The relationship between classroom motivation and academic achievement in first and third graders

Sheri Coates Broussard

Louisiana State University and Agricultural and Mechanical College

Follow this and additional works at: https://digitalcommons.lsu.edu/gradschool_theses

Part of the Human Ecology Commons

Recommended Citation
https://digitalcommons.lsu.edu/gradschool_theses/1738

This Thesis is brought to you for free and open access by the Graduate School at LSU Digital Commons. It has been accepted for inclusion in LSU Master's Theses by an authorized graduate school editor of LSU Digital Commons. For more information, please contact gradetd@lsu.edu.
THE RELATIONSHIP BETWEEN CLASSROOM MOTIVATION
AND ACADEMIC ACHIEVEMENT
IN FIRST AND THIRD GRADERS

A Thesis
Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Master of Science

in

The School of Human Ecology

by
Sheri Coates Broussard
B.C.J., Louisiana State University, 1989
December, 2002
ACKNOWLEDGEMENTS

The completion of this thesis would not have been possible without the unyielding support of many friends and relatives. However, there are several that deserve special mention.

I would first like to thank my major professor, Betsy Garrison, for her constant enthusiasm, encouragement, flexibility, and most importantly, her normalcy. I also would like to extend appreciation to my committee members, Dr. Bonnie Belleau and Dr. Burts, for their constructive and insightful critiques.

Whether it was providing Kleenex for my tears, or providing baby sitting services for Wade, or providing computer support, or providing all three at the same time, there are many individuals who contributed to the completion of this thesis in ways they may never fully comprehend. I would like to personally thank my mother. There is truly no other mother in the universe which can compare. I would also like to thank my father for instilling in me that you can do anything you want to do no matter what. I would also like to personally thank Troy Broussard, David Dunaway, and Gerri Garon. Friends are indispensable.

Finally, I particularly want to thank my husband, Brad, for his undying love, strength, optimism, and patience through it all. I also want to thank my son, Wade, for reminding me what is truly important in life and for demanding that I stop and play no matter what chapter I was writing.
# TABLE OF CONTENTS

ACKNOWLEDGMENTS ................................................................. ii

ABSTRACT ................................................................................ iv

CHAPTER

1 INTRODUCTION .............................................................................. 1

2 REVIEW OF LITERATURE ............................................................ 7

3 METHODOLOGY .......................................................................... 21

4 RESULTS .................................................................................... 26

5 DISCUSSION ................................................................................. 38

REFERENCES .................................................................................. 45

APPENDIX: CHILDREN’S MOTIVATION ........................................... 50

VITA ............................................................................................... 54
ABSTRACT

The purpose of this study was to examine the relationship between classroom motivation and academic achievement in first and third graders. The subjects included 122 first grade children and 129 third grade children from a mid-sized, southern city. The total sample was comprised of 251 children, 59% non-white and 57% female.

The findings from the current study were consistent with the literature reviewed in that higher levels of mastery motivation and judgment motivation were found to be related to higher grades in third graders. It is important to note, however, that only higher levels of mastery motivation, not judgment motivation, were found to be related to higher grades in first graders.
CHAPTER 1
INTRODUCTION
Rationale for the Study

There has been a national concern for the United States’ educational position and rank when compared to other powerful countries in our world. Concern for our Nation’s dropout rate and the prevalence of standardized testing in public, private, and parochial schools as well as suggestions and considerations for a longer school year all demonstrate the reality of this situation. Over 10 years ago, Gottfried (1990) stated that the impact of motivation on children’s education certainly could not be more critical as professionals and the public are concerned about declining test scores and escalating drop-out rates.

Intelligence is not the only determinant of academic achievement. High motivation and engagement in learning have consistently been linked to reduced dropout rates and increased levels of student success (Kushman, Sieber, & Harold, 2000). Development of academic intrinsic motivation in young children is an important goal for educators because of its inherent importance for future motivation, as well as for children’s effective school functioning (Gottfried, 1990). The purpose of this study is to investigate whether young children who are characterized as intrinsically motivated are better academic achievers than young children who are characterized as extrinsically motivated.

Previous research characterized motivation as being biologically driven in order to satisfy personal needs. White (1959), Harter (1981), and Deci and Ryan (1985) have stipulated that while physiological drives play a role, the bulk of behavior initiation rests
upon the need to feel effective and master the environment (Weist, Wong, & Kreil, 1998). White (1959) was the first person to challenge these traditional drive and instinct theories of motivation by stating behaviors such as curiosity and exploration are an urge toward competence. White (1959) proposed that people are innately motivated to gain mastery over their environment and gain what he termed feelings of effectance. This solution he called ‘effectance,’ was defined as one which impels the organism toward competence and is satisfied by a feeling of efficacy or capability (Harter, 1978). His theory was revolutionary in that it clearly put forth a motivational system that was independent of drive reductions as a reinforcer (Goldberg, 1994).

Since that time, Harter (1978) has extended White’s work by translating and operationalizing theoretical concepts related to motivation into researchable formulations that can be empirically tested within a developmental context. Unfortunately, the body of literature reviewed has not focused on young children. The few studies that have examined motivation in young children have found that it is a weak predictor of achievement (Stipek & Ryan, 1997). The current study has the potential to reveal a relationship between intrinsic motivation and academic achievement in young children and provide further support for the examination and study of motivation as a valid educational construct.

**Theoretical Framework**

Early motivational theorists in psychology attempted to explain motivation in many different settings and for many kinds of behaviors (Weiner, 1990). As previously mentioned, most of these early explanations were based on drive and instinct. White (1959) was one of the first to argue that exploratory behaviors occur even when basic
bodily needs are fully met. The theoretical framework for this research is Harter’s
effectance motivation theory, which uses White’s argument as a point of departure.
Harter (1983) proposed a model of mastery (or effectance) motivation, describing the
effects of both success and failure experiences on mastery motivation. The goals of
effectance motivation are acquiring competence and influencing one’s environment
(Eccles, Wigfield, & Schiefele, 1998). Mastery motivation is defined as a general
tendency to interact with and to express influence over the environment (White, 1959).
Specifically, Eccles, Wigfield, and Schiefele (1998) state that

Successful mastery attempts that (initially) are positively reinforced lead
to internalization of the reward system. They also enhance perceptions of
competence and perceived internal control over outcomes, give the
individual pleasure, and ultimately increase mastery motivation. In
contrast, when mastery attempts fail, the need for approval by others
persists, with a corresponding increase in external control beliefs, lower
competence beliefs, higher anxiety in mastery situations, and ultimately,
lower mastery motivation (p. 1020).

One of the central postulates of Harter’s framework is that children with intrinsic
motivation in academics would have higher self-perceptions of competence in academics
and that children who are extrinsically motivated would have lower perceived academic
competence (Goldberg, 1994). She further hypothesized that the intrinsically motivated
child should manifest higher actual academic achievement.

Harter’s effectance motivation theory is important because it includes the effects
of both success and failure on subsequent motivation (Eccles et al., 1998). Moreover,
this model has been empirically supported (e.g., Harter 1983), and Harter (1980, 1981) has developed an assessment to measure different aspects of intrinsic and extrinsic motivation based on this model (Eccles et al., 1998).

**Hypothesis**

The general hypothesis for this study is that a positive relationship exists between classroom motivation and academic achievement among first and third grade children. As intrinsic motivation increases, academic achievement will increase.

**Objectives**

The following are the objectives for the current study:

1. To measure the level of young children’s intrinsic motivation in the classroom.
2. To measure academic achievement among first and third graders.
3. To investigate the relationship, if any, between motivation and academic achievement.

**Limitations**

The following limitations governed the interpretation of results, conclusions, and recommendations:

1. The sample is limited to elementary, public schools from a Southern United States, urban setting.
2. The sample is limited to children who had parental permission to participate in this study and therefore is not a probability sample of the population.
3. No control group is utilized.
Definitions

Terms used in this study are defined as follows:

- **Motivation**

  Motivation is the attribute that “moves” us to do or not do something (Gredler, 2001). According to Harter (1981), a child has an intrinsic orientation when classroom learning is determined by internal interests such as mastery, curiosity, and preference for challenge. A child has an extrinsic orientation when classroom learning is determined by external interests such as teacher approval and/or grades (Harter, 1981). For this study, children’s motivation was measured by their responses to the Children’s Self Report Scale of Intrinsic versus Extrinsic Motivation in the Classroom (Harter, 1980, 1981).

- **Mastery or Effectance Motivation**

  Mastery motivation is defined as a general tendency to interact with and to express influence over the environment (White, 1959). White viewed this need to deal effectively with the environment as intrinsic, because its gratification produces inherent pleasure (Harter, 1981). Harter (1980, 1981) operationalizes this construct in the Children’s Self Report Scale of Intrinsic versus Extrinsic Motivation in the Classroom as does Ginsburg and Bronstein (1993) in their scale entitled Mastery, which includes Harter’s (1980, 1981) Preference for Challenge, Curiosity/Interest, and Independent Mastery subscales for the purposes of data analysis in this study.

- **Judgment Motivation**

  Judgment motivation refers to the second of two scales created by Ginsburg and Bronstein (1993) used to analyze the data for this study. It includes Harter’s (1980, 1981) Internal Criteria and Independent Judgment subscales, and it reflects the extent to
which a child trusts her or his own opinions versus relying on others judgment; it also reveals the basis (i.e., internal or external) on which the child evaluates her or his performance in school (Ginsburg & Bronstein, 1993).

- **Academic Achievement**

  In this study, academic achievement was defined according to how well a child accomplishes work in the school setting in reading and math. It was assessed by the child’s teacher and represented by the child’s cumulative grade for the year in the above mentioned subject areas. First graders were rated by their teachers as being below, on, or above level. Third graders received letter grades of A, B, C, D, or F in both subject areas.

**Assumptions**

The following are assumed to be true and fundamental to the study:

1. Responses to the Children’s Self Report Scale of Intrinsic versus Extrinsic Motivation in the Classroom (Harter, 1980, 1981) reliably and validly reflect the student’s level of intrinsic motivation for classroom activities.

2. Classroom grades are a valid measure of the students’ academic achievement. Teachers’ grades accurately and objectively reflect academic achievement.

3. The classroom environment was treated as a static context and was not be explained.
CHAPTER 2
REVIEW OF LITERATURE

Introduction

In any school setting, whether it be elementary, secondary, or higher education, a student’s motivation for learning is generally regarded as one of the most critical determinants, if not the premier determinant, of the success and quality of any learning outcome (Mitchell, 1992). Examining the construct of intrinsic motivation in young elementary school children is significant and important, because academic intrinsic motivation in the early elementary years may have profound implications for initial and future school success (Gottfried, 1990). Students who are more intrinsically than extrinsically motivated fare better, and students who are not motivated to engage in learning are unlikely to succeed (Gottfried, 1990). Higher academic standards make it even more important to motivate even the disengaged and discouraged learners (Brewster & Fager, 2000).

The societal costs of less than optimal child development include compromised health and safety; higher long term costs for foster care, school programs, medical care, social assistance, reduced productivity, and law enforcement (National Center for Environmental Health [NCEH], 1999). Optimal development of intrinsic motivation of younger students is important, because it may set patterns that influence later achievement. Motivational patterns in older children were already associated with motivational patterns as early as first grade (Gottfried, 1990). Thus, intrinsic motivation may be a key factor both in determining achievement behavior and maintaining a healthy self-regard (Goldberg, 1994).
This review of literature will focus on motivation, academic achievement, and the relationship between motivation and academic achievement in the classroom. The review of literature is divided into the following sections: (1) motivation, (2) achievement, (3) cognitive development and motivation, (4) classroom motivation and academic achievement, (5) gender differences in motivation, and (6) ethnic group differences in motivation.

Motivation

Many young children begin school with a thirst for learning. They enthusiastically and curiously seek novel or challenging tasks (Goldberg, 1994). It can be concluded then that young children begin school intrinsically motivated. When studying motivation, it is useful to distinguish between two basic orientations: Intrinsic (or Mastery) versus Extrinsic (or Performance) orientation toward learning (Goldberg, 1994). Intrinsic motivational patterns have been associated with high-perceived ability and control, realistic task analysis and planning, and the belief that effort increases one’s ability and control (Fincham & Cain, 1986). An extrinsic orientation toward learning is characterized by a concern with external reasons for working, such as the judgment of others regarding one’s performance, grades, or some anticipated reward (Goldberg, 1994).

Entwisle and her colleagues have found that intrinsic motivation for young children tends to be very high (Entwisle, Alexander, Cadigan, & Pallas, 1986). Goldberg (1994) states that intrinsic motivation is attenuated by the use of extrinsic rewards and tends to change or decrease as the age of the child increases. Kassin and Lepper (1984) have demonstrated that if children are given external justification for engaging in an
activity they enjoy, they will infer that they participated because of that extrinsic reason, and in the future, they will tend not to participate in the activity when a reward is not present. Harter (1981) states that children’s intrinsic motivation for learning diminishes as they begin to adapt to the incentive structure of our elementary schools (e.g. grades, praise, criticism).

**Achievement**

Upon examination of the motivation/achievement literature, there does not appear to be one specific or universal definition of academic achievement. For the purposes of this study, it will be defined as that which is accomplished by the actual execution of class work in the school setting. It is typically assessed by the use of teacher ratings, tests, and exams; however, it should be noted that IQ tests are usually not included in analyses relative to achievement research to ensure the uniqueness and significance of the other relationships being studied (Howse, 1999). Academic achievement and academic performance can be used interchangeably, as there is no real difference or distinction between the two concepts in the literature. Stipek (1984) provides an early example of this interchangeability in the following:

I once interviewed 96 children at the beginning of first grade; they all claimed to be among the smartest in their class (Stipek, 1977). But, the actual performance of many of these children fell significantly short of their expectations. Some of them, by any objective standard an adult would use, failed miserably. Many papers came back with more answers marked wrong than right. At the end of the year, these children were reading stories out of primary texts. Interviews of these relatively low-
achieving children at the end of the school year revealed a remarkable ignorance of their poor academic performance. (p. 169).

Academic competence, as it relates to this study, is defined in terms of the students’ expectancy and ability beliefs (Wigfield & Eccles, 2000). Research often shows that students’ perceptions of academic competency decline as they advance in school (Eccles, Wigfield, & Schiefele, 1998). Schunk & Pajares (2002) attribute this decline to various factors, including greater competition, less teacher attention to individual student progress, and stresses associated with school transitions. For younger children, ability seems to be more related to concrete, observable, things they know and can do. Dweck (2002) goes on to state that in contrast, at about 7-8 years of age, children are developing an awareness of ability as a more internal, less observable quality (i.e., being smart can mean outperforming others). Children 7-8 years old also seem to become more accurate in their self-perceptions of academic competence, and this typically means perceptions that are less positive and less optimistic than younger children (Eccles, Wigfield, Harold, & Blumenfeld, 1993).

Cognitive Development and Motivation

As previously mentioned in the discussion regarding motivation and achievement, it appears that young children begin their academic career with an intrinsic approach to learning and achievement. Goldberg (1994) states that this is due to multiple social/cognitive factors such as an egocentric conception of task difficulty or inability to utilize performance norms, an incomplete differentiation between the concepts of ability and effort, and an unrealistic success expectancy or wishful thinking that seem to change during the time period between the beginning of second grade and the end of third grade.
Harter (1981) suggests that prior to approximately age 8, young children have not yet developed an internalized belief system that includes concepts of motivation and internal judgments of performance. She hypothesizes that these younger children are too cognitively immature to have developed an intrinsic motivational orientation (Goldberg, 1994). It should be noted that in a study by Lepper and Green (1975), they found that preschool children’s intrinsic motivation to play with certain toys was diminished by paying the children. Goldberg (1994) suggests a possible resolution to this inconsistency in stating that the cognitive informational component of motivation, which Harter (1981) called autonomous judgment, develops separately from intrinsic mastery motivation behavior.

**Classroom Motivation and Academic Achievement**

Gottfried (1985) demonstrates the significance of academic intrinsic motivation for children’s education in the results of three studies. The participants of study 1 were 141 white, middle-class children attending fourth and seventh grades in a suburban, public school district. Participants of study 2 were 260 black and white middle-class children in grades 4 through 7 of an integrated, public school. One hundred sixty six white, middle-class boys and girls comprise the sample of study 3. They attended grades 5 through 8 at a private school. Gottfried hypothesized that academic intrinsic motivation is positively related to school achievement. She also used the third study to determine the correlation between the Children’s Academic Intrinsic Motivation Inventory (CAIMI) and Harter’s (1980, 1981) Scale of Intrinsic Versus Extrinsic Orientation in the Classroom. It was hypothesized that the CAIMI is positively related to Harter’s measure.
The CAIMI was the measure used to assess children’s intrinsic motivation for school learning. It contains five subscales, four of which measure intrinsic motivation in the subject areas of reading, math, social studies, and science, with the fifth measuring intrinsic motivation as a general orientation toward school learning (Gottfried, 1985). Achievement measures were administered concurrently within the same period of time as the CAIMI. In study 1, the SAT’s scores in math, reading, and auditory comprehension skills were used. Social studies and science achievement scores were available for the seventh graders. In study 2, a standardized achievement test was administered to all children, which yielded scores in reading, language, and math. The same standardized achievement test was also administered to all children in study 3, yielding scores in reading, language, math, social studies, and science. Final report card grades were also available in studies 2 and 3 utilizing a letter-grade system (A+ to F).

According to Gottfried (1985), the results supported the hypothesis that academic intrinsic motivation is positively and significantly related to children’s school achievement as measured by both standardized achievement tests and teacher grades. Children who reported higher academic intrinsic motivation had significantly higher school achievement (Gottfried, 1985). The findings also revealed that the CAIMI subscales were positively correlated with Harter’s measure of intrinsic motivation.

In Gottfried (1990), further empirical support is found confirming that intrinsic motivation is a significant construct in children’s education. In this study, she examined the construct of academic intrinsic motivation in young, elementary school children presented in two studies. The first was a longitudinal study of 107 middle-class subjects beginning at age 1 and continuing through age 9. Children’s development was assessed
every 6 months from ages 1 to 3.5 years and yearly from ages 5 through 9 years. At each assessment, a comprehensive battery of standardized measures was administered to examine development across cognitive, social, behavioral, and academic domains (Gottfried, Gottfried, & Bathurst, 1988). The second study was cross-sectional, and involved a sample of 98 multiethnic children in first, second, and third grades.

Young Children’s Academic Intrinsic Motivation Inventory (Y-CAIMI) was the index used to assess intrinsic motivation. It assesses intrinsic motivation in math and reading, and it provides a score for general intrinsic motivation. In the longitudinal study, standardized achievement was assessed using the Woodcock-Johnson Psycho-Educational Battery at ages 7, 8, and 9 years. Teacher’s ratings of children’s academic performance in reading and math were obtained through completion of the teacher version of the Child Behavior Checklist (Achenbach & Edelbrock, 1986) also at ages 7, 8, and 9 years. In the cross-sectional study, achievement was assessed using scores on a standardized test that had been administered by the schools, end-of-the-year report card grades in reading and math, and teacher ratings obtained using the same method as in the longitudinal study.

Gottfried found that academic intrinsic motivation is a valid construct for young children. Across both studies, positive correlations between motivation and achievement were obtained. Specifically, young children with higher academic intrinsic motivation had significantly higher achievement and intellectual performance (Gottfried, 1990). Overall, young children with higher academic intrinsic motivation functioned more effectively in school. She also found that early intrinsic motivation correlates with later motivation and achievement and that later motivation is predictable from early
achievement (Gottfried, 1990). As a longitudinal study, Gottfried’s work is an important contribution to validating the construct of intrinsic motivation in younger children. The small sample size should be noted as a limitation, however.

In Fortier (1995), it was also found that perceived academic competence was positively related to intrinsic motivation. Her study was comprised of a sample of 263 French-Canadian students in the ninth grade from two Montreal high schools. To measure academic motivation, students completed the French form of the Academic Motivation Scale, which assesses three different types of intrinsic motivation: intrinsic motivation to know, intrinsic motivation to accomplish things, and intrinsic motivation to experience stimulation. Final math, French, geography, and biology grades were used to determine school performance. It seems that students who feel competent and self-determined in the school context develop an autonomous motivational profile toward education, which in turn leads them to obtain higher school grades (Fortier, Vallerand, & Guay, 1995). More specifically, Fortier (1995) found that perceived academic competence and perceived academic self-determination positively influenced autonomous academic motivation, which in turn had a positive impact on school performance. It should be noted that Fortier did not use an experimental or longitudinal design in this study. Her failure to control for prior achievement or ability level (IQ) is another limitation of this study.

In a research paper comprised of several field studies and laboratory experiments, Boggiano et al. (1992) revealed that academic motivation positively influenced academic performance. Fifth-grade children participated in a field study conducted over a 2-year period and examined whether extrinsic and intrinsic children’s achievement in an
experimental setting paralleled their achievement in the classroom. Motivation orientation was assessed using Harter’s (1980, 1981) scale. The assessment of academic achievement was more detailed. It involved three different sessions over the 2-year period. After training problems in math were undertaken to ensure that all children could solve the problems equally well, children worked on a set of four test problems, which were unsolvable (Boggiano et al., 1992). Children’s verbalizations during the final two failure problems were recorded as well as their attributions for their performance. National percentile scores for the math and reading portions of the Iowa Test of Basic Skills were obtained as well.

It was found that motivational orientation predicted children’s standardized achievement scores (Boggiano et al., 1992). Specifically, children with an intrinsic motivational orientation had higher reading and math scores and higher overall achievement scores than their extrinsic counterparts. According to Boggiano and his colleagues (1992), results indicate that adopting an intrinsic vs. extrinsic motivational orientation affects a host of achievement-related behaviors and cognitions in addition to standardized test scores. Children who were extrinsically motivated showed marked performance deterioration. Their data suggest that motivational orientation may be a determinant of attributions and perceptions of competence that undoubtedly contribute to students’ achievements (Boggiano et al., 1992).

It should be noted that some studies have found little or no significant relationship between motivation and academic achievement. Niebuhr (1995) completed a study that examined relationships between several variables and student academic achievement. The study included an investigation of the relationship of individual motivation and its
effect on academic achievement. A survey questionnaire was administered to 241 high school freshmen in a small town in the Southeast United States. The recently revised Harter motivation instrument (Harter, Whitesell, & Kowalski, 1992) was used to measure independently whether a student’s motivation was intrinsically or extrinsically oriented (Niebuhr, 1995). Grade point averages that were reported by the students in the sample were used as the index for academic achievement. The survey questionnaire consisted of 163 items providing individual and family demographic information and responses to perceptual measures (Niebuhr, 1995).

Findings indicate that student motivation showed no significant effect on the relationship with academic achievement (Niehbur, 1995). Niebuhr’s (1995) findings suggest that the elements of both school climate and family environment have a stronger direct impact on academic achievement. It should be noted that grade point averages were reported by the students and may not be as valid as school records.

A 1998 study by Goldberg and Cornell revealed that intrinsic motivation did not directly influence subsequent achievement. The sample included participants in the Learning Outcomes Project being conducted by the National Research Center of the Gifted and Talented. The sample was 949 second and third graders from 15 school districts spanning 10 states.

Study instruments were administered early in the school year and again near the conclusion of the school year (Goldberg & Cornell, 1998). The average time between testing was 25 weeks. Intrinsic motivation was measured with a shortened version of Harter’s (1980, 1981) self-report measure of intrinsic versus extrinsic orientation in the classroom (Goldberg & Cornell, 1998). The original measure was shortened to contain
four subscales to decrease test administration time. The four subscales included: Independent Mastery, Independent Judgment, Internal Criteria for Success and Failure, and Preference for Challenge. The subscale regarding curiosity and interest was deleted. Academic achievement was measured using Form J of the Iowa Test of Basic Skills (ITBS; Hieronymus, Hoover, & Lindquist, 1986).

Goldberg and Cornell (1998) found that correlations between variables measured at Time 1 and Time 2 revealed a series of statistically significant correlations among intrinsic motivation and academic achievement, although, the correlations were generally low in magnitude. Instead, it was indicated that intrinsic motivation influenced perceived competence and that perceived competence influenced subsequent academic achievement (Goldberg & Cornell, 1998). Specifically, intrinsic motivation as measured by either intrinsic mastery motivation or autonomous judgment, did not directly influence subsequent achievement.

A study by Stipek and Ryan (1997) also found a weak relationship between motivation and young children’s achievement. The study examined the influences of several motivational variables on scholastic achievement in economically disadvantaged and advantaged 4-6 year-old preschool and kindergarten children (Howse, 1999). To assess motivation, the children responded to questions about their worries, attitudes, abilities, emotions, and expectations related to school. A letter recognition task and a number recognition task coupled with the short form of the McCarthy Scales of Children’s Abilities (McCarthy, 1972) were used to assess children’s achievement in the Fall and Spring of the school year.
Stipek and Ryan (1997) revealed that both disadvantaged and advantaged children entered school with positive motivation profiles; however, the motivation of the more advantaged children showed a tendency to decline over the first year. Overall, little or no relationship was found between young children’s motivation and their academic achievement. Moreover, Stipek and Ryan (1997) found that children’s cognitive skills were far better predictors of end-of-the-year achievement than motivation.

**Gender Differences In Motivation**

Studies regarding differences in gender are also found in the motivation literature; however, they are few in number. In an experiment by Boggiano, Main, and Katz (1991), the main focus was to address the question of potential gender differences in motivational orientation. It was hypothesized that females would possess a more extrinsic orientation compared to that of males. Participants in this study were 213 fourth through sixth grade boys and girls selected from the Boulder, Colorado, public school system. To assess motivational orientation, the children completed Harter’s (1980, 1981) *Children’s Self Report Scale of Intrinsic versus Extrinsic Motivation in the Classroom*. As was expected, females were significantly more extrinsic than males (Boggiano, Main, & Katz, 1991).

In other gender comparisons, Harter (1985) reported higher ratings of global self-worth in boys than in girls for grades 5-8. A review of the literature by Schiefele, Krapp, and Winteler (1992) strongly suggests that male students’ performance accords their interest level more than is the case for female students. Specifically, female students’ academic performance is less associated with their interests than male students’ academic performance (Schiefele, Krapp, & Winteler, 1992).
Ethnic Group Differences in Motivation

Even less is known about the motivation of children from different racial and ethnic groups. Graham (1994) reviewed the literature on differences between African American and European American students concluding that the differences are not very large; however, African Americans were found to be more externally motivated than European Americans.

Marcon (1999) found contrasting results in her study of a group of early adolescents. As part of a longitudinal study of early intervention, 222 students enrolled in 74 public schools in Washington, D.C. completed the Scale of Intrinsic versus Extrinsic Orientation in the Classroom (Harter, 1980, 1981). The sample was 97% African American. Achievement data was comprised of grades and standardized achievement scores. The academic motivation of Black, urban students was found to be more intrinsic than extrinsic (Marcon, 1999).

In other ethnic and cultural studies, Whang and Hancock (1994) state that Chinese Americans attribute their academic achievement to trying hard and their academic failures to lack of effort; whereas Anglo American students tend to divide their explanations for achievement and failure more evenly between good luck, ability, and effort. Similar patterns favoring effort attributions for achievement have also been found among native-born Mexicans (Covington, 2000).

Summary

The literature suggests that most young children begin their academic career with a desire to learn and with an intrinsic approach to achievement (Entwisle et al., 1986). It has also been revealed that an intrinsic orientation toward education switches to a more
extrinsic orientation as children increase in age (Goldberg, 1994). There is ample research confirming that motivation is an important construct in education; however, there is a gap in the literature with respect to motivation and young children. This study has the potential to reveal a relationship between intrinsic motivation and academic achievement in young children.
CHAPTER 3

METHODOLOGY

Design

The current study is part of a larger, longitudinal project being conducted by Dr. Garrison at the Louisiana State University Agricultural Center investigating the relationships between family stress processes and children’s development. The purpose of the current correlational study is to determine if there is a relationship between children’s classroom motivation and their academic achievement. The following are the specific hypotheses for the current study:

1. A positive relationship exists between mastery motivation and academic achievement for first and third grade children.

2. A positive relationship exists between judgment motivation and academic achievement for first and third grade children.

Data Collection

The children were interviewed at their schools during the spring of 2001. Prior to interviewing, participation in the study was requested from the school boards of two school districts in a mid-size, Southern city, of the local parochial school system, and of selected private and university laboratory schools. One school board granted permission to conduct the study on its campuses. Letters were sent to the principals of the 63 public elementary schools and were followed up by personal telephone calls. Seventeen principals did not respond or return phone calls. Twenty-four principals stated their schools could not participate. Twenty-two principals agreed to participate; however, 4 of those schools were not in the final sample. (One of the four schools did not receive
consent forms due to a late decision to participate. Two schools received consent forms, but failed to pass them out to the students. One school passed out consent forms, but the forms were not returned by the parents.) Children from 18 of the public schools participated in the study. One of the university laboratory schools also agreed to participate yielding a total of 19 schools for this study. A rough estimate of the socio-economic and demographic characteristics of the participating schools indicated that the sample adequately represented the population of the catchment area.

Parental consent forms were delivered to the schools and picked up upon completion by a member of the research team. Families were offered compensation in the amount of $25.00 for participation in the study. Only children whose parents completed a parental survey were interviewed for this study for a total of 290 families. Eleven of the 290 children could not be interviewed, because they either moved out of the area, they transferred to a school that was not participating in the study, or they did not meet the sampling criteria (they were not the target age or had a disability). One member of the research team interviewed 85% of the participating children.

Collection of grades began in 2001 with a mailing to the principals and was followed with a fax request. At the end of the school year in 2001, teachers received a form by mail specifically requesting students’ math and reading grades. Each form had a student’s name on it with a chart to fill in their grades. Grades from one of the elementary schools were collected by visiting the campus.

Grades were collected for each 9-week period for the 2001 school year and averaged to get the reading and math achievement scores. First graders were given grades of B, O, and A indicating that students were “below”, “on”, or “above” average
for reading and math. Third graders were given grades of F, D, C, B, or A in both subject areas. In all, grades were recorded for 251 of the 279 children. Two schools failed to turn in grades for the study.

Variables and Assessment

Data for the proposed study were collected using one instrument. Children’s motivation was measured by using Harter’s (1980, 1981) *Scale of Intrinsic versus Extrinsic Motivational Orientation in the Classroom.*

Academic achievement was assessed by the child’s teacher and represented by the child’s cumulative grade for the year in reading and math. Grades for first grade children was scored and entered as 1(B), 2(O), and 3(A). Grades for third grade children were scored and entered as 0(F), 1(D), 2(C), 3(B), and 4(A).

Children’s Classroom Motivation

Intrinsic motivation was assessed using one instrument, Harter’s (1980, 1981) *Scale of Intrinsic versus Extrinsic Motivational Orientation in the Classroom.* It is a 30-item instrument containing 5 subscales: (1) Preference for Challenge, (2) Curiosity, (3) Independent Mastery, (4) Independent Judgment, and (5) Internal Criteria. Each subscale contains 6 questions, which were counterbalanced in the following manner: 3 items begin with the intrinsic pole, 3 with the extrinsic pole. The assessment is completed by an interviewer who reads the questions to the child and records the answers. The questions characterize or depict two different kinds of students (e.g. Some kids like to go on to new work that’s at a more difficult level, but Other kids would rather stick to the assignments that are pretty easy to do). The participants are asked which child or student is most like them. They then determine if this description is “Sort of true
for me” or “Really true for me” as it pertains to them (The measure, as used in the current study, is included in Appendix A). Each item is scored on an ordinal scale from 1 to 4; a score of four indicates the maximum intrinsic motivation. The two-step decision process and the counterbalancing response format have been shown to be effective in limiting socially desirable responding (Harter, 1982). The reliability of each subscale (KR-20) ranges from .54 to .84 (Harter, 1981).

The Preference for Challenge subscale (reliability = .78 to .84) measures the child’s preference for challenging work versus easy work. One item from this subscale is “Some kids like difficult problems because they enjoy trying to figure them out but Other kids don’t like to figure out difficult problems” (Harter, 1980, 1981). The Curiosity subscale (reliability = .54 to .78) measures learning motivated by curiosity versus learning in order to please a teacher. “Some kids do their schoolwork because the teacher tells them to but Other kids do their schoolwork to find out about a lot of things they’ve been wanting to know” (Harter, 1980, 1981) is an example of one item from this subscale. The Independent Mastery subscale (reliability = .68 to .82) measures the child’s incentive to work at classroom learning activities for personal satisfaction versus working in order to please a teacher and get good grades by items such as “When some kids make a mistake they would rather figure out the right answer by themselves but Other kids would rather ask the teacher how to get the right answer” (Harter, 1980, 1981). The Independent Judgment subscale (reliability = .72 to .81) measures the child’s desire to work independently versus dependence upon a teacher for help. An item from this subscale is “Some kids almost always think that what the teacher says is O.K. but Other kids sometimes think their own ideas are better” (Harter, 1980, 1981). Lastly, the
Internal Criteria subscale (reliability = .75 to .83) measures the child’s tendency to use internal criteria versus external criteria to determine success or failure. One such item from this subscale is “Some kids know when they’ve made mistakes without checking with the teacher but Other kids need to check with the teacher to know if they’ve made a mistake” (Harter, 1980, 1981). Based on higher order factor analysis of these five dimensions, two independent factors were revealed: (1) Mastery, which includes curiosity, independent mastery, and preference for challenge, and (2) Judgment, which includes independent judgment and internal criteria for success or failure (Ginsburg & Bronstein, 1993; Harter, 1981). The current study used these variables to assess children’s classroom motivation as it relates to academic achievement.

Control Variables

Two control variables were considered in the analysis of this study. The race and gender of the children was used as control variables.

Data Analysis

Separate analyses was performed for first and third grade children for two reasons: (1) previous analyses have indicated statistically significant grade differences (Cramer, 2002), and (2) as previously mentioned, nominal values of the grades for first and third grade children are not the same (e.g. “A, O, B” v. “A, B, C, D, F”). To test relationships between classroom motivation and academic achievement as measured by child interviews and grades, simple and multiple regression analyses was employed.
CHAPTER 4
RESULTS

The purpose of the current study is to examine the relationship between children’s classroom motivation and their academic achievement. The data used in this study were part of a larger project investigating family stress and children’s development. Data were analyzed using the Statistical Package for Social Science (SPSS).

Descriptive Statistics

As previously discussed, salient demographic variables of the children were gender and race. Standard questionnaire items from the parental survey were used to measure these variables. Of the first grade children, slightly more than half (52%), were girls, and 60% were nonwhite. A majority of the third grade children were girls (63%), and 58% of the children in third grade were nonwhite.

Description of the Primary Variables

Intrinsic Motivation

Children’s classroom motivation was measured by administering Harter’s (1980, 1981) Scale of Intrinsic versus Extrinsic Motivational Orientation in the Classroom. The measurement consisted of five subscales: Challenge, Curiosity, Mastery, Judgment, and Criteria, each ranging in value from 6 to 24. The theoretical mean of each subscale was 15. The ranges and means of responses were similar for first and third graders’ motivation scores. Both first and third grade children had a mean score that was higher than the theoretical mean for the subscales of Challenge, Curiosity, and Mastery. Likewise, both first and third graders had a mean score lower than the theoretical mean for the subscales of Judgment and Criteria.
The previously mentioned subscales were combined into two separate variables of Mastery Motivation and Judgment Motivation (Ginsburg & Bronstein, 1993). The variable of Mastery Motivation includes Harter’s (1980, 1981) subscales of Challenge, Curiosity, and Mastery. The possible range for the mastery motivation variable was 31 to 72 with a theoretical mean of 45. The mean scores for the first and third grade children were both higher than the theoretical mean for this variable (Table 1). The variable of Judgment Motivation includes Harter’s (1980, 1981) Judgment and Criteria subscales. The possible range for the Judgment Motivation variable was 12 to 45 with a theoretical mean of 30. The first and third grade mean scores were both lower than the theoretical mean for this variable (Table 1). These findings indicate that in young children their level of mastery motivation is higher than their level of judgment motivation.

**Academic Achievement**

Grades were used as the measure for academic achievement. Grades were collected for each 9-week period. First graders were assigned grades of B, O, and A indicating that students were “below”, “on”, or “above” average for reading and math. Third graders were assigned grades of F, D, C, B, or A in both subject areas. In all, grades were recorded for 251 of the 279 children. Two schools failed to turn in grades for the study.

As previously discussed, separate analyses was performed for first and third grade children. For children in first grade, the mean for grades in math was 2.13 with a standard deviation of .54 on a 3-point scale. For reading, the mean was 2.29 with a standard deviation of .63. The results indicate that most children were “on” grade level; however, reading scores were slightly higher than math scores.
Table 1. Descriptive Statistics of Children’s Motivation Scores

<table>
<thead>
<tr>
<th>Subscale</th>
<th>1st Graders (n=122)</th>
<th>3rd Graders (n=129)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Range</td>
<td>M</td>
</tr>
<tr>
<td>Challenge</td>
<td>9-24</td>
<td>18.26</td>
</tr>
<tr>
<td>Curiosity</td>
<td>8-24</td>
<td>15.89</td>
</tr>
<tr>
<td>Mastery</td>
<td>7-24</td>
<td>16.12</td>
</tr>
<tr>
<td>Judgment</td>
<td>6-24</td>
<td>9.48</td>
</tr>
<tr>
<td>Criteria</td>
<td>6-24</td>
<td>11.80</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mastery</td>
<td>31-72</td>
<td>50.27</td>
<td>7.84</td>
<td>33-70</td>
<td>52.79</td>
<td>7.81</td>
</tr>
<tr>
<td>Judgment</td>
<td>12-45</td>
<td>21.29</td>
<td>6.74</td>
<td>12-43</td>
<td>22.48</td>
<td>6.42</td>
</tr>
</tbody>
</table>
For third grade children, the mean in math was 2.57, a high “C” average, with a standard deviation of .97 on a 4-point scale. In reading the mean was 2.76 with a standard deviation of .97. As with the first graders, reading scores were higher than math scores.

**Correlational Analyses**

Correlations between the predictor variables and academic achievement were executed to examine bivariate relationships. For first graders, race was significantly correlated with reading and math scores (Table 2). White children had higher reading and math scores than nonwhites. Additionally, gender was negatively correlated with math grades for first graders in that boys had higher math grades than girls (Table 2). Mastery motivation, but not judgment motivation, was significantly correlated with reading and math grades and in the expected direction (Table 2). For third graders, race, mastery motivation, and judgment motivation were significantly correlated with reading and math grades (Table 3). As with the first graders, whites had higher reading and math grades than nonwhites (Table 3). In essence, higher levels of mastery and judgment motivation were found to be related to higher grades.

**Regression Analyses**

To further explore the relationships among the control variables (race and gender), motivational variables, and reading and math grades, two separate, hierarchical regression analyses were conducted to identify the best set of predictors of Math and Reading grades for first and third grade children. The regression results are shown in Tables 4 through 7.
Table 2. Correlation Between Predictor & Dependent Variables for First Grade (n=122)

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Academic Achievement</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Reading</td>
<td>Math</td>
<td></td>
</tr>
<tr>
<td>Race</td>
<td>.17*</td>
<td>.25*</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>.09</td>
<td>-.22*</td>
<td></td>
</tr>
<tr>
<td>Mastery</td>
<td>.17*</td>
<td>.20*</td>
<td></td>
</tr>
<tr>
<td>Judgment</td>
<td>-.01</td>
<td>-.07</td>
<td></td>
</tr>
</tbody>
</table>

*p ≤ 0.05
Table 3. Correlation Between Predictor & Dependent Variables for Third Grade (n=129)

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Academic Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Reading</td>
</tr>
<tr>
<td>Race</td>
<td>.37*</td>
</tr>
<tr>
<td>Gender</td>
<td>.13</td>
</tr>
<tr>
<td>Mastery</td>
<td>.17*</td>
</tr>
<tr>
<td>Judgment</td>
<td>.24*</td>
</tr>
</tbody>
</table>

*p ≤ 0.05
Table 4. Regression of Predictor Variables and Reading Grades in First Grade Children (n=122)

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Step 1</th>
<th></th>
<th>Step 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>β</td>
<td>t</td>
<td>B</td>
</tr>
<tr>
<td>Race</td>
<td>.20</td>
<td>.15</td>
<td>1.69*</td>
<td>.18</td>
</tr>
<tr>
<td>Gender</td>
<td>.15</td>
<td>.12</td>
<td>1.36</td>
<td>.18</td>
</tr>
<tr>
<td>Mastery</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>.01</td>
</tr>
<tr>
<td>Judgment</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>.00</td>
</tr>
<tr>
<td>Constant</td>
<td>2.13</td>
<td>1.46</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>2.18</td>
<td>2.20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>.04</td>
<td>.07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ΔR²</td>
<td>-</td>
<td>.04</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p ≤ 0.05
Table 5. Regression of Predictor Variables and Math Grades in First Grade Children (n=122)

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Math Grades</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Step 1</td>
<td>Step 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>B</td>
<td>β</td>
<td>t</td>
<td>B</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td>.25</td>
<td>.23</td>
<td>2.56*</td>
<td>.23</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td>-.19</td>
<td>-.18</td>
<td>-2.02</td>
<td>-.17</td>
</tr>
<tr>
<td>Mastery</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>.01</td>
</tr>
<tr>
<td>Judgment</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>.01</td>
</tr>
<tr>
<td>Constant</td>
<td></td>
<td>2.13</td>
<td></td>
<td></td>
<td>1.59</td>
</tr>
<tr>
<td>F</td>
<td></td>
<td>5.73*</td>
<td></td>
<td></td>
<td>4.62*</td>
</tr>
<tr>
<td>$R^2$</td>
<td></td>
<td>.09</td>
<td></td>
<td></td>
<td>.14</td>
</tr>
<tr>
<td>$\Delta R^2$</td>
<td></td>
<td>-</td>
<td></td>
<td></td>
<td>.05*</td>
</tr>
</tbody>
</table>

*p ≤ 0.05
Table 6. Regression of Predictor Variables and Reading Grades in Third Grade Children (n=129)

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Step 1</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>β</td>
<td>t</td>
<td>B</td>
<td>β</td>
<td>t</td>
</tr>
<tr>
<td>Race</td>
<td>.67</td>
<td>.34</td>
<td>4.06*</td>
<td>.63</td>
<td>.32</td>
<td>3.86*</td>
</tr>
<tr>
<td>Gender</td>
<td>-.13</td>
<td>-.06</td>
<td>.76</td>
<td>.16</td>
<td>.08</td>
<td>.99</td>
</tr>
<tr>
<td>Mastery</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>.01</td>
<td>.16</td>
<td>1.90*</td>
</tr>
<tr>
<td>Judgment</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>.02</td>
<td>.16</td>
<td>1.87*</td>
</tr>
<tr>
<td>Constant</td>
<td>2.40</td>
<td></td>
<td></td>
<td></td>
<td>.82</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>9.08*</td>
<td></td>
<td></td>
<td></td>
<td>.70*</td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>.13</td>
<td></td>
<td></td>
<td></td>
<td>.19</td>
<td></td>
</tr>
<tr>
<td>ΔR²</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td>.06*</td>
<td></td>
</tr>
</tbody>
</table>

*p ≤ 0.05
Table 7. Regression of Predictor Variables and Math Grades in Third Grade Children (n=129)

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Math Grades</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Step 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>β</td>
<td>t</td>
<td>B</td>
<td>β</td>
<td>t</td>
<td></td>
</tr>
<tr>
<td>Race</td>
<td>.64</td>
<td>.31</td>
<td>3.59*</td>
<td>.61</td>
<td>.29</td>
<td>3.41*</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>.15</td>
<td>.07</td>
<td>.84</td>
<td>.19</td>
<td>.09</td>
<td>1.07</td>
<td></td>
</tr>
<tr>
<td>Mastery</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>.02</td>
<td>.16</td>
<td>1.85*</td>
<td></td>
</tr>
<tr>
<td>Judgment</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>.01</td>
<td>.12</td>
<td>1.42*</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>2.21</td>
<td>.64</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>7.30*</td>
<td></td>
<td></td>
<td>5.50*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>.10</td>
<td></td>
<td></td>
<td>.15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ΔR²</td>
<td>-</td>
<td></td>
<td></td>
<td>.05*</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p ≤ 0.05
First Grade Children

When race and gender were regressed on reading, race was found to be a significant predictor of reading grades. However, race was no longer a significant predictor when the motivation variables were introduced into the model. Mastery motivation was the only significant predictor of reading grades. In all, the predictor variables explained between 4% and 7% of the variance in reading grades, and the overall model was not significant. The change in $R^2$ (.04) was also not significant.

For math, both control variables were significant predictors; however, race was a stronger predictor of math grades than gender. Whites had higher math grades than nonwhites, and boys had higher math grades than girls. When the motivation variables were introduced into the model, race was still significant, and the same pattern was observed for math as it was for reading. Whites had higher math grades than nonwhites. Mastery motivation was a significant predictor of math grades in the expected direction; however, judgment motivation was not. For first graders, mastery motivation influenced grades, judgment did not. Mastery motivation is the strongest predictor of reading and math grades for first grade children. Overall, the predictor variables explained between 9% and 14% of the variance in math grades, the overall model and the change in $R^2$ (.05) were significant indicating that motivation is an important predictor above and beyond race and gender.

Third Grade Children

As was found with the first grade children, race, but not gender, was a significant predictor of reading grades. In step 2, both mastery and judgment motivation were significant predictors of reading grades; however, race was the strongest predictor.
Motivation was a significant predictor of reading grades above and beyond the control variables of race and gender. Between 13% and 19% of the variance in reading grades was explained by the predictor variables. The overall model was significant as well as the change in $R^2$ (.06).

For math grades, race, but not gender, was a significant predictor. Whites had higher math grades than nonwhites. Mastery motivation, not judgment, was a significant predictor of math grades as well as race, but race was the strongest predictor. In all, the predictor variables explained between 10% and 15% of the variance in math grades, and the overall model was significant. The change in $R^2$ (.05) was also significant.
CHAPTER 5
DISCUSSION

The purpose of this study was to examine the relationship between classroom motivation and academic achievement. Specifically, this study sought to investigate the relationships between mastery motivation and academic achievement and judgment motivation and academic achievement for first and third grade children.

The population of this study included 251 first and third grade students in a mid-sized Southern city. The data set used in this study is part of a larger project conducted by Dr. Garrison at Louisiana State University. A non-probability sample was obtained, and the results are limited to the 251 child participants who received parental permission to participate.

Motivation data were collected via child interviews using Harter’s (1980, 1981) Scale of Intrinsic versus Extrinsic Motivational Orientation in the Classroom. Academic achievement was determined by grades in math and reading. Grades were collected for each 9-week period during the 2000 school year and then averaged for the year.

Of the participants, the majority of students were non-white (59%), mostly African-American. The majority of students were also female (57%). Of the total sample, 122 children were in the first grade, and 129 children were in the third grade.

The objectives of this study were to measure the level of young children’s intrinsic motivation in the classroom, to measure academic achievement among first and third graders, and to investigate the relationship between motivation and academic achievement. In general, the results of the current study supported the researcher’s expectations that intrinsic motivation would be positively related to children’s academic
motivation. More specifically, a positive relationship existed between classroom motivation and academic achievement among first and third grade children. As intrinsic motivation increased, academic achievement increased.

For first grade children, five of the eight correlations between the predictor variables of race, gender, mastery motivation, and judgment motivation were significant to academic achievement. Race was significantly related to reading and math scores. White students had better grades in both subject areas when compared to nonwhite students. It should also be noted that gender was significantly related to math grades. Boys had higher grades than girls in this subject area. Mastery motivation, but not judgment motivation, was significantly related to academic achievement.

With respect to third grade children, six of the eight correlations between the predictor variables were significant to academic achievement. Nonwhite students had lower reading and math scores than white students. Gender was not related to achievement for third grade children; however, both mastery motivation and judgment motivation did influence achievement.

For both groups of children, white students had higher math and reading scores than nonwhite children. As expected by the researcher, mastery and judgment motivation were found to be related to higher grades in third grade children. This finding was consistent with previous studies indicating positive correlations between motivation and achievement in young children (Gottfried, 1985, 1990; Boggiano et al., 1992). For first grade children, only mastery motivation was significant to academic achievement while both mastery and judgment motivation were significant for third grade children. Possible explanations for this result are twofold. First, it could be the difference between their
cognitive stages of development. The majority of first grade children are still in the pre-operational stage of development and may not be able to objectively judge their own work. On the other hand, most third grade children are in the concrete operational stage of development and may be more confident in their judgments of their own work and success. A second reason for this result could simply be related to socialization in the school environment. It could be that the third graders in this study possess more experience in having their work judged and critiqued by adults and have internalized some of these criteria.

Overall, the regression analyses for first graders were partially significant. Mastery motivation, but not judgment motivation, was found to be significantly related to both reading and math grades. More specifically, mastery motivation was a significant predictor of both math and reading grades. Race and gender were not significantly related to reading grades in first grade children, but they were significantly related to math grades.

For third grade children, both motivation variables were significant to math and reading grades. Even though mastery and judgment motivation were found to be significant predictors of reading and math grades after controlling for race and gender, it should be noted that race was the strongest predictor of academic achievement. It should be further noted that even though the predictor variables were found to be significantly related to grades, between 7% and 15% of the variance in academic achievement was explained by the predictor variables. This finding indicates that other circumstances not assessed in the current study may be important indicators of academic achievement. According to Bronfenbrenner’s (1979) ecological model, a child’s development, in this
case academic achievement, is influenced by many factors. Other factors that may be important are family/cultural differences, community differences, testing effects, school climate and environments, parent or child relationships, and parenting styles.

Overall, all of the regression coefficients for mastery motivation were significant. Regardless of grade level and subject area, mastery motivation had a greater effect on academic achievement than judgment motivation. Therefore, mastery motivation is a better predictor of academic achievement. Because intrinsic motivation is a significant construct in children’s education, it is important to nurture this characteristic found in young children. It is equally important for a school’s learning environment to foster this characteristic as well. Classroom and behavior management techniques using token economies, for example, often diminish a child’s intrinsic motivation to succeed.

A review of the literature revealed few studies that examine motivation and academic achievement in young children. The results of this researcher’s study refute the previous studies conducted that found a negative relationship between motivation and academic achievement for young children (Goldberg & Cornell, 1998; Stipek & Ryan, 1997). More importantly, this study’s results support the previous research done in the field and are in line with the motivation literature that found positive relationships between intrinsic motivation and academic achievement in young children. Gottfried (1985, 1990) found positive relationships between motivation and achievement as did this study. Moreover, in a study of fifth grade children, Boggiano et al. (1992) found that children with an intrinsic motivational orientation had higher reading and math scores and higher overall achievement scores than their extrinsically motivated counterparts. Overall, young children with higher intrinsic motivation had significantly higher
achievement. In sum, the hypotheses postulated by the motivational model were confirmed.

**Limitations**

Although the present results provided support for the proposed model, certain limitations should be acknowledged and kept in mind when interpreting the findings. First, missing data reduced the sample size nominally. Although the overall sample size of the study was appropriate for the population represented by the study. Second, the participants were not randomly selected from the population, therefore, a non-probability sample was used in this study. This sampling procedure might limit the generalizability of the results. Third, this study was conducted in a mid-sized, Southern city. Therefore, the results may not be applicable to other geographical locations or to other school systems across the country. Fourth, as previously mentioned, this study focused on a specific number of factors. When considering the complex nature of school performance, it must be acknowledged that many other variables are likely to influence this important educational outcome. Last, this study did not incorporate a longitudinal design. Therefore, relationships over time between motivation and achievement could not be addressed.

**Implications for Parents and Educators**

Research in the field of motivation has revealed that extrinsic rewards decrease intrinsic motivation in young children (Kassin & Lepper, 1984). As previously mentioned, Harter (1981) stated that children’s intrinsic motivation for learning diminishes as they begin to adapt to the incentive structure of our elementary schools (e.g. grades, praise, criticism). Parents and educators should avoid using certain methods
or practices in the home and school environments that extenuate intrinsic motivation. For example, parents should avoid tangible rewards for successful performance. If such a technique is used, it should not be on a regular basis, and it should not be expected by the child. For example, a special dinner or pizza party could be beneficial to celebrate a successful grade on a difficult test, but not for every acceptable grade. Moreover, educators should refrain from the use of controlling motivation techniques and employ more informational motivation techniques. A teacher should say “You’re doing fine,” as opposed to “I bet you will want to do well,” for example. In summation, more research needs to be done to determine the antecedents and correlates of intrinsic motivation.

Implications for Future Research

The results of this study provide potential insights for future research. First and foremost, more studies need to be done on younger children. As indicated by this study’s review of the literature, research on motivation and young children is an understudied area. As previously stated, examining the construct of intrinsic motivation in young elementary school children is significant and important, because academic intrinsic motivation in the early elementary years may have profound implications for initial and future school success (Gottfried, 1990). In order to better predict academic achievement, it would be interesting to incorporate some of the other variables that are likely to influence academic performance. One variable to consider would be parenting styles. There are many studies that indicate a link between parenting styles and school performance (Baumrind, 1991; DeBaryshe, Patterson, & Capaldin, 1993). Another variable to consider would be classroom differences. Studies have discovered a connection between classroom practices and stress in young children (Burts, Hart,
Charlesworth, & Kirk, 1990; Hart, Burts, Durland, Charlesworth, DeWolf, & Fleege, 1998). These same practices could potentially have an effect on young children’s motivation. Still other studies with a focus on gifted and talented samples, advantaged versus disadvantaged children as well as gender and ethnic differences in motivation could only strengthen this area of motivation research.

Because there exists a national concern for our country’s educational system, research on the impact of motivation on children’s education certainly could not be more critical and certainly should not be ignored. Intrinsic motivation decreases with age. Therefore, it only makes sense to concentrate on young children’s motivation in an effort to increase effective school functioning in the later years and eventually improve our educational stature.
REFERENCES


45


Kushman, J. W., Sieber, C., & Harold, K. P. (2000). This isn’t the place for me: School dropout. In D. Capuzzi & D. R. Gross (Eds.), *Youth at risk: A prevention resource


## APPENDIX

### CHILDREN’S MOTIVATION

<table>
<thead>
<tr>
<th>Name ______________________________</th>
<th>Birthday __________________________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interview Date/Time___________________</td>
<td>Interviewer____________________</td>
</tr>
</tbody>
</table>

**Sample Questions**

<table>
<thead>
<tr>
<th></th>
<th>Really true for me</th>
<th>Sort of true for me</th>
<th></th>
<th>Sort of true for me</th>
<th>Really true for me</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>□</td>
<td>□</td>
<td>Some kids would rather play outdoors in their spare time</td>
<td>But</td>
<td>Other kids would rather watch T.V.</td>
</tr>
<tr>
<td>(b)</td>
<td>□</td>
<td>□</td>
<td>Some kids like hamburgers better than hot dogs</td>
<td>But</td>
<td>Other kids like hot dogs better than hamburgers</td>
</tr>
<tr>
<td>1</td>
<td>□</td>
<td>□</td>
<td>Some kids like hard work because it is a challenge</td>
<td>But</td>
<td>Other kids prefer easy work that they are sure they can do</td>
</tr>
<tr>
<td>2</td>
<td>□</td>
<td>□</td>
<td>When some kids don’t understand something right away they want the teacher to tell them the answer</td>
<td>But</td>
<td>Other kids would rather try and figure it out by themselves</td>
</tr>
<tr>
<td>3</td>
<td>□</td>
<td>□</td>
<td>Some kids work on problems to learn how to solve them</td>
<td>But</td>
<td>Other kids work on problems because you’re supposed to</td>
</tr>
<tr>
<td>4</td>
<td>□</td>
<td>□</td>
<td>Some kids almost always think that what the teacher says is OK</td>
<td>But</td>
<td>Other kids sometimes think their own ideas are better</td>
</tr>
<tr>
<td>5</td>
<td>□</td>
<td>□</td>
<td>Some kids know when they’ve made mistakes without checking with the teacher</td>
<td>But</td>
<td>Other kids need to check with the teacher to know if they’ve made a mistake</td>
</tr>
<tr>
<td>6</td>
<td>□</td>
<td>□</td>
<td>Some kids like difficult problems because they enjoy trying to figure them out</td>
<td>But</td>
<td>Other kids don’t like to figure out difficult problems</td>
</tr>
<tr>
<td>7</td>
<td>□</td>
<td>□</td>
<td>Some kids do their school work because the teacher tells them to</td>
<td>But</td>
<td>Other kids do their school work to find out about a lot of things they’ve been wanting to know</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td>When some kids make a</td>
<td>But</td>
<td>Other kids would rather</td>
</tr>
<tr>
<td></td>
<td>Really true for me</td>
<td>Sort of true for me</td>
<td></td>
<td>Really true for me</td>
<td>Sort of true for me</td>
</tr>
<tr>
<td>---</td>
<td>-------------------</td>
<td>-------------------</td>
<td>---</td>
<td>-------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>9</td>
<td>☐ ☐</td>
<td>☐ ☐</td>
<td></td>
<td>☐ ☐</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>10</td>
<td>☐ ☐</td>
<td>☐ ☐</td>
<td></td>
<td>☐ ☐</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>11</td>
<td>☐ ☐</td>
<td>☐ ☐</td>
<td></td>
<td>☐ ☐</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>12</td>
<td>☐ ☐</td>
<td>☐ ☐</td>
<td></td>
<td>☐ ☐</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>13</td>
<td>☐ ☐</td>
<td>☐ ☐</td>
<td></td>
<td>☐ ☐</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>14</td>
<td>☐ ☐</td>
<td>☐ ☐</td>
<td></td>
<td>☐ ☐</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>15</td>
<td>☐ ☐</td>
<td>☐ ☐</td>
<td></td>
<td>☐ ☐</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>16</td>
<td>☐ ☐</td>
<td>☐ ☐</td>
<td></td>
<td>☐ ☐</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>17</td>
<td>☐ ☐</td>
<td>☐ ☐</td>
<td></td>
<td>☐ ☐</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>18</td>
<td>☐ ☐</td>
<td>☐ ☐</td>
<td></td>
<td>☐ ☐</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>19</td>
<td>☐ ☐</td>
<td>☐ ☐</td>
<td></td>
<td>☐ ☐</td>
<td>☐ ☐</td>
</tr>
</tbody>
</table>

- Some kids know whether or not they’re doing well in school without grades.
- Other kids need to have grades to know how well they are doing in school.

- Some kids agree with the teacher because they think the teacher is right about most things.
- Other kids don’t agree with the teacher sometimes and stick to their own opinion.

- Some kids would rather just learn what they have to in school.
- Other kids would rather learn as much as they can.

- Some kids like to learn things on their own that interest them.
- Other kids think it’s better to do things that the teacher thinks they should be learning.

- Some kids read things because they are interested in the subject.
- Other kids read things because they know the teacher wants them to.

- Some kids need to get their report cards to tell them how they are doing in school.
- Other kids know for themselves how they are doing even before they get their report card.

- If some kids get stuck on a problem they ask the teacher for help.
- Other kids keep trying to figure out the problem on their own.

- Some kids like to go on to new work that’s at a more difficult level.
- Other kids would rather stick to the assignments which are pretty easy to do.

- Some kids think that what the teacher thinks of their work is the most important thing.
- For other kids what they think of their work is the most important thing.

- Some kids ask questions in class because they want to learn new things.
- Other kids ask questions because they want the teacher to notice them.

- Some kids aren’t really sure they’ve done well on.
- Other kids pretty much know how well they
<table>
<thead>
<tr>
<th></th>
<th>Really true for me</th>
<th>Sort of true for me</th>
<th></th>
<th>Sort of true for me</th>
<th>Really true for me</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>Some kids like the teacher to help them plan what to do next</td>
<td>But Other kids like to make their own plans for what to do next</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Some kids think they should have a say in what work they do in school</td>
<td>But Other kids think that the teacher should decide what work they should do</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Some kids like school subjects where it is pretty easy to just learn the answers</td>
<td>But Other kids like those subjects that make them think pretty hard and figure things out</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Some kids aren’t sure if their work is really good or not until the teacher tells them</td>
<td>But Other kids know if its good or not before the teacher tells them</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Some kids like to try to figure out how to do school assignments on their own</td>
<td>But Other kids would rather ask the teacher how it should be done</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Some kids do extra projects so they can get better grades</td>
<td>But Other kids do extra projects because they learn about things that interest them</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>Some kids think its best if they decide when to work on each school subject</td>
<td>But Other kids think that the teacher is the best one to decide when to work on things</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>Some kids know they didn’t do their best on an assignment when they turn it in</td>
<td>But Other kids have to wait until the teacher grades it to know that they didn’t do as well as they could have</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>Some kids don’t like difficult school work because they have to work too hard</td>
<td>But Other kids like difficult schoolwork because they find it more interesting</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>Some kids like to do their schoolwork without help</td>
<td>But Other kids like to have the teacher help them to do their schoolwork</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Really true for me</td>
<td>Sort of true for me</td>
<td></td>
<td>Sort of true for me</td>
<td>Really true for me</td>
</tr>
<tr>
<td>---</td>
<td>--------------------</td>
<td>---------------------</td>
<td>---</td>
<td>---------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>30</td>
<td>☐</td>
<td>☐</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Some kids have to work really hard to get good grades</td>
<td>But</td>
<td>Other kids work hard because they really like to learn things</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
VITA

Sheri Coates Broussard was born on June 9, 1967, in Baton Rouge, Louisiana. She is the daughter of Russell and Alta Rae Coates. She is married to Brad Broussard, and they have one son, Wade Joseph.

In 1989, Sheri graduated from Louisiana State University with a Bachelor of Criminal Justice degree. She will graduate from Louisiana State University in December 2002, with a Master of Science in human ecology, with a concentration in Early Childhood Education.

Sheri is a member of the Baton Rouge Association for the Education of Young Children and the National Association for the Education of Young Children. She is also a member of the honor society for the Louisiana State University Department of Agriculture, Gamma Sigma Delta.

While working toward her graduate degree at Louisiana State University, Sheri worked for 1½ years as a graduate assistant in the School of Human Ecology. During the last semester of her graduate work, she taught preschool at the Rosenwald Preschool Center.