Mastery, Performance and Controlling Practices in the Classroom:
A Multilevel Study of Teacher Motivation

Dissertation

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By
Kristen Elizabeth Leigh, M.A.
Graduate Program in Education

The Ohio State University
2012

Dissertation Committee:
Eric Anderman, Advisor
Lynley Anderman
Robert Hite
Abstract

The current context of education today, with an emphasis on high stakes testing and curricular mandates, is affecting motivation in schools (Au, 2007; Barksdale-Ladd & Thomas, 2000; Ryan & Brown, 2004; Supovitz, 2009). It is important to study the relations between teaching in such contexts and teacher and student motivation. The purpose of this study is to explore predictors of teachers’ use of various motivation-related instructional practices. These predictors include (a) perceptions of principal autonomy support for teachers, (b) perceptions of school achievement goal structures, and (c) teacher motivation.

The research design for this study is descriptive, correlational survey to explore and describe the relations between teacher perceptions of school goal structures, principal support, goal orientations for teaching, and instructional practices. An instrument was administered that measured perceptions of teachers from seventy-five elementary schools in a large urban district, through an electronic medium. Correlations, multiple linear regression, and HLM were used to analyze the multivariate relations. HLM is an effective way to examine relations within nested designs (Raudenbush & Bryk, 2002). In the present study, the fact that teachers are nested within schools is an important
consideration. The teacher-level variables of self-reported instructional practices, goal orientations for teaching, teachers’ perceptions of school goal structure, and teachers’ perceptions of principal autonomy support were averaged for each school to obtain aggregated measures.

Findings generally revealed that, as predicted, a teacher’s goal orientations for teaching and their perceptions of school goal structure were strongly related to their instructional practices in the classroom (Butler & Shibaz, 2008). Results suggest that mastery goals for teaching positively influence the use of instructional practices that support individual student growth. In contrast, a school goal structure that is perceived as placing a high emphasis on student performance is related to an increase in the use of controlling practices in the classroom. Controlling practices are detrimental to student motivation and learning, yet their use is widespread in schools (Flink, Boggiano & Barrett, 1990; Pelletier, Seguin-Levesque & Legault, 2002; Deci, Spiegel, Ryan, Koestner & Kauffman, 1982). This is an area of research needed in the future. Principal autonomy support was not significantly related to mastery-focused, performance-focused, or controlling practices.
Dedication

This dissertation is dedicated to my ardent supporter, counselor, sounding board and friend – my husband Tim. You sacrificed much and believed in me always, and I am forever grateful. Also to my two wonderful sons, who said the thing Mommy was best at was “studying”, and “wouldn’t it be great if you did your dis-ter-tation on Harry Potter, Mommy”? I hope you will learn the value of effort, interest and motivation in achieving your dreams.
Acknowledgements

First, to my advisor, Dr. Eric Anderman. You were the perfect advisor for me, pushing me to work hard and providing excellent feedback each step of the way. Thank you for your insight and encouragement throughout my insecurities and endless questions. I’ll never forget when you pushed me out of the nest, “Kristy, sometimes you just have to jump.” You were so right! To Dr. Lynley Anderman, whose course on classroom motivation was the first in my program to strike a chord of passion for research in me. And to Dr. Robert Hite, who guided my journey in so many ways. Your classes taught life skills as well as academics, and I continually reflect on the tenets of teaching and learning you modeled.

To my mom and dad who read many drafts and watched the kids when it got crazy— you taught me how to work hard and remain persistent in my goals! To my brother, who always answered the phone when I needed to bemoan the process. Thank you for your writer’s words of advice and all the snarky jokes that kept me laughing. To my mentors along the way, Margilee and Barb, who gave their time and encouragement when it was most needed. To my colleague and friend, Mickie, who was the one who pushed me first to enter the doctoral program, and my fellow teachers who were always checking in with me on my progress and shared kind words of encouragement: Germaine, Bonnie, Marguerethe, Karen, Pete, Rodney, Jenny, Dean, Greg, Judy, Kris, Kerri, Lata
and Becky. A huge expression of thanks to my writing group friends, DeLeon and Heather, who took it on home with me. Your feedback and support provided the motivational boost to finish! Lastly, to Clara and my extended family and friends, who put up with me for these last several years. Thank you all, it truly took the whole village. WE DID IT!
Vita

June 1988…………………………………Utica High School

May 1992…………………………………B.S. Elementary Education, Miami University

September 1999………………………….M.A. Social Studies and Global Education


1995 – 1997………………………………Teacher, Newark City Schools

1997 – present…………………………….Teacher and Staff Development Specialist,
Columbus City Schools

2009-2011…………………………………Adjunct, Ashland University

Fields of Study

Major Field: Education

Cognate: Educational Psychology
Table of Contents

Abstract .................................................................................................................. ii

Dedication ........................................................................................................ iv

Acknowledgements .............................................................................................. v

Vita ..................................................................................................................... vii

List of Tables ....................................................................................................... xii

Chapter 1: Introduction ....................................................................................... 1

  Significance of the Study ................................................................................... 6

  Research Questions .......................................................................................... 8

Chapter 2: Literature Review .............................................................................. 9

  Goal Orientation Theory ............................................................................... 11

    Background .................................................................................................. 11

    Goal Structures .......................................................................................... 13

  Teacher and Student Goal Orientations ....................................................... 16

  The Approach-Avoidance Distinction ........................................................... 19

  Student Perceptions of Classroom Goal Structure and their Influence on
  Student Goal Orientations ............................................................................. 21
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Question 2: Performance-focused Instructional Practices</td>
<td>80</td>
</tr>
<tr>
<td>Hierarchical Linear Modeling: Analyses</td>
<td>81</td>
</tr>
<tr>
<td>Research Question 3: Controlling Practices</td>
<td>83</td>
</tr>
<tr>
<td>Hierarchical Linear Modeling: Analyses</td>
<td>84</td>
</tr>
<tr>
<td>Summary of Results</td>
<td>86</td>
</tr>
<tr>
<td>Chapter 5 Discussion</td>
<td>88</td>
</tr>
<tr>
<td>Limitations and Implications</td>
<td>94</td>
</tr>
<tr>
<td>References</td>
<td>98</td>
</tr>
<tr>
<td>Appendix A: Implementation Documents</td>
<td>111</td>
</tr>
<tr>
<td>Appendix B: Data</td>
<td>120</td>
</tr>
</tbody>
</table>
List of Tables

Table 2.1 Terms and Implications.................................................................17

Table 3.1 Constructs and Measurement.......................................................50

Table 3.2 Demographic Data and Frequencies for Teacher and School Level Data.....60

Table 4.1 Rotated Component Loadings for the Mastery-focused Instructional Practices
   Scale items ................................................................................................68

Table 4.2 Rotated Component Loadings for the Performance-focused Instructional
   Practices Scale items...........................................................................70

Table 4.3 Correlation Matrices including Cronbach’s Alpha, Means and Standard
   Deviations for all Scales...................................................................74

Table 4.4 Means, Standard Deviations, and Measures of Skewness for Aggregated
   Measures............................................................................................77

Table 4.5 Hierarchical Regression Predicting Mastery-focused Instructional
   Practices..............................................................................................80

Table 4.6 Performance-focused Instructional Practices Model 2: HLM Results.........83

Table 4.7 Controlling Practices Model 3: HLM Results.................................86
Chapter 1: Introduction

In *Talks to Teachers*, William James gave a series of lectures to practicing educators to argue the efficacy and promote the use of new psychological theories and research to inform their work (James, 1939). In a passage which is perfectly in line with the spirit of my study, James emphasized the art inherent in teaching, and the capacity of scientific research to inform the inventive minds of teachers and those who support their craft. James remarks:

“I say moreover that you make a great, a very great mistake, if you think that psychology, being the science of the mind’s laws, is something from which you can deduce definite programmes and schemes and methods of instruction for immediate schoolroom use. Psychology is a science, and teaching is an art; and sciences never generate arts directly out of themselves. An intermediary inventive mind must make the application, by using its originality.” (p. 9).

It is a commonplace of national news stories to relate the pressure on both teachers and students to perform in schools, producing the unintended consequences of cheating scandals and the publication of teacher performance ratings in local newspapers (Augé & Meyer, 2012; Lovett, 2012; Mellon, 2011; Vogell, Perry, Judd & Pell, 2012).
The nature of schooling today is competitive. School systems, administrators, teachers and students experience great pressure to increase achievement as evidenced by scores on standardized, high stakes tests (Kohn, 2011; Nichols & Berliner, 2008; Supovitz, 2009). The stakes are high not only for students, but for teachers, as teacher evaluation reforms across the nation are linked to publicly released student test scores in an effort to shame teachers into improved performance, which translates to increased scores on high stakes tests (Supovitz, 2009). There are long term detrimental effects of this pressurized, competitive context on motivation and learning in schools (Nichols, Glass & Berliner, 2006). These effects are felt keenly by classroom teachers. During my years as a curriculum and staff development specialist, the following comments were common among those who taught students from preschool to high school:

- “I have to teach what is on the pacing guide each day, there is no room in the curriculum for this kind of (engaging) activity”
- “We work on test preparation for most of the year, since that is ultimately what we are evaluated on”
- “Our curriculum is mandated, I do not want ‘them’ to say I am not doing my job”
- “I just follow the script, that is what I am told to do”

When asked to identify “they”, most teachers I have spoken with cannot be specific. Even the highly creative, innovative teachers with whom I have met have made similar comments and voiced concerns about the constraints on their teaching practices. What motivates teachers to go beyond the pacing guide - to engage students and promote
An increasingly desperate urgency in educational discourse today has created a punishing treadmill for teachers. Reports which are often controversial, and feed much professional debate, indicate that schools are failing to achieve academic success for students. Government legislation has begun a massive effort to reform schools in a multitude of ways, primarily using ‘evidence-based’ practices that are rooted in quantitative research studies (Feuer, Towne & Shavelson, 2002).

In this context, reform takes on new meaning for teachers. Reform efforts for purportedly ‘failing’ schools and districts include the implementation of school, district, and state-mandated curricula, and an increase in high-stakes testing. Combined with increased teacher accountability tied to each reform effort, teachers need to learn at rapid rates to master and effectively negotiate the reform curriculum that is expected to raise student achievement. Students also need to learn at peak rates to attain the rapid improvement of test scores that indicate school improvement according to state and federal policies.
Results of extensive research studies on motivation stand in direct opposition to this increase in standardization and mandates (Ryan & Brown, 2004). The current climate of education acts as a damper on many forms of motivation, and studies show the achievement of students is not increasing within this context (Nichols et al., 2006). From the self-determination theory perspective, the keys to motivation are autonomy, competence and relatedness (Ryan & Deci, 2000). In the current context of high stakes testing, teachers have little autonomy with mandated curricula (Au, 2007), perceive little choice in varying their instructional practices (Barksdale-Ladd & Thomas, 2000), and their training is often limited to support for the mandated curricula and test preparation activities (Gould Boardman & Woodruff, 2004). This context provides little motivation for innovation and creative risk-taking, yet high motivation out of fear of failure, anger and anxiety (Barksdale-Ladd & Thomas, 2000; Jones, M.G., Jones, B.D., Hardin, Chapman, Yarbrough & Davis, 1999). However, the fact remains that this is the context in which teachers are teaching and students are learning. Regardless of researchers’ philosophical debates about the reform movement, we need to know more about how teachers and students learn and develop and what contextual supports need to be in place for this development to occur.

Goal orientation theorists in motivation research state that individuals are oriented toward certain types of achievement goals, and these orientations reflect a pattern of individual beliefs about competence, attributions to success and failure, and personal feelings and emotions about school (Ames, 1992; Dweck & Leggett, 1988; Elliot & Dweck, 1988). Goal orientation theorists attempt to explain the reasons why students
choose to engage in particular tasks (*for a review, see* Anderman & Wolters, 2006). Early research identified two types of goals for tasks, *learning or mastery goals*, and *performance goals*; these goals predict distinct academic beliefs and behaviors (Ames & Archer, 1988; Anderman & Young 1994; Dweck & Leggett, 1988; Nolen, 1988; Patrick, Ryan & Pintrich, 1999). Mastery-oriented students strive to develop competence, skills and abilities, and performance-oriented students strive to demonstrate competence (Ames, 1984; Dweck & Leggett, 1988; Elliot & Dweck, 1988). Advances in this research have included an approach and avoidance distinction which constitutes a framework including mastery-approach, mastery-avoid, performance-approach and performance-avoid goal orientations (Elliot & McGregor, 2001). Further, school and classroom practices and policies that reflect a mastery and/or performance focus (i.e., school and classroom goal structures) influence students’ personal goal orientations (Ames, 1992; Kaplan, Middleton, Urdan & Midgley, 2002; Midgley et al., 2000; Pintrich, 2000a). Recently, research has included teacher goal orientations as factors in the perceived classroom goal structure and use of instructional practices (Butler, 2007; Retelsdorf, Butler, Streblow & Schiefele, 2010).

Achievement goal theory in educational psychology can help to frame the studies around student and teacher learning and development, and create a context for research on school goal structures and teacher goal orientations as they affect instructional practices in the classroom, student motivation and achievement. Further, goal orientation theory provides a basis from which to study the types of instructional environments provided by school leaders that promote learning in an age of reform and change.
Educational policy currently fosters competition between schools and school systems, and in the face of that competition, teachers may be less motivated than ever to take the instructional risks needed for real student learning to take place in the classroom. As we continue to learn more about what motivates students and teachers, we learn about what is needed in classrooms, schools, and policy makers to promote positive motivation for individual growth and development.

Significance of the Study

In the current context of increasingly ‘market-based’ education, high stakes testing, and countless curricular mandates, motivation is suffering (Amrein & Berliner, 2003; Ryan & Brown, 2004). The kind of motivation this context provides may not be the type that sustains the efforts of the reform movement.

“High stakes testing does motivate teachers and administrators to change their practices, yet the changes they motivate tend to be more superficial adjustments in content coverage and test preparation activities rather than promoting deeper improvements in instructional practice” (Supovitz, 2009, p. 211).

Teachers today are feeling pressured, not only by ramifications of student test scores but also by pressure from district and school administration for compliance with standards and curriculum that are assessed on the high stakes tests (Pelletier, Séguin-Lévesque & Legault, 2002). It is more important than ever to study the relations between
teaching in such contexts and teacher and student motivation. In the present study, I will explore relations among principal support for teacher autonomy, the goal structure of the school for students, teacher motivation for teaching, and the instructional practices that students experience.

Programs developed at the federal level, part of wider reform efforts, have recently entered the landscape of education. Race to the Top (RttT) is one of these programs. RttT is a US governmental initiative created by the US Department of Education to dole out stimulus money for education, explicitly tied to high stakes assessments. The Race to the Top Assessment Program, authorized under the American Recovery and Reinvestment Act of 2009 (ARRA), provides funding to a partnership of States to develop valid, accurate and measureable assessments for students (U.S. Department of Education, 2009). Creative and innovate practices, the elements that the developers of Race to the Top wish to support, are drowned in the framing of initiatives that focus their efforts on, in part, training programs that familiarize teachers with a new set of common core standards, upon which their students and ultimately themselves will be assessed through ever more rigorous and high stakes assessments. From competing versus collaborating with other states and school systems for educational funding to support programs to increase student achievement; state mandates that translate into more paperwork and less curricular choice and autonomy for teachers; district-wide testing systems that over-emphasize performance and ability versus individual growth and effort; and evaluation practices that pit teacher against teacher and promote the closed door schoolhouse, RttT and similar reform efforts place a high motivational burden on
teachers. Couched within the current context of reform movements, this research will add new insights into the complexities of teacher motivation and instruction in schools.

**Research Questions**

This study will examine the relations among teacher perceptions of school goals for students, teacher achievement goals for teaching, principal autonomy support for teachers, and teacher instructional practices. The following research questions will be addressed:

1. What is the relation among teacher perceptions of school mastery goals for students, self-reported teacher mastery goals for teaching, teacher perceptions of principal autonomy support, and self-reported mastery-focused instructional practices?

2. What is the relation among teacher perceptions of school performance goals for students, self-reported teacher performance goals for teaching, teacher perceptions of principal autonomy support, and self-reported performance-focused instructional practices?

3. What is the relation among teacher perceptions of school performance goals for students, self-reported teacher performance goals for teaching, teacher perceptions of principal autonomy support, and self-reported teacher’s controlling practices?
Chapter 2: Literature Review

Instructional Practices are at the heart of teacher pedagogy in the classroom and affect the motivation and learning of students in often dramatic ways. From the manner in which a teacher assigns a task to grouping decisions, grading practices and teacher directives, instructional practices influence the way students receive feedback, engage in study, and consider their competence on academic tasks and in various content areas (Ames, 1992; Butler & Shibaz, 2008; Jang, Deci & Reeve, 2010; Reeve, 2009; Retelsdorf et al, 2010). Thus, these practices are important motivation-related concepts that have important implications for students, particularly within the broader political and social context of public education today (Kohn, 2011; Nichols et al, 2006; Ryan & Brown, 2004; Supovitz, 2009).

As an ideal purpose for education, schools should engender intrinsically motivated, self-directed learners, and support school and classroom structures that foster rather than undermine students’ intrinsic motivation (Deci, Schwartz, Sheinman & Ryan, 1981). Unfortunately, often the opposite is true. Teachers and parents tend to believe that controlling strategies, which have been shown to undermine intrinsic motivation, are more effective in motivating students (Boggiano & Katz, 1991; Flink, Boggiano & Barret, 1990; Reeve, 2009). However, policies that manage students’ behavior and are believed to increase student engagement often do not encourage the critical thinking and autonomy
necessary for thoughtful, self-motivated students (Barrett & Boggiano, 1988; Boggiano, Barrett, Weiher, McClelland & Lusk, 1987).

A teacher’s instructional practices are the primary means through which the goal orientation of the teacher and the goal structure of the classroom are conveyed to and perceived by students (Ames & Archer, 1988; Butler & Shibaz, 2008). Instructional practices are also a means of supporting student autonomy in the classroom. In one study, it was reported that within two months, students adapted to their teacher’s control or autonomy orientations, and that adaptation remained constant over the course of the school year (Deci et al., 1981). Thus, as I will review in this chapter, teacher instructional practices are important to study as they are related to the perceived goal structure of the classroom and influence students’ learning and motivation in multiple ways.

In this section, I review the literature on goal orientation theory, and autonomy support versus control of behavior, with attention to three outcomes that influence the instruction of students in schools: mastery-focused instructional practices, performance-focused instructional practices, and controlling practices. I begin with an overview of the theories, followed by a review of each of the instructional practice outcomes. I conclude with a description of the independent variables that I use in my study: school goal structure, teacher goal orientations for teaching, and principal autonomy support. In the following chapters, I propose and test three models to describe the complex interactions and influences among teacher goal orientations, perceived principal support, school goal
structure, and the demographic variables of teacher gender, years of teaching experience, socioeconomic status of the school, school enrollment, and instructional practices.

**Goal Orientation Theory**

**Background**

Goal orientation theory gained prominence in the early 1980s based on the work of developmental, social, and educational psychologists (Anderman & Wolters, 2006; Pintrich, 2000a, 2000b, 2000d). The purpose of many of those studies was to explain student motivation for specific academic tasks in the classroom. Whereas the initial focus of early research was on students’ goal orientations, the body of work has expanded to include classroom and school goal structures and teacher goal orientations that are related to those structures (Bong, 2009; Butler, 2007; Butler & Shibaz, 2008; Meece, 1991; Midgley et al, 2000; Patrick, Anderman & Ryan, 2002; Turner & Patrick, 2004).

Goal orientation is differentiated from the general construct of goals in the literature. Goal orientation reflects reasons individuals choose to engage in tasks and standards to evaluate performance on tasks, and indicates beliefs and the patterns they can generate (Ames, 1992; Perry, Turner & Meyer, 2006; Pintrich, 2000a; 2000c; 2000d). The word goal is sometimes used in place of goal orientation, but these are separate from other goal constructs. Goal orientations are defined in various ways by different theorists, and have been described as purposes or reasons for engaging in academic
behaviors; a pattern of beliefs that leads to approaching situations; or personality-like styles (Ames, 1992; Ford, 1992; Pintrich, 2003).

Achievement goal theory emerged from the early research on goal orientations. Achievement goal theorists identify several types of goal orientations that have been researched in schools and classrooms with students and teachers (Ames, 1992; Ames & Archer, 1988; Anderman & Wolters, 2006; Midgley et al, 2000; Nicholls, 1984; Pintrich, 2000d; Urdan, 1997). The types of goal orientations I address in this study are mastery goal orientations and performance goal orientations.

There are several conceptualizations of mastery and performance goal orientations in the research literature, and researchers define and measure mastery and performance orientations in different ways. One primary distinction among them is the theory behind the construct. For example, Dweck’s (1999) model uses theories of intelligence, as fixed or malleable, to explain goal orientations. That is, a student who believes s/he cannot become ‘smarter’ (i.e., that intelligence is unchangeable and fixed), subscribes to the entity theory of intelligence. These students seek to prove their abilities, and when they face challenges that they judge to be beyond their ability, they fall into helpless patterns such as giving up, diverting attention to others, or trying to change the task (Dweck & Leggett, 1988). Subscription to the entity theory is related to the adoption of performance goals. Students who believe they can ‘grow smarter’ subscribe to the incremental theory of intelligence, and these students embrace challenges, and often find them enjoyable. Subscription to the incremental theory is related to the adoption of mastery goals. Nicholls’ theory assumes that a person’s goal orientation is related to
beliefs about the causes of success, for example in schoolwork and sport, and predicts the person’s standard for judging success. This theory posits that personal goals of superiority, termed *ego-involved* goals, place importance on ability to attain success, whereas personal goals to gain knowledge or skills, termed *task* goals, tout intense effort, interest and collaboration with others as the means for success (Duda & Nicholls, 1992).

Mastery goals are goals based on developing competence within the self, and these goals focus on the mastery of the task. Also termed *task goal*, *task-focused goal*, or *learning goal*, a *mastery goal* refers to “developing one’s abilities, mastering a new skill, trying to accomplish something challenging, and trying to understand learning materials” (Meece, Anderman & Anderman, 2006, p. 488), or “wanting to gain understanding, insight, or skill, whereby learning is valued as an end in itself” (Patrick, Anderman, Ryan, Edelin & Midgley, 2001, p. 35). Performance goals are based on demonstrating competence or skill at a task in relation to others. Further distinctions between mastery and performance goals will be discussed later.

**Goal Structures**

Early studies of students’ perceptions of classroom climate (Fraser & Fisher, 1982; Moos & Moos, 1978) involved junior high or high school students, their perceptions of their classroom environments, and the implications for getting a ‘just right’ fit between perceptions and desired environments. Higher average grades were correlated to teacher and student perceptions of high student involvement and low teacher control. Classes rated high in competition and teacher control and rated low in perceptions of teacher support had higher absence rates. These early studies defined
many of the factors that influence perceptions of classroom climate and influence on student goal orientations. These factors are used as indicators on surveys of student goal orientations, perceptions of classroom and school goal structures, and perceptions of teacher goal orientations for teaching (Midgley et al., 2000). Classroom goal structures are defined by the ways in which different types of achievement goals are emphasized in the classroom, and influence patterns of student achievement goal orientations (Ames & Ames, 1984; Ames & Archer, 1988; Ames, 1992). A mastery goal structure is evident when students perceive an emphasis on mastery goals in the classroom (i.e., teacher practices focused on individual student growth). A performance goal structure is evident when students perceive an emphasis on performance goals in the classroom (i.e., teacher practices focused on students’ ability relative to others). Teachers’ instructional practices in the classroom communicate differential emphases on goals, and influence student perceptions of the classroom goal structure.

Student perception of competition is an indicator of the classroom goal structure (Midgley et al., 2000). Moos and Moos (1978) found that classes that are competitive and difficult may increase learning outcomes; however, competition is defined and enacted in different ways in the classroom environment. Competition for grades and recognition, or for who can answer questions first, might lead to a student’s perception of a performance-oriented classroom. Team competitions that encourage peer relationships might be perceived as mastery-oriented. Social comparison is a common practice in junior high classrooms (Eccles et al., 1993). The use of competition in a classroom with high teacher control (and low teacher support) and low grades may adversely affect adolescent’s
intrinsic motivation (Moos & Moos, 1978). Students require appropriate challenge for motivation, especially those students at risk academically (Eccles et al., 1993; Perry et al., 2006).

Another indicator of students’ perceptions of classroom goal structure and the influence on student goal orientations is the perception of academic tasks assigned in the classroom (Midgley et al., 2000). How students perceive tasks, or the initial value they place on tasks, “influence how they approach learning (and) have important consequences for how they use available time” (Ames, 1992, p. 263). *Variety and diversity, personal meaning or interest, development of content knowledge or skills, challenge, control, and social components* are possible task values for students (Ames, 1992). There is a need to define many of the social components of task value and describe their implementation for teachers because “the key dimensions of tasks may be meaningfulness and value” (Blumenfeld, 1992, p. 273). The personal relevance value of the task for students is important (Ames, 1992; Blumenfeld, 1992; Meece et al., 2006). Therefore, decisions teachers make about the tasks they assign have a direct impact on how students perceive those tasks.

Grades are another indicator of students’ perceptions of classroom goal structures, environment and classroom motivation (Midgley et al., 2000). Grades are found to be critical motivators for students, and higher grades have been found to increase school satisfaction (Moos & Moss, 1978) and interest (Harackiewicz, Durik, Barron, Linnenbrink-Garcia & Tauer, 2008), which impact motivation and learning. In fact, “There is no stronger predictor of students’ self-confidence and sense of efficacy than the
grades they receive” (Eccles et al., 1993, p. 94). Following this, it makes sense that overly difficult grading policies place stressors and social comparison practices on the student, which creates an environment of risk. When grading practices are less stringent, the environment holds less risk and increased teacher support and autonomy may occur. Grading policies are indicators of student perceptions of classroom goal orientation (Midgley et al., 2000). In classrooms where students feel efficacy and control regarding how grades are earned, students are more likely to perceive a classroom mastery goal structure.

**Teacher and Student Goal Orientations**

It may be helpful at this point to identity the similarities and differences among terms. A description of terms and implications for teachers and students is provided in Table 2.1. Discussion of the relevant literature on teacher and student goal orientations and classroom and school goal structures follows.
### Table 2.1. Terms and Implications

<table>
<thead>
<tr>
<th>Terms</th>
<th>Teacher</th>
<th>Student</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal Orientations for Teaching</td>
<td>The achievement goal orientations teachers hold for teaching (Butler, 2007)</td>
<td></td>
</tr>
<tr>
<td>Personal Goal Orientations</td>
<td>The achievement goal orientations teachers hold for their own personal learning (Gordon, Dembo, &amp; Hovecar, 2007)</td>
<td>Goal orientations students hold for their academic achievement; can vary across domains or situations (Ames &amp; Archer, 1988)</td>
</tr>
<tr>
<td>Classroom Goal Structure</td>
<td>The enacted instructional practices of teachers that lead to student perception of classroom goal structure (Ames, 1992)</td>
<td>Student perceptions of the goal structure of the classroom (e.g., performance- or mastery-oriented) (Kaplan et al., 2002)</td>
</tr>
<tr>
<td>Perceptions of Student Goal Orientations</td>
<td>Teacher perceptions of student goal orientations, either as an individual student or as a whole class of students (Beghetto, 2007)</td>
<td></td>
</tr>
<tr>
<td>Perceptions of School or District Goal Structure</td>
<td>Teacher perceptions of the goal structure of the school (e.g., performance- or ability-oriented, or mastery-oriented) or district (Midgley et al., 2000)</td>
<td>Student perceptions of the goal structure of the school (e.g., performance- or ability-oriented, or mastery-oriented) or district (Midgley et al., 2000)</td>
</tr>
</tbody>
</table>

The terms *mastery* and *performance* are used as general categories for goal orientations. I will first describe each general orientation category and then describe the four specific types of goal orientation addressed in current literature. Students who hold mastery orientations are more likely to attribute success to effort rather than ability or luck. Students who hold performance orientations tend to attribute success and failure to a sense of fixed ability. For example, students may think they failed a test because they
just weren’t good at math. Students with mastery orientations who failed the same test may believe it was due to a lack of effort. Mastery-oriented students would most likely expend more effort studying for the next test, whereas performance-oriented students might believe that no amount of effort would make up for their fixed ability in math.

Goal orientations are related to the use of cognitive strategies, achievement outcomes, student interest and engagement in learning, and behavioral outcomes (Ames, 1992; Anderman & Maehr, 1994; Maehr & Midgley, 1991). Individuals who hold a mastery goal orientation direct behavior towards personal mastery of concepts or skills. For example, a student who holds a mastery goal orientation may use deeper cognitive processing strategies that help them understand content and recall information, and self-regulate more effectively (Anderman & Young, 1994; Nolen, 1988). These students may feel proud of their accomplishments, feel guilty if they do not work as hard as they expect themselves to work or to achieve at levels they expect of themselves, and have highly positive attitudes about and interest in learning. Mastery goal-oriented students tend to prefer challenging tasks, continue to put forth effort when presented with more difficult tasks (Elliot & Dweck, 1988); and seek help when needed (Karabenick, 2004; Ryan & Pintrich, 1997). In addition, there are positive relations among mastery-goal orientations, test scores and grades (Meece & Holt, 1993; Patrick et al., 1999). In a study of specific instructional interventions for students, Meece and Miller (1999) found that giving students challenging and lengthy tasks requiring extended effort and opportunities for peer work lessened students’ focus on performance goals. Individuals who hold a performance goal orientation direct behavior towards performing on a task relative to
others or to some set of performance standards, and have reported using rehearsal or memorization strategies (Anderman & Young, 1994; Kaplan & Midgley, 1997; Nolen, 1988). A student who is performance-oriented may choose the easiest method of accomplishing a task, and feel badly after failure.

The Approach-Avoidance Distinction

Goal orientations are currently discussed and studied in terms of approach and avoidance distinctions. Elliot and McGregor (2001) examined a 2 X 2 goal structure that differentiates among mastery-approach, mastery-avoidance, performance-approach and performance-avoidance orientations. Approach and avoid are described as valences of the mastery-performance dichotomy. Individuals with approach tendencies direct behavior towards a positive eventuality, such as success on a task, whereas individuals with avoid tendencies direct behavior away from a negative eventuality, such as avoiding failure (Ames, 1992).

A student who holds a mastery-approach orientation strives to develop skills and abilities, understand content, and master tasks. A student who holds a mastery-avoid orientation strives to avoid losing skills and abilities, worries about failing to learn content, and tries to avoid making mistakes or leaving tasks incomplete (Elliot & McGregor, 2001). Mastery-avoid oriented students also may be anxious about forgetting what they have already learned, as is the case for elderly persons concerned about diminished skills and abilities, athletes and professionals who feel ‘past their prime’, and perfectionists (Elliot, 2005).
A student who holds a *performance-approach* orientation works to outperform peers and to demonstrate ability (for example, to gain a high score relative to others on a test). Some studies have shown that students who hold *performance-approach* orientations may experience high intrinsic motivation and interest for tasks (Barron & Harackiewicz, 2001), although others have found different results (Linnenbrink, 2005; Midgley, Kaplan & Middleton, 2001). A student who holds a *performance-avoid* orientation works to avoid appearing less competent than others (Elliot & Covington, 2001; Elliot & McGregor, 1999). The *performance-avoid* oriented student also is less likely to take risks or seek help, and may experience negative outcomes such as learned helplessness (Karabenick, 2004; Ryan & Pintrich, 1997). *Performance-avoid* orientations are generally maladaptive (Ames, 1992; Anderman & Wolters, 2006; Elliot & Harackiewicz, 1996).

Mastery-approach and avoid, and performance-approach and avoid goal orientations are not mutually exclusive. A student could hold multiple goal orientations at the same time, in varying degrees and for the same task. Researchers have noted that the goal orientation of an individual may vary across domains and even across tasks and over time (Kaplan et al., 2002). In general the evidence is strong that adopting a mastery goal orientation is related to the widest array of adaptive outcomes (Anderman & Wolters, 2006).

There is also a connection to behaviors in the classroom. Performance-avoid goal-orientations are related positively to academic cheating, while cheating is negatively related to mastery goals (Anderman & Midgley, 2004; Niiya, Ballantyne, North &
Crocker, 2008). In a study of personal goals and classroom goal structures and classroom behavior, Kaplan, Gheen and Midgley (2002) found that students with personal mastery goals had less documented incidences of disruptive behavior, whereas students with performance-approach and performance-avoid goals tended to have a higher number of disruptive incidents.

**Student Perceptions of the Classroom Goal Structure and their Influence on Student Goal Orientations**

Researchers emphasize the interaction of individual and contextual variables in terms of students’ goals and engagement (Anderman & Anderman, 2000; Kaplan et al., 2002; Meece, 1991; Turner & Patrick, 2004). Students’ goal orientations are shaped by the classroom environment and are influenced by the teacher and the school at large (Ames, 1992; Blumenfeld, 1992; Meece et al., 2006). In fact, “classroom structures (are) viewed as precursors of students’ personal goal orientations” (Meece et al., 2006, p. 495).

Specific achievement goals are emphasized through the instructional practices a teacher employs in the classroom, including the way tasks are assigned, groups are formed, evaluative feedback and recognition is given, and the degree of student autonomy (Ames, 1992). Collectively, instructional policies and practices are perceived by students as classroom goal structures. A mastery goal structure is characterized by private evaluation of individual improvement and effort, challenging and relevant learning tasks, opportunities to collaborate with peers, effective strategy use, persistence and choice; and greater satisfaction for learning (Ames & Archer, 1988; Nolen, 2003;
A performance goal structure is characterized by public recognition and evaluation, the use of low-level cognitive strategies, and attributions of failure to lack of ability (Ames & Archer, 1988; Kaplan & Midgley, 1997). Studies have attempted to identify classroom practices that contribute to mastery or performance goal structures. However, it is difficult to parse out data collected from the complex classroom interactions in studies to describe the cognitive, affective, and behavioral elements of classroom environments that influence students’ goal orientations and perceptions of classroom goal structure. The elements are so deeply integrated that in some cases, researchers analyze the elements together, in pairs or groups, rather than isolate them. For example, Anderman, Andrzejewski and Allen (2011) addressed combinations of three core themes in high school classrooms. The themes of supporting understanding, building and maintaining rapport, and managing the classroom, all of which could be subsumed under the cognitive, affective and behavioral aspects of classroom environments. Meyer and Turner (2006) describe the integration of emotion, motivation, and cognition, arguably part of the cognitive and affective domains enacted through behavior. Emotions, learning and motivation are part of an integrated process and one is not necessarily a precursor to or outcome of another. These researchers have investigated the elements of a positive learning environment for students. In the next section, I review literature on aspects of the instructional climate for teachers as well as students: the support of teacher and student autonomy versus the control of behavior.
Autonomy Support versus Control

The introductory literature on goal orientations, particularly mastery goal orientations in the classroom, is closely connected with the research on psychological needs (Ryan, 1995). Descriptions of Intrinsically Motivated Behavior (IMB) describe the psychological and biological history of theories that articulate the need for growth. There are studies of naturalistic tendencies of humans and other animals. There is also a need to understand the psychological needs of teachers and the contexts that support them, as their motivations and behaviors have a direct impact on student learning.

Ryan (1995) elaborated the theory around IMB with a comprehensive view of integration in behavior. In essence, he argued that individuals are intrinsically motivated to seek experiences and integrate those experiences into the self. However, this generally occurs only when these individuals are supported by elements of autonomy, competence, and relatedness. In addition, people prefer to “be the ‘origin’ of their own behavior” (Ryan, p. 409).

Self-determination theory (SDT) claims these three innate human needs for psychological well-being, personal growth and development: competence (mastery), autonomy (control), and relatedness (belonging) (Deci & Ryan, 2008; Ryan & Deci, 2000). Competence is one’s general need for mastering the environment. SDT emphasizes intrinsic motivation, or the need to be competent and self-determining in one’s environment, as key to personal growth and development (Deci, 1980). Intrinsic motivation leads people to seek out and master challenge, to explore and to learn, which
satisfy the need to be competent and self-determining, but only when competence is attributed to a sense of personal control (Ryan & Deci, 2000). When people cannot be self-determining, or are not free to make choices or take responsibility for their actions, intrinsic motivation is diminished. In other words, intrinsic motivation decreases when people feel controlled, and their natural tendencies toward learning and creativity are dampened (Ryan & Deci, 2000). Deci and Ryan (1987) posited that events and interpersonal contexts can be perceived as autonomy-supportive or controlling, and perceptions of contexts may vary along a continuum between feeling autonomous, or self-determined, to feeling controlled. These authors specify that contexts themselves do not control people; rather, the psychological meaning people give to different contextual factors determines their ‘functional significance’ for a person’s motivation and self-determination (Deci & Ryan, 1987).

Characteristics of autonomy-support, or nurturing “inner-motivational resources” (Reeve, 2006, p. 225), include positive feedback (by affirming competence), interest, enjoyment, creativity, and better conceptual learning. Characteristics of control, or pressuring people toward specific outcomes, include rewards (particularly task-contingent rewards), threats and deadlines, evaluation and surveillance, greater tension or pressure, and learning in order to be tested or evaluated. Along this continuum, as a person moves from feeling autonomous to feeling controlled, their intrinsic motivation declines (Deci & Ryan, 1987).

Of particular significance to the present study are investigations of teacher support of student autonomy. Support for student autonomy is related to many positive
outcomes including increased engagement and improved student-teacher relations (Jang et al., 2010; Reeve, 2006). Three types of teacher autonomy support have been identified: organizational (i.e., student decisions about the management of daily classroom life); procedural (i.e., student choice of ways to convey content learning); and most significantly through cognitive autonomy support (i.e., providing students with opportunities for self-evaluation of progress) (Stefanou, Perencevich, DiCintio & Turner, 2004). Later in this chapter, I discuss how the aspect of autonomy support pertains to teachers as well.

Promoting choice, self-initiation of behavior and personal responsibility, all components of self-determination, lead to creativity, cognitive flexibility, and self-esteem (Deci, Vallerand, Pelletier & Ryan, 1991). School contexts can work to support autonomy and self-regulated learning, which contribute to the development of more self-motivated, invigorated and integrated students; or these contexts can work to control or pressure students towards performance. Research can contribute to the design of environments in classrooms and schools that enhance growth, performance and well-being (Ryan & Deci, 2000). In the following sections, I explore specific instructional practices that should be considered in the design of classroom and school environments, as they are related to students’ perceptions and, in turn, their intrinsic motivation and goal orientation towards learning.
Mastery-Focused Instructional Practices

Students’ perceptions of classroom goal structures are influenced by teacher practices (Ames & Ames, 1984). In the classroom and school environment, an emphasis on a mastery goal structure contributes to an optimal classroom environment for student learning (Assor, Kaplan, & Roth, 2002; Blumenfeld, 1992; Meece, 1991; Meece et al., 2006; Patrick, 2004; Patrick et al., 2001). It could be predicted that holding mastery goals increases student achievement. However, research on this is inconclusive (Anderman & Wolters, 2006). While some studies have shown mastery goals to be unrelated to measures of GPA or grades (Elliot, McGregor & Gable, 1999; Pintrich, 2000c), others have found a clear relation between mastery goals and classroom performance (Harackiewicz, et al., 2008; Linnenbrink-Garcia, 2008; Wolters, 2004).

A mastery goal structure is likely to be perceived when students are involved in choice and decision making; there are opportunities to interact with others and work collaboratively; there is flexible grouping based on interests and needs; and success is defined in terms of effort, progress, and improvement (Ames & Archer, 1988; Maehr, 1991). Epstein’s work with families (1989) identified dimensions that affect motivation. Researchers in education later adapted these for student motivation: task, authority, recognition, grouping, evaluation, and time; and the acronym TARGET was established. In each of these TARGET areas, there are teacher practices that can emphasize a mastery focus or a performance focus.
Patrick, Anderman, Ryan, Edelin and Midgley (2001) studied four classrooms that exhibited different motivational profiles and used observations to investigate teacher practices and discourses in these classrooms. Regarding task, content and procedures were observed to be similar across contexts. However, teachers differed in the level of participation and task engagement they expected and required of students. Teachers in perceived high-mastery classrooms articulated the necessity of active participation of all students in learning, and conveyed enthusiasm and enjoyment of learning in their classrooms. These teachers emphasized effort and assured students that making mistakes was part of learning. With regard to authority, high-mastery teachers discussed rules rarely after the first day of school, and then emphasized on-task behavior. Autonomy was present in high-mastery classrooms, with freedom of movement and choice prevalent, while recognition given to students was task-related; students were praised for effort or redirected with specific feedback for improvement. Social behaviors evident in high-mastery classrooms included encouragement of students talking with each other and helping each other on tasks. Teachers shared personal information with students, showed respect for students as individuals, and conveyed confidence in students’ learning abilities. High-mastery teachers made themselves available to students for help, and encouraged students to seek help from peers. Together, these practices describe the purpose for learning in a given classroom situation (Maehr & Midgley, 1991).

More recently, Patrick and Ryan (2008) explored the types of teacher practices students attend to in their appraisal of their classroom’s mastery goal structure. Students were administered a mastery goal structure scale and asked to describe the teacher’s
words or actions that led them to their rating. Students’ responses were coded thematically, and researchers found that students attend primarily to three TARGET practices in ways consistent with research: tasks, recognition, and evaluation. Students frequently noted how their teacher related to themselves and other students as ways the teacher communicated mastery goals, including caring and supportive behaviors, respect, and use of humor. This finding is consistent with research that students perceive the social aspects of the classroom, including respect, rapport and classroom management, as contributing to a classroom mastery goal structure (Anderman, Andrzejewski & Allen, 2011).

Freeman and Anderman (2005) examined rural and urban middle school classrooms and found an increase in personal mastery goals and perceived mastery goal structure in rural classrooms over time. Using teacher and principal questionnaires and classroom observations to explore further, rural teachers exhibited higher self-efficacy for teaching than urban teachers, and classroom observations produced evidence of a mutually respectful environment that supported students’ personal mastery goals and contributed to perceptions of a classroom mastery goal structure. The authors suggested considering a stable and orderly environment as part of the TARGET framework (Freeman & Anderman, 2005).

Students’ sense of belonging is another prominent area of the literature that contributes to a mastery goal structure in the classroom (Kember, Ho & Hong, 2000; Stevens, Hamman & Olivarez, 2007; Walker, 2010). Anderman (2003) found that students’ sense of belonging declined over time during middle school, and the teacher
practice of promoting respect in the classroom helped to diminish this decline. Students who experience a decline in mastery goal structure from one grade level to the next may be especially affected by the classroom goal structure. Urdan and Midgley (2003) found that students who perceived a decline in classroom mastery goal structure from 5th to 6th grade experienced significantly lower individual mastery goals, GPA, self-efficacy, and positive affect in school, and higher negative affect in school.

The benefits of a classroom mastery goal structure to students extend still further. Students may value the subject more when they experience a mastery goal structure in the classroom (Anderman, Eccles, Yoon, Roeser, Wigfield & Blumenfeld, 2001). Students’ coping strategies and general positive feelings about learning increase, and students are more likely to seek the help they need (Kaplan & Midgley, 1999; Karabenick, 2004; Ryan & Pintrich, 1997; Turner et al., 2002). Perceived mastery-oriented classrooms have been found to exhibit low rates of maladaptive student behaviors, including not asking for help when needed, self-handicapping, disruptive behaviors and cheating (Kaplan et al, 2002)

**Performance-focused Instructional Practices**

Studies have outlined the types of instructional practices indicative of a performance-oriented classroom. Ability or performance-oriented classrooms are characterized by instructional practices that promote competition with peers, social comparison, grouping by ability, public performance and behavior evaluations, grading
based on relative ability to peers, fewer choices and less collaborative work (Maehr & Midgley, 1991).

Teachers in perceived high performance-focused classrooms emphasize grades and formal assessments more than mastery-focused teachers, and publicly reward students with correct answers (Patrick et al., 2001). A performance goal structure has been found to be related to both academic achievement and valuing of content in school. Nolen (2003) found lower science achievement in students who collectively perceived a classroom performance goal structure with a focus on comparative ability and correct answers. Anderman and colleagues found that mastery-focused instructional practices did not predict the valuing of math and reading, yet performance-focused instructional practices were related to declines in student valuing of math and reading (Anderman et al., 2001).

Perceptions of a performance goal structure are associated with maladaptive forms of coping, negative feelings about school and learning, and avoidance of help-seeking (Kaplan & Midgley, 1999; Karabenick, 2004). Performance-focused instructional practices that compare students to each other based on relative ability are related to students’ use of self-handicapping strategies such as procrastination (Urdan, Midgley, & Anderman, 1998), and are related to cheating in the classroom (Anderman, Griesinger & Westerfield, 1998).
Controlling Practices

Controlling is “the interpersonal sentiment and behavior teachers provide during instruction to pressure students to think, feel, or behave in a specific way” (Reeve, 2009, p.159). Teacher behaviors to control students or to support student autonomy affect student motivation (Deci et al., 1991). Further, the use of controlling practices by teachers weakens students’ self-determination and impairs performance (Flink et al., 1990).

Controlling practices or strategies are described as “directives, evaluation, avoidance of providing choice options” (Flink et al., 1990, p.916). It is an enigma that although students benefit in multiple ways from autonomy-supportive teachers, there is a widespread use of controlling practices, which often work against efforts to increase motivation and engagement in the classroom (Assor, Kaplan, Kanat-Maymon & Roth, 2005). Flink et al. (1990) found that teachers’ self-reported use of controlling strategies was related to students’ decreased perceptions of competence, lowered self-determination, and poor scores on achievement tests. However, these researchers also found that controlling strategies “affected student’s performance only when teachers were pressured” (Flink et al., p. 922). To set up the pressure condition, teachers were told that their job was to make sure students performed ‘up to standards’ on specific tasks, and that their students should do well if tested.

Why would teachers adopt a controlling style when the result is unmotivated learners and poor performers or underachievers? One reason may stem from the
pressures from school administrators (Pelletier, Seguin-Levesque & Legault, 2002).

“The more teachers perceive pressure from above (they have to comply with curriculum, with colleagues, and with performance standards) and pressure from below (they perceive their students to be non-self-determined), the less they are self-determined toward teaching. In turn, the less they are self-determined toward teaching, the more they become controlling with students” (Pelletier et al., 2002, p.186).

Studies have shown the effects of performance standards on teaching practices, and the conditions that lead teachers to be more controlling with their students. For example, Deci, Spiegel, Ryan, Koestner and Kauffman (1982) found that informing teachers they are responsible for their students’ performance on standards led them to be more controlling. These teachers talked more, were more critical of the students, gave more commands, and allowed less choice and autonomy. Alternatively, Roth, Assor, Kanat-Maymon and Kaplan (2007) found that teachers’ self-reported autonomous motivation for teaching promoted students’ self-reported autonomous motivation for learning by enhancing teachers’ autonomy-supportive practices, such as choice in how to complete tasks and articulating reasons for studying content.

Teachers’ inclinations to be controlling or promote autonomy are not stagnant. On the contrary, there are indications that autonomy-supportive practices can be taught. Reeve, Jang, Carrell, Jeon and Barch (2004) found that once teachers were trained in the use of autonomy-supportive methods, the use of these methods in the classroom was significantly increased in comparison with untrained teachers. Moreover, as teachers increased their use of autonomy support practices, their students’ engagement increased.
An important reason to study the effects of controlling practices on student motivation and achievement is found in the research, particularly in research that describes student perceptions of teacher control. Deci, Schwartz, Sheinman and Ryan (1981) designed a measure to assess teachers’ orientations of autonomy and control in the classroom. Short vignettes and questionnaire items were constructed and administered to assess teacher orientations in grades K-6 in two schools. The teachers’ control and autonomy scores correlated with students’ perceptions of teacher autonomy and control orientations. To further explore the relations among teacher orientation and student outcomes, Deci and colleagues gathered data on students’ intrinsic motivation and self-esteem in those classrooms. The results indicated that students of autonomy-oriented teachers were more intrinsically motivated and had higher self-esteem than students of more control-oriented teachers.

Boggiano and Katz (1991) predicted that teacher’s use of controlling practices influences students towards an extrinsic motivational orientation, as it emphasizes external reasons for learning. These controlling practices, which included evaluation, the use of ‘ought to’ and ‘should’ statements, and extrinsic incentives, increased students’ vulnerability to helpless achievement patterns, and reduced feelings of control. When controlling directives are prominent in the classroom, intrinsically motivated students respond to the feedback as informative, but extrinsically motivated students respond to the feedback as controlling. In an Israeli study, Assor and his colleagues proposed that negative emotions, extrinsic motivation, and a-motivation act as mediators of the effect of Directly Controlling Teacher Behaviors (DCTB) on student engagement in learning.
DCTBs are defined as “explicit attempts to fully and instantly change the behaviors children presently engage in or the opinions they hold” (Assor et al., 2005, p. 398). Student perception data were gathered using a questionnaire administered by researchers without the teacher present. Teachers were asked to assess student engagement in their classes in terms of frequency of observed behaviors for intensive academic engagement, including task persistence, for example. Using path analyses and tests of mediation, the researchers concluded that DCTBs including directives, interference with students’ preferred learning pace, and not allowing critical and independent opinions, were harmful to students, as they led to anger and anxiety, a-motivation and extrinsic motivation (Assor et al., 2005). While this study was conducted with elementary school students and their teachers, research has shown that the frequency of DCTB increases in middle school (Eccles & Midgley, 1989).

Why do teachers choose to use mastery-focused, performance-focused or controlling practices? What influences teachers as they plan and carry out classroom practices including rewards and incentives, feedback and recognition, and instructional tasks? In the following sections, each independent variable in the proposed models is described in the ways each contributes to the use of these instructional strategies.

**Teacher Goal Orientations for Teaching**

Teacher’s achievement goals for teaching are related to their instructional practices and students’ perceptions of teacher behaviors. A teacher who holds a mastery orientation for teaching expends effort to learn and improve professional skills and
knowledge. Teachers with performance-approach orientations strive to be better teachers than their peers; and those with performance-avoid orientations for teaching try to avoid having less teaching ability than others. Finally, teachers who hold work-avoid orientations try to get through their day without expending a lot of effort (Butler, 2007). Butler and Shibaz (2008) found that a mastery goal orientation for teaching was positively correlated with teacher support of question-asking and help-seeking, and negatively correlated with student perceptions of teacher inhibition of these behaviors. A performance-avoid orientation for teaching was positively associated with students’ perceptions of teacher inhibition and student cheating, and negatively associated with perceived support.

Beghetto (2007) studied prospective teachers’ perceptions of student goal orientations and their perceptions of personal past goal orientations to find possible correlations between prospective teachers’ past school experiences and their current beliefs. In Beghetto’s (2007) study, prospective teachers with reported past mastery goal orientations were more likely to perceive students as mastery oriented. Prospective teachers who reported past performance-approach orientations tend not to perceive students as mastery oriented. Beghetto found there was a negative relation between the number of teacher education courses taken by prospective teachers and their performance-approach beliefs about students. Critical to teacher learning, this suggests that an increased number of teacher education courses might affect certain motivational beliefs. Particularly salient in this study was the prospective teacher responses to open-ended questions regarding their beliefs about students’ performance-avoidance goals, as
related to prospective teachers’ own past goal orientations. Teachers who reported performance-approach orientations tended to view students with performance-avoid orientations as ‘lazy’. Findings from this study raise more questions about the link between teacher beliefs about student orientations and classroom practices that promote or discourage a mastery goal orientation. The findings encourage additional research into teacher goal orientations as they influence beliefs about student orientations and classroom practices. The use of long-term approaches that directly address new teachers’ beliefs and experiences have shown potential (Hammerness et al., 2005). Graber (1996) found that common, strong programmatic messages spread across five semesters in an intervention format led to a strong influence on new graduates’ teaching beliefs. Practicing teachers’ beliefs and concerns are of primary importance for instructional leaders and professional developers in schools today.

Future studies are suggested to examine the professional development of prospective teachers for how perceptions of past orientation are identified and addressed, and to assist educators in developing skills that support avoidant students (Beghetto, 2007). These suggestions also identify the need to study practicing teachers’ personal goal orientations for teaching and learning. Additional studies may provide practical assistance for teacher educators and instructional leaders to help teachers identify and address such beliefs about help seeking for professional growth.

Other studies help shed light on teachers’ goal orientations and the relations of those goal orientations to their perceptions of students’ goal orientations. Myers (2008) studied the disparities of learning goals between college faculty and college students.
Faculty and students held different sets of learning goals. In addition, faculty and students tended to disagree on the priority of the eight common learning goals: critical thinking, basic academic skills, career preparation, scientific reasoning, personal development, mastery of discipline content, citizenship and values, and art and cultural appreciation. Although many faculty expressed the value that knowing students’ personal goals for learning would assist them in development of appropriate curricula, few faculty implemented practices that would gather that information. Results from the study suggest that “teaching and learning and, ultimately, students’ development may be affected by the different learning goals held by students and their faculty” (Myers, p. 56, italics added).

Butler (2007) proposed that achievement goal theory could be applied not only to student and teacher learning, but also to teaching. The Goal Orientations for Teaching measure (Butler, 2007) was developed to assess teachers’ achievement goal orientations for teaching, including mastery, ability-approach, ability-avoid and work-avoid orientations. This study also included measures of teacher help-seeking to inform teacher motivation. Help-seeking was measured in terms of teacher perceptions of the benefits of help-seeking, frequency of help-seeking, teacher preferences for receiving autonomous and expedient help, and teacher perceptions of organizational support for help-seeking. Teachers who indicated a mastery goal orientation for teaching were more likely to report greater frequency of help-seeking, more positive perceptions of help-seeking and the preference for autonomous help, and teachers who reported motivations to avoid being seen as lower in ability reported avoiding help-seeking, and negative perceptions of help-
seeking behaviors. Teachers who held work-avoid orientations for teaching tended to prefer expedient help, or help in which the problem was solved without the teachers’ effort (e.g., getting the principal to deal with student behavior). These results provide evidence of the link between teachers’ goal orientations for teaching and their learning behaviors and perceptions.

There is a growing interest in the relation between teachers’ personal learning goals and goal orientations and their achievement goals for teaching (Butler, 2007; Gordon et al., 2007; Roeser et al., 2002). Interest in this topic may be furthered fueled by a current national emphasis on teacher learning and growth that includes high quality professional development and improved teacher education programs (Wei, Darling-Hammond & Adamson, 2010). The national context promotes increased research on teacher goal orientations for both personal learning and for teaching.

Recently, Gordon, Dembo and Hocevar (2007) studied teachers’ learning behaviors and their relation with instructional practices in the classroom. Specifically, they hypothesized that teachers’ own learning behaviors influenced classroom goal structures and beliefs about control. The results of this study indicate that teachers who are self-regulated learners tend to believe that students should also become self-regulated learners, and their teaching practices reflect this belief. Teachers who value autonomy tend to provide opportunities for student autonomy in the classroom. This enforces the need for teachers to be aware of their own beliefs about learning and the goal orientations they hold, and how those beliefs impact the teaching strategies and broader classroom goal structure they create. In addition, the amount of autonomy support a principal
provides for teachers may impact teacher practices and the school goal culture that is created.

**Principal Autonomy Support**

Three ways teacher behaviors enhance autonomy broadly include fostering relevance, providing choice, and allowing criticism (Assor et al., 2002). These three ways may be applied to administrator and district support of teacher autonomy in the context of schools. Teachers have a *natural* tendency toward growth, but it may often be dampened by controlling contexts; this same tendency toward growth may be fostered with contexts that facilitate autonomy, competence and relatedness in specific ways (Reeve, 2002). Deci and his colleagues (1991) also summarized research that the pressures and control placed on teachers by their superiors *increased* the controlling behaviors of teachers with students.

Evidence in the literature indicates that teachers may have a real need to continue their learning, and work in environments that support their intrinsic motivation and self-determination. The psychological needs for autonomy, competence, and relatedness (Reeve, 2002) are present for our teachers, and if not met, lead to undesirable contexts for our teachers and students. Assor et al. (2005) state that “directly controlling teacher behaviors can stem from multiple sources, including *controlling principal behavior* or organizational context, student behavior, and teacher’s personal dispositions” (p. 398, italics added). Research therefore indicates the need for an autonomy-supportive context for teacher growth and development. As support for autonomy assists students in our
classrooms, so does that support assist their teachers. For, “just as children need autonomy-oriented classrooms to be intrinsically motivated and to perceive themselves as competent, teachers need an autonomy-oriented context within which to benefit from feedback about their own orientations” (Deci et al., 1981, p 649).

Creating an autonomy-supportive context for teachers may not be as simple as it sounds. Professionals may avoid seeking help when there are hierarchical relationships with supervisors (Ladany, Hill, Corbutt & Nutt, 1996), and as result teachers may hesitate to ask the principal for assistance when the principal is viewed as an authority with evaluative power. Teachers who work with colleagues who face similar challenges with teaching and learning can provide a support system in which teachers feel emotionally and psychologically safe to express difficulty without repercussions. In this way, teachers can seek help and reciprocate with peers to promote adaptive learning. Personal and contextual supports for teachers are important. These supports can originate from administrators and colleagues, as well as from staff development opportunities.

Research suggests that perceived school goal structure might also impact teachers’ achievement goals, and that the administrator who creates a mastery goal structure in the school with teachers supports the kind of school climate that promotes teacher growth and development (Butler, 2007). In the following section, I address school goal structures that influence teachers and the students they serve.
School Goal Structures

Policies and procedures of schools and districts convey the purpose and meaning of education to staff and students, and indicate to the public the value that is placed on certain aspects of schooling (Kaplan & Maehr, 1999; Maehr, 1991; Maehr & Anderman, 1993; Maehr & Midgley, 1991). Maehr and Midgley (1991) proposed that schools, in addition to classrooms, could be restructured to positively affect student motivation and learning, and that goal orientation theory could be used as a springboard for schoolwide practices that promoted the adoption of mastery goals among students. For example, teacher efforts to create mastery-oriented classrooms can be undermined by school policies and procedures that promote performance and comparison, such as school-level honor roll systems, essay contests with monetary rewards, a wall of student stars for rankings on high-stakes achievement tests, and so on. A teacher’s classroom is part of the larger social system of the school, and changes in the classroom are difficult to sustain if the polices of the school as a whole are not reflective of those changes (Maehr & Midgley, 1991).

Using goal theory as a framework, these researchers described ways that school could implement reforms based on the TARGET framework (previously described). Policies and procedures of the school were considered to assist administrators and teacher leaders in reframing practices to reflect a mastery orientation of the school, and in turn, enhance student motivation for learning. For example, school programs designed to: challenge all students and emphasize goals for learning and self-assessment of progress; promote enjoyment of learning; provide choice and flexibility in instructional activities;
give awards for “personal bests” rather than recognition based on ability; de-emphasize public references to grades and test scores that compare students’ achievement (Maehr & Midgley, 1991). Maehr (1991) stressed a need to further the research on schoolwide goal structures as parallel research to classroom goal structures, to provide a theoretical base with practical use for school organization and management that enhances student motivation.

On a school-wide scale, Kaplan and Maehr (1999) found that schools that emphasize mastery goals are more conducive to African American students’ academic success and well-being than those that emphasize performance goals. Specifically, seven dimensions of school culture were identified that promote emphasis on task goals in ethnically heterogeneous schools: academic tasks, distribution of authority, recognition, grouping, evaluation practices, use of time and social norms. Schools that adopt mastery goals change the very nature of learning with policies and practices that affect every area of school life, from hallways and auditoriums to classrooms and gymnasiums, and consistently ask the question “What is worth doing and why?” (Maehr & Anderman, 1993, p. 595).

Roeser, Midgley and Urdan (1996) conducted a study of middle school students’ perceptions of school goal structures (mastery and performance), and personal goals [task (mastery) and ability (performance)]; they found that perceptions of a mastery school goal structure were related positively to academic self-efficacy, mediated through personal mastery goals. Perceptions of a performance school goal structure were related to self-consciousness in academic situations, mediated through personal performance
goals. The results of this study suggest that perceptions of school policies and procedures that emphasize individual effort and improvement contribute to more adaptive patterns of learning than schools perceived as emphasizing performance and competition. These researchers point out the need for dialogue around de-emphasis of school policies and procedures such as honor roll assemblies, privileges for ‘smarter’ students, and competition among students; in other words, recognition based on ability and performance rather than individual effort and growth (Roeser et al., 1996). Practices such as these are prevalent in schools today, and often school personnel consider these incentives that promote student motivation, although much research has been done about the detriments rewards and recognition have on intrinsic motivation (Deci, Koestner & Ryan, 2001).

Two decades ago, Deci and his colleagues (Deci et al., 1982) concluded from a study of the effects of performance standards on instructional practices, that when teachers are pressured toward specific outcomes, specifically making their students perform up to standards, they may use more controlling practices with their students which, in turn, could diminish the intrinsic motivation of students. This research is highly relevant in 2012, when schools and school systems are testing students ever more frequently and with higher stakes attached to the assessments for students as well as their teachers. Administrators who place high emphasis on student test scores may create performance-oriented school structures in which teachers are discouraged from help-seeking and teacher growth is inhibited (Butler, 2007). Moreover, there is a tendency for administrators to evaluate teachers’ performance positively when controlling strategies
are used in the classroom, so teachers may experience pressure from their administrators to use controlling strategies (Boggiano & Katz, 1991).

**Proposed Models**

I hypothesize that in the face of multiple reforms, the willingness to change, the will to learn, and support for teacher goal orientations for teaching may interact in complex ways. In contrast to the facilitative environment students need for psychological growth (Reeve, 2002), individuals who feel more controlled in their work life will feel less autonomous (Ryan, 1995). It follows that teachers who are working in schools or districts in which they feel controlled will feel less autonomous, experience fewer optimal challenges, will potentially feel less a part of the system and will not function integratively, which will influence their goal orientations for teaching and ultimately the instructional practices that they use in their classrooms daily. Ignoring the psychological needs of teachers and the contextual supports for fulfilling those needs, particularly the need for autonomy support, seems to work in opposition to the desire to see our schools and students flourish.

Three models are proposed to describe the complex relations among teacher perceptions of principal autonomy support, teacher perceptions of school goals for students, self-reported teacher achievement goals for teaching, and self-reported instructional practices.
Chapter 3: Methods

Introduction

The methodology presented in this chapter describes the procedures used to test three models. The goal of this study was to explore and describe the relations among teacher perceptions of school goal structures, teacher perceptions of principal support, goal orientations for teaching, and self-reported instructional practices. To achieve this, three questions guide the study.

1. What is the relation among teacher perceptions of school mastery goals for students, self-reported teacher mastery goals for teaching, teacher perceptions of principal autonomy support, and self-reported mastery-focused instructional practices?

2. What is the relation among teacher perceptions of school performance goals for students, self-reported teacher performance goals for teaching, teacher perceptions of principal autonomy support, and self-reported performance-focused instructional practices?

3. What is the relation among teacher perceptions of school performance goals for students, self-reported teacher performance goals for teaching, teacher perceptions of principal autonomy support, and self-reported teacher’s controlling practices?
Research Design

The research design for this study is descriptive, between-participants, correlational survey research. An instrument was administered online that measured perceptions of teachers from seventy-five elementary schools in a large urban district. Survey research was selected as an effective way to measure perceptions and includes the benefits of low cost, anonymity of participants, the potential for quick responses, and time for thoughtful answers (Ary, Jacobs, Razavieh & Sorenson, 2006).

Three Conceptual Models. Three models were used in this study. For each model, the outcome variable was a type of instructional practice. The first model focused on predicting mastery practices in the classroom, the second on predicting performance practices and the third predicting controlling practices.

Model 1: Mastery-focused Instructional Practices. Model 1, labeled Mastery-focused Instructional Practices for the dependent variable, indicates teacher perceptions of principal autonomy support, teacher perceptions of school mastery goal structure for students, and teacher mastery goal orientation for teaching as predictors of self-reported mastery-focused instructional practices. In this model, the degree and quality of principal support for teachers; how teachers perceive the school environment, in terms of a focus on student mastery of concepts and individual student academic growth; and the degree of a teacher’s mastery goal orientation toward teaching predict a teacher’s self-reported use of mastery instructional practices that emphasize individual student academic progress.
**Model 2: Performance-focused Instructional Practices.** Model 2, Performance-focused Instructional Practices, indicates teacher perceptions of principal autonomy support, teacher perceptions of school performance goal structure, teacher performance-approach, performance-avoid, and work-avoid goal orientations for teaching as predictors of self-reported performance instructional practices. In this model, the degree and quality of perceived principal support for teachers; how teachers perceive the school environment, in terms of a focus on student performance and comparisons of student academic achievement; and the degree of a teacher’s performance orientation toward teaching predict a teacher’s self-reported use of instructional practices that emphasize student to student comparison and student performance on assessments.

**Model 3: Controlling Practices.** Model 3, Controlling Practices, indicates teacher perceptions of principal autonomy support, teacher perceptions of school performance goal structure, teacher performance-approach, performance-avoid and work-avoid goal orientations for teaching as predictors of teacher’s controlling practices. In this model, the degree and quality of principal support for teachers; how teachers perceive the school environment, in terms of a focus on student performance and comparisons of student academic achievement; and teacher’s orientations for teaching predict teacher’s self-reported use of controlling classroom practices that emphasize student compliance.

**Variables.** According to research by Midgley et al. (2000), perceptions of a school goal structure can be measured by evaluating the relations between the learning environment and student motivation, affect, and behavior. The predictor variables in this study included perceptions of mastery and performance school goal structures; mastery,
performance-approach, performance-avoid, and work-avoid goal orientations for teaching; perceptions of principal support; and demographics. The demographic variables included gender, years of teaching, socioeconomic status of the school as measured by percentage of free and reduced lunch, and school size as measured by the number of students enrolled. The independent variables in this study were naturally occurring. School contexts and individual differences were examined.

**Approach to Sampling.** The entire population of teachers in elementary schools in one large urban district were recruited to measure perceptions of the teachers from the seventy-five elementary schools. The instrument was administered by the researcher through an electronic medium. An equal opportunity was given to all teachers to complete one questionnaire. The data sample includes those teachers who elected to complete the instrument and were currently employed elementary school teachers in the district.

**Participants and Conditions of Measurement.** The elementary schools sampled for this study were the total number of elementary schools in one large urban school district in a Midwestern state. The target population for this study was elementary teachers in the seventy-five specified, diverse elementary schools in a large urban school district. The teachers ranged in experience from 0 to 35 years of teaching. To control for new teacher practices and beliefs, there was a question on the survey to indicate number of years of total teaching and a question to indicate number of years teaching in the current school (see Appendix B for the full measure). The 75 elementary schools varied widely in the number of teachers on staff, ranging from 7 to 43, with approximately 1500
total teachers identified for this study. This meets the criteria for a multilevel study (Raudenbush & Bryk, 2002).

Gender and years of teaching experience are demographic variables in this study. Participants self-reported these variables on the demographics portion of the questionnaire. The exclusion criteria for participants was release from employment or the transfer to another position in the district that was not an elementary teaching position. Teachers are reassigned in the district after a week in early autumn which verifies student enrollment. I controlled for this by distributing the survey after the district settled on final placements for its teaching staff. No employment ramifications occurred for those that elected or did not elect to complete the instrument.

**Measure Development.** In this study, I evaluated teacher perceptions of the school goal structure for students, perceived principal support, teachers’ self-reported goal orientations for teaching, and teachers’ self-reported instructional practices. A questionnaire was utilized for the present study. This questionnaire was developed from the following established measures: Patterns of Adaptive Learning Scales (Midgley et al., 2000), Teacher Goal Orientations for Teaching scale (Butler, 2007), and Work Climate Questionnaire (Baard, Deci & Ryan, 2004). Table 3.1 details each construct and the measurement of the construct.
### Table 3.1. Constructs and Measurement

<table>
<thead>
<tr>
<th>Construct</th>
<th>Measurement of Construct</th>
</tr>
</thead>
<tbody>
<tr>
<td>School mastery goal structure</td>
<td>PALS Teacher Scales: Perceptions of the Mastery Goal Structure for Students (7 items)</td>
</tr>
<tr>
<td></td>
<td>(Midgley et al., 2000)</td>
</tr>
<tr>
<td>School performance goal structure</td>
<td>PALS Teacher Scales: Perceptions of the Performance Goal Structure for Students (7 items)</td>
</tr>
<tr>
<td></td>
<td>(Midgley et al., 2000)</td>
</tr>
<tr>
<td>Mastery goal orientation for teaching</td>
<td>Teacher Goal Orientations for Teaching Scale: Mastery Goal Orientation (4 items) (Butler,</td>
</tr>
<tr>
<td></td>
<td>2007)</td>
</tr>
<tr>
<td>Performance-approach goal orientation for teaching</td>
<td>Teacher Goal Orientations for Teaching Scale: Performance-approach Goal Orientation (4</td>
</tr>
<tr>
<td></td>
<td>items) (Butler, 2007)</td>
</tr>
<tr>
<td>Performance-avoid goal orientation for teaching</td>
<td>Teacher Goal Orientations for Teaching Scale: Performance-avoid Goal Orientation (4</td>
</tr>
<tr>
<td></td>
<td>items) (Butler, 2007)</td>
</tr>
<tr>
<td>Work-avoid goal orientation for teaching</td>
<td>Teacher Goal Orientations for Teaching Scale: Work-avoid Goal Orientation (4 items)</td>
</tr>
<tr>
<td></td>
<td>(Butler, 2007)</td>
</tr>
<tr>
<td>Mastery-focused instructional practices</td>
<td>PALS Teacher Scales: Mastery Approaches to Instruction (4 items) (Midgley et al., 2000);</td>
</tr>
<tr>
<td></td>
<td>Intrinsic-focused Approach to Teaching scale (2 items) (MAST, 1998)</td>
</tr>
<tr>
<td>Performance-focused instructional practices</td>
<td>PALS Teacher Scales: Performance Approaches to Instruction (5 items) (Midgley et al.,</td>
</tr>
<tr>
<td></td>
<td>2000); 2 additional items constructed by the researcher (Leigh, 2012)</td>
</tr>
<tr>
<td>Controlling practices</td>
<td>Controlling Strategies Approach to Teaching Scale (4 items) (MAST 1998)</td>
</tr>
<tr>
<td>Principal autonomy support</td>
<td>Perceived Autonomy Support: Climate Questionnaires: Work Climate Questionnaire (6 items)</td>
</tr>
<tr>
<td></td>
<td>(Baard et al., 2004)</td>
</tr>
</tbody>
</table>
In the next section, the Cronbach’s alpha from prior studies is reported for each scale of the instrument. Cronbach’s alpha is an internal consistency reliability coefficient that measures the homogeneity of the scale; that is, that the items measure one construct rather than multiple constructs. Cronbach’s alpha is a reliable measure for use in one administration (Ary et al., 2006).

**Patterns of Adaptive Learning Scales.** According to research by Midgley et al. (2000), goal orientations can be measured by the *Patterns of Adaptive Learning Scales* (PALS). The Patterns of Adaptive Learning Scales (Midgley et al., 2000) measure personal achievement goal orientations of students, the perceptions of teacher goals, the student perceptions of the goal structures in the classroom, achievement-related beliefs, attitudes and strategies; and perceptions of parents and home life. PALS is a well-established measurement instrument (Bong, 2009; Pintrich, 2000c; Retelsdorf et al., 2010).

**Independent Variables**

*School Goal Structure: School Mastery Goals.* The variable perceptions of school goal structure for students: mastery goal structure, was measured with seven items from the PALS Teacher Scales: Perceptions of the School Goal Structure for Students: Mastery Goal Structure for Students. Internal consistency for the Mastery Goal Structure for Students portion of the PALS measure was reported with Cronbach’s alpha of .81 (Midgley et al., 2000). Sample items include “The importance of trying hard is really stressed to students”; “Students are told that making mistakes is OK as long as they
are learning and improving.” There were no modifications made to these items for this study. The full scale is presented in Appendix B.

School Goal Structure: School Performance Goals. The variable **perceptions of school goal structure for students: performance goal structure** was measured with six items from the PALS Teacher Scales: Perceptions of the School Goal Structure for Students: Performance Goal Structure for Students. Internal consistency for the Performance Goal Structure for Students portion of the PALS measure was reported with Cronbach’s alpha of .70 (Midgley et al., 2000). Sample items include “Students who get good grades are pointed out as an example to others”; “Students hear a lot about the importance of getting high test scores.” There were no modifications made to these items for this study. The full scale is presented in Appendix B.

Teacher Goal Orientations for Teaching: Mastery Goal Orientation. The variable **mastery goal orientation for teaching** was measured with four items from Teacher Goal Orientations for Teaching scale (Butler, 2007). Internal consistency for the Mastery portion of the Teacher Goal Orientations for Teaching measure was reported with Cronbach’s alpha of .70. (Retelsdorf et al., 2010). Sample items include “…I learned something new about myself as a teacher”; “Something that happened in class made me want to deepen my professional knowledge.” There were no modifications made to these items for this study. The full scale is presented in Appendix B.

Teacher Goal Orientations for Teaching: Performance-approach Goal Orientation. The variable **performance-approach goal orientation for teaching** was
measured with four items from the Teacher Goal Orientations for Teaching scale (Butler, 2007). Internal consistency for the Ability Approach portion of the Teacher Goal Orientations for Teaching measure was reported with Cronbach’s alpha of .80. (Retelsdorf et al., 2010). Sample items include “I was praised for having high teaching ability relative to other teachers”; “My classes scored higher on an exam than those of other teachers.” One modification was made on item 7j: the word “exam” was changed to “test” to accommodate current language used by elementary teachers in the study’s demographic area. The full scale is presented in Appendix B.

**Teacher Goal Orientations for Teaching: Performance-avoid Goal Orientation.**

The variable **performance-avoid goal orientation for teaching** was measured with four items from Teacher Goal Orientations for Teaching scale (Butler, 2007). Internal consistency for the Ability Approach portion of the Teacher Goal Orientations for Teaching measure was reported with Cronbach’s alpha of .71 (Retelsdorf et al., 2010). Sample items include “In a meeting the principal did not include me as one of the teachers having difficulty”; “I didn’t ‘mess up’ in any of my classes.” One modification was made on item 7p: the word “exam” was changed to “test” to accommodate current language used by elementary teachers in the study’s demographic area. The full scale is presented in Appendix B.

**Teacher Goal Orientations for Teaching: Work-avoid Goal Orientation.**

The variable **work-avoid goal orientation for teaching** was measured with four items from Teacher Goal Orientations for Teaching scale (Butler, 2007). Internal consistency for the Work Avoid portion of the Teacher Goal Orientations for Teaching measure was reported
with Cronbach’s alpha of .78 (Retelsdorf et al., 2010). Sample items include “I got through the day OK without having to work too hard”; “Some of my classes were cancelled.” One modification was made on item 7b: the word “mark” was changed to “grade” to accommodate current language used by elementary teachers in the study’s demographic area. The full scale is presented in Appendix B.

**Principal Autonomy Support.** Principal Autonomy Support was measured with six items from the Work Climate Questionnaire, part of the larger Perceived Autonomy Support: Climate Questionnaires (Baard et al., 2004). The items were modified for this study to refer to the manager of the workplace as the principal of the school. Internal consistency for the Work Climate Questionnaire measure was reported with Cronbach’s alpha of .90 (Baard et al., 2004). The modification that was made on all items on this scale was that the word “manager” was changed to “principal” to accommodate current language used by elementary teachers to describe their direct supervisor or manager. Sample items include “I feel that my principal provides me with choices and options”; “My principal listens to how I would like to do things.” The full scale is presented in Appendix B.

**Criterion Variables: Instructional Practices**

**Mastery-focused Instructional Practices.** The variable **mastery-focused instructional practices** was measured with four items from the Patterns of Adaptive Learning Scales (Midgley et al., 2000) and two items from the intrinsic-focused approach to teaching scale (MAST, 1998). Internal consistency for the Mastery Approaches to
Instruction portion of the PALS measure was reported with Cronbach’s alpha of .69 (Midgley et al., 2000). Items 8k and 8q were added from a later modification of PALS. Two additional items were added to assure an acceptable alpha level. These items are numbers 8h and 8o on the questionnaire. Item number 8h, “I frequently ask my students to explain and illustrate their line of thought”, is adopted from the Cognitive Autonomy Support Measure, that was found to have a Cronbach’s alpha of .79 (Retelsdorf et al., 2010). Item number 8o, “I don’t allow students to move on until they have mastered a concept” was developed by the researcher for this study. Sample items include “During class, I often provide several different activities so that students can choose among them”; “I make a special effort to recognize students’ individual progress, even if they are below grade level.” The full scale is presented in Appendix B.

*Performance-focused instructional practices.* The variable **performance-focused instructional practices** was measured with five items from the Patterns of Adaptive Learning Survey (Midgley et al., 2000). Internal consistency for the Performance Approaches to Instruction portion of the PALS measure was reported with Cronbach’s alpha of .69 (Midgley et al., 2000). Two additional items were added to assure an acceptable alpha level. These additional items are numbers 8a, “I reward students for getting correct answers with extra recess, stickers, candy, etc.” and 8e, “I offer incentives for students who receive high scores on tests” on the questionnaire. These items were developed by this researcher for this study. Sample items include “I display the work of the highest achieving students as an example”; “I give special privileges to students who do the best work.” The full scale is presented in Appendix B.
Controlling Practices. The variable **controlling practices** was measured with four items (MAST, 1998). Internal consistency for the Teachers’ Controlling Strategies portion of the measure was reported with Cronbach’s alpha of .77 (MAST, 1998). Sample items include “I make sure that students do their work exactly the way I say”; “When I give an assignment, I make sure that all students do it the same way.” There were no modifications made to these items for this study. The full scale is presented in Appendix B.

Demographics. Additional independent variables included self-reported demographics. The questionnaire included a demographics section with items pertaining to the teacher’s school, gender, the grade level range of the teacher, number of years of classroom teaching, and number of years teaching in the current school. Schools were coded numerically in the analysis, from 1 to 75. Gender was coded 1 (female) and 2 (male). The grade level range question was stated “choose all that apply” and was coded 0 (not selected) or 1 (selected) for PreK-2 and 3-8. The number of years of classroom teaching and number of years teaching in the current school were coded 1 (0-5 years), 2 (6-10 years), 3 (11-15 years), and 4 (more than 15 years). Two additional, open-ended questions were added to the end of the survey. These questions asked participants about school practices that support or hinder teacher professional growth. It was determined by the committee that these items would not be used in the current study. All items are clearly worded and presented in Appendix B.

Summary of Instrument. In total, the questionnaire consisted of 63 total items. Two preliminary, open-ended response items were initially designed to explore a fourth
research question proposed during the research proposal stage of the study. It was
determined by the committee that these items and the fourth research question would not
be used in the current study. Fifty-six of the 63 items were arranged within 4
subsections. The subsections were School Goal Structure, Goal Orientation for Teaching,
Instructional Practices, and Principal Autonomy Support. Related items were grouped
together in each subsection. For example, school mastery goal structure and school
performance goal structure items were grouped in the School Goal Structure subsection.
A five point Likert-type scale which ranged from 1 (strongly disagree) to 5 (strongly
agree) was employed for subsections School Goal Structure. A five point Likert-type
anchor which ranged from 1 (not true at all) to 5 (very true) was employed for subsection
Goal Orientation for Teaching and Instructional Practices. A seven point Likert-type
anchor which ranged from 1 (strongly disagree) to 7 (strongly agree) was employed for
subsection Principal Autonomy Support. These scales were used to elicit perceptions of
teachers in each of the subsections in a way that would be familiar to them. Demographic
items were also included.

Field Testing of the Survey Instrument. Cognitive interviewing involving
teachers in Metropolitan City Schools (pseudonym) occurred during November 2010.
This group of teachers was selected because of their similarity to the research
participants. Cognitive interviewing is the administering of draft survey questions, while
collecting additional verbal information about the survey responses, which is used to
evaluate the quality of the response or to determine whether the question is generating the
information that its author intended (Beatty & Willis, 2007). Five teachers on special
assignment that work with the elementary level were selected as participants for the
cognitive interviews. The teachers were asked to complete the questionnaire on their
own, indicate the time it took to complete, and make comments on questions they found
confusing or inappropriate. Afterwards, I individually interviewed teachers about the
instrument. After completing these initial interviews, the notes from each interview were
analyzed. The wording on two items was updated and instructions to teachers were
revised. In addition, the online recruitment script was revised. Once these changes were
made, a second round of interviews was conducted and notes were analyzed. No further
changes were made to the instrument. The cognitive interviewing process also informed
the readability, suitability, and clarity of items.

A field test was conducted to assess the readability and usability of the instrument
in the online format. The field test was conducted with the same five teachers on special
assignment in Metropolitan City Schools through a weblink to the survey. Feedback
received from the teachers about the readability of items in the online format indicated
that no further changes to the instrument were required.

**Participants**

**Participant Recruitment.** The total population of elementary teachers in this
district were recruited (1479 potential participants). This represented the entire
population of elementary school teachers in the district. There were 507 useable
responses for the study. The rate of response overall was 34%. The average rate of
response per school site was 39%.
**Participant Demographics.** Of the 507 participants in the study, the majority were female (92.5%). Almost half the participants (48.7%) had more than 15 years of teaching experience, and half (50.7%) had been teaching in their current school for 0-5 years. The proportion of participants teaching primary students (grades PreK-2) and intermediate students (grades 3-8) was balanced (245 and 262). It should be noted that while the average percentage of free and reduced lunch for the schools reporting was 81.7%, the range was wide, with individual schools reporting from 36.7% to 98.6% free and reduced lunch. In addition, the enrollment in each school ranged from 126 students to 538 students in the year of the study, while the average enrollment was 365 students. Table 3.2 indicates the demographic data and frequencies for teacher and school level data.
Table 3.2. *Demographic data and frequencies for teacher and school level data*

<table>
<thead>
<tr>
<th>Item</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers</td>
<td>507</td>
<td></td>
</tr>
<tr>
<td>My primary school location is…(please answer all questions with regard to the school indicated)*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The grade level(s) I teach is…* (choose all that apply)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PreK-2</td>
<td>275</td>
<td>54.2</td>
</tr>
<tr>
<td>Grades 3-8</td>
<td>292</td>
<td>57.6</td>
</tr>
<tr>
<td>I am..*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>469</td>
<td>92.5</td>
</tr>
<tr>
<td>Male</td>
<td>38</td>
<td>7.5</td>
</tr>
<tr>
<td>I have been teaching for a total of…*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 – 5 years</td>
<td>33</td>
<td>6.5</td>
</tr>
<tr>
<td>6 – 10 years</td>
<td>94</td>
<td>18.5</td>
</tr>
<tr>
<td>11 – 15 years</td>
<td>133</td>
<td>26.2</td>
</tr>
<tr>
<td>More than 15 years</td>
<td>247</td>
<td>48.7</td>
</tr>
<tr>
<td>I have been teaching in this school for a total of…*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 – 5 years</td>
<td>257</td>
<td>50.7</td>
</tr>
<tr>
<td>6 – 10 years</td>
<td>113</td>
<td>22.3</td>
</tr>
<tr>
<td>11 – 15 years</td>
<td>80</td>
<td>15.8</td>
</tr>
<tr>
<td>More than 15 years</td>
<td>57</td>
<td>11.2</td>
</tr>
<tr>
<td>Schools</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>SES (average proportion of free and reduced lunch)</td>
<td></td>
<td>81.7</td>
</tr>
<tr>
<td>Enrollment (average number of students enrolled in the school)</td>
<td>365</td>
<td></td>
</tr>
</tbody>
</table>

*The items are listed here for reference.

**Planning for Questionnaire Administration.** Email addresses were obtained from staff through the district department of accountability and data for the total number of elementary teachers in the district. Under the advisement of the Director of Research for the district, I sent an initial email to principals at all district elementary schools as a courtesy. The email included information about the postcards and emails that would be sent in the coming days to the teachers at their school sites. Verification of district approval of the research study was included in this introductory email to principals.
Additionally, the email stated that if principals were interested in the results of the study, they could contact the researcher for a presentation.

### Administration and Collection Procedures: Implementation Schedule

*This study required eleven months to implement. An implementation schedule is outlined below:*

<table>
<thead>
<tr>
<th>Date</th>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>September - December, 2010</td>
<td>Completed questionnaire and conducted cognitive interviews. Revised instrument instructions to respondents and item wording. Submitted for IRB approval.</td>
</tr>
<tr>
<td>December – January 28, 2011</td>
<td>Field tested online for clarity and readability of items. No changes were needed.</td>
</tr>
<tr>
<td>February – March, 2011</td>
<td>Obtained IRB approval (see Appendix). Submitted research proposal to district committee for approval of district research with teachers. Obtained documented district approval (see Appendix).</td>
</tr>
<tr>
<td>March 21, 2011</td>
<td><em>Postcards were sent to all elementary teachers announcing upcoming questionnaire.</em> An initial postcard indicating that a questionnaire would be forthcoming was mailed to the teachers’ schools. A hot cocoa packet was attached to the postcard as a small token of appreciation (see Appendix for sample).</td>
</tr>
<tr>
<td>March 23, 2011</td>
<td><em>Questionnaires were emailed.</em> Two days after the postcard was sent, the electronic questionnaire was sent via email to all teachers in the target population.</td>
</tr>
</tbody>
</table>
April 4, 2011  The first reminder was emailed to the target population.

April 11, 2011  The second reminder was emailed to the target population asking for their response to the questionnaire.

April 15, 2011  A final reminder was sent to the target population asking for their response to the questionnaire, prior to the district’s spring recess.

May 2011 – September 2012  Data analysis, conclusions, and presentation of findings.

**Delimitations and Assumptions**

1. This study only focuses on those elementary school teachers employed full time during the 2010-11 school year in the selected school district who elected to complete the research instrument.

2. This study is generalizable only to those subjects who elected to complete the research instrument and provided usable data.

3. It is assumed that perceptions can be measured at a particular moment and only that particular moment with the study’s instrument.

4. The instrument includes all necessary items to adequately measure the constructs.

5. It is assumed that the subjects easily understood the instrument, were reflective, and completed it accurately.
**Data Analysis**

For this study, descriptive statistics, Principal Components Analysis (PCA), reliability and regression analyses were conducted using Statistical Packages for the Social Sciences (SPSS) Version 19 (SPSS, 2010). The multilevel analyses of the research questions using multilevel modeling was conducted using HLM Version 6.08 (Raudenbush & Bryk, 2002). First, PCA was completed for the mastery-focused and performance-focused instructional practice scales, since new items were added to these scales. Next, the alpha coefficients for all scales were calculated to determine the level of internal consistency of the items in each construct. Means, standard deviations and measures of skewness were calculated for each item and for each scale. All scales and item statistics are listed in Appendix B. A correlation matrix was developed that included these statistics.

Correlations, ordinary least squares regression, and HLM (Hierarchical Linear Modeling) analyses were used to analyze the multivariate relations. HLM is an effective way to study cross-level effects and nested designs (Raudenbush & Bryk, 2002). In the present study, the fact that teachers are nested within schools is an important consideration; intraclass correlations for instructional practices (i.e., variation across schools) are accounted for in the analyses.

For research question one, a multiple linear regression analysis was applied to the model. Multiple linear regression is a multivariate statistical technique that determines the linear relationships between predictors and an outcome variable, and also determines
the best combination of predictors for predicting the outcome (Grimm & Yarnold, 1995). The hierarchical entry was used in lieu of the stepwise entry method (Thompson, 1995).

For research questions two and three, HLM models were used. The independent variables at level one were teacher perceptions of school goal structure, self-reported teacher achievement goals for teaching, and demographics (gender and number of years teaching). The dependent variables were self-reported instructional practices. The independent variables at level two were aggregated teacher perceptions of school goal structure, aggregated self-reported teacher goal orientations for teaching, and school-level demographics (socioeconomic status of the school (SES) as reported by percentage of free and reduced lunch, and enrollment as reported by number of students enrolled in the year of the study). Since the dataset included 507 acceptable cases in 75 units at Level 2, it was deemed sufficient to run HLM in Full Maximum Likelihood with robust standard errors. Robust standard errors are used with data sets having a moderate to large number of units at level 2, or if data are skewed (Raudenbush & Bryk, 2000, p. 276). An empty model was run to determine the Intraclass Correlations (ICC), followed by full models to improve the model quality (Raudenbush & Bryk, 2000, p. 36). Slopes were allowed to vary. The variables were entered into the model at Level 1 as group centered, keeping in mind that the contexts for teaching are not the same across schools, and group centering statistically accounts for this difference (Raudenbush & Bryk, 2000, p. 33).
Chapter 4: Results

Introduction

The goal of this study is to explore and describe the relations among teacher perceptions of school goal structures, teacher perceptions of principal autonomy support, goal orientations for teaching, and self-reported instructional practices. To achieve this goal, three questions guide the study.

1. What is the relation among teacher perceptions of school mastery goals for students, self-reported teacher mastery goals for teaching, teacher perceptions of principal autonomy support, and self-reported mastery-focused instructional practices?

2. What is the relation among teacher perceptions of school performance goals for students, self-reported teacher performance goals for teaching, teacher perceptions of principal autonomy support, and self-reported performance-focused instructional practices?

3. What is the relation among teacher perceptions of school performance goals for students, self-reported teacher performance goals for teaching, teacher perceptions of principal autonomy support, and self-reported teacher’s controlling practices?

This chapter presents findings related to each research question examined in this study. The chapter is organized with a presentation of the preliminary analyses on the factor...
structure of the items and scale reliabilities, followed by the results of each of my three models predicting mastery-focused instructional practices, performance-focused instructional practices, and controlling practices respectively.

**Preliminary Analysis**

In order to prepare for the primary analyses, I conducted several preliminary analyses on my data. The first set of tasks in the preliminary analyses involved determining the reliability and validity of the measures used for this study. There were four separate measures incorporated into this study: the Patterns of Adaptive Learning Scales, PALS (Midgley et al, 2000), the MAST (1998) Approaches to Teaching Scales, the Teacher Goal Orientations for Teaching Scale (Butler, 207), and the Work Climate Questionnaire (Baard, Deci & Ryan, 2004). The PALS consisted of four subscales: the items designed to measure mastery and performance-focused instructional practices, and mastery and performance school goal structure. The MAST scales included teachers’ controlling strategies. The Teacher Goal Orientations for Teaching Scale consisted of four subscales: the items designed to measure mastery, performance-approach, performance-avoid and work-avoid goal orientation for teaching. The Work Climate Questionnaire provided the Principal Autonomy Support scale. Thus, in total, ten scales were utilized.

New items were added to two of the scales, which warranted factor analysis on these scales. The scales with the added items measured two of the three dependent variables, mastery-focused and performance-focused instructional practices. Principal
Components Analysis (PCA) with varimax rotation was used to determine the factor loadings of these two scales prior to conducting the primary analyses.

**Patterns of Adaptive Learning Scales: Mastery-focused Instructional Practice Items**

As described in Chapter Three, the Mastery-focused Instructional Practices scale was designed to measure the extent to which teachers use mastery practices in their classrooms. Four additional items were added to this scale in an effort to increase the reliability to an acceptable level. PCA with varimax rotation was conducted on the items to determine if the items held together as a single underlying construct or if the items seemed to be measuring more than one component (DeVellis, 2003). The PCA extracted two components from the eight items accounting for 48.65% of the variance. Component 1 accounted for 34.46% of the variance. A Scree test indicated two components could be extracted. The factor loadings from the PCA for each item in this scale are represented in Table 4.1.
Table 4.1 Rotated Component Loadings for the Mastery-focused Instructional Practices Scale items (PCA, n=507)

<table>
<thead>
<tr>
<th>Item</th>
<th>Component 1</th>
<th>Component 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please indicate the degree to which each is true for you...</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I give a wide range of assignments, matched to students’ needs and skill level</td>
<td>0.69</td>
<td>0.20</td>
</tr>
<tr>
<td>I make a point of showing my students that learning is fun</td>
<td>0.69</td>
<td>0.08</td>
</tr>
<tr>
<td>I often provide several different activities so students can choose among them</td>
<td>0.64</td>
<td>0.41</td>
</tr>
<tr>
<td>I work hard to make class interesting and engaging for all my students</td>
<td>0.69</td>
<td>-0.15</td>
</tr>
<tr>
<td>I make a special effort to recognize students individual progress, even if they are below grade level</td>
<td>0.66</td>
<td>-0.17</td>
</tr>
<tr>
<td>I consider how much students have improved when I give them report card grades</td>
<td>0.48</td>
<td>0.03</td>
</tr>
<tr>
<td>I don’t allow students to move on until they have mastered a concept</td>
<td>0.23</td>
<td>0.72</td>
</tr>
<tr>
<td>I frequently ask my students to explain and illustrate their line of thought</td>
<td>0.39</td>
<td>-0.60</td>
</tr>
<tr>
<td>Percentage of variance accounted for</td>
<td>34.46</td>
<td></td>
</tr>
<tr>
<td>Eigenvalue</td>
<td>2.75</td>
<td></td>
</tr>
</tbody>
</table>

*Participants were asked to respond to these items on a 5-point Likert type scale, where (1) = Not true at all and (5) = Very true

Upon examination of the items, it became clear that the original scale with two additional items held together with loadings above .40. One item, “During class, I often provide several different activities so that students can choose among them”, cross-loaded on both components. However, it was determined that this item would be kept, as the aspect of providing choice was a strong indicator of this scale, with an initial loading of .60. Items with a factor loading of less than .40 were dropped from the scale. Two added items on the scale, “I don’t allow students to move on until they have mastered a concept” and “I frequently ask my students to explain and illustrate their line of thought”,...
loaded at .23 and .39 respectively, and were dropped from the scale. Two added items on the scale, “I work hard to make class interesting and engaging for all my students”, and “I make a point of showing my students that learning is fun”, loaded at .69 and .69 respectively, and were retained with the original four items.

**Performance-focused Instructional Practice Items**

As described in Chapter Three, the Performance-focused Instructional Practices scale was designed to measure the extent to which teachers use instructional practices that emphasize comparison and competition in their classrooms. Two additional items were added to the Performance-focused Instructional Practice scale in an effort to increase the reliability of this scale. Principal Components Analysis (PCA) with varimax rotation was conducted on the items to determine if the items held together as a single underlying construct or if the items seemed to be measuring more than one component (DeVellis, 2003). The PCA extracted one component from the seven items accounting for 45.75% of the variance. A Scree test indicated one component could be extracted. The factor loadings from the factor analysis for each item in this scale are represented in Table 4.2.
Table 4.2 Rotated Component Loadings for the Performance-focused Instructional Practices Scale items (PCA, n=507)

<table>
<thead>
<tr>
<th>Item</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please indicate the degree to which each is true for you...</td>
<td></td>
</tr>
<tr>
<td>I offer incentives for students who receive high scores on tests</td>
<td>0.75</td>
</tr>
<tr>
<td>I display the work of the highest achieving students as an example</td>
<td>0.73</td>
</tr>
<tr>
<td>I help students understand how their performance compares to others</td>
<td>0.71</td>
</tr>
<tr>
<td>I encourage students to compete with each other</td>
<td>0.70</td>
</tr>
<tr>
<td>I point out those students who do well as a model for the other students</td>
<td>0.65</td>
</tr>
<tr>
<td>I give special privileges to students who do the best work</td>
<td>0.63</td>
</tr>
<tr>
<td>I reward students for getting correct answers with extra recess, stickers, candy, etc</td>
<td>0.48</td>
</tr>
<tr>
<td>Percentage of variance accounted for</td>
<td>45.74</td>
</tr>
<tr>
<td>Eigenvalue</td>
<td>3.20</td>
</tr>
</tbody>
</table>

*Participants were asked to respond to these items on a 5-point Likert type scale, where (1) = Not true at all and (5) = Very true

I established that items with a factor loading of less than 0.40 were to be dropped from the scale. Therefore, the two added items on the scale, “I offer incentives for those students who receive high scores on tests” and “I reward students for getting correct answers with extra recess, stickers, candy, etc” with factor loadings of .75 and .48 respectively, were included in the final scale. The scales here represent the process leading to a decision of the final items used in this study. Means, standard deviations, and measures of skewness for the final items used are reported in Appendix B.
Descriptive Statistics and Reliabilities of Scales

Standard deviations, means, and Cronbach’s alpha were computed for all scales and are presented in Table 4.3. Bivariate correlations were calculated in order to examine the relations between the variables. Pearson-product moment correlations were utilized for this purpose, and can also be found in Table 4.3. All scales and item statistics are listed in Appendix B. Examining the bivariate correlations, it appears that the association between the predictors did not violate the assumption of multicollinearity; the strongest correlation was between Performance-approach and Performance-avoid orientations for teaching \( (r = .49, p < .01) \).

The correlations presented in Table 4.3 provide preliminary support for the predicted associations between self-reports of school goal structure, teacher’s achievement goals for teaching, principal autonomy support and instructional practices. Overall, correlations were low, but in the expected directions and generally significant. Teacher’s mastery-focused instructional practices were positively correlated with school mastery goal structure \( (r = .18, p < .01) \), teacher’s mastery orientation for teaching \( (r = .31, p < .01) \), and principal autonomy support \( (r = .11, p < .01) \); and negatively correlated with teacher’s work-avoid orientation for teaching \( (r = -.20, p < .01) \). This suggests that teachers who perceive a school mastery goal structure for students, teachers who hold a mastery goals for teaching, and teachers who perceive their principal as autonomy-supportive are more likely to use instructional practices that emphasize individual student growth in their classrooms.
Teacher performance-focused instructional practices were positively correlated with school performance goal structure \((r = .44, p < .01)\), performance-approach orientation for teaching \((r = .36, p < .01)\), performance-avoid orientation for teaching \((r = .36, p < .01)\) and work-avoid orientation for teaching \((r = .25, p < .01)\). Teacher controlling strategies were positively correlated with school performance goal structure \((r = .17, p < .01)\), performance-approach orientation for teaching \((r = .15, p < .01)\), performance-avoid orientation for teaching \((r = .30, p < .01)\), and work-avoid orientation for teaching \((r = .28, p < .01)\). Interestingly, teacher’s controlling strategies were also positively correlated with performance-focused instructional practices \((r = .36, p < .01)\).

As expected, a mastery orientation for teaching was positively correlated with school mastery goal structure \((r = .21, p < .01)\); and a performance-approach orientation for teaching was positively correlated with school performance goal structure \((r = .25, p < .01)\). Additionally, teacher’s work-avoid orientation for teaching had a small, negative yet significant correlation with school mastery goal structure \((r = -.12, p < .01)\). This suggests that teachers who perceive higher levels of mastery goal structure in their schools are less likely to exhibit a work-avoid orientation for teaching than teachers who perceive lower levels of mastery goal structure in their schools. Also of note, teacher’s performance-approach orientation for teaching had a small, positive and significant correlation with teacher’ mastery orientation for teaching \((r = .15, p < .01)\), suggesting that, as stated in the literature, teachers can hold mastery and performance orientations simultaneously. In contrast, the relations between performance-avoid and mastery orientations for teaching were small and not statistically significant \((r = .06)\).
Principal autonomy support was positively associated with school mastery goal structure ($r = .32, p < .01$) and teacher’s mastery orientation for teaching ($r = .12, p < .01$), and was negatively associated with teacher’s work-avoid orientation for teaching ($r = -.13, p < .01$). This suggests, as expected, that teachers who perceive principals as supportive are more likely to perceive the school as promoting mastery goals for students, and are also more likely to hold mastery orientations for teaching.

Performance-Approach Orientation for teaching was related significantly and positively to both performance-avoid orientation for teaching ($r = .49, p < .01$) and work-avoid orientation for teaching ($r = .31, p < .01$). Work-avoid and performance-avoid orientations were also positively associated ($r = .45, p < .01$).
Table 4.3 Correlation Matrices including Cronbach’s Alpha, Means and Standard Deviations for all Scales

<table>
<thead>
<tr>
<th></th>
<th>α</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Mastery Goal Structure</td>
<td>0.83</td>
<td>3.88</td>
<td>0.68</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2. Performance Goal Structure</td>
<td>0.62</td>
<td>3.26</td>
<td>0.62</td>
<td>.06</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3. Mastery Orientation</td>
<td>0.77</td>
<td>4.07</td>
<td>0.70</td>
<td>.21**</td>
<td>.04</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>4. Performance Approach Orientation</td>
<td>0.85</td>
<td>2.62</td>
<td>1.06</td>
<td>- .01</td>
<td>.25**</td>
<td>.15**</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>5. Performance Avoid Orientation</td>
<td>0.71</td>
<td>2.40</td>
<td>0.91</td>
<td>.03</td>
<td>.21**</td>
<td>.06</td>
<td>.49**</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>6. Work Avoid Orientation</td>
<td>0.69</td>
<td>1.66</td>
<td>0.68</td>
<td>-.12**</td>
<td>.08</td>
<td>-.06</td>
<td>.31**</td>
<td>.45**</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>7. Principal Autonomy Support</td>
<td>0.96</td>
<td>5.06</td>
<td>1.71</td>
<td>.32**</td>
<td>-.06</td>
<td>.12**</td>
<td>.00</td>
<td>-.04</td>
<td>-.13**</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>8. Mastery-focused Instructional Practices</td>
<td>0.72</td>
<td>4.17</td>
<td>0.57</td>
<td>.18**</td>
<td>.04</td>
<td>.31**</td>
<td>-.02</td>
<td>-.06</td>
<td>-.20**</td>
<td>.11**</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>9. Performance-focused Instructional Practices</td>
<td>0.79</td>
<td>2.55</td>
<td>0.82</td>
<td>.44**</td>
<td>.00</td>
<td>.36**</td>
<td>.36**</td>
<td>.25**</td>
<td>.03</td>
<td>.05</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>10. Controlling Strategies</td>
<td>0.64</td>
<td>2.47</td>
<td>0.65</td>
<td>.17**</td>
<td>-.05</td>
<td>.15**</td>
<td>.30**</td>
<td>.28**</td>
<td>-.03</td>
<td>-.07</td>
<td>.36**</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).
**Research Question 1: Mastery-focused Instructional Practices**

What is the relation among teacher perceptions of school mastery goals for students, self-reported teacher mastery goals for teaching, teacher perceptions of principal autonomy support, and self-reported mastery-focused instructional practices?

*Initial Analyses: HLM*

To examine the extent to which teachers’ perceptions of principal autonomy support, teachers’ perceptions of school goal structure, and teachers’ mastery goal orientation for teaching predicted self-reported mastery instructional practices, a Hierarchical Linear Model was calculated to determine the variation across schools. Previous research has stressed the value of school goal structure and teacher’s mastery goal orientation in predicted mastery instructional practices (Maehr & Midgley, 1991). Although principal autonomy support has not previously been used as an indicator of instructional practices, I included it as a predictor based on the literature base that indicates autonomy support is a crucial component in supporting student motivation and learning (Assor et al., 2005; Flink et al., 1990). It follows that principal autonomy support may influence teachers’ motivations for teaching and teachers’ instructional practices.

HLM was used as the major statistical analysis technique for my study because of the nested nature of teachers within schools. HLM is an effective way to study cross-level effects and nested designs (Raudenbush & Bryk, 2002).

To examine the relations of achievement goal orientations clustered within schools, I estimated a two-level hierarchical linear model using HLM 6.02 software
(Raudenbush, Bryk & Congdon, 2005). Outcomes of instructional practices were measured at the teacher level (Level 1). Additional Level 1 indicators included teacher-level characteristics, and Level 2 indicators included teacher and school level variables. The dependent variables in the teacher-level (Level 1) models, which used only teacher-level data, were the measures of mastery- and performance-focused instructional practices, and controlling practices. Independent variables at Level 1 included the teacher’s goal orientation for teaching, teacher’s perception of school goal structure, and teacher’s perception of principal autonomy support. In addition, I included gender and number of years of teaching experience.

The teacher-level variables of self-reported instructional practices, goal orientations for teaching, teachers’ perceptions of school goal structure, and teachers’ perceptions of principal autonomy support were averaged for each school to obtain aggregated measures. Means and standard deviations for the aggregated measures are included in Table 4.4. Level 2 indicators included aggregated teacher-level variables, and the school level variables of SES (Socioeconomic Status), based on the percentage of reported free and reduced lunch at each school, and Enrollment, based on the number of students enrolled in each school.
Table 4.4  Means, Standard Deviations, and Measures of Skewness for Aggregated Measures, N=75

<table>
<thead>
<tr>
<th>Measure</th>
<th>M</th>
<th>SD</th>
<th>Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal Autonomy Support</td>
<td>5.06</td>
<td>1.02</td>
<td>-0.48</td>
</tr>
<tr>
<td>Controlling Practices</td>
<td>2.47</td>
<td>0.30</td>
<td>0.47</td>
</tr>
<tr>
<td>School Mastery Goal Structure</td>
<td>3.88</td>
<td>0.31</td>
<td>-0.49</td>
</tr>
<tr>
<td>Mastery Goal Orientation for Teaching</td>
<td>4.07</td>
<td>0.29</td>
<td>-0.13</td>
</tr>
<tr>
<td>Mastery-focused Instructional Practices</td>
<td>4.17</td>
<td>0.22</td>
<td>-0.15</td>
</tr>
<tr>
<td>Performance-approach Goal Orientation for Teaching</td>
<td>2.62</td>
<td>0.39</td>
<td>0.91</td>
</tr>
<tr>
<td>Performance-avoid Goal Orientation for Teaching</td>
<td>2.40</td>
<td>0.39</td>
<td>0.55</td>
</tr>
<tr>
<td>School Performance Goal Structure</td>
<td>3.26</td>
<td>0.28</td>
<td>-0.14</td>
</tr>
<tr>
<td>Performance-focused Instructional Practices</td>
<td>2.55</td>
<td>0.35</td>
<td>-0.26</td>
</tr>
<tr>
<td>Work-avoid Goal Orientation for Teaching</td>
<td>1.66</td>
<td>0.29</td>
<td>3.35</td>
</tr>
</tbody>
</table>

For each instructional practices outcome, an unconditional model with no covariates was estimated to partition the variance across the two levels. Maximum likelihood estimation with robust standard errors was used to estimate the parameters.

The full model for Mastery-focused instructional practices is shown below.

**Model 1: Mastery-focused Instructional Practices**

Level 1

Mastery-focused Instructional Practices = \( \beta_0 + \beta_1 \) (Teacher Mastery Goal Orientation for Teaching) + \( \beta_2 \) (School Mastery Goal Structure) + \( \beta_3 \) (Principal Autonomy Support) + (Gender) + (Number of years teaching experience) + rij

Level 2

\( \beta_0 = \gamma_{00} + \gamma_{01} \) (Aggregate Teacher Mastery Goal Orientation for Teaching) + \( \gamma_{02} \) (Aggregate School Mastery Goal Structure) + \( \gamma_{03} \) (Aggregate Principal Autonomy Support) + (SES) + (Enrollment) + noj

**Demographics Note:** Schools were coded numerically in the analysis, from 1 to 75. Gender was coded 1 (female) and 2 (male). The number of years of classroom teaching was coded 1 (0-5 years), 2 (6-10 years), 3 (11-15 years), and 4 (more than 15 years). SES was coded from 1 to 100 based upon the published percentage of free and reduced lunch.
enrollment at the school site for the year of the study. Enrollment was coded as a number determined by the number of students enrolled in the school during the year of the study.

The Intraclass Correlation for this model (ICC) was not significant ($\chi^2 (74) = 76.71$). As the first analysis with regard to contextual factors did not yield statistically significant results, multiple regression was employed to further explore the relationships in this model at the individual level of analysis. The correlations present in Table 4.3 implied that there might be significant relationships, which warranted further exploration.

**Final Analysis: Multiple Regression**

For Research Question One, the ICC indicated that the dependent variable did not vary significantly between schools. Therefore, I used a hierarchical regression analysis to further explore Research Question 1. Mastery-focused instructional practices was entered as the dependent variable in the regression. The analysis included four steps: The variables entered into Step 1 were demographics of gender, number of years teaching, socioeconomic status of the school indicated by the percentage of free and reduced lunch, and enrollment indicated by the number of students enrolled in a school. At Step 2, I added teacher’s mastery goal orientation for teaching; at Step 3, I added teacher’s perceptions of school mastery goal structure; and at Step 4, I added principal autonomy support. This hierarchical approach to the analysis provided information about teacher’s self-reported mastery-focused instructional practices after demographics and other variables were controlled statistically. Therefore, coefficients reported in Step 4 predicted residual variance in mastery-focused instructional practices.
The results of the analysis are displayed in Table 4.5. Overall, these results were consistent with the hypothesis that a Mastery Goal Orientation for Teaching and the perception of a school Mastery Goal Structure for students predict mastery-focused instructional practices. However, the results revealed that Principal Autonomy Support was not a significant contributing factor to the teachers’ use of mastery-focused instructional practices. This was an unexpected outcome.

Results of Step 1 revealed that gender, number of years teaching, SES and Enrollment were not predictors of mastery-focused instructional practices. However, after controlling for demographics, Step 2 revealed Mastery Goal Orientation for Teaching ($\beta = .31, p < .001$) as a significant predictor of mastery-focused instructional practices. Specifically, teachers who report a greater orientation toward individual student mastery and growth report greater use of mastery-focused instructional practices. The variance in mastery-focused instructional practices ($R^2 = .10$), accounted for by Mastery Orientation for teaching was significant, $F (506) = 12.09, p < .001$.

Step 3 revealed School Mastery Goal Structure ($\beta = .12, p < .01$) as a significant predictor of mastery-focused instructional practices. Specially, after accounting for contributions of demographics and Mastery Goal Orientation for teaching, teachers who perceive a school-wide focus on goals for individual student growth report greater use of instructional practices that promote individual student growth in their classrooms.
Table 4.5 *Hierarchical Regression Predicting Mastery-focused Instructional Practices*

<table>
<thead>
<tr>
<th>Step</th>
<th>β Step 1</th>
<th>β Step 2</th>
<th>β Step 3</th>
<th>β Step 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>-.08</td>
<td>-.07</td>
<td>-.07</td>
<td>-.07</td>
</tr>
<tr>
<td>Years Teaching</td>
<td>-.05</td>
<td>-.03</td>
<td>-.04</td>
<td>-.04</td>
</tr>
<tr>
<td>SES</td>
<td>-.06</td>
<td>-.01</td>
<td>-.00</td>
<td>-.00</td>
</tr>
<tr>
<td>Enrollment</td>
<td>-.04</td>
<td>-.04</td>
<td>-.04</td>
<td>-.04</td>
</tr>
<tr>
<td>Step 2</td>
<td>Mastery Orientation</td>
<td>.31***</td>
<td>.28***</td>
<td>.28***</td>
</tr>
<tr>
<td>Step 3</td>
<td>Mastery Goal Structure</td>
<td>.12**</td>
<td>.11*</td>
<td></td>
</tr>
<tr>
<td>Step 4</td>
<td>Autonomy Support</td>
<td></td>
<td></td>
<td>.04</td>
</tr>
</tbody>
</table>

R^2 | .01 | .10 | .12 | .10 |
Change in R^2 | .01 | .09** | .01* | .00 |

β = Standardized regression coefficient. Variables coded can be found above.

* p < .05; ** p < .01; *** p < .001.

Finally, Step 4 showed that, after accounting for demographic variables, Mastery Orientation for Teaching was significant (β = .28, p < .001), and Mastery Goal Structure was significant (β = .11, p < .05). Specifically, a one unit increase in reported mastery goal orientation for teaching indicated a .28 unit increase in the reported use of mastery-focused practices. A one unit increase in perceived school mastery goal structure indicated a .11 unit increase in reported use of mastery-focused instructional practices. Principal Autonomy Support was not statistically significant (β = .04).

**Research Question 2: Performance-focused Instructional Practices**

What is the relation among teacher perceptions of school performance goals for students, self-reported teacher performance goals for teaching, teacher perceptions of
principal autonomy support, and self-reported performance-focused instructional practices?

Hierarchical Linear Modeling: Analyses

The model below represents the final level model used to test Performance-focused Instructional Practices.

**Model 2: Performance-focused Instructional Practices**

**Level 1**

Performance-focused Instructional Practices = \( \beta_0 + \beta_1 \) (Teacher Performance-approach Goal Orientation for Teaching) +\( \beta_2 \) (Teacher Performance-avoid Goal Orientation for Teaching) +\( \beta_3 \) (Teacher Work-avoid Goal Orientation for Teaching) +\( \beta_4 \) (School Performance Goal Structure) +\( \beta_5 \) (Principal Autonomy Support) + (Gender) + (Number of Years Teaching Experience)+ \( rij \)

**Level 2**

\( \beta_0 = \gamma_{00} + \gamma_{01} \) (Aggregate Teacher Performance-approach Goal Orientation for Teaching) +\( \gamma_{02} \) (Aggregate Teacher Performance-avoid Goal Orientation for Teaching) +\( \gamma_{03} \) (Aggregate Teacher Work-avoid Goal Orientation for Teaching) +\( \gamma_{04} \) (Aggregate School Performance Goal Structure) +\( \gamma_{05} \) (Aggregate Principal Autonomy Support) + (Grade Level Teaching) + (SES) + (Enrollment) + noj

**Demographics Note:** Schools were coded numerically in the analysis, from 1 to 75. Gender was coded 1 (female) and 2 (male). The number of years of classroom teaching was coded 1 (0-5 years), 2 (6-10 years), 3 (11-15 years), and 4 (more than 15 years). SES was coded from 1 to 100 based upon the published percentage of free and reduced lunch enrollment at the school site for the year of the study. Enrollment was coded as a number determined by the number of students enrolled in the school during the year of the study.

First, I ran an empty model to test the extent to which variation in teachers’ self-reported performance-focused instructional practices depended on the schools in which
they were teaching. Results revealed that significant variation in teachers’ self-reported performance-focused instructional practices could be attributed to differences across schools. Specifically, 3% of the variation in performance-focused instructional practices could be attributed to between-school differences. There was variation across schools in this one-way random effects model, $\chi^2 (74) = 95.01, p < .05$.

Next, I ran the full model, which revealed significant findings at the school and individual levels of analysis. Multilevel model estimates for Performance-focused Instructional Practices are displayed in Table 4.6. In this model, school performance goal structure at the teacher level was statistically significant ($p < .001$); however, when school-level factors were added to the model, school performance goal structure was not significant.

At the teacher level of analysis (Level 1), work avoid orientation for teaching was significant ($\beta = 0.14, p < .01$). Performance-avoid orientation for teaching was significant ($\beta = 0.12, p < .01$) and performance-approach orientation for teaching was significant ($\beta = 0.13, p < .01$). Performance Goal Structure was most significant in this study at Level 1 ($\beta = 0.48, p < .001$).

Performance-approach, performance-avoid and work avoid orientations for teaching were statistically significant at the teacher level for performance-focused instructional practices ($p < .01$); however, when school factors were added to the model, only performance-avoid orientation for teaching remained statistically significant ($p < .05$). The Level 2 interaction remained significant for performance-focused instructional
practices in the multilevel analyses. This interaction term represents the difference in instructional practices as the amount of performance-avoid orientation for teaching increases among teachers. For this, the interaction coefficient was positive, indicating that in schools with more teachers who hold performance-avoid orientations for teaching there is an increased use of performance-focused instructional practices ($\gamma = 0.28, p < 0.05$).

Table 4.6 *Performance-focused Instructional Practices Model 2: HLM Results*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>SE</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 2 (Intercept)</strong></td>
<td>-0.27</td>
<td>0.56</td>
<td>-0.48</td>
</tr>
<tr>
<td>SES</td>
<td>0.00</td>
<td>0.00</td>
<td>1.45</td>
</tr>
<tr>
<td>Enrollment</td>
<td>-0.00</td>
<td>0.00</td>
<td>-0.31</td>
</tr>
<tr>
<td>Autonomy Support</td>
<td>0.06</td>
<td>0.03</td>
<td>1.66</td>
</tr>
<tr>
<td>School Performance-approach</td>
<td>0.05</td>
<td>0.09</td>
<td>0.60</td>
</tr>
<tr>
<td>School Performance-avoid</td>
<td>0.28</td>
<td>0.10</td>
<td>2.60*</td>
</tr>
<tr>
<td>School Performance Goal Structure</td>
<td>0.33</td>
<td>0.17</td>
<td>1.90</td>
</tr>
<tr>
<td>School Work-avoid</td>
<td>-0.00</td>
<td>0.12</td>
<td>-0.01</td>
</tr>
<tr>
<td><strong>Level 1</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>0.19</td>
<td>0.11</td>
<td>1.65t</td>
</tr>
<tr>
<td>Years Teaching</td>
<td>-0.04</td>
<td>0.03</td>
<td>-1.28</td>
</tr>
<tr>
<td>Performance Goal Structure</td>
<td>0.48</td>
<td>0.06</td>
<td>7.65***</td>
</tr>
<tr>
<td>Performance-approach</td>
<td>0.13</td>
<td>0.03</td>
<td>3.56**</td>
</tr>
<tr>
<td>Performance-avoid</td>
<td>0.12</td>
<td>0.04</td>
<td>2.87**</td>
</tr>
<tr>
<td>Work-avoid</td>
<td>0.14</td>
<td>0.05</td>
<td>2.92**</td>
</tr>
<tr>
<td>Autonomy Support</td>
<td>0.02</td>
<td>0.01</td>
<td>1.12</td>
</tr>
</tbody>
</table>

*p < .05; **p < .01; ***p < .001

**Research Question 3: Controlling Practices**

What is the relation among teacher perceptions of school performance goals for students, self-reported teacher performance goals for teaching, teacher perceptions of principal autonomy support, and self-reported teacher’s controlling practices?
For this research question, the following model was calculated as a Hierarchical Linear Model to determine the variation across schools. The full model is shown on the following page.

**Hierarchical Linear Modeling: Analyses**

**Model 3: Controlling Practices**

Level 1

Controlling Practices = \( \beta_0 + \beta_1 \) (Teacher Performance-approach Goal Orientation for Teaching) + \( \beta_2 \) (Teacher Performance-avoid Goal Orientation for Teaching) + \( \beta_3 \) (Teacher Work-avoid Goal Orientation for Teaching) + \( \beta_4 \) (School Performance Goal Structure) + \( \beta_5 \) (Principal Autonomy Support) + (Gender) + (Number of Years Teaching Experience) + rij

Level 2

\( \beta_0 = \gamma_{00} + \gamma_{01} \) (Aggregate Teacher Performance-approach Goal Orientation for Teaching) + \( \gamma_{02} \) (Aggregate Teacher Performance-avoid Goal Orientation for Teaching) + \( \gamma_{03} \) (Aggregate Teacher Work-avoid Goal Orientation for Teaching) + \( \gamma_{04} \) (Aggregate School Performance Goal Structure) + \( \gamma_{05} \) (Aggregate Principal Autonomy Support) + (Grade Level Teaching) + (SES) + (Enrollment) + noj

**Demographics Note:** Schools were coded numerically in the analysis, from 1 to 75. Gender was coded 1 (female) and 2 (male). The number of years of classroom teaching was coded 1 (0-5 years), 2 (6-10 years), 3 (11-15 years), and 4 (more than 15 years). SES was coded from 1 to 100 based upon the published percentage of free and reduced lunch enrollment at the school site for the year of the study. Enrollment was coded as a number determined by the number of students enrolled in the school during the year of the study.

First, I ran an empty model to test the extent to which variation in teachers’ self-reported controlling practices depended on the schools in which they were teaching.
Results revealed that significant variation in teachers’ self-reported controlling practices could be attributed to differences across schools. Specifically, 7% of the variation in controlling practices could be attributed to between-school differences. There was variation across schools in this one-way random effects model, $\chi^2 (74) = 118.93, p < .005$. These findings illustrate the potential importance of considering variation at the school level.

Next, I ran the full model with significant findings at the school and individual levels of analysis. Multilevel model estimates for controlling practices are displayed in Table 4.7. In this model, performance-avoid and work-avoid orientations were statistically significant at the teacher level; however, they did not remain so when school level factors were added to the model.

At the teacher level (Level 1), work-avoid orientation for teaching was significant ($\beta = 0.19, p < .001$), performance-avoid orientation was significant ($\beta = 0.13, p < .001$) and school performance goal structure was significant ($\beta = 0.15, p < .01$).

SES, a characteristic of school level based on the number of free and reduced price lunch at the school, was not statistically significant ($\gamma = -0.00, p < .10$). This was an unexpected finding, as I had initially predicted that higher SES levels would indicate a higher degree of controlling practices employed in the classroom.
Table 4.7 Controlling Practices Model 3: HLM Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>SE</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 2 (Intercept)</strong></td>
<td>2.17</td>
<td>0.51</td>
<td>4.25***</td>
</tr>
<tr>
<td>SES</td>
<td>-0.00</td>
<td>0.00</td>
<td>-1.85</td>
</tr>
<tr>
<td>Enrollment</td>
<td>-0.00</td>
<td>0.00</td>
<td>-0.59</td>
</tr>
<tr>
<td>Autonomy Support</td>
<td>-0.04</td>
<td>0.04</td>
<td>-1.04</td>
</tr>
<tr>
<td>School Performance-approach</td>
<td>0.01</td>
<td>0.09</td>
<td>0.19</td>
</tr>
<tr>
<td>School Performance-avoid</td>
<td>0.15</td>
<td>0.11</td>
<td>1.40</td>
</tr>
<tr>
<td>School Performance Goal Structure</td>
<td>0.12</td>
<td>0.13</td>
<td>0.87</td>
</tr>
<tr>
<td>School Work-avoid</td>
<td>0.12</td>
<td>0.11</td>
<td>1.07</td>
</tr>
<tr>
<td><strong>Level 1</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>-0.02</td>
<td>0.07</td>
<td>-0.34</td>
</tr>
<tr>
<td>Years Teaching</td>
<td>0.02</td>
<td>0.02</td>
<td>1.11</td>
</tr>
<tr>
<td>Performance Goal Structure</td>
<td>0.15</td>
<td>0.05</td>
<td>2.68**</td>
</tr>
<tr>
<td>Performance-approach</td>
<td>-0.03</td>
<td>0.02</td>
<td>-1.37</td>
</tr>
<tr>
<td>Performance-avoid</td>
<td>0.13</td>
<td>0.03</td>
<td>4.20***</td>
</tr>
<tr>
<td>Work-avoid</td>
<td>0.19</td>
<td>0.04</td>
<td>4.21***</td>
</tr>
<tr>
<td>Autonomy Support</td>
<td>0.02</td>
<td>0.02</td>
<td>1.12</td>
</tr>
</tbody>
</table>

*p < .05; **p < .01; ***p < .001

Summary of Results

This study revealed some interesting findings about the use of mastery-focused, performance-focused and controlling practices in the classroom. First, teachers who perceived a school goal structure focused on student mastery tended to report using instructional practices that promote individual student growth and emphasize student effort and enjoyment of learning tasks (mastery-focused instructional practices). Teachers who focused on their own professional growth and improvement of teaching skills also tended to report using mastery-focused instructional practices with their students.

Second, teachers nested in schools that reported a focus on performance of students,
including public recognition based on ability (school performance goal structure) tended to report an increased use of public recognition of ability and a focus on performance with their students. Individual teachers with work-avoid, performance-avoid and performance-approach orientations toward teaching tended to report using performance-focused instructional practices in their classrooms.

Finally, teachers who reported work-avoid and performance-avoid orientations for teaching, and teachers who perceived a performance goal structure at the school level tended to report using controlling practices with their students. The results showed no significant relations between teachers’ perceptions of principal autonomy support for teachers and instructional practices. Despite small amounts of variance explained by the models, these models may yet have potential for the field of achievement motivation. It is necessary, therefore, to discuss the limitations and inferences that can be made from these results and the implications for future research.
Chapter 5: Discussion

The instructional practices used by teachers daily communicate the goal orientation of the teacher and the goal structure of the classroom to students (Ames, 1992; Ames & Archer, 1988), and convey support for student autonomy (Stefanou et al., 2004) or an emphasis on control of student behavior (Flink et al., 1990). Instructional practices are essential to study, as they ultimately support or diminish student motivation for learning. The research summarized in the last chapter investigated the relations among teachers’ perceptions of school goal structures, teachers’ perceptions of principal autonomy support for teachers, self-reported goal orientations for teaching and self-reported instructional practices. Three models were proposed based on three types of instructional practices: mastery-focused, performance-focused and controlling practices. Findings generally revealed that, as predicted, a teacher’s goal orientations for teaching and their perceptions of school goal structure were strongly related to their instructional practices in the classroom. Principal autonomy support, however, was not related to mastery-focused, performance-focused, or controlling practices.

Research question one posed, what is the relation among teacher perceptions of school mastery goals for students, self-reported teacher mastery goals for teaching, teacher perceptions of principal autonomy support, and self-reported mastery-focused instructional practices?
Overall, the results of the analysis were consistent with the research on mastery-focused instructional practices (Butler & Shibaz, 2008; Patrick et al., 2001; Retelsdorf et al., 2010; Roeser et al., 2002). Teachers who exhibited a mastery goal orientation for teaching and perceived a school mastery goal structure for students tended to report using mastery-focused instructional practices in their classrooms. Specifically, a one unit increase in reported mastery goal orientation for teaching indicated a .28 unit increase in the reported use of mastery-focused instructional practices. A one unit increase in perceived school mastery goal structure indicated a .11 unit increase in reported use of mastery-focused instructional practices.

However, the results revealed that teacher perceptions of principal support for autonomy did not contribute significantly to teachers’ reported use of mastery-focused instructional practices in their classroom. Although the preliminary results from the correlation matrix showed a low positive and significant correlation between principal autonomy support and mastery-focused instructional practices, the primary analysis did not reveal this relation. This was an unexpected outcome.

Research on teacher efficacy may help explain these results. Self-efficacy is defined as the “self-perception of competence” (Tschannen-Moran, Woolfolk Hoy & Hoy, 1998, p. 211). There is a positive correlation between teacher efficacy and the use of mastery instructional practices in the classroom (Midgley et al., 1995; Wolters & Daugherty, 2007). Teachers who are more efficacious, or believe in their own capability to help students learn, tend to teach with a focus on individual student growth (see also Bandura, 1997; Pajares, 1996; Tschannen-Moran et al., 1998). However, the relation has
not been found to be causal in a specific direction, so it might also be hypothesized that teachers who focus on individual student growth and mastery tend to become more efficacious (Wolters & Daugherty, 2007). Additionally, elementary school teachers tend to report greater use of mastery-focused instructional practices than do middle or high school teachers (Midgley et al., 1995; Anderman & Midgley, 1997). As this study focused solely on elementary school teachers, this may have been a factor in the outcomes. Future research incorporating measures of teacher efficacy could shed light on these results, particularly with regard to the time frame the survey was administered (i.e., close to high stakes testing). Teachers may experience lower efficacy as the date of high stakes testing draws nearer, and higher efficacy after and prior to the high stakes test (Dawson, 2012).

In addition, I initially predicted that there would be variation among teachers’ use of mastery-focused instructional practices based upon their school context; however, this variation between schools was not found to be significant in the HLM analysis. That is, while teachers individually reported use of mastery-focused instructional practices, there were no predictive relations between belonging to a specific school and reporting the use of mastery-focused practices. This was a surprising finding, as I had initially predicted there would be a commonality found among teachers at the same school location in regard to support for teacher autonomy from the principal, the mastery goal structure of the school, or the teachers’ own mastery orientations for teaching, and their mastery-focused instructional practices. The use of school-level predictors in the regression was a limitation in my analysis.
Consideration of the findings from the model of mastery-focused instructional practices begs several questions for investigation in future studies. For example, highly efficacious teachers may not need autonomy-supportive principals to employ mastery practices, possibly because their need for autonomy is satisfied in other ways, for example, through curricular autonomy (Pearson & Moomaw, 2005) or with a schoolwide focus on learning and collaboration with peers (Roeser et al., 2002). Potentially, then, highly efficacious teachers may be less affected by perceived principal autonomy support. Another possibility is that principals leave mastery-oriented teachers alone, and neither support nor control their behavior, thus warranting no relation among these variables. The principal’s view of the teacher as an excellent or poor educator, for example, could lead to differentiated autonomy support for teachers. While my study did not reveal relations between principal autonomy support and instructional practices, further studies using different techniques could investigate the relations between principal autonomy support and control of behavior, and teacher efficacy and goal orientations for teaching. Finally, are teachers able to distinguish principal autonomy support from school goal structure? It may be that some teachers view the principal alone as having greatest influence on school goal structure and may be answering the survey questions based on their perception of the principal and not of the school as a whole.

Research question two posed, what is the relation among teacher perceptions of school performance goals for students, self-reported teacher performance goals for teaching, teacher perceptions of principal autonomy support, and self-reported performance-focused instructional practices?
Findings were consistent with the stated model for performance-focused instructional practices, with significant differences between schools. Specifically, 3% of the variation in performance-focused instructional practices could be attributed to between-school differences. At the teacher level of analyses, work avoid, performance-avoid and performance-approach orientations for teaching were each significantly related to the use of performance-focused instructional practices; and the perception of a school performance goal structure had the highest correlation to performance-focused instructional practices. These results align with previous research on relations between teaching orientations and performance-focused practices (Butler & Shibaz, 2008; Deemer, 2004; Retelsdorf et al., 2010) and school goal structure and performance-focused practices (Roeser et al., 2002). Findings indicate that in schools where teachers perceive a focus on competition among students and public comparison of student achievement and ability, teachers tend to teach emphasizing competition and comparison among students.

At the school level of analyses, I found that in schools with higher numbers of teachers who hold performance-avoid orientations for teaching, there was an increased self-reported use of performance-focused instructional practices, indicating that teachers who want to avoid being compared poorly with their peers tend to emphasize performance in their teaching. In contrast, the perception of a school performance goal structure was not related to performance-focused instructional practices at the school level.
The school performance-avoid orientation for teaching was significant at the Level 2 unit of analysis with \( p < .01 \). The significance in this means that teachers at schools who consider themselves to hold high performance-avoid orientations for teaching, or the teachers strongly agree that they hold goals for themselves to not perform poorly in teaching compared to others, exhibit greater use of performance-focused instructional practices. These results add to the literature on the maladaptive nature of performance-avoid orientations (Elliot & McGregor, 1999; Harackiewicz et al., 2008; Luo, W., Paris, Hogan & Luo, Z., 2011). One explanation for these results may be that a performance goal structure may affect individuals with performance-avoid orientations more than individuals who hold performance-approach orientations, yet even performance-approach oriented students could shift to performance-avoid with a significant performance focus at the classroom and school (Brophy, 2005).

Research question three posed, *what is the relation among teacher perceptions of school performance goals for students, self-reported teacher performance goals for teaching, teacher perceptions of principal autonomy support, and self-reported teacher’s controlling practices?*

Results of HLM analysis revealed that significant variation in teachers’ self-reported controlling practices could be attributed to differences across schools. Specifically, 7% of the variation in teacher’s controlling practices could be attributed to between-school differences. These findings illustrate the potential importance of considering variation at the school level. Controlling practices are detrimental to student motivation and learning, yet their use is widespread in schools (Flink et al., 1990;
Pelletier et al., 2002; Deci et al., 1982). However, there are no studies I could find of the relations between school goal structure and controlling practices. This is an area of research needed in the future.

At the teacher level, work-avoid and performance-avoid orientations for teaching were significant predictors of controlling practices. This indicates that teachers who wish to avoid work and teachers who wish to avoid being compared negatively to other teachers tend to use more practices that control students. Teacher perception of a school performance goal structure was also related to the use of controlling strategies in the classroom. Thus, teachers who perceived the school to promote students to compete with each other academically, emphasize the importance of test scores and recognize honor roll students reported controlling practices such as sticking to a strict schedule of concept presentation and making sure students do their work in exactly the same way.

As suggested by Boggiano and Katz (1991), there is a tendency for administrators to evaluate teachers’ performance positively when controlling practices are used in the classroom, and teachers may experience pressure from their administrators to use controlling practices. Teachers who report work-avoid and performance-avoid orientations would likely be most concerned about avoiding negative performance reviews from their principals.

Limitations and Implications

Considerations should be given to the limitations of my study. The population from which this sample was drawn included only public school elementary teachers in
grades pre-Kindergarten through grade eight, with grades six through eight teachers included in K-8 buildings. Responses from middle and high school teachers regarding the constructs in the models may impact instructional practice outcomes differently than at the elementary level. However, they are not reflected in this study. Results may be affected by the capability and motivation of participants to respond to the instrument.

The data collected in this study were exclusively based on teacher self-report data, and absent of any objective observable data. The data is contingent upon the teachers’ perceptions of their school environments, motivation for teaching, and instructional practices. Ames (1992) remarks that goal structures warrant study through perceptions of individuals. Although Ames was discussing student perceptions, the same may be said of teachers’ shared perceptions of the school goal structure. In this study those perceptions are taken as indicators of the goal structure of schools, and thus describe more fully the shared experience of teachers in schools.

An additional limitation of this study is the lack of a measure of teacher efficacy. As aforementioned, teacher efficacy has been a factor in previous research studies of instructional practices, particularly in the use of mastery-focused practices in the classroom (Midgley et al., 1995; Wolters & Daugherty, 1997). Elementary teachers in particular tend to report using more mastery-focused practices than teacher at other levels (Midgley et al, 1995), and future studies would be improved through the addition of such measures.
The quality and depth of the responses are limited by the instrument as the only collection tool. My study measured the perceptions of principal autonomy support, it did not measure perceptions of principal controlling strategies. I found a high average for principal autonomy support, with 5 on the 7 point scale reported as the mean rating. This finding may be due to social desirability bias, or it may be that without a contrasting measure of controlling strategies, the differentiation was not wide enough for teacher to choose from. Possibly adding a scale that rates principal autonomy support or control of behavior would more accurately measure the construct (Deci & Ryan, 1987). It would also be interesting to conduct this study with an overlay of principal perceptions of their support for autonomy, and principal’s perceptions of the school goal structure.

Further studies are warranted that consider the role school context and school goal culture in particular play in teacher goal orientations and subsequent instructional practices that reflect classroom goal structures for students at the middle and high school level (Midgley et al., 1995; Anderman & Midgley, 1997). Principal controlling strategies could be measured to investigate effects on teacher instructional practices at the school level (Deci et al., 1982). The use of qualitative means of investigation, such as interviews or case studies, can lead to further understanding of teachers’ interpretation of the items on the goal orientation and principal autonomy support scales and how they relate to perceptions of school goal structure and the adoption of specific types of instructional practices (Glesne, 2006).

This type of research could potentially assist administrators in creating environments that support the adoption of teacher goal orientations associated with
adaptive outcomes for students. Results of this study contribute to the discussion and research on teacher goal orientations for teaching, teachers’ contextual supports for their teaching, and how teacher goal orientations influence instructional practices. Further, presenting studies of the influences of instructional practices on motivation in professional development programs will encourage teachers to interrogate their assumptions. Collaborative opportunities for discourse on the motivational influences of teacher and school practices may well promote educational change to the benefit of all learners, including teachers themselves.
References


MAST (Spencer) Teacher Survey General Codebook. (1998). Approaches to Teaching Scales, Wave 1, Fall. Part of the larger studies made possible by Grant 199800210 from the Spencer Foundation to Julianne C. Turner and Carol Midgley.


Appendix A: Implementation Documents

Communications

Initial Email to Participants

Dear Colleague,

I am completing research on motivation in schools as a student at The Ohio State University under the direction of Dr. Eric Anderman. You are an expert in this area, and your participation is critical! Click on the link below (or copy in your web browser’s address bar) to complete a short survey instrument based on your experiences. This survey should take approximately 10-15 minutes. Answers to survey questions will be kept confidential. Please contact me with any questions you might have. I can be reached via email – leigh.27@osu.edu. Please know that your participation is adding value to schooling and the teaching profession.

Thank you for all you do for students!

Respectfully,

Kristy Leigh

Doctoral Candidate, The Ohio State University

Note: For questions about your rights as a participant in this study or to discuss other study-related concerns or complaints with someone who is not part of the research team, you may contact Ms. Sandra Meadows in the Office of Responsible Research Practices at 1-800-678-6251.
First Reminder email script:

Dear Colleague,

This is a reminder email about the online survey on motivation in schools. Your participation is critical! Click on the link below (or copy in your web browser’s address bar) to complete the short survey. Answers to survey questions will be kept confidential. Please contact me with any questions you might have. I can be reached via email – leigh.27@osu.edu. Please know that your participation is adding value to schooling and the teaching profession.

Thank you for all you do for students!

Respectfully,

Kristy Leigh

Doctoral Candidate, The Ohio State University

Second Reminder Email Script:

Dear Colleague,

This is a final reminder email about the online survey on motivation in schools. Your participation is critical! Click on the link below to complete the short survey. Answers to survey questions will be kept confidential. Please contact me with any questions you might have. I can be reached via email – leigh.27@osu.edu.

Respectfully,

Kristy Leigh

Doctoral Candidate, The Ohio State University
Motivation in Schools Questionnaire

Please answer the questions honestly. This is an anonymous survey. Your candid responses are confidential and will help support the study of motivation in schools.

1. My primary school location is: *Please answer all questions with regard to the school indicated.

2. The grade level(s) I teach is:
   - PreK-2
   - Grades 3-8

3. I am:
   - Female
   - Male

4. I have been teaching for a total of:
   - 0-5 years
   - 6-10 years
   - 11-15 years
   - More than 15 years

5. I have been teaching in this school for a total of:
   - 0-5 years
   - 6-10 years
   - 11-15 years
   - More than 15 years
6. We are interested in the context of motivation in schools. Please consider the following questions with the school you named as your primary location in mind:

In this school:  1 – Strongly Disagree  2- 3-Somewhat Agree  4- 5-Strongly Agree

The importance of trying hard is really stressed to students.

It’s easy to tell which students get the highest grades and which students get the lowest grades.

A lot of the work students do is boring and repetitious.

A real effort is made to show students how the work they do in school is related to their lives outside of school.

Students hear a lot about the importance of getting high test scores.

Students are told that making mistakes is OK as long as they are learning and improving.

Students are encouraged to compete with each other academically.

The emphasis is on really understanding schoolwork, not just memorizing it.

Grades and test scores are not talked about a lot.

Students are frequently told that learning should be fun.

Students hear a lot about the importance of making the honor roll or being recognized at honor assemblies.

Students who get good grades are pointed out as an example to others

A real effort is made to recognize students for effort and improvement.
7. We are interested in what makes teachers feel that they had a good day at work. When this question was put to teachers they gave many different reasons, which are presented in the following list. For each reason, please indicate the degree to which it is true for you.

I feel I had a good day at work when:

1-Not True at all  2-   3-   4-   5-Very True

The material was easy and I did not have to prepare for my classes.

I didn’t have any tests or homework to grade.

Something that happened in class made me want to deepen my professional knowledge.

I was praised for having high teaching ability relative to other teachers.

In a meeting my lesson plan was singled out as better than that of any of the other teachers.

The students did not ask any questions in class that I could not answer.

I got through the day OK without having to work too hard.

I learned something new about myself as a teacher.

The principal singled me out as having higher teaching ability than other teachers in the school.

My classes scored higher on a test than those of other teachers.

Some of my classes were cancelled.

I saw that I am developing professionally and teaching more effectively than in the past.

In a meeting the principal did not include me as one of the teachers having difficulty.
A student asked a question that made me think again about the subject matter.

I didn’t ‘mess up’ in any of my classes.

My classes did not do any worse than those of other teachers on a test.

8. We are interested in the types of instructional practices teachers use in the classroom. Please indicate the degree to which each is true for you.

1-Not True At All  2-  3-  4-  5-Very True

I reward students for getting correct answers with extra recess, stickers, candy, etc.

I make a special effort to recognize students’ individual progress, even if they are below grade level.

I help students understand how their performance compares to others.

I display the work of the highest achieving students as an example.

I offer incentives for students who received high scores on tests.

I give a wide range of assignments, matched to students’ needs and skill level.

I make sure that students do their work exactly the way I say.

I frequently ask my students to explain and illustrate their line of thought.

I plan my lessons so that students learn exactly what I want them to learn.

I give special privileges to students who do the best work.

I make a point of showing my students that learning is fun.

During class, I often provide several different activities so that students can choose among them.
I encourage students to compete with each other.

I point out those students who do well as a model for other students.

I don’t allow students to move on until they have mastered a concept.

I stick to a strict schedule regarding when concepts will be presented to my class.

I work hard to make class interesting and engaging for all my students.

I consider how much students have improved when I give them report card grades.

When I give an assignment, I make sure that all students do it the same way.

9. This questionnaire contains items that are related to your experiences with the principal who is your most immediate supervisor. Principals have different styles in dealing with teachers, and we would like to know more about how you have felt about your encounters with your principal. Your responses are confidential. Please be honest and candid.

1-Strongly Agree  2-  3-  4-Neutral  5-  6-  7-Strongly Agree

I feel that my principal provides me choices and options.

I feel understood by my principal.

My principal conveys confidence in my ability to do well at my job.

My principal encourages me to ask questions.

My principal listens to how I would like to do things.

My principal tries to understand how I see things before suggesting a new way to do things.
10. What is one thing your school does to support teachers’ professional growth?
11. What is one thing your school does that hinders teachers’ professional growth?

Please click Done to submit your survey response.
March 14, 2011

Dear Principal,

I am conducting a study on motivation in schools with elementary teachers in [Metropolitan City Schools] as part of my doctoral program at The Ohio State University. Attached is the approval letter for this study from the district’s Research Proposal Review Committee.

An introductory postcard and a hot chocolate incentive for each certified teacher in your school are included in this packet. This includes all certified teachers, including unified arts teachers, in your building.

Feel free to contact me at any time with any questions or concerns. I may be reached via email at leigh.27@osu.edu.

Thank you so much for your time and consideration.

Sincerely,

Kristy Leigh
Doctoral Student
Teacher Education, Policy and Leadership
College of Education and Human Ecology
The Ohio State University
Appendix B: Data

Data for All Scales and Items

Means, Standard Deviations, and Measures of Skewness for Principal Autonomy Support Items  N=507

<table>
<thead>
<tr>
<th>Item</th>
<th>M</th>
<th>SD</th>
<th>Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel that my principal provides me choices and options</td>
<td>5.07</td>
<td>1.81</td>
<td>-.76</td>
</tr>
<tr>
<td>I feel understood by my principal</td>
<td>5.00</td>
<td>1.88</td>
<td>-.75</td>
</tr>
<tr>
<td>My principal conveys confidence in my ability to do well at my job</td>
<td>5.49</td>
<td>1.76</td>
<td>-1.18</td>
</tr>
<tr>
<td>My principal encourages me to ask questions</td>
<td>4.98</td>
<td>1.94</td>
<td>-.69</td>
</tr>
<tr>
<td>My principal listens to how I would like to do things</td>
<td>5.03</td>
<td>1.90</td>
<td>-.77</td>
</tr>
<tr>
<td>My principal tries to understand how I see things before suggesting a new way to do things</td>
<td>4.79</td>
<td>1.94</td>
<td>-.62</td>
</tr>
</tbody>
</table>

Means, Standard Deviations, and Measures of Skewness for Controlling Practices Items  N=507

<table>
<thead>
<tr>
<th>Item</th>
<th>M</th>
<th>SD</th>
<th>Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td>I make sure that students do their work exactly the way I say</td>
<td>2.41</td>
<td>.91</td>
<td>.31</td>
</tr>
<tr>
<td>I plan my lessons so that students learn exactly what I want them to learn</td>
<td>3.26</td>
<td>.96</td>
<td>-.36</td>
</tr>
<tr>
<td>I stick to a strict schedule regarding when concepts will be presented in my class</td>
<td>2.33</td>
<td>1.06</td>
<td>.45</td>
</tr>
<tr>
<td>When I give an assignment, I make sure that all students do it the same way</td>
<td>1.91</td>
<td>.84</td>
<td>.62</td>
</tr>
</tbody>
</table>
### Means, Standard Deviations, and Measures of Skewness for School Mastery Goal Structure Items, N=507

<table>
<thead>
<tr>
<th>Item</th>
<th>M</th>
<th>SD</th>
<th>Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td>In this school the importance of trying hard is really stressed students</td>
<td>4.39</td>
<td>.91</td>
<td>-1.67</td>
</tr>
<tr>
<td>In this school a lot of the work students do is boring and repetitious</td>
<td>3.70</td>
<td>.95</td>
<td>-.65</td>
</tr>
<tr>
<td>In this school a real effort is made to show students how the work they do in school is related to their lives outside of school</td>
<td>3.79</td>
<td>.96</td>
<td>-.68</td>
</tr>
<tr>
<td>In this school students are told that making mistakes is okay, as long as they are learning and improving</td>
<td>4.04</td>
<td>.97</td>
<td>-.95</td>
</tr>
<tr>
<td>In this school the emphasis is on really understanding schoolwork, not just memorizing it</td>
<td>3.95</td>
<td>.98</td>
<td>-.88</td>
</tr>
<tr>
<td>In this school students are frequently told that learning should be fun</td>
<td>3.35</td>
<td>1.04</td>
<td>-.22</td>
</tr>
<tr>
<td>In this school a real effort is made to recognize students for effort and improvement</td>
<td>4.00</td>
<td>1.01</td>
<td>-1.06</td>
</tr>
</tbody>
</table>

### Means, Standard Deviations, and Measures of Skewness for Mastery Goal Orientation for Teaching Items, N=507

<table>
<thead>
<tr>
<th>Item</th>
<th>M</th>
<th>SD</th>
<th>Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Something that happened in class made me want to deepen my professional knowledge</td>
<td>3.98</td>
<td>.96</td>
<td>-.93</td>
</tr>
<tr>
<td>I learned something new about myself as a teacher</td>
<td>4.11</td>
<td>.88</td>
<td>-1.02</td>
</tr>
<tr>
<td>I saw that I am developing professionally and teaching more effectively than in the past</td>
<td>4.37</td>
<td>.81</td>
<td>-1.44</td>
</tr>
<tr>
<td>A student asked me a question that made me think again about the subject matter</td>
<td>3.85</td>
<td>.99</td>
<td>-.95</td>
</tr>
</tbody>
</table>
### Means, Standard Deviations, and Measures of Skewness for Mastery-focused Instructional Practice Items,  $N=507$

<table>
<thead>
<tr>
<th>Item</th>
<th>$M$</th>
<th>$SD$</th>
<th>Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td>I make a special effort to recognize students’ individual progress, even if they are below grade level</td>
<td>4.56</td>
<td>.69</td>
<td>-1.68</td>
</tr>
<tr>
<td>I give a wide range of assignments, matched to students’ needs and skill level</td>
<td>4.15</td>
<td>.91</td>
<td>-.90</td>
</tr>
<tr>
<td>I make a point of showing my students that learning is fun</td>
<td>4.31</td>
<td>.79</td>
<td>-1.24</td>
</tr>
<tr>
<td>During class, I often provide several different activities so that students can choose among them</td>
<td>3.50</td>
<td>1.11</td>
<td>-.34</td>
</tr>
<tr>
<td>I work hard to make class interesting and engaging for all my students</td>
<td>4.54</td>
<td>.65</td>
<td>-1.49</td>
</tr>
<tr>
<td>I consider how much students have improved when I give them report card grades</td>
<td>3.98</td>
<td>1.02</td>
<td>-1.07</td>
</tr>
</tbody>
</table>

### Means, Standard Deviations, and Measures of Skewness for Performance-approach Goal Orientation for Teaching Items,  $N=507$

<table>
<thead>
<tr>
<th>Item</th>
<th>$M$</th>
<th>$SD$</th>
<th>Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td>I was praised for having high teaching ability relative to other teachers</td>
<td>3.19</td>
<td>1.30</td>
<td>-.26</td>
</tr>
<tr>
<td>In a meeting my lesson plan was singled out as better than that of any of the other teachers</td>
<td>2.31</td>
<td>1.24</td>
<td>.54</td>
</tr>
<tr>
<td>The principal singled me out as having higher teaching ability than other teachers in the school</td>
<td>2.24</td>
<td>1.24</td>
<td>.59</td>
</tr>
<tr>
<td>My classes scored higher on a test than those of other teachers</td>
<td>2.76</td>
<td>1.32</td>
<td>.11</td>
</tr>
</tbody>
</table>

### Means, Standard Deviations, and Measures of Skewness for Performance-avoid Goal Orientation for Teaching Items,  $N=507$

<table>
<thead>
<tr>
<th>Item</th>
<th>$M$</th>
<th>$SD$</th>
<th>Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td>The students did not ask any questions in class that I could not answer</td>
<td>1.89</td>
<td>1.07</td>
<td>1.03</td>
</tr>
<tr>
<td>In a meeting the principal did not include me as one of the teachers having difficulty</td>
<td>2.76</td>
<td>1.41</td>
<td>.08</td>
</tr>
<tr>
<td>I didn’t ‘mess up’ in any of my classes</td>
<td>2.55</td>
<td>1.30</td>
<td>.27</td>
</tr>
<tr>
<td>My classes did not do any worse than those of other teachers on a test</td>
<td>2.41</td>
<td>1.19</td>
<td>.30</td>
</tr>
</tbody>
</table>
### Means, Standard Deviations, and Measures of Skewness for School Performance Goal Structure Items, N=507

<table>
<thead>
<tr>
<th>Item</th>
<th>M</th>
<th>SD</th>
<th>Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td>In this school it’s easy to tell which students get the highest grades and which students get the lowest grades</td>
<td>3.07</td>
<td>.93</td>
<td>.13</td>
</tr>
<tr>
<td>In this school students hear a lot about the importance of getting high test scores</td>
<td>3.92</td>
<td>1.08</td>
<td>-.80</td>
</tr>
<tr>
<td>In this school students are encouraged to compete with each other academically</td>
<td>2.61</td>
<td>1.07</td>
<td>.30</td>
</tr>
<tr>
<td>In this school grades and test scores are not talked about a lot</td>
<td>3.75</td>
<td>1.04</td>
<td>-.62</td>
</tr>
<tr>
<td>In this school students hear a lot about the importance of making the honor roll or being recognized at honor assemblies</td>
<td>2.90</td>
<td>1.14</td>
<td>-.02</td>
</tr>
<tr>
<td>In this school students who get good grades are pointed out as an example to others</td>
<td>3.30</td>
<td>1.12</td>
<td>-.41</td>
</tr>
</tbody>
</table>

### Means, Standard Deviations, and Measures of Skewness for Performance-focused Instructional Practice Items, N=507

<table>
<thead>
<tr>
<th>Item</th>
<th>M</th>
<th>SD</th>
<th>Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td>I reward students for getting correct answers with extra recess, stickers, candy, etc.</td>
<td>2.86</td>
<td>1.41</td>
<td>.07</td>
</tr>
<tr>
<td>I help students understand how their performance compares to others</td>
<td>2.64</td>
<td>1.13</td>
<td>.28</td>
</tr>
<tr>
<td>I display the work of the highest achieving students as an example</td>
<td>2.45</td>
<td>1.22</td>
<td>.45</td>
</tr>
<tr>
<td>I offer incentives for students who receive high scores on tests</td>
<td>2.30</td>
<td>1.28</td>
<td>.56</td>
</tr>
<tr>
<td>I give special privileges to students who do the best work</td>
<td>2.43</td>
<td>1.22</td>
<td>.41</td>
</tr>
<tr>
<td>I encourage students to compete with each other</td>
<td>2.07</td>
<td>1.10</td>
<td>.86</td>
</tr>
<tr>
<td>I point out those students who do well as a model for the other students</td>
<td>3.12</td>
<td>1.18</td>
<td>-.26</td>
</tr>
<tr>
<td>Item</td>
<td>M</td>
<td>SD</td>
<td>Skewness</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>-----</td>
<td>-----</td>
<td>----------</td>
</tr>
<tr>
<td>I feel I had a good day at work when the material was easy and I did not have to prepare for my classes</td>
<td>1.67</td>
<td>.92</td>
<td>1.23</td>
</tr>
<tr>
<td>I feel I had a good day at work when I didn’t have any tests or homework to grade</td>
<td>2.01</td>
<td>1.15</td>
<td>.95</td>
</tr>
<tr>
<td>I feel I had a good day at work when I got through the day OK without having to work too hard</td>
<td>1.48</td>
<td>.78</td>
<td>1.72</td>
</tr>
<tr>
<td>I feel I had a good day at work when some of my classes were cancelled</td>
<td>1.52</td>
<td>.89</td>
<td>1.75</td>
</tr>
</tbody>
</table>