tension-free. They are often happy and receive a healthy balance of emotions. They tend to be methodical and persistent in attaining goals even when faced with delays or difficulties. This ninth grader is self-confident and socially assertive yet, a good team player. He or she is willing, able and interested in acting diplomatically in person-to-person contacts. They work well with others. They value planning and organization. The highly motivated ninth grade student uses their experiences as a means to achievement. When students are
motivated to perform skillfully on academic tasks, they will learn in accordance to their abilities. Student learning can only be maximized when achievement motivation is improved (Cooper & Slavin, 2001; Fan & Chen, 2001; Haycock, 2001; Tileston, 2010).

Finally, male and female ninth graders tend to describe their motivational characteristics in similar ways. This finding implies that it is less important to identify gender-sensitive adaptation strategies for responding to achievement motivation in these ninth grade students. Strategies should be inclusive and conversations not limited by gender grouping. Additionally, outcome variables tended to be a little higher than the predictor variables. This could suggest that the ninth grade students within this self-reporting assessment may believe they are doing better than they actually are.

In conclusion, male and female ninth grade students with high achievement motivation (high scores on achievement motivation, competitiveness, goal-orientation) and high achievement-related work habits (high scores on planning & organization, initiative, team player) tend to report less tension, impatience, unhappiness, and display more self-confidence, cooperation, assertiveness, diplomacy skills and extraversion. That said, understanding and creating opportunities that influence motivation to achieve among ninth grade students can help reveal the underlying factors associated with student achievement. Educators can no longer assume that there is a simple and powerful causal effect to learning. Students that are poorly motivated have special needs (e.g., Alderman, 1990) requiring remediation in information acquisition skills (listening), information utilization (test taking and problem solving), and information organization skills (note taking and graphic organizers). Additionally, a supportive classroom environment with appropriate learning activities that rely on formative rather than summative assessments
can increase the cooperation and achievement for students (Cooper & Slavin, 2001). Powell and Arriola (2003) found varied gender, ethnicity, and age differences within their study between self-esteem and achievement that shed light on the complexity of this issue.

Motivation to achieve includes the ability to set obtainable goals, a concern for personal achievement beyond external rewards for success, and the desire for performance, work-related feedback rather than attitudinal feedback. McClelland (1985) reported that students who were motivated to achieve consistently thought about ways in which they could be even more successful, which led to increased actual achievement. The literature supports the notion that students generally want to do good work. The key is connecting them to realities that show progress and accomplishments. With all the high stakes testing, teachers are removed from the human side of education and what has become the focus is saving their (meaning the educators) place within the school. Consequently, special education referrals have increased, educators feel burnout and focus on those students that will obviously do well and the others that don’t seek out support or feel they are worthy of the exchange of the educational process are left to their own demise without the desire to compete or will to stay the path. I believe the present supports the need to further examine ninth grade motivation.

**Limitations of the Study**

There are some limitations involved in this study. One of the limitations of this study is that it focuses on ninth graders in only one high school. The findings are not a representation of all ninth grade students in the United States. Additionally, this study is only correlational in nature; therefore, no statements about cause and effect can be made.
Furthermore, keep in mind, academic underachievement can result from a combination of factors including student choice, medical status, and mental disorders, such as depression. Educators and clinicians are advised to continue investigating other potential problem areas even after the AMP provides valuable information on factors contributing to underachievement. Lastly, while the data collected from the AMP gave a descriptive summary of the motivational characteristics of ninth grade students, it does not give an explanation as to why the characteristics exist.

**Recommendations**

Given the results from the AMP survey, there are a number of interventions that can seek to engage students in order to enhance the learning process. As the ninth grade students grapple with understanding who they are, workshops, training, mentoring programs and counseling should be available to support their development and connect them to their future.

**Recommendation #1.** In order to promote motivation, ninth graders might benefit from required self-confidence workshops.

The results in the present study support the establishment of self-confidence workshops to inform and empower ninth grade students to harness their power and inner strength. This will be used to improve their image, from the inside. Workshops such as “Positive Thinking” or “Building Confidence” may be implemented during the school year.

**Recommendation #2.** In order to promote motivation, ninth graders might benefit from required assertiveness workshops. Assertiveness training will increase the ninth graders to compete and value the competitiveness trait. The results for the second
research question supports assertiveness training. Assertiveness is a constructive way of thinking and behaving that allows a person to stand up for his needs while respecting the rights of others. Ninth grade students in assertive training will learn to be appropriately direct, open and honest, and clarify their needs to the other person without resorting to aggression or manipulation. The ninth graders who have mastered the skill of assertiveness will be able to greatly reduce the level of interpersonal conflict in their lives, thereby reducing a major source of stress. When they face problems, they will be able to focus on solutions rather than problems, thereby able to negotiate conflict successfully. Ultimately, ninth graders will more toward assertive attitudes and behaviors that are the core of living healthy and productive life. A suggestion for the title of this training could be “Finding the Leader Within You.” This training could include a series of training with levels and stages of development.

**Recommendation #3.** In order to promote motivation, ninth graders might benefit from group and individual counseling interventions designed to promote personal development skills. The results suggest a need for group and individual counseling in areas such as: “Knowing when to say No” or “Embracing Healthy Relationships.” In this study, these findings suggested that the ninth grade students who reported lower levels of patience and lacked self-confidence also did not take initiative toward their own learning. These students did not work well with others or in team settings. Additionally, participation in individual counseling sessions may help to address these issues. Results indicated assertiveness, personal diplomacy, and extroversion to have a positive correlation with a student’s work habits, however, low levels of cooperative may reflect a pattern of automatic resistance to the suggestions of others that could result in
interpersonal difficulties. Counseling within this area should include: “How to Negotiate Your Environment” and “The Power of Agreement.”

**Recommendation #4.** In order to promote motivation, ninth graders might benefit from peer and adult mentoring to learn achievement related-habits and to promote personal development. Involving mentors and role models in the learning process by soliciting speakers from the community who are recognized as achievers can enhance the ninth graders involvement and connection to the community. This can lead to greater accountability measures to partner with schools in developing the whole-child.

**Recommendation #5.** In order to promote motivation, ninth graders might benefit from greater parent participation in the learning process. Encouraging family members’ participation with the ninth grade student can be beneficial. Research shows family involvement to be helpful in reinforcing classroom learning in the home. Studies have shown that parents learn how to help their ninth grader when they see appropriate learning strategies used in the classroom. This is especially valuable since instructional techniques have change consistently over the past years. Martinez-Pons’ (2002) study revealed that parents who were unsuccessful in school, involvement in their student’s schooling helped them to reinforce the school’s belief that success is possible and achievement motivation is important to learn.

For ninth grade in particular, there are other factors that must be considered in understanding and fostering motivation to achieve. Noguera (2003) found that positive social support helped adolescents to be motivated to complete high school. This further helps adolescents, especially those contemplating dropping out to understand the relevance of who they are and how their education today affects their future. It is
important to have interventions designed to support ninth graders in connecting to a promising future.

**Recommendation #6.** In order to promote motivation, ninth graders might benefit from individual achievement plans. Upon entry into the high school, each student would benefit from an individual achievement plan that is worked up by a committee that includes the student and his or her identified support group. This support group should include someone from the family, a mentor, someone knowledgeable of resources, and someone that provides vision to the process. The plan would include the goals, potentially obstacles and strategies to overcome them both in and out of school. Motivation is not something that you do to a ninth grade student, it is something that you can do with them. Within that context, students must be immersed with opportunities within their reach. Individual achievement plans is also a suggestion that would support the low motivated ninth grade student in developing a greater sense of interpersonal strength and feel more control and power over their longer term goals. Tileston (2010) discussed internal motivation to achieve academically as the ability to connect current academic performance to future aspirations. Supporting ninth grade students to set and to develop strategies that would enable them to reach their goals is an invaluable tool that will add or create a personal sense of power and control. Within Achievement Motivation Theory students should be supported in identifying their source of power and control.

**Conclusion**

The present study revealed that male and female ninth grade students with high achievement motivation (high scores on achievement motivation, competitiveness, goal-orientation) and high achievement-related work habits (high scores on planning &
organization, initiative, team player) tend to report less tension, impatience, unhappiness, and display more self-confidence, cooperation, assertiveness, diplomacy skills and extraversion. The contribution of this study and its results will add to scholarly research. For example, understanding factors that influence academic achievement among ninth grade students can shed light on the underlying logic that influences their motivation and potentially reduce the dropout rate. It is critical that educators understand how ninth graders perceive their functioning and the areas that are lacking. The findings of the study that support previous research results may lead to change in school policy, program modifications, and professional development. It is critical that educators understand the developmental needs of ninth grade students. It is important to know the complexity of the needs and not to write off a challenge by the failure of “one size fits all” approach. As society evolves, the needs and issues in the classroom reflect the increasing demand to shift. Every student has a story to tell; we must be equipped and have the capacity to listen or the results will be increasingly disturbing.

This researcher would be interested in conducting focus groups for the next step of the study. The focus groups would give the ninth grade students an opportunity to explain their responses to the statements and elaborate to gain understanding of underlying reasons. Focus groups would provide insights into the setting of the issues and possibly generate ideas. It could also uncover prevalent trends in thoughts and opinion. This research will aid education professionals and mental health clinicians, including psychologist and counselors, in assessing students’ motivation to achieve. It will assist educators at the school and district level in identifying needs within the school programs, operations, staff and environment for working successfully with low-achieving students.
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Appendix A

AMP Survey

Achievement Motivation Profile (AMP)

Student’s ID Number _____________________

Age _________                               Date of Birth ________________

Gender:  Circle One  Male    Female

Ethnicity:  Circle One
Asian    Black   Hispanic
Native American  White    Other

Directions: The purpose of the AMP is to describe your perceptions of yourself and your motivations on a typical day. The AMP consists of 140 statements that can be true in describing you, false in describing you, or somewhere in between. For each statement, circle the number that corresponds to your response as follows:

Answer 1 if the statement is ALWAYS TRUE.
Answer 2 if the statement is MOSTLY TRUE.
Answer 3 if the statement is SOMETIMES TRUE AND SOMETIMES FALSE.
Answer 4 if the statement is MOSTLY FALSE.
Answer 5 if the statement is ALWAYS FALSE.
If you wish to change a response to any statement, cross it out with an X, and circle the new response you have chosen. There are no right or wrong answers. Just answer as accurately as possible. Please answer ALL items.

1=Always True  2=Mostly True  3=Sometimes True/Sometimes False
4=Mostly False  5=Always False

1.  1 2 3 4 5 I like working outdoors.
2.  1 2 3 4 5 I worry about decisions I have made.
3.  1 2 3 4 5 I am at ease talking to people.
4.  1 2 3 4 5 I am nervous.
5.  1 2 3 4 5 People like me.
6.  1 2 3 4 5 I am happy.
7.  1 2 3 4 5 I am afraid of being rejected.
8.  1 2 3 4 5 I am as happy as others.
9.  1 2 3 4 5 I take risks.
10. 1 2 3 4 5 I am a workaholic.
11. 1 2 3 4 5 I am sociable and outgoing.
12. 1 2 3 4 5 I finish what I start.
13. 1 2 3 4 5 I am sarcastic.
14. 1 2 3 4 5 I plan for the future.
15. 1 2 3 4 5 I say what I feel.
16. 1 2 3 4 5 Throughout my life I have kept up with my peers socially.
17. 1 2 3 4 5 Others respect me.
18. 1 2 3 4 5 I hide my feelings.
19. 1 2 3 4 5 I like my work.
20. 1 2 3 4 5 I have a wide range of interests.
21. 1 2 3 4 5 I like school.
22. 1 2 3 4 5 I like to draw and sketch.
23. 1 2 3 4 5 I find life boring.
24. 1 2 3 4 5 I am easily discouraged.
25. 1 2 3 4 5 I feel bad about thoughts I have.
26. 1 2 3 4 5 I find I am depressed for no reason at all.
27. 1 2 3 4 5 I like this period of my life.
28. 1 2 3 4 5 My success is up to me.
29. 1 2 3 4 5 I give my time, energy, and/or resources to others in need.
30. 1 2 3 4 5 I like to advise or counsel people.
31. 1 2 3 4 5 I have a good memory.
32. 1 2 3 4 5 I am shy.
33. 1 2 3 4 5 I try to do my best.
34. 1 2 3 4 5 I feel guilty.
35. 1 2 3 4 5 I have initiative.
36. 1 2 3 4 5 I trust myself.
37. 1 2 3 4 5 I argue with people I care about.
38. 1 2 3 4 5 My mood changes.
39. 1 2 3 4 5 I make new friends easily.
40. 1 2 3 4 5 I am argumentative.
41. 1 2 3 4 5 I get blamed for things I didn’t do.
42. 1 2 3 4 5 I am able to manipulate others.
43. 1 2 3 4 5 I like to risk starting and managing new activities.
44. 1 2 3 4 5 I achieve in school.
45. I enjoy learning how things work.
46. I have close friends.
47. I wonder what people are thinking about me.
48. I worry about what I am going to do with the rest of my life.
49. I feel that I am a successful person.
50. I am easily manipulated by others.
51. I like to sell.
52. Throughout my life I have kept up with my peers academically.
53. I am sensitive to others’ feelings.
54. I can concentrate well.
55. I lose interest in things.
56. I am easy to get along with.
57. I have stepped on others to get ahead.
58. I am optimistic.
59. I waste time.
60. I get depressed easily.
61. I am able to love.
62. I am aggressive.
63. I have confidence in myself.
64. I am afraid of failing.
65. I get what I want.
66. I have become depressed for weeks at a time.
67. I sleep very well.
68. I like to compete.
69. I get angry.
70. I like to speak in front of a group.
1. I am capable of leadership.

2. I am well organized.

3. I am capable of creativity.

4. I think clearly.

5. My temper gets out of hand.

6. I am self-conscious.

7. I am jealous of others.

8. People talk about me behind my back.

9. I am money-motivated.

10. I believe that life is a big game to be played to win.

11. I’ve “got my act together.”

12. To me the future looks good.

13. I understand my feelings.

14. I want to be the best.

15. I procrastinate.

16. There are people I can depend on.

17. I trust others.

18. I am willing to compromise.

19. I like to fix or repair things.

20. When I make a promise, I keep it.

21. I feel like I’m “just going through the motions.”

22. I work hard.

23. I am satisfied with who I am.

24. I believe most people care for each other.

25. I learn quickly in school.

26. I hurt people I love.
97. 1 2 3 4 5 I am lonely.

98. 1 2 3 4 5 I like a career in which things are always changing.

99. 1 2 3 4 5 I like to express myself through writing.

100. 1 2 3 4 5 I get up easily in the morning.

101. 1 2 3 4 5 I do things to attract attention.

102. 1 2 3 4 5 I have friends of the opposite sex.

103. 1 2 3 4 5 I like writing letters or reports.

104. 1 2 3 4 5 I am a changing and growing human being.

105. 1 2 3 4 5 I have lots of energy.

106. 1 2 3 4 5 I feel stress or pressure.

107. 1 2 3 4 5 I have close friends of the same sex.

108. 1 2 3 4 5 I work well with others.

109. 1 2 3 4 5 I am critical of others.

110. 1 2 3 4 5 I resent being told what to do.

111. 1 2 3 4 5 I like to be left alone to “do my own thing.”

112. 1 2 3 4 5 My attention wanders.

113. 1 2 3 4 5 I am afraid of being blamed or punished.

114. 1 2 3 4 5 Time pressures bother me.

115. 1 2 3 4 5 I am bothered when I see others perform better than I do.

116. 1 2 3 4 5 I get so nervous I can hardly function.

117. 1 2 3 4 5 I am pessimistic.

118. 1 2 3 4 5 I like to work.

119. 1 2 3 4 5 I like to work with numbers.

120. 1 2 3 4 5 I am lucky.

121. 1 2 3 4 5 I am lazy.

122. 1 2 3 4 5 I feel competent.
123. 1 2 3 4 5 My friends have done well in school.

124. 1 2 3 4 5 When I take on new responsibilities, I follow through and complete them.

125. 1 2 3 4 5 I believe I am intelligent.

126. 1 2 3 4 5 I find it easy to relax.

127. 1 2 3 4 5 I am “right on course” in attaining my career goals.

128. 1 2 3 4 5 I lie to protect people.

129. 1 2 3 4 5 I get “good reviews” at school.

130. 1 2 3 4 5 My grades in school reflect my ability.

131. 1 2 3 4 5 I am able to influence others to my way of thinking.

132. 1 2 3 4 5 I can solve problems in many areas.

133. 1 2 3 4 5 I can handle stress or pressure.

134. 1 2 3 4 5 I apply my energy consistently to study or to work.

135. 1 2 3 4 5 I am emotionally stable.

136. 1 2 3 4 5 I let others influence my decisions.

137. 1 2 3 4 5 I like crossword puzzles, chess, bridge, or other “thinking” games.

138. 1 2 3 4 5 I get my work in on time.

139. 1 2 3 4 5 Others perceive me as being competent.

140. 1 2 3 4 5 I get to appointments on time.
Appendix B

Parental Consent Letter

A Profile of Achievement Motivation among 9th Grade Students

I, __________________________________________, give permission for my child,

(Parent/Legal Guardian’s name)

__________________________________________, to participate in a research study being conducted by (Student’s name)

Pamela Taylor under the supervision of Dr. Jerry Willis in the Executive Leadership program at St. John’s Fisher College on the campus of the College of New Rochelle.

The purpose of this research is to examine the profile of motivational characteristics of ninth students that inhibit and/or promote academic achievement in this diverse suburban high school.

The procedure involves one session of 20 to 30 minutes, during which students will be administered the survey in a paper and pencil format. This survey will take place during the day and will not interrupt their academic schedule.

All information collected in this study is confidential to the extent permitted by law. The data students provide will be grouped with data others provide for reporting and presentation and their names will not be used.

There are no risks to students who participate in the study.

The study is not designed to help students personally, but to help learn more about achievement motivation among ninth grade students. Students and parents are free to ask questions or to withdraw from participation at any time and without penalty. Your support is appreciated and upon completion, Ms. Taylor will make a respectable donation to the class of 2013. Thank you.

Sincerely,

Pamela Taylor

pdt0747@bjf.edu

I give permission for my child to participate in the Achievement Motivation study.

Print Name of Student __________________________________________

Signature of Parent/Legal Guardian __________________________________ Date ____________

I, __________________________________________, (Student’s Signature) agree to participate.