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ELEMENTARY TEACHERS' ACHIEVEMENT GOAL ORIENTATIONS IN A HIGH-  
STAKES ACCOUNTABILITY CONTEXT: A VALIDATION STUDY

A dissertation submitted in partial fulfillment of the requirements for the  
Doctor of Philosophy in Education, Educational Psychology at Virginia Commonwealth  
University.

by

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## Acknowledgement

This dissertation would not have been possible without the involvement of so many individuals, from faculty and colleagues to family and friends. First, to my dad, Steve: thank you for allowing me countless hours of discussion, venting, and sometimes rambling, and for remaining interested in and supportive of my dream even though at times it seemed crazy. I owe much of my motivation, ambition, and perhaps some stubbornness, to you. To my mom, Kathy, I am thankful for your support, belief, and pride in my work; you always provided a positive outlook and words of encouragement, and those things gave me a fresh perspective through which to view my work. To my in-laws, John and Moira Turner, whose steadfast support and thoughtful discussion always motivated me to keep going. And to Sarah Conklin, whose friendship I value so much. I don't think I could have made it through this program without you.

Finally, to the faculty members who have guided my work throughout my doctoral program and dissertation, I thank you. Dr. Solomon, without your support and expertise I would have never developed such a deep understanding of teacher motivation and education policy. Your thoughtful questions and our lively discussions always pushed my thinking, and I am grateful. Dr. Cauley, you were my inspiration to engage in this program in the first place, and I am honored that you have taken a continued interest in my work and success, both in this program and in life in general. Dr. Clark, your wisdom and humor amaze me, and I am so grateful to have had the chance to work with you throughout this program and this research. Dr. Graham, thank you for your thoughtful feedback and guidance. Finally, Drs. McMillan and Stemhagen, I thank you for your mentorship and your friendship.

## Dedication

This dissertation is dedicated to my husband, Jonathan Turner. This work would have never been possible without your unwavering support, dedication, and love. Thank you for building me up, keeping me focused, and making me take a step back when necessary.

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## Abstract

### TEACHERS' ACHIEVEMENT GOAL ORIENTATIONS IN A HIGH-STAKES ACCOUNTABILITY CONTEXT: A VALIDATION STUDY

By Amanda B. Turner, Ph.D.

A dissertation submitted in partial fulfillment of the requirements for the Doctor of Philosophy in Education, Educational Psychology at Virginia Commonwealth University.

Virginia Commonwealth University, 2014

Dissertation Chair: Dr. Hadley J. Solomon

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The present study investigated teacher motivation in a high-stakes accountability context. Specifically, this study examines elementary teachers' achievement goal orientations, self-efficacy for teaching, and perceptions of help-seeking in the context of high-stakes testing and school accountability under No Child Left Behind and an Elementary and Secondary Education Act waiver. Butler's (2007) teacher achievement goal orientation framework provided the theoretical basis of the present study; high-stakes tests and school accountability status were thought to impact teachers' achievement goal orientations. Additionally, teachers' achievement goal orientations were thought to impact teaching self-efficacy and perceptions of help-seeking. The sample included 381 elementary school teachers. Multivariate analysis of variance (MANOVA) and hierarchical multiple regression were used to examine the relationships between and among high-stakes testing and issues teachers perceive to be related to these tests, stress related to high-stakes tests, school accountability status, teachers' achievement goal

orientations, teaching self-efficacy, and perceptions of teacher help-seeking. Results suggest that, for this sample, dimensions of teachers' achievement goal orientations differ from the dimensions characterized by Butler and colleagues (Butler, 2007; Butler & Shibaz, 2008; Nitsche et al., 2010; Cho & Shim, 2013; Shim et al., 2013). Specifically, teachers in this sample exhibited mastery and work-avoidance goals, as characterized by Butler (2007), but not performance-approach and performance-avoidance goals. Teachers here distinguished between personal performance orientation, or motivation driven by external factors (e.g., recognition from administrators) and using others as the referent to which they compared their own performance (e.g., colleagues). Additionally, class performance orientation emerged as a distinct dimension of teachers' achievement goal orientations for this sample. Those who espoused this orientation sought for their classes to compare favorably with other classes and were motivated by external factors, such as their class scoring high on state-wide tests. Teacher achievement goal orientations were related to high-stakes testing, but school issues related to high-stakes testing and stress associated with these tests were more salient predictors of teachers' achievement goal orientations than whether teachers taught in testing grades or not. Finally, teachers' achievement goal orientations were significant predictors of self-efficacy for teaching and teachers' perceptions of their own help-seeking.

## **Chapter One: Introduction**

The aim of the present study is to examine teacher motivational processes in the context of school accountability under No Child Left Behind. For the purposes of this study, teacher motivation is characterized as achievement goal orientation. Specifically, teacher motivation is defined as the goals teachers hold for engagement in an achievement task (Dweck & Leggett, 1988; Elliot, 2005), in this case teaching (Butler, 2007). Additionally, teachers' achievement goal orientations are thought to impact self-efficacy for teaching and perceptions of help-seeking (Butler, 2007; Butler & Shibaz, 2008). The present study examines the relationships among these constructs, along with the impact of school accountability and high-stakes testing on teachers' achievement goal orientations.

### **School Accountability Under No Child Left Behind**

In 2002, President Bush signed the No Child Left Behind act (NCLB), ushering in three primary aims: A) to increase school accountability through testing and teacher evaluation, B) to provide students with greater school choice through vouchers, and C) to provide more spending flexibility for educational agencies that maintain Adequate Yearly Progress (AYP) (Hursh, 2007; McCarthy, 2008; NCLB, 2002). Schools achieve Adequate Yearly Progress (AYP) by ensuring that students, including subgroups such as English Language Learners, pass statewide content assessments, and mandates that 100% of students will pass statewide high-stakes examinations in math, English, science, and social studies by 2014 (NCLB, 2002). If schools do not meet AYP, they are subject to sanctions, and must develop improvement plans. Failing to make AYP in subsequent years may lead the state to take over schools, ultimately resulting in closure of low-

performing schools (Darling-Hammond, 2007; Hursh, 2007). This cycle of increased pressure as a result of the need for improved test scores has placed more stress on teachers and administrators, with administrators looking to teachers to produce passing test scores in the classroom (Amrein-Beardsley, Berliner, & Rideau, 2010; Valli & Beusse, 2007).

Some states, such as Virginia, have received Elementary and Secondary Education Act (ESEA) flexibility waivers designed to reduce performance gaps between high- and low-performing schools and student sub-groups (VDOE, 2012). These waivers allow states to design benchmark assessments, to define sub-groups of students (e.g., students with disabilities, students of color), and to set acceptable pass rates for state examinations for these subgroups (Virginia DOE, 2013). Rather than meeting AYP, Virginia reports on the performance of students and schools in relation to Annual Measurable Objectives (AMO; VDOE, 2012). Similar to AYP, AMO requires that student sub-groups and schools meet statewide testing pass-rate benchmarks each year. Under the flexibility waiver, Virginia designates low-performing schools as *Priority* or *Focus schools*, and high-performing schools as *Reward schools* (see Table 1, VDOE, 2012, 2013).

**Table 1.1**

*School status designations under ESEA waiver.*

	<b>Priority School</b>	<b>Focus School</b>	<b>Reward School</b>
<b>Definition</b>	Non-Title I schools failing to make AMO for two consecutive years	Title I schools failing to make AMO for two consecutive years	Any school meeting AMO consistently
<b>Consequence</b>	Turn-around professionals; state takeover within 1 year of designation	Development of improvement plan; turn-around professionals; state takeover within 1 year of designation	

*Priority schools* refer to non-Title I schools that have failed to meet AMO for two years in a row. *Focus schools* are Title I schools that have not met AMO in the same subject for two years in a row. Focus schools must develop an improvement plan detailing the steps being taken to raise student test scores (VDOE, 2012). Priority and Focus schools are subject to interventions, including "turn-around" professionals hired to develop overhauls of schools that have consistently failed to meet AMO (VDOE, 2012). Many states, under ESEA waivers, have designed similar school and sub-group categories and interventions for under-performing schools (McMurrer & Yoshioka, 2013). Such practices put pressure on teachers that may have unintended consequences (Amrein-Beardsley et al., 2010; Barret, 2009; Crocco & Costigan, 2007; Darling-Hammond, 2003, 2007; Rustique-Forrester, 2005), which are detailed below. Though the present study is limited to teachers in Virginia, findings resulting from this research may inform further research in states with similar waivers and intervention policies.

### **The Impact of Accountability Policy on Teacher Practices and Well-Being**

A number of studies have illustrated that the pressures of accountability practices mandated by NCLB impact teachers' pedagogy (Barret, 2009; Rustique-Forrester, 2005), well-being (Abrams, Pedulla, & Madaus, 2003; Berryhill, Linney, & Fromewick, 2009; Valli & Buesse, 2007) and motivation (Abrams et al., 2003; Berryhill et al., 2009; Ciani, Summers, & Easter, 2008; Dawson, 2013; Finnigan, 2010; Finnigan & Gross, 2007). These pressures lead to a host of unintended, often negative outcomes for teachers (Abrams et al., 2003; Berryhill et al., 2009; Darling-Hammond, 2007). For instance, teachers experience such negative consequences as cheating, emotional distress, low teacher morale, teacher burnout, and decreased motivation. These unintended consequences are explored below.

## **Teacher Cheating**

Since the passage of NCLB, a number of cheating scandals have been highlighted in the media (e.g., California, New York, Atlanta, Texas, and Chesapeake, Virginia) (Amrein & Berliner, 2002; The Atlanta Journal-Constitution, 2013; Dessoiff, 2011; Nichols & Berliner, 2005). Amrein-Beardsley and colleagues (2010) surveyed teachers about cheating and found that over 50% admitted to cheating in some capacity, from changing students' answers to pointing out incorrect answers to students while they took state-wide exams. Teachers in this study indicated that pressures from school- and district-level administrators led to or encouraged cheating to raise student test scores to meet ever-growing AYP expectations (Amrein-Beardsley et al., 2010).

Similarly, Pedulla and colleagues (2001) surveyed teachers nation-wide and found that teachers reported providing students with hints, gave students more time than allowed, and even changed students' answers on statewide exams. Rather than vilifying teachers, we may be better served to critically examine accountability practices that encourage teachers to cheat (Nichols & Berliner, 2005). Campbell's law tells us "The more any quantitative social indicator is used for social decision-making, the more subject it will be to corruption pressures..." (Koretz, 2008; Nichols & Berliner, 2005). Applied to education, Campbell's law suggests that the higher the stakes attached to testing and accountability, the greater pressure teachers will feel to raise student test scores, even by cheating (Nichols & Berliner, 2005).

## **Emotional Distress**

Environments that stress test scores and meeting ever-growing quantitative benchmarks cause teachers stress (von der Embse & Hasson, 2012). Nation-wide, teachers report feeling extreme levels of stress as a result of high-stakes testing (Dawson, 2013; von der Embse &

Hasson, 2012). Valli and Buesse (2007) describe teachers leaving meetings with colleagues, administrators, and union representatives in tears, lamenting constant changes in curriculum and expectations in response to AYP benchmarks. Teachers in this study linked stress levels directly to AYP expectations, questioning why pass rates were acceptable one year and then increased significantly the next, with no increase in resources (Valli & Buesse, 2007).

Others have reported similar findings, with teachers reporting feelings of exhaustion by changing expectations, curriculum, and roles, and humiliation when their students or schools do not meet AYP (Berryhill et al., 2009; Jones & Egley, 2004). Even in states where teachers generally support accountability based on high-stakes tests, such as Florida, teachers report low morale and high stress (Abrams, 2004; Jones & Egley, 2004; Vernaza, 2012). These findings suggest teachers feel increased pressure due to accountability policies, leading to negative emotional responses.

### **Teacher Burnout**

The pressure to meet AYP/AMO also leads to teacher burnout. Teacher burnout is characterized by emotional exhaustion, depersonalization, and decrease in personal accomplishments (Skaalvik & Skaalvik, 2010, 2011). Policies emphasizing standardized test scores and AYP/AMO can lead to feelings of role conflict, an antecedent of teacher burnout (Berryhill et al., 2009). That is, teachers may feel that such policies require them to teach a narrowed curriculum or move on from concepts too quickly (Nichols & Berliner, 2005).

Another example of role conflict is what Booher-Jennings (2006) calls "educational triage," or the practice of dividing students into groups based on those likely to pass state-mandated exams. Students are divided into "safe cases...bubble kids...and hopeless cases," (pg. 757) and teachers are instructed to focus their attention on the "bubble kids," or those that need



just a little extra help to pass the exams (Booher-Jennings, 2006). "Safe cases," and, perhaps most disturbingly, "hopeless cases," receive little to no attention because they are either expected to pass without much help or, in the latter case, are not expected to pass even with much extra tutoring and attention (Booher-Jennings, 2006). These requirements are often at odds with the purposes teachers perceive as central to teaching and education (Booher-Jennings, 2006; Hursh, 2007; Turner, Stemhagen, & Stringer, 2013), and can lead to emotional exhaustion and disengagement from the profession.

Berryhill and colleagues (2009) found that increased accountability pressures were related to teacher emotional exhaustion and role conflict, both of which are antecedents of burnout. Teachers also feel that standardization strips them of their professionalism, with such policies suggesting they are incompetent to select and teach curriculum and concepts that will benefit students on their own (Abrams, 2004; Barrett, 2009; Donnelly & Sadler, 2008). This can lead to teachers feeling disconnected with the curriculum and profession as a whole, another cause of teacher burnout (Berryhill et al., 2009; Skaalvick & Skaalvick, 2010; 2011).

### **Teacher Attrition**

Teacher burnout, spurred by accountability pressures and standardization, can lead to teacher attrition. Amrein and Berliner (2002) and Valli and Buesse (2007) report teachers leaving the profession in droves, often in the early years of their career. Amrein and Berliner (2002) described a "teacher exodus" (pg. 45); in the face of emotional distress described above, with waning support from district leaders coupled with increased accountability pressures, teachers at all career levels began to transfer to higher-performing schools or leave the profession altogether (Amrein & Berliner, 2002; Tye & O'Brien, 2002). Surveying teachers who had recently left the field, Tye and O'Brien (2002) found teachers cited accountability (defined as high-stakes testing,

test preparation, and standardization) as the number one reason for their departure. Extending this research, Sass and colleagues found that elementary teachers in low-performing schools were more likely to leave the field than middle and high school teachers; in high-performing schools, high school teachers were more likely to leave the profession (Sass, Flores, Claeys, & Perez, 2012). These findings suggest that accountability policies that tie school accreditation and status to high-stakes tests may push teachers out of the classroom (Sass et al., 2012).

This is not to suggest that teachers should not be held accountable. On the contrary, teachers in Tye and O'Brien's (2002) study indicated they agreed with policies that hold students, teachers, and schools accountable for student learning. However, these teachers suggest that a single standardized test is not a valid measure of performance, a view supported by experts in educational measurement (e.g., Koretz, 2009). Teachers view tying high-stakes test scores to school and teacher quality, accreditation, grade promotion and retention, and teacher evaluation as inappropriate (Abrams, 2004). Other studies building on this line of research reflect similar results (Berryhill et al., 2009; Finnigan, 2010; Finnigan & Gross, 2007; Vernaza, 2012). Teachers also want policy-makers to consider factors outside of teachers' control, such as students' home environments or disabilities, when designing systems of teacher accountability (Vernaza, 2012). Ignoring these factors can lead to the unintended consequences described above, along with low teacher motivation.

### **Accountability and Teacher Motivation**

Teacher motivation can also be affected by accountability policies. Some researchers have studied the impact of policy pressures on teacher self-efficacy or expectancy-value (Berryhill et al., 2009; Dawson, 2012; Finnigan, 2010; Finnigan & Gross, 2007). For instance, accountability and high-stakes testing have been shown to negatively relate to teacher self-

efficacy (Ciani et al., 2008; Dawson, 2013; Berryhill et al., 2009). Finnigan showed a relationship between school probation status and teacher expectancy (2010), though she suggests that principal leadership and other school contextual variables may mediate the relationship between accountability and teacher expectancy and valence (Finnigan, 2010; Finnigan & Gross, 2007). Results from Berryhill et al.'s interviews echo Finnigan's findings (2010, Finnigan & Gross, 2007), suggesting teachers feel their influence on student performance on state exams is limited by external factors such as socioeconomic status and parental involvement (2009). Berryhill and colleagues (2009) suggest that accountability policies negatively impact teachers' self-efficacy because their estimations of competence are not based solely on their own abilities, but on their ability to teach in combination with students' abilities to pass standardized tests.

These studies illustrate a relationship between accountability and self-efficacy. However, motivational processes related to self-efficacy may also be impacted by accountability policies. Achievement goal orientation can provide a framework for understanding the impact of accountability on teacher motivation.

### **Accountability and Teachers' Achievement Goal Orientations**

Goals provide a framework for the interpretation of events and environments, impacting cognition, affect, and behavior (Dweck & Legget, 1988). Butler (2007) suggests that the classroom can be interpreted as an achievement context for teachers, so that they may strive for mastery, demonstration of ability, or avoidance behaviors. Such orientations frame the way individuals approach the environments around them (Elliot, 2005), and extend to the way teachers approach their profession.

The school environments created by high-stakes testing and AYP/AMO expectations are performance-based, with an emphasis on raising student test scores. This performance-based

environment is likely to lead to an increased feeling of competitiveness among teachers, with teachers striving to out-perform others (Barrett, 2009; Jones & Egley, 2004; Wolters & Daugherty, 2007). A focus on out-performing others and demonstrating ability characterizes a performance-approach goal orientation (Ames, 1992; Butler, 2007). Teachers who do not thrive in such competitive environments may withdraw from administrators, colleagues, and even the practice of teaching, indicating a performance-avoidance orientation (Butler, 2007). On the other hand, teachers may respond to increased accountability pressures by striving to amass pedagogical knowledge and practices, suggesting mastery orientation (Butler, 2007). Work on teacher achievement goal orientations conducted by Butler (e.g., Butler, 2007) and her colleagues (e.g., Butler & Shibaz, 2008; Retelesdorf et al, 2010) serves as the theoretical framework for the research presented here, and will be explored in further detail in the following chapter.

The present study aims to examine teacher motivation, operationalized as achievement goal orientations, in relation to accountability policy, namely high-stakes testing and school performance as evidenced by AMO in Virginia. This study also examines the impact of these orientations on related motivational processes, including self-efficacy for teaching and perceptions of help-seeking. The literature review that follows describes the relations between teachers' achievement goal orientations, self-efficacy for teaching, and perceptions of help-seeking in the context of accountability policy.

### **Rationale**

In our highly charged educational accountability climate, the impact of accountability policies on teachers' motivation and practice must be examined, as prior research suggests teacher practices and well-being is impacted by these policies (Amrein-Beardsley et al., 2003;

Darling-Hammond, 2007; Vernaza, 2012; Skaalvik & Skaalvik. 2010, 2011; Sass et al., 2012). As evidenced by the teacher outcomes described in the sections above, further examination of the impact of accountability policies on teacher motivation is warranted, as findings from such study may demonstrate the relationships among teacher motivational constructs in accountability contexts. Butler's (2007) teacher achievement goal orientation framework provides a mechanism for examining teacher motivation. However, Butler's (2007) framework has been examined with teachers mainly outside of the United States (Butler, 2007, 2012; Butler & Shibaz, 2008; Nitsche, Dickhauser, Fasching, & Dresel, 2011; Retelsdorf & Gunther, 2011; Retelsodrf, Butler, Streblow, & Schiefele, 2010). Cho and her colleagues have examined American teachers' achievement goal orientations, goal structures, and teaching self-efficacy with teachers in the Midwest (Cho & Shim, 2013; Shim, Cho, & Cassady, 2012), but did not investigate the relationship between accountability and teachers' achievement goals. With the proliferation of studies demonstrating the impact of accountability and high-stakes testing on teacher outcomes described above, the possible impact of accountability policies on teachers' achievement goal orientations should be examined.

The present study also aims to extend Butler's (2007) framework for teacher achievement goal orientations to teachers in the United States by replicating her studies on teacher achievement goal orientations, self-efficacy, and perceptions of help-seeking (Butler, 2007; Retelsdorf et al., 2010). Butler and her colleagues (Butler, 2007; Retelsdorf et al., 2010) have demonstrated that teacher achievement goal orientations predict teacher self-efficacy as well as their perceptions of help-seeking as either positive for their professional persona or damaging to their professional persona and ego (Butler, 2007; Retelsdorf et al., 2010). The present study also examines these relationships along with teachers' perceptions of the problems created by

accountability and high-stakes testing in their schools. The examination of teachers' achievement goal orientations and related motivational processes in the context of accountability policies extends this promising framework (Butler, 2007) to teachers in the United States.

### **Summary of the Present Study**

**Research questions.** This study was guided by the following four research questions:

R1: What is the impact of high-stakes testing on the four dimensions of teachers' achievement goal orientations?

R2: What is the impact of school AMO status, accounting for demographic variables, years of experience, issues related to high-stakes testing, and stress, on the four dimensions of teachers' achievement goal orientations?

R3: Do teachers' achievement goal orientations predict self-efficacy for teaching, after accounting for demographic variables, years of experience, issues related to high-stakes testing, and stress?

R4: Do teachers' achievement goal orientations predict teachers' perceptions of help-seeking, after accounting for demographic variables, years of experience, issues related to high-stakes testing, and stress?

**Measures.** One specific aim of this study is to extend Butler's (2007) teacher achievement goal orientation framework by applying the framework to a new sample of teachers (elementary teachers from a Mid-Atlantic U.S. state) and in the context of high-stakes testing and accountability. Therefore, Butler's (2007) *Teacher Achievement Goal Orientation Questionnaire* was modified to fit the present context and sample. Additionally, as it has been validated through a number of studies across several years, Tschannen-Moran and Woolfolk Hoy's (2001) *Teacher Self-Efficacy Scale* was used to assess teaching self-efficacy and the impact of teacher

achievement goal orientations on teaching self-efficacy. Butler's (2007) *Teacher Perceptions of Help-Seeking Questionnaire* was used to measure teachers' perceptions of their own help-seeking for further validation of the construct for teachers in this sample. Dawson's (2012) *Known Issues* and *Stress* scales were included to determine the extent to which teachers perceive issues related to high-stakes testing as salient in their schools, and to assess the degree of stress teachers associate with these issues. Two items assessed school AMO status and whether teachers taught in testing grades. Additionally, demographic items were included to account for the impact of gender, ethnicity, education, and years of experience on teacher motivation and related processes.

**Analyses.** Multivariate analysis of variance (MANOVA) and a series of hierarchical multiple regressions were used to examine the relationships between and among high-stakes testing and issues teachers perceive to be related to these tests, stress related to high-stakes tests, school accountability status, teachers' achievement goal orientations, teaching self-efficacy, and perceptions of teacher help-seeking. Specifically, MANOVA was used to determine whether differences in achievement goal orientations were attributable to high-stakes testing status. Hierarchical regressions were used to examine whether school AMO status had an impact on teacher achievement goal orientations after accounting for demographic variables, and above and beyond years of experience, the salience of issues related to high-stakes testing in schools, and stress associated with these tests. Similarly, hierarchical multiple regressions were used to determine whether teachers' achievement goal orientations could be used to predict teaching-self efficacy above and beyond the aforementioned variables. Finally, a similar set of hierarchical regressions, including the same control variables as the previous sets, was employed to

determine whether teachers' achievement goal orientations predicted teachers' perceptions of their own help-seeking.

**Summary of results.** The results that emerged from the analyses described above suggest that, for this sample, dimensions of teachers' achievement goal orientations differ from the dimensions characterized by Butler and colleagues (Butler, 2007; Butler & Shibaz, 2008; Nitsche et al., 2010; Cho & Shim, 2013; Shim et al., 2013). Teachers here did espouse mastery and work-avoidance goals, as characterized by Butler (2007), but performance-approach and performance-avoidance goals were not distinguished. Rather, teachers in this sample distinguished between personal performance orientation, or motivation driven by external factors (e.g., recognition from administrators) and using others as the referent to which they compared their own performance (e.g., colleagues). Additionally, class performance orientation emerged as a distinct and salient dimension of teachers' achievement goal orientations for this sample. Those who espoused this orientation aimed for their classes to compare favorably with other classes and were motivated by external factors, such as their class scoring high on state-wide tests. Teacher achievement goal orientations were related to high-stakes testing, but school issues related to high-stakes testing and stress associated with these tests were more salient predictors of teachers' achievement goal orientations than whether teachers taught in testing grades or not. Finally, teachers' achievement goal orientations were significant predictors of self-efficacy for teaching and teachers' perceptions of their own help-seeking.



## **Chapter 2: Literature Review**

While achievement goal orientation has been studied with students for decades (e.g., Ames, 1992; Ames & Archer, 1988; Church, Elliot, & Gable, 2001; Elliot, 1999; Elliot & Dweck, 1988; Elliot & Harackiewicz, 1996; Linnenbrink, 2005; Turner, Meyer, Midgley, & Patrick, 2003; Urdan & Mestas, 2006), comparatively little is known about teachers' achievement goal orientations. Achievement goal orientations have been shown to relate to self-efficacy and help-seeking perceptions and behaviors for students, and studies of teachers' achievement goal orientations are beginning to show similar relationships (Butler, 2007; Butler & Shibaz, 2008; Eren, 2009). The purpose of this review is to summarize and critique the existing literature on achievement goal orientation, self-efficacy, and perceptions of help-seeking as it relates to teachers. As the study of teachers' achievement goal orientations for their practice is relatively new, related research concerning students in K-12 and collegial settings is also reviewed.

This literature review first begins with an overview of achievement goal orientations as they have been studied with students, and then with teachers. Next, the relations between teachers' achievement goal orientations and self-efficacy for teaching is discussed, including an overview of the construct of self-efficacy. Similarly, the relationship between help-seeking perceptions and behaviors and achievement goal orientations is explored. Finally, a summary of the literature on teachers' achievement goal orientations, self-efficacy for teaching, and help-seeking is included, concluding with a discussion of the aims of the present project, namely to extend our understanding of teachers' achievement goal orientations in the current educational climate.

## **Achievement Goal Orientation**

Achievement goal theory is one of the most widely researched theoretical frameworks used for studying academic motivation and achievement (Butler, 2000; Retelsdorf & Gunther, 2011). Achievement goal theory attempts to explain why individuals attend to an achievement task and the standards by which they evaluate their performance on a task (Pintrich, 2000).

Extensive research focusing on students' achievement goal orientations for schooling has been conducted for decades (Ames, 1992; Ames & Archer, 1988; Church, Elliot, & Gable, 2001; Elliot, 1999; Elliot & Dweck, 1988; Elliot & Harackiewicz, 1996; Linnenbrink, 2005; Turner, Meyer, Midgley, & Patrick, 2003; Urda & Mestas, 2006). Most recently, this framework has been applied to better understand teachers' motivation for teaching (Butler, 2007; Butler & Shibaz, 2008; Retelsdorf, Butler, Streblow, & Schiefele, 2010; Retelsdorf & Gunther, 2011).

Achievement goal orientations have been defined as the purposes for engaging in an achievement context (Dweck & Leggett, 1988; Elliot, 2005), as opposed to achievement goals which are thought to be more task-specific (Hulleman, Schrager, Bodmann, & Harackiewicz, 2010). Children and adults adopt achievement goal orientations in various achievement settings such as classroom or work environments (Elliot, 2005; Butler, 2007), and these goal orientations are posited as the force that drives behavior in such settings (Elliot, 2005). Achievement goal orientations consist of both cognitive and affective components, including beliefs about ability and achievement attributions, which impact the way individuals may approach various tasks (Ames, 1992; Dweck, 1986).

Individuals' implicit theories of competence are central to their development of achievement goal orientations (Ames, 1992; Dweck, 1986; Dweck & Leggett, 1988; Elliot, 2005). Students believe that competence is either fixed or malleable, and thus approach

achievement tasks in light of these views (Ames, 1992; Dweck, 1986; Dweck & Legget, 1988; Elliot, 2005). Competence is assessed based on a referent, including task requirements, personal performance history, and the performance of others (Elliot, 2005; Elliot & McGregor, 2001). Additionally, assessment of competence includes valence because students view their competence in terms of possible positive outcomes or possible negative outcomes (Elliot, 2005; Elliot & McGregor, 2001). Those who believe that competence is malleable, who believe that they are competent based on a referent, and who perceive a positive valence, are likely to engage in appropriately challenging tasks and aim to improve skills or competence (Ames, 1992; Dweck & Legget, 1988; Elliot, 2005; Elliot & McGregor, 2001; Robins & Pals, 2002). For example, if a teacher believes she can improve upon her science pedagogy if she tries, views her current pedagogical competence in science as appropriate, and perceives a potential positive outcome to trying out a new science lesson with her students, she will likely take on the task of teaching a lesson that she has never taught before. Conversely, a teacher who views competence as fixed, believes she is incompetent based on a particular referent, or perceives a negative valence, will likely choose tasks through which they can demonstrate competence or avoid tasks at which she may fail, particularly if she believes her ability to be low (Ames, 1992; Dweck & Leggett, 1988; Elliot, 2005; Elliot & McGregor, 2001; Robins & Pals, 2002).

### **The 2x2 Model of Achievement Goal Orientation**

Achievement goal theorists generally distinguish between two types of goals, namely mastery and performance goals (Ames, 1992; Ames & Archer, 1988; Elliot & Dweck, 1988; Maehr & Zusho, 2009). Those with mastery goals typically focus on improving their own understanding and knowledge. In contrast, those who espouse performance goals typically focus on demonstrating ability (Ames, 1992; Ames & Archer, 1988; Elliot, 2005; Elliot & Dweck,

1988; Maehr & Zusho, 2009). Mastery goals are generally thought to be adaptive for learning and achievement, as the focus is on personal improvement rather than demonstration of ability (Ames, 1992; Ames & Archer, 1988). The findings on performance goals have been less conclusive; while performance goals are often thought to be maladaptive for learning, some studies have suggested that such goals can be adaptive for achievement for certain individuals or in specific achievement contexts (e.g, Butler, 1992; Harackiewicz and Elliot, 1993, Koestner, Zuckerman, & Koestner, 1989).

Elliot and McGregor (2001) proposed a 2x2 model of achievement goals, retaining the mastery and performance goal distinction, and distinguishing between approach and avoidance goals. Approach goals are those that prompt individuals to engage in achievement or learning situations, whether to gain competence (mastery-approach) or to demonstrate competence (performance-approach) (Elliot, 2005; Elliot & Harackiewicz, 1996; Elliot & McGregor, 2001). Avoidance goals prompt individuals to avoid engaging in an achievement task (Elliot, 2005; Elliot & Harackiewicz, 1996; Elliot & McGregor, 2001). Individuals who espouse mastery-avoidance goals strive to avoid losing their competence (Elliot, 2005; Elliot & McGregor, 2001). Those who espouse performance-avoidance goals avoid demonstrating a lack of competence, and thus may avoid engaging in achievement situations (Elliot, 2005; Elliot & Harackiewicz, 1996; Elliot & McGregor, 2001). While the evidence regarding the maladaptive nature of performance goals as a whole is inconclusive, it is generally thought that performance-avoidance goals are maladaptive because individuals who espouse these goals avoid achievement situations in which their lack of ability would be revealed. (Ames, 1992; Elliot & Church, 1997; Elliot & Harackiewicz, 1996; Maehr & Zusho, 2009).

## Teacher Achievement Goal Orientations

Carol Midgley and her colleagues (Midgley et al, 1998; Midgley et al, 2000) first approached the study of teachers' achievement goal orientations by including a scale of teachers' approaches to instruction in their *Patterns of Adapting Learning Survey* (PALS), designed to measure students' achievement goal orientations, teacher practices, and classroom and school goal structures. However, the focus of this scale is not teachers' personal achievement goal orientations, but teachers' mastery or performance-oriented instructional practices designed to communicate beliefs about reasons for achievement to their students (Midgley et al, 1998; Midgley et al, 2000). Additionally, this scale measures student perceptions of teacher practice, not actual teacher practice (Midgley et al., 1998). The PALS teacher scale has been used to investigate teachers' use of instructional practices which communicate goal types (Wolters & Daugherty, 2007), and to connect teachers' self-reported instructional practices to student perceptions of classroom goal structure (Deemer, 2004; Patrick, Anderman, Ryan, Edelin, & Midgley, 2001). Items on this scale include *I make a special effort to recognize students' individual progress, even if they are below grade level*, and, *I give special privileges to students who do the best work*, (Midgley et al, 2000). These items emphasize teachers' instructional practices and decisions about students rather than teachers' own reasons for engaging in pedagogy. In this way, the PALS teacher scale differs from Butler's (2007, 2012) measure of teacher achievement goal orientations, which is focused on teachers' personal motivations to achieve in their own practice. Insights into teachers' achievement goal orientations, spurred by Butler's (2007) work, are discussed in detail in the sections that follow.

## **An Emergent Construct**

Butler's (2007) framework of teachers' achievement goals seeks to provide a lens through which researchers may view the antecedents of teacher motivation for teaching. Butler (2007) characterizes the classroom as an arena in which teachers may strive to amass or demonstrate professional ability and skill. Like students, Butler (2007) suggests that teachers may hold different goals for their success in the classroom.

Butler's (2007) framework distinguishes between four goals types: (a) mastery goals (aiming to learn and develop professional understanding and expertise), (b) performance-approach goals (demonstrate superior teaching skills), (c) performance-avoidance (avoid demonstrating inferior teaching skills) goals, and (d), work-avoidance goals (make it through the work day with as little effort as possible). Due to conceptual difficulties regarding mastery-avoidance goals, Butler (2007) did not include this goal orientation in her framework for teachers. Studies of teachers' achievement goals, like those of students' achievement goals, have attempted to shed light on potential adaptive and maladaptive outcomes for the different types of goals. For instance, Butler found that teachers' mastery goals were related to positive perceptions of help-seeking and to high self-efficacy for teaching (2007). Performance-avoidance and work-avoidance goals were negatively related to these outcomes (Butler, 2007).

Extending this research, Butler and Shibaz (2008) demonstrated that students' perceptions of their teachers differed according to teachers' self-reported achievement goals for teaching. Students of mastery-oriented teachers reported that their teachers encouraged and looked favorably upon students' own help-seeking and problem-solving strategies. Students in classes of performance-avoidant teachers reported that their teachers inhibited or discouraged student help-seeking and questions. Teachers' performance-approach and work-avoidance goals were not

significantly related to their teaching practices or attitudes about help-seeking (Butler & Shibaz, 2008).

Retelsdorf et. al (2010) also found inconclusive results regarding both performance goal types. Mastery and work-avoidance orientations were found to be positive and negative predictors (respectively) of high-level cognitive tasks and mastery goal structures in the classroom. However, performance-approach orientations were predictive of performance goal structures in a sample of German teachers (Retelsdorf et. al, 2010). The same was not true when the study was repeated with a sample of Israeli teachers (Retelsdorf et. al, 2010). With this sample, only performance-avoidance goals were predictive of classroom goal structure.

Retelsdorf and Gunther (2011) attempted to clarify the nature of teachers' performance goals for classroom outcomes by including teachers' reference norms as a mediating factor. Reference norms refer to the evaluative criteria people choose when assessing their performance or performance of another (Elliot, 2005; Retelsdorf & Gunther, 2011). To this end, teachers may compare student performance either to the individual student or to other students in the class. Retelsdorf and Gunther (2011) hypothesized that teachers' achievement goals would influence their reference norms by prompting them to choose to compare student achievement either to individual student factors or among other students in the class and thus influence their classroom evaluation practices. The authors also included a confirmatory factor analysis for Butler's (2007) teacher achievement goal framework, which provided confirmation of the utility of the four-factor structure (Retelsdorf & Gunther, 2011).

Retelsdorf and Gunther (2011) found that teachers' mastery goals were adaptive and predictive of teachers' promotion of comprehensive (or deep, connected) learning. Work-avoidance goals clearly negatively predicted these outcomes, and were also linked to strategies

that promoted surface-learning, suggesting that these goals are maladaptive for teaching practices that promote comprehensive learning. Results for both types of performance goals for teaching also revealed a link between these goals and teaching practices which encouraged surface learning (Retelsdorf & Gunther, 2011).

### **Clarifying Teacher Goal Orientation**

To extend and further clarify her model, Butler (2012) added relational goals to her Goal Orientations for Teaching (GOT) measure. Relational goals refer to the goals teachers hold for the nature of their relationships with students, such as care (Butler, 2012). She conjectured that relational goals constitute a distinct fifth factor in the achievement goal framework for teaching, positing that teachers not only strive to gain more competence and knowledge (mastery goals), demonstrate or avoid demonstration of ability (performance-approach and performance-avoidance goals, respectively), or avoid extra work (work-avoidance), but also to create and foster caring and meaningful relationship with their students. She also hypothesized that differing teaching practices would correlate to each of the five goal dimensions in her expanded framework (Butler, 2012).

Butler (2012) found that relational goals did in fact constitute a distinct fifth factor, with instructional practices focusing on social support correlating significantly with relational goals. Mastery teaching practices also correlated strongly with relational goal orientation, at over twice as high as the correlation with mastery orientation (Butler, 2012; Turner, Gray, Anderman, Dawson, & Anderman, 2013). Both performance orientations were significantly correlated with a performance approach to teaching. Low-demand teaching practices, such as asking easy questions or not assigning homework, correlated significantly with both performance-avoidance and work-avoidance orientations (Butler, 2012).



More recently, Butler (2012) found that students perceived their teachers' practices as more mastery-oriented when their teachers professed a relational goal orientation. That is, the more their teachers strived to foster meaningful relationships with students, the more students reported mastery practices in the classroom, such as encouraging effort and viewing mistakes as learning opportunities (Butler, 2012). The relationship between approach and avoidance performance goals for teaching was unclear when both goals were examined in the full model of teachers' goals and instructional practices. However, when entered into distinct models, both goal types were predictive of performance teaching practices (Butler, 2012).

In an attempt to refine theoretical understanding of teachers' achievement goal orientations, Nitsche, Dickhauser, Fasching, and Dresel (2011) added addressee facets to both performance orientations, as well as knowledge facets to the mastery goal orientation. Specifically, teachers who espouse performance goals may seek to demonstrate competence to various individuals or groups, termed addressees, such as their principal or colleagues. An example item is, *In my vocation, I aspire to demonstrate to my **principal** that I know more than other teachers* (Nitsche et al., 2011, emphasis added). Those who espouse mastery goals may seek to gain knowledge or competence in specific areas, such as a particular content area or classroom management techniques. Items referring to these knowledge facets included, *In my vocation, I aspire to improve my content knowledge and experience* (Nitsche et al., 2011).

Nitsche and colleagues hypothesized that this more specific model of teacher achievement goal orientations would allow for deeper understanding as to why teachers adopt mastery goal orientations and the types of knowledge these teachers strive for, as well as the reasons teachers adopt performance orientations and the specific addressees (e.g., administrators, colleagues) these teachers hope to impress or avoid (2011). In addition, Nitsche and colleagues

(2011) hypothesized that a mastery goal orientation would positively predict self-efficacy for teaching while performance-avoidance and work-avoidance orientations would negatively predict self-efficacy for teaching. Lastly, the authors hypothesized that a mastery goal orientation would positively predict perceptions of help-seeking as beneficial and that performance-avoidance goals would positively predict perceptions of help-seeking as threatening. Nitsche et al. (2011) included both practicing teachers and pre-service teachers in their sample, suggesting that the achievement goal framework may be beneficial for understanding the development of teacher trainees' motivation, as well.

Nitsche and colleagues' (2011) hypotheses regarding the predictive nature of teachers' achievement goal orientations and self-efficacy for teaching and perceptions of teacher help-seeking were confirmed. Self-efficacy for teaching was positively predicted by mastery goal orientation and negatively predicted by performance-avoidance orientation (Nitsche et al., 2011). Interestingly, performance-approach orientation also positively predicted self-efficacy for teaching. Teachers' mastery goals positively predicted perceptions of help-seeking as beneficial, while performance-avoidance goals positively predicted perceptions of help-seeking as threatening to teachers' professional identity (Nitsche et al., 2011). In contrast, mastery goal orientation was found to be a negative predictor of perceiving help-seeking as threatening for student teachers (Butler, 2012; Nitsche et al., 2011).

### **Achievement Goal Orientations and Pre-Service Teachers**

A few studies have examined pre-service teachers' achievement goal orientations in order to understand how teacher motivation develops. Malmberg (2006) studied achievement goal orientation with pre-service teachers and applicants to a teacher preparation program in Finland, examining how pre-service teacher motivation (i.e. intrinsic, introjected, extrinsic) predicted

goal-orientation for teacher studies. According to Malmberg, motivation for teaching significantly predicted student teachers' goal orientations for their teacher studies, which the author postulated to be an indicator of in-service teacher goal orientations (2006). Pre-service teachers' intrinsic motivation significantly predicted mastery goal orientation, while extrinsic motivation significantly predicted performance-avoidance orientation. Performance-approach and performance-avoidance goal orientations were significantly correlated, but performance-approach orientation was only predicted by program entrance examination scores. The relationship between both performance goal orientations is again unclear in this study, as performance-approach orientation has been linked to extrinsic motivational factors in the goal theory literature (Ames, 1992; Elliot, 2005).

Malmberg (2008) also studied pre-service teachers' achievement goal orientations in order to link achievement goal orientations during teacher studies to teaching-related outcomes such as intrinsic motivation for teaching and control-expectancy beliefs. Among the various expected outcomes, Malmberg hypothesized that pre-service teachers' mastery goal orientations would be related to intrinsic motivation for teaching, reflective thinking, and support seeking (2008). Malmberg also hypothesized that performance-approach goals would relate to higher grades and to higher levels of teacher control-expectancy beliefs (2008). Malmberg found a relationship among mastery goal orientation, intrinsic motivation, self-reflection and support seeking (2008). Both mastery goals and performance-approach goals were related to higher control-expectancy beliefs, suggesting that pre-service teachers who hold both mastery and performance-approach goals recognize the value of pedagogical competence in teaching practice (Malmberg, 2008). Finally, maladaptive behaviors such as task-irrelevant behaviors were related to both performance-approach and performance-avoidance goals (Malmberg, 2008). Work-

avoidance orientation was not considered in Malmberg's framework for student teachers' achievement goal orientations.

### **Recent Developments in Teachers' Achievement Goal Orientations**

Recently, scholars have focused on teacher well-being and professional demeanor, and have begun to apply this framework to new populations. Nitsche, Dickhauser, Fasching, and Dresel (2012) examined the relationship between teachers' achievement goal orientations and teacher attendance at professional training as well as the number of sick leave days taken. Nitsche and colleagues found that teachers who held mastery goal orientations held more positive attitudes toward professional development and also perceived less vocational burden, as indicated by the number of sick days taken (2012). Teachers who held performance-avoidance beliefs reported a more negative attitude regarding professional development and perceived higher vocational burden (Nitsche et al., 2012). However, the authors point out that no direct association between performance-avoidance goals and behavioral measures of professional development (i.e. attendance at further training sessions) and vocational burden (i.e. sick leave) surfaced. Again, the nature of performance-avoidance goals and their relationships to related outcomes is unclear for Nitsche and colleagues (2012).

In the first study of teacher achievement goal orientations with teachers in the United States, Shim, Cho, and Cassady (2013) investigated the relationship between teachers' achievement goal orientations, theories of intelligence, and classroom goal structure. Surveying over 200 K-12 teachers in the Midwest, Shim and colleagues found teacher mastery goal orientation predicted mastery-oriented classroom environments, while performance-approach orientations predicted competitive, ability-focused classroom environments (2013). Interestingly, when teachers espoused both mastery and performance-approach goals, they were more likely to

create performance-oriented classroom goal structures. Shim and her colleagues conclude that, when taking their findings and findings from previous research on teachers' performance goal orientations as a whole, performance-approach goal orientations do not necessarily undercut adaptive behaviors such as seeking professional development (2013). Rather, performance-approach goal orientations lead teachers to create competitive environments for their students (Shim et al., 2013). However, as the authors did not assess teachers' professional practices, further research is necessary to validate this claim.

Cho and Shim (2013) examined teachers' achievement goal orientations, as well as school goal structure and self-efficacy for teaching, with a similar sample. Using a snowball sampling method, they examined whether self-efficacy for teaching moderated the relationship between perceived school goal structure and achievement goal orientation. This hypothesis was confirmed. Teacher efficacy moderated the relationship between school goal structure particularly for both types of approach goals. That is, teachers who were highly efficacious reported both high-mastery and high-performance-approach goals (Cho & Shim, 2013). Teachers with high self-efficacy were likely to adopt both mastery and performance-approach goals, while teachers with low self-efficacy did not adopt either approach goal for teaching (Cho & Shim, 2013). Self-efficacy was a stronger predictor of achievement goal orientation than perceived school goal structure, as the relationship between goal structure and teacher goal orientation proved to be significant only when teachers reported low self-efficacy (Cho & Shim, 2013). These findings extend our understanding of the predictors of teachers' achievement goal orientations, but school climate and thus teachers' goal orientations may also be affected by educational policy. Examination of such factors is warranted.

While this line of research concerning teachers' achievement goal orientations is relatively young, many researchers have already made the case for the utility of an achievement goal framework for understanding teachers' motivation for teaching (e.g., Butler, 2007; Butler, 2012, Retelsdorf et. al, 2010). These studies have already begun to link teachers' achievement goal orientations to important outcomes such as teaching practices (Butler, 2012; Retelsdorf et. al, 2010; Retelsdorf & Gunther, 2011; Shim et al., 2013), student perceptions (Butler, 2012; Butler & Shibaz, 2008), professional demeanor (Nitsche et. al, 2012), and other motivational processes (Butler, 2007, Nitsche et. al, 2011). The existing research highlights the adaptive nature of mastery-goal orientations, while performance-goal orientations are typically maladaptive for teachers (Butler, 2007; Butler & Shibaz, 2008; Retelsdorf et al., 2010; Retelsdorf & Gunther, 2011; Shim & Cho, 2013; Shim et al., 2013).

However, teacher motivation does not exist in a vacuum. Educational policy, including high-stakes testing and teacher evaluations tied to student test scores, may impact teachers' achievement goal orientations and subsequent outcomes. Bandura (1978) explains that individuals' beliefs impact their behavior, and this explanation extends to teacher behaviors (Gibson & Dembo, 1984; Tschannen-Moran & Woolfolk Hoy, 2001). Thus, there is reason to believe that factors such as high-stakes testing and school AYP/AMO status may impact teachers' achievement goal orientations, which in turn may impact self-efficacy for teaching and help-seeking perceptions and behaviors.

## **Self-Efficacy**

### **Overview of Self-Efficacy**

Bandura (1997) describes self-efficacy as “the belief in one’s capabilities to organize and execute the courses of action required to manage prospective situations” (p. 2). Self-efficacy

results from various sources, including past mastery experiences, vicarious experiences, verbal persuasion, and physiological states (Bandura 1977, 1982; Usher & Pajares, 2009). Self-efficacy beliefs are future oriented and reflect an assessment of capabilities for a future task (Bandura, 1997; Usher & Pajares, 2009). Bandura explains that efficacy expectations impact the types of tasks and situations in which people engage and the effort that people will expend on tasks, particularly in the face of opposition (1977). Additionally, Bandura (1993) notes that self-efficacy plays a significant role in teaching, contributing to teachers' beliefs that they can overcome adverse situations in the classroom and also impact the classroom environment and teaching practices.

### **Self-efficacy for Teaching**

Self-efficacy for teaching has been defined as the beliefs teachers hold about their own capacity, competence, and effectiveness as teachers, and generally includes mention of the capability to overcome adverse situations. (Gibson & Dembo, 1984; Soodak & Podell, 1996; Tschannen-Moran & Woolfolk Hoy, 2001). Self-efficacy for teaching refers to teachers' perceived ability to complete a task related to teaching (Bandura, 1993; Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998). For example, a teacher must decide whether he or she has the capability to impact student learning even though the student may present obstacles such as behavior problems or low reading ability. It is important to note that self-efficacy refers to self-perceived ability rather than actual ability (Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998). Therefore, a teacher may or may not actually have the capability to impact the student's learning, but may still feel efficacious nonetheless (Tschannen-Moran et al., 1998).

As a construct, teacher self-efficacy (TSE) grew out of studies by Rand researchers, who, on a measure of teacher implementation of reading programs, included two items measuring

teachers' "belief that they could control the reinforcement of their actions, that is, whether control of reinforcement lay within them or the environment" (Tschannen-Moran & Woolfolk Hoy, 2001, pg. 784). These two items asked teachers whether the locus of control for student motivation and performance is more impacted by factors in the home environment (Item 1), or whether they felt they can reach even the most difficult students if they expend enough effort (Item 2) (Klassen, Bong, Usher, Chong, Huan, Wong, & Georgiou 2009; Tschannen-Moran & Woolfolk Hoy, 2001). These two items proved to be powerful predictors of teachers' success when teaching students in urban environments, as well as continuing federally funded projects in classrooms after the end of funding (Tschannen-Moran & Woolfolk Hoy, 2001). These findings spurred a bevy of research on TSE, with scholars in the 1980's developing multiple measures to try to capture the meaning and outcomes related to TSE (Tschannen-Moran & Woolfolk Hoy, 2001; Tschannen-Moran et al., 1998).

Almost three decades after the Rand studies, Tschannen-Moran and Woolfolk Hoy developed a measure of TSE which differentiates among three strands of teaching self-efficacy, distinguishing the various tasks for which teachers are responsible (2001). These are: teachers' sense of efficacy for instructional strategies, efficacy for classroom management, and efficacy for student engagement. Efficacy for instructional strategies refers to the extent teachers can control and use a variety of teaching practices, such as differentiating assessment or answering difficult questions (Tschannen-Moran & Woolfolk Hoy, 2001). Highly efficacious teachers are more likely to use varied instructional strategies and tailor their practices to individual students (Gibson & Dembo, 1984; Tschannen-Moran & Woolfolk Hoy, 2001; Tschannen-Moran et al., 1998). Efficacy for classroom management refers to the extent of control teachers feel they have over student behaviors in their classroom (Tschannen-Moran & Woolfolk Hoy, 2001). For



example, Gibson and Dembo found that highly efficacious teachers redirected students who were off-task more adeptly than low efficacy teachers (1984). Lastly, efficacy for student engagement refers to the extent to which teachers feel they can motivate students (Tschannen-Moran & Woolfolk Hoy, 2001). Tschannen-Moran and Woolfolk Hoy contend that efficacious teachers feel they can impact student engagement by fostering student interest and value for learning (2001).

Teachers' self-efficacy has been shown to vary with teacher years of experience and grade level. Elementary teachers tend to be more efficacious than middle and high school teachers (Fives & Buehl, 2010). Additionally, TSE varies in a non-linear fashion with years of teaching experience (Klassen & Chiu, 2010). More experienced teachers report high self-efficacy than novice teachers (Fives & Buehl, 2010; Woolfolk Hoy, 2000), but TSE falls in later stages of teachers' careers (Klassen & Ciu, 2010). Teachers with more experience often have more exposure to competent models, professional development (Klassen & Chiu, 2010) and mastery experiences (Klassen & Chiu, 2010; Tschannen-Moran & Woolfolk Hoy, 2007) than their novice counterparts. Teaching experience plays an important role in the development and maintenance of teaching self-efficacy.

The literature on TSE suggests that this construct has powerful impacts on teacher motivation as well as student motivation and performance outcomes (Bandura, 1993; Tschannen-Moran et al., 1998; Tschannen-Moran & Woolfolk Hoy, 2001). One of the reasons TSE is so powerful is that it is a cyclical, reciprocal process (Bandura, 1993; Woolfolk Hoy, 2003). For instance, highly efficacious teachers are likely to use effective instructional practices (Gibson & Dembo, 1984; Tschannen-Moran & Woolfolk Hoy, 2001; Tschannen-Moran et al, 1998), leading to success in the classroom, or a mastery experience for themselves (Bandura, 1993). As mastery

experiences are one of the sources of self-efficacy (Bandura, 1977, 1993; Usher & Pajares, 2008), this successful classroom experience is likely to lead to increased TSE, continuing the cycle (Bandura, 1993; Woolfolk Hoy, 2003). Conversely, teachers with low TSE use less effective strategies and instructional practices (Tschannen-Moran & Woolfolk Hoy, 2001), and therefore create fewer mastery experiences for themselves, likely leading to decreased TSE for future classroom practices (Bandura, 1993; Woolfolk Hoy, 2003).

In addition to creating mastery experiences for themselves, highly efficacious teachers create mastery experiences for their students (Bandura, 1993). Those with high teaching efficacy are likely to use student-centered practices and provide more autonomy, interest, and opportunities for mastery for students (Bandura, 1993; Gibson & Dembo, 1984). Conversely, teachers with low teaching efficacy are more controlling and critical, and provide fewer opportunities for autonomy and interest development (Bandura, 1993; Gibson & Dembo, 1984; Tschannen-Moran et al., 1998). This process, like the process for TSE, is cyclical in nature, with highly efficacious teachers promoting student motivation and strategies, thus leading to mastery experiences, which in turn promote students' own self-efficacy (Tschannen-Moran et al., 1998).

Additionally, TSE is powerful because it may bolster teacher confidence and subsequent practices even in the face of constrained resources, such as in an urban teaching environment (Tschannen-Moran & Woolfolk Hoy, 2001). This is evidenced by the impact that collective efficacy has been found to exert over individual teacher efficacy and student achievement in urban school contexts (Bandura, 1993; Goddard & Goddard, 2001). Collective efficacy refers to the beliefs that school staff, including teachers and administrators, hold regarding their capabilities to overcome obstacles and positively impact student academic success (Bandura, 1993). Goddard and his colleagues (Goddard & Goddard, 2001; Goddard, Hoy, & Woolfolk

Hoy, 2000) have demonstrated that collective efficacy is associated with TSE, and teachers at urban schools with higher collective efficacy also report higher TSE than at schools with low collective efficacy. Additionally, collective efficacy has been positively associated with student achievement in mathematics and reading (Goddard et al., 2000). These findings suggest that collective efficacy, often studied as the aggregate of teachers' self-reported TSE (Bandura, 1993), significantly impacts academic outcomes for both teachers and students.

### **Self-Efficacy and Achievement Goals**

Teaching self-efficacy has been related to a wide variety of motivational constructs for teachers. Skaalvik and Skaalvik (2010) found that teachers' sense of self-efficacy related to teacher burnout. Teachers who felt more efficacious were less likely to report feeling emotionally exhausted and depersonalized, while reporting higher levels of job satisfaction. The opposite was true for teachers who felt less efficacious (Skaalvik & Skaalvik, 2010). Freidman and Kass found similar results, and also reported that teachers' sense of self-efficacy was related to a collective, school-wide sense of faculty efficacy (2002).

Teachers' self-efficacy is also related to teachers' classroom practices. Teachers with higher self-efficacy for teaching persist in finding ways to reach difficult or struggling students, use varied instructional practices, and demonstrate greater enthusiasm for teaching (Tschannen-Moran & Woolfolk Hoy, 2001). Conversely, teachers with low self-efficacy are more likely to criticize students for making mistakes, expend less effort to locate materials and resources, and are less likely to persist with students who are struggling. (Deemer, 2004; Pajares, 1996).

Teachers' classroom practices are related to the goal structures they create in the classroom, and teachers' self-efficacy has been shown to impact classroom goal structure, with more efficacious teachers typically fostering mastery environments in the classroom (Midgley,

Anderman, & Hicks, 1995). However, highly efficacious teachers may use both mastery and performance-oriented classroom practices to engage a variety of learners (Deemer, 2004; Wolters & Daugherty, 2007). Such findings illustrate a relationship between achievement goal orientations and structures with self-efficacy for teaching, but the direction of this relationship remains unclear. Pajares (1996) recommends investigating the antecedents of self-efficacy, and some scholars have begun to follow this directive.

Malmberg (2008) examined the predictive ability of goal orientation for student teachers' control-expectancy beliefs. Malmberg (2008) likened control-expectancy beliefs to teachers' sense of self-efficacy for instruction, asking participants whether they felt able to locate resources and aid struggling learners. Both mastery and performance-approach goal orientations positively predicted control-expectancy beliefs (Malmberg, 2008). The relationship between performance-avoidance goal orientation and control-expectancy beliefs was less clear, with performance-avoidance goal orientation predicting only task-irrelevant behavior and not control-expectancy beliefs (Malmberg, 2008).

Also investigating pre-service teachers, Eren (2009) found relationships among teacher self-efficacy and personal achievement goal orientations with 374 pre-service teachers in Turkey. When comparing pre-service teachers in constructivist teaching programs versus traditional programs, students in constructivist programs, which Eren (2009) deems more demanding and requiring more teacher competence, held higher self-efficacy beliefs, higher mastery-approach goal orientation, low performance-avoidance goals, and low conceptions of traditional classroom education. These results highlight a significant relationship between self-efficacy and achievement goal orientations with student teachers' views on teaching and learning. Malmberg (2008) and Eren (2009) studied pre-service teachers, who may have idealized expectations of

teaching. Conducting similar studies with in-service teachers may shed light on the complex relationship between performance goals and efficacy beliefs.

Tschannen-Moran and colleagues (1998) posit that teachers judge their own capabilities while considering the requirements for that task, and that "the standards the teacher holds for what constitutes good teaching will influence how these factors are weighed" (pg. 231). These authors explain that teachers often come to the realization that teaching is demanding and that the resources available for teaching are lacking (Tschannen-Moran et al., 1998). Thus, teachers' views on, or orientations toward, good teaching determine their efficacy for the situation (Tschannen-Moran et al., 1998). It stands to reason that teachers' self-efficacy for teaching is impacted by the outcome of past experiences, the level and types of support available for a given situation, and their overall orientation to approaching novel tasks.

Goals provide a framework within which individuals interpret and react to events, and result in different patterns of cognition, affect, and behavior (Dweck & Leggett, 1988). Butler (2007) reasons that teachers view the classroom as an achievement situation, one in which they may strive to amass knowledge and competency, demonstrate their ability, avoid demonstration of a lack of competence, or avoid work. These achievement goal dimensions constitute an overall way of approaching the world (Elliot, 2005) or, in this case, teaching in general. This way of approaching the world includes the standards by which teachers judge success, or mastery experiences (Papaioannou & Christodoulidis, 2007). For instance, a teacher may define success as improving upon gaining expertise in content knowledge (mastery orientation), or by beating out other teachers in student test scores (performance-approach orientation). As mastery experiences are thought to be the most powerful antecedent of self-efficacy beliefs (Bandura,

1997; Tschannen-Moran & Woolfolk Hoy, 2007), teachers' goal orientations likely impact teaching self-efficacy.

## **Perceptions of Help-Seeking**

### **Overview of Help-Seeking**

Help-seeking may be thought of as adaptive or maladaptive for students and teachers, depending on the individual's perception of the costs and benefits of seeking help (Butler, 1998; Newman, 1990, 1998). Instrumental help-seeking refers to seeking help to increase skill and decrease later help-seeking necessity. Executive, or expedient, help-seeking refers to asking for help to avoid work (Butler, 1998; Karabenick, 2004). People may view help-seeking as either beneficial or threatening to their professional persona (Butler, 1998). Research on help-seeking has typically been conducted with PreK-12 students (e.g., Butler, 1998; Newman, 1998) or with adults in other fields, such as business or social work (e.g., Gilman & Gabriel, 2004). While much is understood about help-seeking perceptions and behaviors in students, far less is known about teachers' help-seeking. However, scholars have begun to examine teachers' help-seeking behaviors and their relationship to other motivational variables such as achievement goal orientation and self-efficacy (e.g., Bembenuddy, 2006; Butler, 2007; Nitsche et al, 2011; White, 2011). Further research is needed to determine if teachers' perceptions of help-seeking reflect those of students.

A host of educational constructs relate to help-seeking behaviors and perceptions. Though much of this research has been conducted with students (e.g., Newman, 1998; Butler, 1998), this relationship also appears to extend to teachers (Butler, 2007; Nitsche et al., 2011). Help-seeking has been linked to outcomes such as self-regulatory strategy use (Ryan, Hicks, & Midgley, 1997), achievement goal orientations (Butler, 1998, 2007; Newman, 1998; Ryan et al.,

1997; Tanaka, Murakami, Okuno, & Yamauchi, 2002, Karabenick, 2003, 2004; Roussel, Elliot, & Feltman, 2011; Skaalvick & Skaalvick, 2005), achievement goal structures (Newman, 2008), social goals (Ryan, Gheen, & Midgley, 1998; Ryan et al., 1997), self-efficacy (Ryan et al., 1998; Ryan & Shim, 2011), and academic performance (Ryan & Shin, 2011). More specifically, positive perceptions of help-seeking and help-seeking behaviors can be predicted by mastery goal orientations (Butler, 2007; Karabenick, 2003; 2004; Nitsche et al., 2011; Tanaka, 2002), while performance goal orientations are related to negative perceptions of help-seeking (Butler, 2007; Nitsche et al., 2011; Karabenick, 2003, 2004; Roussel, 2011).

### **Pre-Service Teachers' Help-Seeking Perceptions and Behaviors**

Help-seeking behaviors and perceptions have been examined with students in teacher education programs. White (2011) sampled 50 students attending a private college in New York City who were preparing to take entrance exams for a teacher preparation program at the college. This study employed multiple measures of help-seeking behaviors and perceptions, including a survey of students' propensity to seek instrumental or executive help, reluctance to seek help, and perceptions of the benefits of help-seeking for teacher preparatory program examinations. Additionally, White (2011) observed the help-seeking behaviors of these students as they prepared for these exams through a series of classes, workshops, and study groups. White (2011) also solicited information from instructors of pre-service teacher courses in which the students were enrolled.

Results indicated that these pre-service teachers were more likely to seek instrumental, or adaptive help, rather than executive help, or help to avoid work (White, 2011). However, pre-service teachers were also more likely to avoid seeking help than to employ executive help-seeking strategies (White, 2011). This finding is troubling because it suggests that pre-service

teachers would prefer to struggle on their own than to ask for help, even less adaptive forms of help. Additionally, potential benefits of seeking help were not strong predictors of actual help-seeking behaviors. Comparing students' help-seeking perceptions and behaviors to students' scores on the teacher preparation program entrance exams, White (2011) concluded that pre-service teachers who sought instrumental help exhibited adaptive help-seeking behaviors from peers and instructors, and earned higher exam scores than those who sought executive help.

The purpose of White's (2011) study was to provide reliability and validity evidence for a measure of pre-service teacher help-seeking perceptions and behaviors rather than to examine the relationship between help-seeking and other motivational processes. However, Bembenuddy (2006) examined the relationship between pre-service teachers' help-seeking perceptions and preferences and their intrinsic interest for homework in teacher preparation courses as well as their self-esteem. Pre-service teachers who prefer instrumental help had higher self-esteem and were more intrinsically motivated to complete homework for teacher preparation courses (Bembenuddy, 2006). Expedient help-seeking and avoidance of help-seeking were negatively related to self-esteem, and expedient help-seeking negatively predicted intrinsic motivation (Bembenuddy, 2006). Help-seeking, particularly instrumental help-seeking, seems to be positively related to pre-service teachers' adaptive behaviors and motivational processes.

### **In-Service Teachers' Help-Seeking Perceptions and Behaviors**

To date, few studies have investigated teachers' achievement goal orientations and help-seeking perceptions and behaviors. Though they did not include achievement goal orientations as a variable of interest, Gilman and Gabriel (2004) surveyed over 1,500 teachers regarding their views on seeking help from school psychology services. Gilman and Gabriel (2004) asked how much teachers understood about seeking help from school psychologists. Results revealed that



teachers view school psychological services as only moderately helpful (Gilman & Gabriel, 2004). In fact, the teachers reported that school psychologists were significantly less helpful to both teachers and students seeking counseling help than school administrators (Gilman & Gabriel, 2004). These findings suggest that teachers are reticent to seek help from school staff, and these perceptions of help-seeking may extend to colleagues and administrators.

Teachers' help-seeking perceptions are impacted by their achievement goal orientations (Butler, 2007; Nitsche et al., 2011). A positive relationship exists between teachers' mastery goal orientations and their perceived benefits of help-seeking, with mastery goal orientation predicting help-seeking behaviors and preference for autonomous help (Butler, 2007). Performance-avoidance goals often predict teachers' perceptions of help-seeking as threatening to their professional persona (Nitsche et al., 2011). Teachers who espouse work-avoidant goals also seek help, but prefer expedient help-seeking, or help-seeking in which the problem is solved by others (Butler, 2007).

If help-seeking is adaptive and beneficial for student learning and motivation (Karabenick, 1998), teachers may also benefit from help-seeking (Bembenutty, 2006). Bembenutty explains that, "...pre-service [teachers] who seek help in order to master the tasks and to get knowledge are those who reported seeking more help..." (pg. 7). The same relationship may hold true for in-service teachers; teachers who are mastery oriented and seek to master teaching tasks and amass knowledge are likely to perceive help-seeking as beneficial for their practice and look for ways to collaborate and learn from colleagues and administrators. However, teachers who feel competitive with their colleagues may be reluctant to seek help from colleagues and administrators. Additionally, teachers who seek to avoid work may seek executive or expedient help in order to have others solve their problems, stifling true engagement

in the teaching profession. Though few, the results of studies of teachers' help-seeking perceptions converge to provide evidence of an important link between teachers' achievement goal orientations and perceptions of help-seeking.

### **The Current High-Stakes Testing Climate**

Our current educational system is heavily reliant on high-stakes tests as measures of accountability for schools, administrators, and teachers (Darling-Hammond, 2007; Jones & Egley, 2004). Individual schools in Virginia, the context of the present study, must meet Annual Measurable Objectives (AMO) (Virginia Department of Education, 2012) by ensuring that the number of students passing statewide tests, including important sub-groups such as students with special needs, meets the quota set by the federal government; the goal for 2014 is that 100% of students pass these exams (NCLB, 2002). Schools that do not meet AMO receive sanctions (VDOE, 2012). Schools can be accredited (meet all AMO), accredited with an improvement plan if they are a Title I school and have not met AMO in the same subject for two years, and accredited with warning if not a Title I school (VDOE, 2012). Finally, schools that do not meet AMO for three or more years are denied accreditation, and are subject to closure or take-over by private companies (VDOE, 2012). In this study, *AMO status* refers to a school's accreditation rating (accredited, accredited with improvement plan, accredited with warning, accreditation denied). *Testing status* refers to whether or not a teacher works in a testing grade; grades Pre-Kindergarten through two are referred to as non-testing grades, because teachers in these grades do not administer end-of-year Standards of Learning (SOL) tests. Grades three through five are referred to as testing grades because teachers in these grades administer end-of-year SOL exams, and student performance on SOL tests in these grades determines school accreditation status.

Such accountability mandates and school labels may create performance-focused environments, with students, teacher, and administrators focusing on test scores rather than personal improvement. The experience of teachers working in high-performing schools, or schools that consistently meet AMO and receive accreditation, may differ significantly from teachers working in low-performing schools that have been placed on warning or are facing closure (Amrein-Beardsley, Berliner, & Rideau, 2010; Darling-Hammond, 2007). As evidenced by a number of studies, NCLB mandates impact teachers' pedagogical practices (Barret, 2009; Rustique-Forrester, 2005), well-being (Berryhill et al., 2009; Valli & Buesse, 2007), and motivation (Abrams et al., 2003; Berryhill et al., 2009; Ciani et al., 2008; Dawson, 2012; Finnigan, 2010; Finnigan & Gross, 2007).

Quantitative and qualitative studies of the impact of high-stakes testing and accountability policy on teachers suggest such mandates impact teachers in a number of ways. For instance, both Amrein-Beardsley and her colleagues (2010) and Pedulla and his colleagues (2001) surveyed teachers across the United States regarding their experiences with NCLB accountability mandates and high-stakes testing. Results from these studies indicated pressures from school administrators, spurred by high-stakes testing and AYP requirements, led teachers to cheat by providing students with hints or changing answers on statewide exams (Amrein-Beardsley et al., 2010; Pedulla et al., 2001). Berryhill and colleagues (2009), along with Jones & Egley (2004) conducted interviews with teachers regarding the impacts of high-stakes testing on their well-being. Teachers in these studies reported feelings of exhaustion and stress related to high-stakes testing, as well as humiliation if their students did not perform well.

## Teacher Stress Related to High-Stakes Testing

Earlier studies of the relationship between teacher job satisfaction and stress suggest teacher stress is negatively related to teacher job satisfaction (Klassen, Usher, & Bong, 2010). Klassen and colleagues (Klassen, 2010; Klassen & Chiu, 2010; Klassen et al., 2010) have linked teacher stress to low levels of teacher performance, burnout, and depression. More recently, von der Empse & Hasson (2012) and Dawson (2012) conducted surveys with teachers to investigate how high-stakes testing impacts teachers stress. Results from these studies suggest teachers are highly stressed, and that such stress leads to decreased self-efficacy for teaching, particularly as testing time approaches (Dawson, 2012).

Dawson (2012) developed a survey instrument including two scales to measure the issues related to high-stakes testing that teachers perceive as salient in their schools (the *Known Issues* scale) as well as a scale measuring the degree to which teachers associate stress with these issues (the *Stress* scale). Dawson (2012) points out the importance of distinguishing between the two constructs with the use of two separate, but related, scales. From a measurement perspective, parsing out the two constructs into separate scales protects against construct-irrelevant variance, or the introduction of variance not attributable to the measurement of the desired construct (Messick, 1995; Shadish, Cook, & Campbell, 2002). For instance, asking teachers about issues related to high-stakes testing and the stress associated with this issue would require the teacher to accurately assess both of the constructs for one item. In her measure, however, Dawson (2012) asks *In my school, I feel pressure to improve standardized test scores*; and then *This causes me stress*. By separating the items, the teacher is asked to assess to what extent he or she feels an issue is salient in the school, and then to what extent the issue causes stress. Rather than conflating issues related to high-stakes testing and associated stress, the teacher is asked to

reflect on each separately, enhancing the validity of the measure (Messick, 1995; Shadish et al., 2002).

These *Known Issues* and *Stress* scales (Dawson, 2012) are included in this study to account for the issues, specifically related to high-stakes testing, teachers perceive as salient in their schools and the stress associated with these issues, and to examine the impact of high-stakes testing issues and related stress on teacher motivation. As evidenced by Klassen and colleagues (Klassen, 2010; Klassen, 2010; Klassen & Chiu, 2010; Klassen et al., 2010) as well as others who have studied teacher stress as related to high-stakes testing and its impact on teacher motivation (e.g., Dawson, 2012; von der Empse & Hasson, 2012), teachers stress, particularly related to high-stakes testing, negatively impacts teacher motivation and related outcomes. While previous studies have typically focused on the impact of teacher stress on teaching self-efficacy, other motivational processes, such as teachers' achievement goal orientations, are likely impacted by stress related to high-stakes testing. In this study, teacher achievement goal orientations are thought be impacted by the status of the school, whether high-stakes tests are administered in the grade in which they teach, and the issues related to high-stakes testing they perceive as salient in their schools, along with stress related to these issues.

### **Summary**

Teachers' testing status and school AMO status may impact teachers' motivation, including achievement goal orientations. In turn, teachers' achievement goal orientations have an impact on teachers' self-efficacy and perceptions regarding the costs and benefits of seeking help (Butler, 2007; Nitsche et al., 2011). This chapter details the literature regarding achievement goal orientations, self-efficacy, and help-seeking, highlighting the importance of these constructs for teachers.

Teachers' achievement goal orientations are a system of cognitive and affective processes (Ames, 1992; Ames & Archer, 1988), chiefly driven by personal assessments of competence (Elliot, 2005). Teachers' achievement goal orientations can take the form of mastery goals, performance-approach goals, performance-avoidance goals, and work-avoidance goals (Butler, 2007; Butler & Shibaz, 2008; Cho & Shim, 2013; Nitsche et al., 2011). Teachers' achievement goal orientations impact various educational and motivational variables (Butler, 2007; Butler & Shibaz, 2008; Cho & Shim, 2013; Nitsche et al., 2011; Retelsdorf & Gunther, 2011; Retelsdorf et al., 2010; Shim, Cho, & Cassady, 2013).

Self-efficacy for teaching is another important motivational factor for teachers. Teacher efficacy is defined as teachers' beliefs in their capability to impact student learning and motivation (Tschannen-Moran & Woolfolk Hoy, 2001). Teacher efficacy is related to achievement goal orientations (Butler 2007; Deemer, 2004; Nitsche et al., 2011; Skaalvick & Skaalvick, 2007), achievement goal structures (Deemer, 2004; Midgley, Anderman, & Hicks, 1995), classroom practices (Midgley, Anderman, & Hicks, 1995; Pajares, 1996; Tschannen-Moran & Woolfolk Hoy, 2001), and help seeking (Butler, 2007; Nitsche et al., 2011).

Teachers can view help-seeking as positive and beneficial for their practice, negative or harmful for their practice and professional persona, or helpful if their problem is solved by someone else (i.e., expedient) (Butler, 2007; Karabenick, 2004; Nitsche et al., 2011). Such perceptions affect behaviors; those who believe others will see them as incompetent if they ask for help will likely avoid asking for help with professional dilemmas or problems (Butler, 1998, 2007; Newman, 1998; Nitsche et al., 2011). Help seeking impacts self-regulatory strategy use (Ryan, Hicks, & Midgley, 1997), achievement goal orientations (Butler, 1998, 2007; Newman, 1998; Ryan et al., 1997; Tanaka et al., 2002, Karabenick, 2003, 2004; Roussel et al., 2011;

Skaalvick & Skaalvick, 2005), achievement goal structures (Newman, 2008), social goals (Ryan, Gheen, & Midgley, 1998; Ryan et al., 1997), and self-efficacy (Ryan et al., 1998; Ryan & Shin, 2011).

While achievement goal orientation provides a useful framework for understanding teacher motivation and relationships among teachers' goal orientations and related outcomes (Butler, 2007), questions regarding the impact of educational policy on teachers' achievement goal orientations and related processes still exist. Teachers' achievement goal orientations have been studied in Israel (Butler, 2007, 2012; Butler & Shibaz, 2008), Germany (retelsdorf & Gunther, 2011; Retelsdorf et al., 2010; Nitsche et al., 2011), and Finland (Malmberg, 2006, 2008). While scholars have begun to examine teachers' achievement goals here in the United States (Shim et al., 2013; Cho & Shim, 2013), no other studies of teachers' achievement goal orientations and related processes have investigated the impact of accountability policy on teacher motivation.

### **The Present Study**

As evidenced by the research described in the sections above, further examination of the impact of accountability policies on teacher motivation is warranted. Butler's (2007) teacher achievement goal orientation framework provides a lens through which to view teacher motivation. However, Butler's (2007) framework has been examined with teachers mainly outside of the United States (Butler, 2007, 2012; Butler & Shibaz, 2008; Nitsche, Dickhauser, Fasching, & Dresel, 2011; Retelsdorf & Gunther, 2011; Retelsodrf, Butler, Streblow, & Schiefele, 2010). Two studies, conducted by Cho and her colleagues (Cho & Shim, 2013; Shim et al., 2013) extended this framework to teachers in the United States, but did not include an investigation of the way in which accountability and high-stakes testing impact teacher

motivation. Additionally, the present study includes the measurement of the issues teachers perceive as salient in their school relating to high-stakes testing, and the stress associated with these issues. In this way, the present study aims to determine whether teachers are affected by accountability and high-stakes testing, as well as the stress associated with high-stakes testing, which Dawson (2012) illustrated. Further extending Dawson's (2012) research, this study aims to investigate the impact of issues related to high-stakes tests and stress on teachers' achievement goal orientations, and to see whether teachers' achievement goal orientations can predict teaching self-efficacy and perceptions of help-seeking above and beyond the effect of known testing-related issues and stress. A summary of and justification for the inclusion of each of these variables of interest is presented below.

### **Variables of Interest**

#### **Teachers' Achievement Goal Orientations**

Teachers may hold different goals for their success in the classroom (Butler, 2007), termed achievement goal orientations. Butler suggests that teachers' achievement goal orientations include (a) mastery goals (aiming to learn and develop professional understanding and expertise), (b) performance-approach goals (demonstrate superior teaching skills), (c) performance-avoidance (avoid demonstrating inferior teaching skills), and (d), work-avoidance (make it through the work day with as little effort as possible) (2007). In the present study, teachers' achievement goal orientations were used both as independent and dependent variables.

#### **Teacher Self-Efficacy**

Teacher self-efficacy (TSE) has been defined as the beliefs teachers hold about their own capacity, competence, and effectiveness as teachers, and generally includes mention of the capability to overcome adverse situations. (Gibson & Dembo, 1984; Soodak & Podell, 1996;



Tschannen-Moran & Woolfolk Hoy, 2001). TSE refers to teachers' perceived ability to complete a task related to teaching (Bandura, 1993; Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998). For example, a teacher must decide whether he or she has the capability to impact student learning even though the student may present difficulties such as behavior problems or low reading ability. Teacher self-efficacy is related to teachers' achievement goal orientations (Butler, 2007; Retelsdorf, Butler, Streblow, & Schiefele, 2008). In the present study, teacher self-efficacy will be used as a dependent variable, predicted by teachers' achievement goal orientations.

Achievement goal orientations were thought to predict teacher self-efficacy because goal orientations constitute an approach to achievement-related tasks, in this case teaching (Butler, 2007). Therefore, self-efficacy is likely to be impacted by the goals teachers have for engaging in the practice of teaching (Butler, 2007; Eren, 2008; Malmberg, 2008).

### **Teacher Perceptions of Help-Seeking**

People may view help-seeking as either beneficial or threatening to their professional persona (Butler, 1998). Teacher's help-seeking perceptions are impacted by their achievement goal orientations. A positive relationship exists between teachers' mastery goal orientations and their perceived benefits of help-seeking, while performance-avoidance goals predict negative perceptions of help-seeking (Butler, 2007). Additionally, Butler (2007) found that teachers who espouse work-avoidant goals preferred expedient help-seeking. In the present study, teachers' perceptions of help-seeking served as a dependent variable, predicted by teachers' achievement goal orientations.

As teacher help-seeking is related to teachers' achievement goal orientations, this construct may be related to other motivational processes for teachers. However, no literature investigating the relationship between help-seeking and processes such as self-efficacy exists to

date. Therefore, only the relationship between teachers' achievement goal orientations and help-seeking was examined here.

### **Accountability**

The current educational climate in the United States is focused on high-stakes tests and schools achieving adequate yearly progress (AYP) or, for those schools under No Child Left Behind (NCLB) flexibility waiver, meeting annual measurable objectives (AMO) based on test scores. The constraints that teachers feel based on these policies may impact their personal goal orientations (Barrett, 2009; Wolters & Daugherty, 2007). High-stakes testing pits schools, counties, and even states against one another, and this competition is felt at the classroom level. When schools fail to make AYP, they lose funding which directly impacts classrooms and resources (Hursh, 2007). Therefore, teachers who work in low-performing schools, measured by AYP or AMO status, may hold differing achievement goal orientations than those who teach in high-performing schools. Similarly, teachers who teach in testing grades, typically grades three through five in elementary schools, may hold different achievement goal orientations than those who teach in non-testing grades, typically Pre-Kindergarten through second grade in elementary schools. Teaching in these grades may lead to more stress as a result of high-stakes testing, possibly impacting teachers' achievement goal orientations. In the present study, testing grade status and school AMO status were used as independent variables to determine whether such differences in teacher motivation exist.

### **Stress Related to High-Stakes Testing**

Recent studies suggest that teachers perceive issues related to high-stakes testing as salient in their schools, and associate stress, at times extreme levels of stress, to these issues (Dawson, 2012; von der Empse & Hasson, 2012). These high-stakes testing issues and associated

stress have been found to negatively impact teachers' self-efficacy, and may impact other motivational processes such as teachers' achievement goal orientations. To this end, *Known Issues* and *Stress* scales will be included in the regression analyses to examine the impact of issues related to high-stakes testing and associated stress on teacher motivation, operationalized here as teacher achievement goal orientations.

### **Years of Teaching Experience**

There is a clear relationship between years of teaching experience and self-efficacy (Klassen et al., 2011; Tschannen-Moran & Woolfolk Hoy, 2001). Therefore, the relationship between teachers' achievement goal orientations and self-efficacy, and likely achievement goal orientations and perceptions of help-seeking, is best examined by controlling for years of experience. For this reason, years of experience served as a control variable when examining teachers' achievement goal orientations, self-efficacy for teaching, and perceptions of help-seeking.

### **Demographics**

In addition to teacher achievement goal orientations, self-efficacy, help-seeking perceptions, and high-stakes testing variables, demographic information was collected from each teacher. This information included two items measuring high-stakes testing and school accreditation status. Specifically, these items asked teachers to report whether they administer Standards of Learning (SOL) exams in their grade level, and whether their school is fully accredited, accredited with warning, or has been denied accreditation. Additionally, Dawson's (2011) *Perceived Stress Due to High-Stakes Testing* scale, measured the degree to which teachers perceive stress related to high-stakes test scores and school accreditation. Such information will allow for comparisons between the study's sample and the larger elementary

teacher population. This information will also provide for comparisons among other studies of teacher motivation (e.g., Cho & Shim, 2013).

### **Research Questions**

The research questions examined in this study are as follows:

R1: What is the impact of high-stakes testing on the four dimensions of teachers' achievement goal orientations?

R2: What is the impact of school AMO status, accounting for demographic variables, years of experience, issues related to high-stakes testing, and stress, on the four dimensions of teachers' achievement goal orientations?

R3: Do teachers' achievement goal orientations predict self-efficacy for teaching, after accounting for demographic variables, years of experience, issues related to high-stakes testing, and stress?

R4: Do teachers' achievement goal orientations predict teachers' perceptions of help-seeking, after accounting for demographic variables, years of experience, issues related to high-stakes testing, and stress?

### **Chapter Three: Methods**

The purpose of the present study is to examine teachers' achievement goal orientations in relation to teachers' self-efficacy beliefs and perceptions of help-seeking. Additionally, this study aims to investigate the impact of high-stakes testing policy on teacher motivation. While much is known about students' motivational beliefs, less is known about teachers' achievement goal orientations and related motivational processes (Butler, 2007). Table 3.1 highlights the variables of interest in the present study, their definitions, and their hypothesized relationships.

Table 3.1

*Variables/constructs of interest, definitions, and hypothesized relationships*

<b>Variable/Construct</b>	<b>Definition</b>	<b>I/D/C*</b>	<b>Hypotheses</b>
Demographic Information	Information such as gender, ethnicity, grade level, subject, and education level	C	N/A
Years of Teaching Experience	The number of years a teacher has been teaching	C	N/A
Testing Status	Whether a teacher is required to administer Virginia SOL examinations	I	Achievement goal orientations will differ based on testing status, with those in tested grades espousing performance orientations.
AMO Status	A school's typical performance on Virginia SOL examinations	I	Teachers in high-performing schools will espouse mastery orientations, while those in low-performing schools will espouse performance orientations. Work-avoidance may vary.
Teacher Stress due to Known Issues	The stress that teachers perceive due to issues relating to high-stakes testing.	I	Stress will be positively associated with performance orientations and negatively associated with mastery orientations. Relationship with work-avoidance may vary.
Teacher Achievement Goal Orientations	Goals teachers hold for their practice: mastery, performance-approach, performance-avoidance, and work-avoidance	D/I	Achievement goal orientations will be impacted by testing status and AMO status as described above, and will relate to efficacy for teaching and help-seeking perceptions as described below.
Teaching Self-Efficacy	Beliefs teachers hold about their own capacity, competence, and effectiveness as teachers, and generally includes mention of the capability to overcome adverse situations	D	Mastery orientation will relate positively to teaching self-efficacy, while performance and work-avoidance orientations will relate negatively.
Teacher Perceptions of Help-Seeking	Viewing help-seeking as beneficial for teaching practice, damaging to professional persona, a means to have someone else fix one's problems	D	Mastery orientation will relate to viewing help-seeking as beneficial; performance orientations will relate to viewing help-seeking as harmful; work-avoidance orientation will predict preference for expedient help-seeking.

\*I = Independent variable, D = Dependent Variable, C = Control Variable

## **Participants and Procedures**

### **Participants**

To investigate the variables presented above, teachers in the central Virginia area were invited to participate in the present study. The study design aimed to limit the sample to elementary school teachers in public schools, as the elementary school context represents a natural dichotomy between testing and non-testing grades. That is, those who teach pre-school through second grade are not required to administer Virginia Standards of Learning (SOL) assessments, while those who teach grades three through five are required to administer these assessments.

Sampling was conducted in two ways. First, teachers in four school district were invited to participate. These districts represent suburban and rural areas (two each) and are typically high-performing. For example, every school in one of the suburban counties achieved accreditation in 2011-2012 (VDOE, 2012). Secondly, elementary teacher members of a state teacher's association were invited to participate. With a membership of approximately 20,000 elementary teachers across the state of Virginia, it was thought that this sample would achieve greater diversity regarding school accreditation status than sampling from one metropolitan area alone.

However, data and results were not disaggregated by teacher association membership due to potential recourse for the association. Therefore, it was not possible to differentiate between teachers who are members of the association and who are not members of the association. As districts had already agreed to participate prior to association participation agreement, it was important to retain these districts in order to maintain a positive, beneficial relationship for both the researcher and school districts. These districts expressed a vested interest in the proposed

study and results, and thus were retained in the sample. Recruitment procedures and a detailed description of the sample are included below.

**Recruitment.** Recruitment for this study began in November of 2013 following the approval of Virginia Commonwealth University's Institutional Review Board (IRB). Prospective school districts were contacted in June 2013 to request permission to contact teachers and to obtain lists of teachers' email addresses. The president of the teacher's association was contacted in September 2013 for permission to recruit association members.

For school district sampling, principals from each elementary school in each district were contacted with a description of the study, IRB approval information, and the recruitment email containing the teacher letter (Appendix A) and survey (Appendix B) link. Next, the principals sent an email containing the survey link to all elementary teachers in their school, excluding support staff and administrators. For teacher association sampling, the same email was sent to the president of the association, who sent the recruitment email to association representatives in every public school district in Virginia, excluding those in the counties listed above. This was to avoid recruiting teachers in these counties who are also members of the association twice. Association representatives then sent the recruitment email, including the link to the online survey, to elementary teacher members in their respective districts.

The recruitment email asked teachers to volunteer to take an online survey administered through Surveygizmo, in the fall of 2013. The letter is included in Appendix A, and explains that participation is optional, and teachers are not required to answer any given survey item, per IRB requirements. As an incentive to participate, teachers were entered to win a \$50 Amazon gift certificate. Participants were directed to email a separate email account created for the proposed study if they chose to participate. No other information other than the participant emails was



necessary to enter the drawing. Following data collection and closing of the survey, one email was randomly selected as the winner. Amazon was selected because of the ability to generate a gift card sent directly to an email address, so participant names, addresses, or phone numbers were not required. The email included a link to the survey instrument (Appendix B), and responses were automatically entered into an online Surveygizmo database. The survey remained active for two and a half weeks, with a reminder email sent from the researcher to administrators and teacher association representatives and then forwarded to all participants.

After closing the survey, data from Surveygizmo was uploaded into an SPSS database for analysis. Participants' responses were kept confidential. Participants were recruited from a number of school systems, limiting the possibility of tracing survey responses back to individual teachers. No personally identifying information was collected, and participants were automatically assigned an identifier through the Surveygizmo program.

The combination of two sampling procedures posed challenges, particularly in the calculation of response rate. For sampling method one, or district sampling, the survey was sent to 2,790 teachers, of which 446 responded, for a response rate of 16%. Following sampling method two, teacher association sampling, I sent an email asking whether association representatives did in fact forward the survey and, if so, to approximately how many teacher members. This email was sent to the president of the association, who forwarded the email to all representative, with the exception of the four districts sampled in method one. Of the representatives across the state, representatives from 11 districts responded with the total of teachers who received the recruitment email. The total number of teacher members for these 11 districts was 2927, of which 206 responded, for a response rate of 8%. However, the total

number of teachers sampled through the teacher association method cannot be calculated with certainty because some district representatives did not respond to the second email.

In total, 652 teachers responded to the survey, of which 128 were partially completed, meaning these teachers dropped out of the survey entirely at some point. These surveys were removed from the analysis. Screening for patterns of missing data, including correlations among dummy-coded system missing and all other variables, indicated that data were not missing at random. Further screening of dummy-coded system missing variables, including bar charts and transposing missing values, indicated a pattern of missing data related to outcome variables. That is, cases with data missing on the achievement goal orientation scales often included missing values on related variables, such as the self-efficacy and stress scales, as well. Therefore, listwise deletion was used to account for missing data, resulting in an additional 143 respondents being deleted from the analysis following the deletion of the initial 128 partial completers, leaving a total sample of 381 teachers.

**Sample.** Data for this study were collected at only one point, during the fall of 2013, and were used to determine the nature of the relationships among the variables described above, thus making the study cross-sectional in nature (Groves, Fowler, Couper, Lepkowski, Singer, & Tourangeau, 2009). The sampling frame consists of all regular education elementary teachers, grades pre-kindergarten through six, in four counties as well as elementary members of the teacher association across the state of Virginia. The sampling method was probability sampling, as each teacher in the sampling frame was given an equal chance of participating in the study (Groves et al, 2009). Teacher association representatives in each of the participating counties did not receive the recruitment email. This was to avoid recruiting teachers in these counties who are also members of the association twice, or over-recruiting.

Demographic information on the participants is presented in Table 3.2. Of the sample, 38 teachers (8.0%) identified as male and 438 (92.0%) identified as female. The majority of the sample identified as White alone (441, or 92.6%). Seventeen (3.6%) identified as Black or African American, 12 (2.5%) identified as being two or more races, three (0.6%) identified as Hispanic or Latino, two (0.4%) identified as American Indian or Alaskan Native, and one (0.2%) identified as Asian alone. Over half of the sample (57.4%) had a Master's degree. Ten percent of the sample had been teaching for three years or less, while over 12 percent had been teaching for 30 years or more. The average length of time participants had been teaching was 14.78 years.

One-hundred-sixty-four (34.6%) teachers taught in grades Pre-K through second. Two-hundred-nineteen (46.1%) teachers taught in grades three through six. However, 93 teachers, or 19.5%, indicated they taught in a grade other than Pre-K through 6th. This was problematic because this study aimed to examine elementary teachers' motivation as it relates to accountability and testing policy, specifically because the elementary context represents a natural dichotomy between tested and non-tested grades (P-2 and 3-6, respectively). Thus, data from teachers who indicated they teach in a grade other than what would be found in an elementary school in Virginia (P-6) were discarded. This resulted in a final *N* of 381.

Table 3.2

*Demographic variables, frequencies, percentages, and applicable means*

<b>Item</b>	<b>Response</b>	<b>Frequency</b>	<b>Percent</b>	<b>Mean</b>
How many years have you been teaching?	1	12	3.1	14.78
	2	13	3.4	
	3	17	4.4	
	4	8	2.1	
	5	8	2.1	
	6	17	4.4	
	7	14	3.7	
	8	15	3.9	
	9	19	5.0	
	10	31	8.1	
	11	14	3.7	
	12	13	3.4	
	13	11	2.9	
	14	15	3.9	
	15	18	4.7	
	16	9	2.3	
	17	9	2.1	
	18	13	3.4	
	19	12	3.1	
	20	12	3.1	
	21	8	2.1	
	22	9	2.3	
	23	8	2.1	
	24	4	1.0	
	25	11	2.9	
	26	5	1.3	
	27	5	1.3	
	28	9	2.3	
	29	4	1.0	
	30 or more	41	10.7	
What is your gender?	Male	29	7.6	
	Female	354	92.4	
	Other	0	0.0	
*Please choose the ethnicity with which you most closely identify.	White alone	353	92.2	
	Black or African American alone	16	4.2	
	American Indian or Alaskan Native alone	1	0.3	
	Asian alone	1	0.3	

Please indicate your highest level of education.	Hispanic or Latino	3	0.8
	Two or More Races	9	2.3
	Bachelor's	138	36.0
What is the primary grade level you currently teach?	Master's	211	55.1
	Doctorate (PhD or EdD)	3	0.8
	Post-Graduate Certificate (e.g., reading specialist)	29	7.6
	Other	2	0.5
	Pre-Kindergarten	6	1.6
	Kindergarten	46	12.0
	First	56	14.6
	Second	56	14.6
	Third	66	17.2
	Fourth	75	19.6
What subjects do you currently teach?	Fifth	72	18.8
	Sixth	6	1.6
	Math	6	1.6
	English/Language Arts	28	7.3
	Science	0	0.0
	Social Studies	1	0.3
	Physical Education	2	0.5
	Art	1	0.3
	Music	1	0.3
	Special Education	4	1.0
	Other	3	0.8
	Multiple Subjects	337	88.0
	Total	383	

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\* United States Census Bureau, 2010

## Instruments

Teachers completed an online survey instrument consisting of 66 total items. Through piloting procedures conducted in spring 2013, the instrument was found to take approximately 10 minutes to complete. However, two scales were added following piloting procedures; thus, the final instrument was found to take approximately 10-20 minutes to complete. The instrument consisted of six sections. These include 1) demographics, 2) two items measuring high-stakes testing status, 3) the *Known Issues in Schools* and *Stress* scales (Dawson, 2012), 4) the *Teacher*

*Achievement Goal Orientation Questionnaire* (Butler, 2007), 5) the *Teacher Self-Efficacy Scale (Short Form)* (Tschannen-Moran & Woolfolk Hoy, 2001), and 6) the *Teacher Perceptions of Help Seeking Questionnaire* (Butler, 2007). The instrument was administered once during fall 2013, and is described in detail in the sections that follow.

### **Instruments**

**Demographic Items.** The items listed in this section have been described in the preceding sections. See Table 3.2 for all items.

**Accountability.** One item was used to determine whether teachers in testing grades and non-testing grades, or schools that meet accreditation or have not met accreditation, differ in regard to their achievement goal orientations. Rather than using accreditation language with which teachers may be unfamiliar, teachers were asked to report whether their school meets passing rates rather than placing their school in categories determined by the Virginia Department of Education, such as "Focus School" and "Priority School." Most participants (119, or 81%) indicated that their school typically met acceptable pass rates for all or most subjects each year. Seventy-nine participants (16.6%) indicated that their school often does not meet these pass rates, while 10 teachers (2.1%) indicated their students did not take the SOLs. These data are presented in Table 3.3.

Table 3.3.

*School performance.*

	Frequency	Percent
<b>How does your school typically perform on Virginia Standards of Learning (SOL) exams?</b>		
My school always meets acceptable pass rates each year (e.g., is "high-performing" or a "reward school").	90	23.5
My school meets acceptable pass rates for most subjects each year (e.g., usually meets AMO).	215	56.1
My school often does not meet acceptable pass rates in two or more subjects each year (e.g., is a "focus" or "priority" school).	70	18.3
My school has not met acceptable pass rates for multiple years and is closing.	0	0.0
My students are not required to take the SOL tests.	8	2.1

***Perceived Stress Due to High-Stakes Tests Scale.*** The *Perceived Stress Due to High-Stakes Tests* scale (Dawson, 2012) was developed to assess pressures teachers perceive in their schools related to high-stakes testing an accountability as well as the stress these tests cause them. This scale includes 16 items, anchored on a five-point Likert scale at 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). Each item contains two parts; the first is deigned to assess the pressures teacher feel in their school due to a particular issue related to high-stakes testing. For example, *I feel pressure to improve **standardized test scores*** (emphasis added). The second part of each item assess the stress teachers feel due to this issue: *This causes me stress*.

Dawson (2012) developed these two-part items to first measure the extent to which teachers actually perceived issues related to high-stakes testing as problematic in their schools, and then to measure the stress each issue causes teachers. This method is preferable to items that confound issues related to testing *and* stress, which may introduce measurement error (Dawson, 2012). The 16 items can be found in Table 3.4.

This scale was not administered with the demographic items, achievement goal scale, self-efficacy for teaching scale, and help-seeking scale in the pilot study. However, pilot testing

was desirable for this scale because these scales (achievement goal scale, self-efficacy for teaching scale, perceptions of help-seeking scale) had not previously been combined and administered in the same instrument with teachers in the United States. Upon collection of survey responses from the first 100 teachers these data were analyzed for reliability information, effectively serving as a pilot study. Cronbach's alpha for the *Known Issues* and stress scales were 0.81 and 0.86, respectively, indicating acceptable reliability.

Data from this scale were used to account for the pressures teachers feel regarding high-stakes testing and accountability in regression analyses of self-efficacy for teaching and perceptions of help-seeking. These data also served as descriptive information, highlighting issues teachers face in schools across Virginia

Table 3.4

*The Perceived Stress Due to High-Stakes Testing scale.*

**Items** ( $\alpha = .85$ )

In my school...

I feel pressure to improve standardized test scores.

This causes me stress.

Tested content areas are often treated as more important than non-tested content areas.

This causes me stress.

I feel pressured to make sure that my students pass the test.

This causes me stress.

There is increased pressure in the weeks leading up to the test.

This causes me stress.

Using practice standardized tests is common.

This causes me stress.

There is pressure to maintain or improve our image to the public.

This causes me stress.

There is a sense of relief when the test is over.

This causes me stress.

Tensions rise as testing time approaches.

This causes me stress.

**The Teacher Achievement Goal Orientation Questionnaire.** *The Teacher Achievement*

*Goal Orientation Questionnaire* (TAGOQ) was originally created to measure teachers'



achievement goal orientations for their practice (Butler, 2007). This measure included 16 total items with responses anchored from 1 (*Do not agree at all*) to 5 (*Agree completely*) on a Likert scale. The measure includes an opening stem, *Teachers differ in what makes them feel they had a successful day at school; when would you feel that you had a successful day?* Example items include *I learned something new about teaching or myself as a teacher*, *My classes did better than other teachers on an exam*, *No one asked a question that I could not answer*, and *The material was easy and I did not have to prepare lessons*. The measure includes four subscales designed to assess four dimensions of teachers' achievement goal orientations: mastery goals, performance-approach goals, performance-avoidance goals, and work-avoidance goals.

Subsequent studies (Nitsche, Dickhauser, Fasching, & Dresel, 2011; Retelsdorf et al., 2008) sought to revise Butler's (2007) original measure to more accurately capture teachers' reasons for individual goal pursuits rather than measuring definitions of success or the actions of other teachers. Most recently, Nitsche and colleagues included addressee facets to each dimension of teachers' goal orientations (2011). Addressee facets refer to individuals teachers may be trying to impress or avoid, including themselves, colleagues, and administrators. Nitsche and colleagues (2011) retained the four achievement goal factors included in Butler's (2007) original instrument, as well as many of Butler's (2007) items, and included items specifying possible addressees for each factor.

Nitsche and colleagues' (2011) revised instrument included 36 total items. Each item was anchored on a 5-point Likert scale from 1 (*Strongly disagree*) to 5 (*Strongly agree*). The measure includes an opening stem, *In my vocation, I aspire...* Example items include *...to increasingly understand complicated class situations*, *...to demonstrate to my colleagues that I know more than other teachers*, *...to not show my colleagues when I have more troubles to meet the job*

*demands of other teachers, and ...not to have to work too hard.* Reliability estimates for the mastery, performance-approach, performance-avoidance, and work-avoidance scales suggest that these scales are appropriate for measuring teachers' achievement goal orientations (Cronbach's  $\alpha$  = .78, .89, .85, and .79, respectively).

For the purposes of this study, the measure developed by Nitsche and his colleagues (2011) was adapted for the present sample. That is, Nitsche and colleagues' (2011) TAGOQ has been used with teachers in Germany (2011, 2013) and includes language that may be cumbersome to teachers in the United States. Additionally, the 36-item measure includes redundant items, with three items for each addressee facet for each goal dimension, possibly resulting in an inflation of reliability estimates. Therefore, the present study utilized selected items from Nitsche et al.'s (2011) measure, retaining items included in Butler's (2007) original measure, and modifying items that may reflect difficulty in German to English translation. For example, "*...to not show my colleagues when I have more troubles to meet the job demands than other teachers,*" was modified to read "*to conceal from my colleagues when I have more troubles meeting job demands than other teachers.*"

Piloting procedures conducted in the spring of 2013 revealed acceptable reliability for the adapted goal orientation scales: mastery, performance-approach, performance-avoidance, and work orientation (Cronbach's  $\alpha$  = .92, .87, .74, and .92, respectively). However, cognitive interview data for the TAGOQ pilot suggested that TAGOQ items should be randomized so that items addressing the four goal orientations are intermixed. Cognitive interview participants noted that the grouping of particular goal orientation items led them to answer in a particular way throughout the survey. Therefore, items in this measure were randomized to ensure participants' responses were not impacted by item order, enhancing reliability of the measure. The full scale

and alphas for each sub-scale, extracted from pilot data, are presented in Table 3.5. Reliability estimates were calculated prior to analyses with data from the present study, and are detailed in the next chapter.

Table 3.5

*Final Teacher Achievement Goal Orientation Scale*

**In my vocation, I aspire...**

*Mastery Goal Orientation ( $\alpha = 0.92$ )*

- ... to get new ideas on how to convey knowledge in my subject.
- ...to understand how to best transfer knowledge in my subject.
- ...to improve my pedagogical knowledge and competence.
- ...to improve my content knowledge and experience.
- ...to increasingly deal better with critical class situations.
- ...to learn something new about myself.
- ...to want to learn more.
- ...for my students' questions to make me think.

*Performance-Approach Orientation ( $\alpha = 0.87$ )*

- ...to demonstrate to my colleagues that I know more than other teachers.
- ...to demonstrate to my colleagues that I teach better than other teachers.
- ...to demonstrate to my principal that I know more than other teachers.
- ...to demonstrate to my principal that I teach better than other teachers.
- ...to be praised for high teaching ability.
- ...for my classes to score higher than others.
- ...to be one of the best teachers in my school.
- ...to plan the best lessons.

*Performance-Avoidance Orientation ( $\alpha = 0.74$ )*

- ...to conceal from my colleagues when I have more trouble meeting job demands than other teachers.
- ...to conceal from my principal when I have more trouble meeting job demands than other teachers.
- ...to avoid showing low teaching ability.
- ...to keep my students from asking hard questions.
- ...for my class not to score worse than other classes.
- ...for my class not to be farthest behind.

*Work-Avoidance Orientation ( $\alpha = 0.92$ )*

- ...to avoid planning new lessons.
- ...to not have to work too hard.
- ...to avoid grading.
- ...to get through the day with little effort.

**The Teacher Self-Efficacy Scale.** The *Teacher Self-Efficacy Scale (Short Form)* (TSES) was created to measure teachers' perceptions of their own competence in three areas related to teaching: teachers' sense of efficacy for instructional strategies, efficacy for classroom management, and efficacy for student engagement (Fives & Buehl, 2010; Tschannen-Moran & Woolfolk Hoy, 2001). This measure includes 12 total items, which for the purposes of this study are anchored from 1 (*I can do nothing*) to 5 (*I can do a great deal*). The measure asks teachers to respond to the 12 items while ...*considering the combination of...current ability, resources, and opportunity...* Example items include *How much can you control disruptive behavior in the classroom*, *To what extent can you craft good questions for your students*, and *How much can you do to get students to believe they can do well in school work?* Reliability estimates for the instructional strategies, classroom management, and student engagement scales suggest these scales are appropriate for measuring teacher self-efficacy (Cronbach's  $\alpha = 0.86$ ,  $0.86$ , and  $0.81$ , respectively). Tschannen-Moran and Woolfolk Hoy (2001) report adequate reliability for the measure as a whole (Cronbach's  $\alpha = 0.90$ ). Piloting of the TSES also revealed appropriate reliability, with Cronbach's  $\alpha = 0.92$ . Cognitive interview findings suggested no necessary changes to the TSES for the present study. Items and reliability for the full scale are presented in Table 3.6.

Table 3.6

*The Teacher Self-Efficacy Scale*

**Items** ( $\alpha = .92$ )

*Instruction*

To what extent can you craft good questions for your students?

To what extent can you use a variety of assessment strategies?

To what extent can you provide an alternative explanation or example when students are confused?

How well can you implement alternative teaching strategies in your classroom?

*Classroom Management*

How much can you do to control disruptive behavior in the classroom?

How much can you do to calm a student who is disruptive and noisy?

How much can you do to get children to follow classroom rules?

How well can you establish a classroom management system with each group of students?

*Student Engagement*

How much can you do to motivate students who show low interest in school work?

How much can you do to help your students value learning?

How much can you do to get students to believe they can do well in school work?

How much can you assist families in helping their children do well in school?

**The Teacher Perceptions of Help-Seeking Questionnaire.** The *Teacher Perceptions of Help-Seeking Questionnaire* (TPHSQ) was created to measure teachers' perceptions of seeking help as either beneficial or harmful to their professional practice and persona (Butler, 2007). The measure includes 11 total items, anchored on a Likert scale from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). Example items include *Seeking help is a way to acquire new knowledge and skills*, *Asking for help can be seen as a sign of weakness*, and *Asking for help is worthwhile if it saves effort and bother*. Three subscales are included in the TPHSQ: perceptions of help-seeking as beneficial, perceptions of help-seeking as harmful, and preference for expedient help-seeking. Reliability estimates for the scales assessing perceptions of help-seeking as beneficial or harmful suggest that these scales are appropriate for measuring teachers' perceptions of help-seeking (Cronbach's  $\alpha = 0.81$  and  $0.84$ , respectively) (Butler, 2007). However, reliability for the

expedient help-seeking scale is poor, as Butler (2007) reports (Cronbach's  $\alpha = .58$ ). For this reason, this measure was piloted along with the measures described above in the spring of 2013.

Pilot data again revealed acceptable reliability for perceptions of help-seeking as beneficial, as well as preference for expedient help-seeking (Cronbach's  $\alpha = 0.95$ , and  $0.75$ , respectively). However, Cronbach's alpha for the perceptions of help-seeking as negative scale was lowest at  $0.59$ , which is poor. These findings were compared with cognitive interview findings, which suggested two items in this scale were unclear to teachers: *It is embarrassing to show that I am having difficulty by asking for help*, and *Asking for help may be seen as a sign of weakness*.

Cognitive interview data suggest these items are likely problematic because the first includes an affective component, embarrassment, which may be hard to conceptualize without context. The second asks teachers to make inferences about others' perceptions, which may also be difficult for teachers to imagine. When two of the negative help seeking items were removed for further analysis of pilot data, reliability increased. However, pilot testing was conducted with only 13 participants, and Butler (2007) reported adequate reliability for this scale, so the scale was retained for the present study. Reliability estimates using data from the present sample were conducted prior to analyses, and these results are reported in the chapter that follows. All items can be found in Table 3.7.

Table 3.7

*The Teacher Perceptions of Help-Seeking Questionnaire*

**Items**

*Help-Seeking as Beneficial* ( $\alpha = 0.95$ )\*

Asking for help with problems is a good way to learn.

Getting expert advice helps one become a better teacher.

Seeking help is a way to acquire new knowledge and skills.

It is better to ask for help than to continue having difficulty.

*Perceptions of Help-Seeking as Harmful* ( $\alpha = 0.59$ )\*

It is embarrassing to show that I am having difficulty by asking for help.

It is better not to show you are having a problem.

Asking for help may be seen as a sign of weakness.

*Preference for Expedient Help-Seeking* ( $\alpha = 0.75$ )\*

Asking for help can lead to more work.

Asking for help is worthwhile if it saves effort and bother.

Asking for help is okay if people provide a solution.

\* Cronbach's alphas calculated from pilot data in spring 2013

**Analyses**

**Data Screening**

Data were first screened for assumptions of multivariate procedures. A series of tests were conducted to screen for complete data, absence of outliers, absence of multicollinearity, multivariate normality, and homoscedasticity. All analyses were conducted using SPSS. To screen for missing data, data were copied into a new SPSS database and then dummy coded. Missing data were coded 1 and existing data were coded 0. Next, a series of bivariate correlation coefficients were calculated on dependent variables of interest, to include scores on the achievement goal measure to determine whether systematic patterns of missing data occur on the TAGOQ and measures of teacher self-efficacy (TSES) and help-seeking perceptions (TPHSQ) (Dattalo, 2013). A pattern of missing data on outcome variables of interest did exist, so data were deleted listwise.

Next, data were screened for outliers. Dattalo (2013) recommends using Cook's *D* to detect outliers and determine the impact of a particular observation on a regression coefficient.

This procedure allows the researcher to estimate the impact of an outlier on the overall statistical model, and is particularly appropriate for screening data prior to conducting multivariate analysis of variance (MANOVA), as this procedure is sensitive to outliers (Dattalo, 2013).

To screen for outliers using Cook's *D*, a regression analysis was conducted with participant scores on the TAGOQ as the dependent variable and testing status as the independent variable. Selecting Cook's *D* in SPSS will result in a new variable, values of Cook's *D*. Values of Cook's *D* that are greater than  $4/n + 1/2$  indicate outliers (Dattalo, 2013). For these data, no cases had Cook's *D* values greater than .5062 ( $.0062 + 1/2$ ). The assumption of absence of outliers for these data is plausible.

Pearson product-moment correlation coefficients were then calculated for each variable serving as an independent variable in further analyses to determine the absence of multicollinearity. Achievement goal orientation, teacher self-efficacy, and perceptions of help-seeking are thought to be related (Butler, 2007), so screening for multicollinearity is important for these constructs. Intercorrelations between pairs of IVs showed strong correlations between some achievement goal orientations (e.g., work avoidance) and school status. However, tolerance (calculated as  $1 - R^2$ ) of school accountability regressed on all AGO, and all AGO regressed on all other AGO were greater than 0.20, suggesting that multicollinearity is not a problem for these data (Dattalo, 2013).

Finally, data were screened for the presence of homoskedasticity and multivariate normality. Histograms, P-P plots of standardized residuals, and scatterplots show little correlation between error (residuals) and predicted values, suggesting the assumption of homoskedasticity is tenable (Dattalo, 2013). Additionally, as homoskedasticity is related to multivariate normality, the latter assumption is tenable (Dattalo, 2013).



## **Frequencies and Descriptive Statistics**

Data were analyzed by conducting frequency analyses and calculating descriptive statistics. The results of these analyses have been described in the preceding sections.

## **Reliability**

Prior to conducting any analyses, it was necessary to examine the reliability of all scales. Reliability of scales was assessed using Exploratory Factor Analysis (EFA) with Varimax rotation and Cronbach's alpha. EFA uncovers the underlying structure of the variables included in the study, and employing Varimax rotation allows for maximization of the variance among each factor (Dattalo, 2013). Subscales that emerge as a result of EFA were examined for reliability using Cronbach's alpha (Cronbach, 1951). Due to the novel context under which teacher motivation was examined in the present study, the TSES was also subject to reliability analysis. That is, though this instrument has established reliability information, the present study combines this scale with measures of high-stakes testing, achievement goal orientations, and perceptions of help-seeking, which may introduce factors affecting the reliability of the TSES. Additionally, Tschannen-Moran and Woolfolk Hoy (1998) recommend that studies employing the TSES subject the instrument to reliability analysis.

Finally, participants' scores on each remaining item of each scale were converted to a scale score for further analyses. Table 3.8 describes this procedure.

Table 3.8

*Measures and calculation of scale scores.*

<b>Measure</b>	<b>Number of Scales</b>	<b>Scale Range</b>	<b>Calculation of Scale Score</b>
<i>Known Issues</i>	1	1 (Strongly Disagree) to 5 (Strongly Agree)	1. Add item scores for each scale together (1 scale with 8 items) 2. Divide by number of items (8) 3. This will results in two scale scores to be used in analyses for hypotheses 2-4.
<i>Stress</i>	1	1 (Strongly Disagree) to 5 (Strongly Agree)	1. Add item scores for each scale together (1 scale with 7 items) 2. Divide by number of items (7) 3. This will results in two scale scores to be used in analyses for hypotheses 2-4.
<i>Teachers' Achievement Goal Orientation Questionnaire</i>	4	1 (Strongly Disagree) to 4 (Strongly Disagree)	1. Add item scores for each scale together (2 scales with 8 items, 1 scale with 7 items, 1 scale with 4 items) 2. Divide by number of items (8, 7, or 4) 3. This will results in four scale scores to be used as dependent (H2) or independent (H3, H4) variables
<i>Teacher Self-Efficacy Scale</i>	1	1 (I can do nothing) to 5 (I can do much)	1. Add item scores for the entire scale together 2. Divide by number of items (12) 3. This will results in one scale score to be used as a dependent variable (H3)
<i>Teacher Perceptions of Help-Seeking Questionnaire</i>	3	1 (Strongly Disagree) to 4 (Strongly Agree)	1. Add item scores for each scale together (2 scales with 3 items, 1 scale with 4 items) 2. Divide by number of items (3 or 4) 3. This will results in three scale scores to be used as dependent variables (H4)

## MANOVA.

**Testing status.** A multivariate analysis of variance (MANOVA) was conducted to determine differences between groups of teachers on achievement goal orientation. The MANOVA examined testing status (testing and non-testing grades) on achievement goal orientation (mastery orientation, personal performance orientation, class performance orientation, work-avoidance orientation), resulting in a 2x4 between-groups MANOVA. This analysis was appropriate because the independent variable, testing status, is a categorical variable with two levels.

Teacher testing status was determined by examining teachers' responses on both the grade level and subject items. Teachers working in grades PreK-2 do not administer Virginia SOL examinations; these teachers were immediately ascribed non-testing status. It was then necessary to examine whether teachers who indicated they teach in grades 3-6 taught in tested subject areas. Teachers in grades 3 and 5 and who teach math, English/Language Arts, and/or social studies were ascribed "testing" status, as these subjects are tested in grades 3 and 5 in Virginia (none of the teachers indicated they teach science). Teachers who teach in grades 4 and 6 were also ascribed "testing" status if they indicated they taught math, English/Language arts, or social studies, as these subjects are tested in these grades. These variables were then dummy-coded as "1," tested, or "0," non-tested, respectively.

The dependent variables, the four types of achievement goal orientations, are continuous variables (Field, 2009). It was hypothesized that teachers' achievement goal orientations differ as a function of testing or non-testing status. SPSS computes a multivariate measure of effect size, *multivariate  $\eta^2$* , ranging in strength from zero to one. This measure was used as an indicator of

effect size for the MANOVA (Huberty, 2002). Post-hoc analyses were not conducted because the grouping variable, testing status, includes only two groups (testing and non-testing).

### **Hierarchical Multiple Regression Analyses.**

A series of hierarchical multiple regression analyses (HMR) were conducted to examine the relationship between teachers' achievement goal orientations and self-efficacy and teachers' achievement goal orientations and perceptions of help-seeking. All HMR analyses included demographic data to account for gender, ethnicity, grade level, and subject. These categorical data were transformed into dichotomous variables in order to enter them into the regression equations. In addition, school AMO status was dummy-coded in order to be used as a predictor variable in the first set of HMR analyses. described below. For model parsimony, variables with multiple categories, such as education level and grade level, were combined to form comparison groups. Dummy-code information for these categorical data is presented in Table 3.9.

Table 3.9

*Dummy-coding information for categorical variables.*

Variables			Dummy Coding					
Gender	Male 0	Female 1						
Race/Ethnicity			White	Black	American Indian or Alaskan Native	Asian	Hispanic	Two or More Races
			1	0	0	0	0	0
			0	1	0	0	0	0
			0	0	1	0	0	0
			0	0	0	1	0	0
			0	0	0	0	1	0
			0	0	0	0	0	1
Grade Level	PreK-2 0	3-6 1						
School AMO Status			Focus/Priority School	Meets AMO	Reward School			
			1	0	0			
			0	1	0			
Education					1			
			Bachelor's	Master's and Above				
			0	1				
Subject	Multiple	Math only	E/LA only	SS only	Resource (PE, Art, Music, Other)	SpEd		
	1	0	0	0	0	0		
	0	1	0	0	0	0		
	0	0	1	0	0	0		
	0	0	0	1	0	0		
	0	0	0	0	1	0		
	0	0	0	0	0	1		

Teacher years of experience was also included in the regression model, as years of experience has been shown to relate to teacher motivation, particularly self-efficacy (Fives & Buehl, 2009). Additionally, HMR analyses included the *PS-HST-Known Issues* and *PS-HST-Stress* scale data in order to account for the pressures teachers perceive as a result of SOL testing and school accountability. Including these variables allowed for parsing out the impact of achievement goal orientation on self-efficacy for teaching and teachers' perceptions of help-seeking, separate from the influence of demographic variables, years of experience, and perceived pressure. Results for all HMR analyses include measures of strength of relationship between the variables, including  $R$ , adjusted  $R^2$ , and  $\Delta R^2$ . Beta serves as an indicator of the strength of the relationship between the predictor variables and the dependent variable.  $\Delta R^2$  serves as a measure of effect size for each hierarchical regression (Ellis, 2010). Correlations among demographic variables and dependent variables were examined for significant regression results. Each of the HMR analyses are detailed below.

**School Performance and Achievement Goal Orientations.** Hierarchical regression allows for controlling of confounding variables, in this case demographic information and years of teacher experience. Years of experience has been shown to impact teacher motivation, particularly teacher self-efficacy (Fives & Buehl, 2009; Klassen, Tze, Bets, & Gordon, 2011). Specifically, teachers with 10 or more years of experience report greater self-efficacy for teaching than beginning teachers (Fives & Buehl, 2009). Dummy-coded demographic information served as the first step of the regression equation, while years of experience served as the second step, to examine this variable's unique contribution to teacher motivation outside of other demographic information. Data from the *Known Issues* and *Stress* scales were included in

the third step of the hierarchical regression equations in order to account for the impact of perceived pressures and stress due to high-stakes testing and accountability on teachers' achievement goal orientations. Perceived pressure and stress may impact teachers' achievement goal orientations along with or above and beyond school performance on SOL tests because, if teachers do not perceive pressure due to these tests in their schools, their motivation may not be impacted.

Finally, data from the item measuring typical school performance on SOL examinations will serve as the predictor variable for each hierarchical regression analysis. These data are thought to relate to teacher achievement goal orientations above and beyond data from the *Known Issues* and *Stress* scales because the *Known Issues* and *Stress* scales assesses teachers' perceptions of high-stakes policies and related stress, not the policies themselves, which may serve as the impetus for these perceptions and teachers' achievement goal orientations. Recall that no identifying information below the district level was collected, so teachers' report of their school's performance on Virginia's SOL exams served as a proxy for actual school AMO status. Four regression analyses were conducted, with each of the four possible achievement goal orientations (mastery, performance-approach, performance-avoidance, and work-avoidance) serving as the dependent variables. The regression equations are as follows:

$$DV = \beta_0 = b_1 (\text{gender}) + b_2 (\text{ethnicity}) + b_3 (\text{education level}) + b_4 (\text{grade level}) + b_5 (\text{subject}) + b_6 (\text{years experience}) + b_7 (PS-HST \text{ Known Issues}) + b_8 (PS-HST \text{ Stress}) + b_9 (\text{school performance}).$$

### **Teachers' Achievement Goal Orientations and Self-Efficacy for Teaching.**

Hierarchical regression analyses were conducted for each goal orientation (mastery, performance-approach, performance-avoidance, and work-avoidance) and self-efficacy. As with

the first set of hierarchical regressions, demographic information was included in the first step. Years of teaching experience was included separately in the second step. *PS-HSD Known Issues* and *PS-HSD Stress* scale scores served as the third step, and each of the four achievement goal orientations (mastery, personal performance, class performance, work-avoidance) were included in the fourth step of the hierarchical regression, with teaching self-efficacy as the dependent variable. The regression equation is as follows:

$$DV = \beta_0 = b_1 (\text{gender}) + b_2 (\text{ethnicity}) + b_3 (\text{education level}) + b_4 (\text{grade level}) + b_5 (\text{subject}) + b_6 (\text{years experience}) + b_7 (PS-HSD \text{ Known Issues}) + b_8 (PS-HSD \text{ Stress}) + b_9 (\text{goal orientations}).$$

**Teachers' Achievement Goal Orientations and Perceptions of Help-Seeking.** Lastly, hierarchical regression analyses were conducted to examine the relationship between achievement goal orientation and perceptions of help-seeking. Again, hierarchical regression was chosen to control for the impact of demographic variables, years of teaching experience, and perceived pressure and stress due to high-stakes testing on perceptions of help-seeking. As with the previous hierarchical regressions, demographic information was included in the first step. Years of teaching experience was included separately in the second step. *PS-HST Known Issues* and *PS-HST Stress* scale scores served as the third step, and the four achievement goal orientations (mastery, personal performance, class performance, work-avoidance) were included as separate predictor variables in step four for each of the three hierarchical regressions with teacher perceptions of help-seeking as the dependent variables (help-seeking as beneficial, negative, and preference for expedient help-seeking, respectively). The regression equation is as follows:



$DV = \beta_0 = b_1 (\text{gender}) + b_2 (\text{ethnicity}) + b_3 (\text{education level}) + b_4 (\text{grade level}) + b_5 (\text{subject}) + b_6 (\text{years experience}) + b_7 (PS-HSD \text{ Known Issues}) + b_8 (PS-HSD \text{ Stress}) + b_9 (\text{goal orientations}).$

### **Power Analyses**

Power analyses for the data analysis methods detailed above were conducted using G\*Power 3 (Faul, Erdfelder, Lang, & Buchner, 2007). Power analyses are appropriate for this study because they limit the possibility of committing a Type II error and increase the possibility of achieving the desired effect size (Cohen, 1992). For each analysis, power was set at 0.80 because  $\beta$  is typically set at four times alpha, with power represented as  $1-\beta$ , meaning the possibility of committing a Type II error is four times more likely than that of a Type I error (Cohen, 1992).

Power analyses for the 2 (testing status) by 4 (achievement goal orientation) multivariate analyses of variance (MANOVA) test, with effect size  $f^2 = 0.20$  (Butler, 2007; Nitsche et al., 2011), suggest an  $n$  of approximately 54 will be necessary to obtain statistical power at the recommended 0.80 level (Cohen, 1992). Power analyses for the proposed hierarchical regression analyses, with effect size  $f^2 = 0.20$  (Butler, 2007) indicate an  $n$  of 65 to obtain statistical power at the recommended 0.80 level (Cohen, 1992). As the regression analyses required a greater sample size to achieve statistical power, the desired sample size for the present study was 65 teachers. However, the present sample size exceeded that calculated through power analyses, with 381 teachers.

## **Chapter Four: Results**

The purpose of the present study was to examine the relationship between teacher motivation and high-stakes accountability practices, including high-stakes testing and school accreditation status. The specific research questions examined in this study are:

R1: What is the impact of high-stakes testing on the four dimensions of teachers' achievement goal orientations?

R2: What is the impact of school AMO status, accounting for demographic variables, years of experience, issues related to high-stakes testing, and stress, on the four dimensions of teachers' achievement goal orientations?

R3: Do teachers' achievement goal orientations predict self-efficacy for teaching, after accounting for demographic variables, years of experience, issues related to high-stakes testing, and stress?

R4: Do teachers' achievement goal orientations predict teachers' perceptions of help-seeking, after accounting for demographic variables, years of experience, issues related to high-stakes testing, and stress?

Each of the variables included in this study and their hypothesized relationships can be found in Table 3.1.

### **Analyses**

#### **Reliability of Scales**

Prior to conducting further analyses, it was necessary to validate the measures used in this study. These measures were the *Perceived Stress Due to High-Stakes Testing Scale* (PS-HST, Dawson, 2011), the *Teacher Achievement Goal Orientation Questionnaire* (TAGOQ,

Nitsche et al., 2011), the *Teacher Self-Efficacy Scale* (TSES, Tschannen-Moran & Woolfolk Hoy, 2001), and the *Teacher Perceptions of Help-Seeking Questionnaire* (TPHSQ, Butler, 2007). Most of these measures included sub-scales, and so a total of 10 scales in all were subjected to reliability analyses. Tschannen-Moran and Woolfolk Hoy (2001) recommend conducting reliability analyses on the TSES, particularly when used in novel contexts. Dawson's (2011) PS-HST is a relatively new scale, and was used in a novel context in this study. The remaining scales were also used in a novel context for this study, particularly in the context of high-stakes accountability. Therefore, it was necessary to validate each of these measures and sub-scales for the purposes of the present study.

***The Perceived Stress Due to High-Stakes Tests (PS-HST) - Known Issues Items.*** The PS-HST scale is comprised of two sets of items; one set measuring issues related to high-stakes testing, termed the *Known Issues* items, and the second measuring teachers' stress related to these issues, termed the *Stress* items. The *Known Issues* items were first subjected to exploratory factor analysis (EFA) with Varimax rotation using SPSS. Varimax rotation produces a solution that contains orthogonal factors and allows for maximization of the variance among each factor (Dattalo, 2013). Criteria for retaining factors in this and all other subsequent EFA included an eigenvalue greater than one (Kaiser & Rice, 1974), a scree test, and total variance explained. According to all three criteria, one factor was retained, which explained 53.25% of the variance contained in the correlation matrix for these data.

Communalities among these items, which represent the proportion of the variance in a scale item explained by a factor, suggest that the one-factor model explained more than 50% of the variance across all eight scale items. However, one item, *In my school, there is a sense of relief when the test is over*, loaded below 0.50 and exhibited the lowest communalities of all the

items (0.214). Given the low factor loading and communality, this item was deleted from the scale. Using a factor loading threshold of 0.50, this factor, or scale, was named *Known Issues*.

Items comprising this scale, their means, standard deviations, and factor loadings are presented in Table 4.1. Cronbach's alpha was calculated for this scale, indicating acceptable internal consistency ( $\alpha = 0.870$ ).

Table 4.1

*Means, standard deviations, and rotated component loadings for PS-HST I.*

Item	<i>M</i>	<i>SD</i>	Loading
In my school...			
I feel pressured to make sure that my students pass the test.	4.55	0.735	0.810
I feel pressured to improve standardized test scores.	4.56	0.745	0.763
There is pressure to maintain or improve our image to the public.	4.46	0.786	0.720
Tested content areas are often treated as more important than non-tested content areas.	4.63	0.743	0.698
Tensions rise as testing time approaches.	4.65	0.678	0.807
There is increased pressure in the weeks leading up to the test.	4.61	0.750	0.810
Using practice standardized tests is common.	4.45	0.821	0.703

\*All items measured on a Likert scale from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*)

***The Perceived Stress Due to High-Stakes Tests (PS-HST) - Stress Items.*** The second set of items included in the PS-HST (Dawson, 2011) is termed the *Stress* items. These items were administered at the same time as the *Known Issues* scale items as part of one measure. EFA extracted two factors with eigenvalues over one. Factor one explained 60.72% of the variance in the correlation matrix, while factor two explained 13.09%. Upon further examination, it became clear that the second component consisted of one item which did not match the phrasing of the item on Dawson's (2011) original scale. That is, rather than reading *This relieves stress*, the item was administered in the present study as *This causes me stress* (emphasis added). This item was designed to measure the relief of stress associated with the end of high-stakes testing, occurring on the measure immediately after the *Known Issues* item *In my school there is a sense of relief when the test is over*. As this item was deleted from the *Known Issues* scale for

further analysis in this study, and displayed a factor loading of 0.00 on factor one of the *Stress* scale, this item was deleted from further analyses.

Following deletion of the *relief* item, it appears that this scale captures one construct, the stress associated with issues related to high-stakes testing in schools, or the *Known Issues* scale. Means, standard deviations, and rotated factor loading for the *Stress* scale items are presented in Table 4.2. Cronbach's alpha for this scale indicated acceptable internal consistency ( $\alpha = 0.911$ ).

Table 4.2

*Means, standard deviations, and rotated component loadings for PS-HST II.*

Item	<i>M</i>	<i>SD</i>	Loading
<b><i>This causes me stress.*</i></b>			
I feel pressured to make sure that my students pass the test.	4.50	0.801	0.895
I feel pressured to improve standardized test scores.	4.34	0.905	0.783
There is pressure to maintain or improve our image to the public.	4.47	0.842	0.891
Tested content areas are often treated as more important than non-tested content areas.	4.49	0.823	0.861
Tensions rise as testing time approaches.	3.87	1.07	0.583
There is increased pressure in the weeks leading up to the test.	4.15	0.973	0.624
Using practice standardized tests is common.	4.45	0.826	0.866

\* Items from the *Known Issues* scale are listed here for reference in lieu of *This causes me stress*. Means, standard deviations, and factor loadings in this table refer to the item *This causes me stress*, which was asked immediately following each *Known Issues* item. Conceptualization and administration of this measure was described in detail in Chapter 3. All items measured on a Likert scale from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*).

**The Teacher Achievement Goal Orientation Questionnaire (TAGOQ).** The TAGOQ was designed to assess teachers' goals for their practice (Butler, 2007; Nitsche et al., 2011). This instrument has been used and modified for use with teachers in other countries (e.g., Butler, 2007, 2012; Nitsche et al., 2011) as well as in the United States (i.e. Cho & Shim, 2013, Shim et al., 2013). However, the present study combined the TAGOQ with additional measures such as the PS-HST and TSES, as well as items measuring accountability and high-stakes testing. In this novel context, it was important to test the TAGOQ for reliability and consistency.

The TAGOQ was first subjected to EFA with Varimax rotation. According to eigenvalues, scree tests, and total variance explained, six factors were retained, explaining 59.8% of the variance in the correlation matrix. Communalities among these items, which represent the proportion of the variance in a scale item explained by a factor, suggest that the six-factor model explained almost 60% of all the 26 scale items. Upon further examination of the EFA, it became evident that three factors loosely reflected achievement goal orientations as originally conceptualized by Butler (2007). Factor one, including items such as *In my vocation, I aspire to demonstrate to my colleagues that I know more than other teachers*, represented the performance-approach goal orientation. Factor two included items representing mastery orientation (e.g., *In my vocation, I aspire to improve my pedagogical knowledge and competence*). Factor four included items related to work-avoidance (e.g., *In my vocation, I aspire to get through the day with little effort*).

However, the remaining three factors appeared to represent unique traits that, while related to Nitsche and colleagues' (2011) addressee facets of teachers' goal orientations, did not clearly represent distinct goal orientations. This ambiguity prompted a second EFA using the "factor extraction" function in SPSS to specify four factors. Results of this EFA indicated a clear *Mastery* dimension, with items including *...to improve my content knowledge and experience*. Factor two, with items including *...to demonstrate to my principal that I teach better than other teachers*, represented a distinct *Performance-Approach* orientation. Next, factor three represented a *Work-Avoidant* orientation (e.g., *...to not have to work too hard*).

Despite the loose fit of the first three factors to Butler's (2007) original scales, factor four was again perplexing. Rather than representing a *Performance-Avoidance* dimension, as characterized by both Butler (2007, 2012) and Nitsche et al. (2011), this factor seemed to

represent a dimension characterized by a focus on the teacher's *class*. For example, items in this factor included *...for my class not to score worse than other classes* and *...for my class to score higher than other classes*. So, while this factor appeared decidedly performance-oriented, with a focus on comparison and competition (Ames, 1992; Butler, 2007; Nitsche et al., 2011), it was unclear whether this orientation was approach or avoidant-oriented and had more to do with how a teacher's *class* was perceived rather than the teacher herself. These findings prompted deeper investigation of the performance orientation scales.

In the next EFA with Varimax rotation, only performance orientation items were selected, including both approach and avoid items. Using the "factor extraction" function in SPSS again, the performance orientation items were forced to two factors in order to examine the possibility of an approach-avoidance distinction. A scree plot indicated that one or two factors could be extracted. Items loading highly on factor one included *...to demonstrate to my principal that I know more than other teachers* and *...to demonstrate to my principal that I teach better than other teachers*. This factor had an eigenvalue of 4.606. Items loading highly on factor two included *...for my class not to be farthest behind* and *... for my classes to score higher than others*. This item had an eigenvalue of 1.839. Two items, *...to plan the best lessons* and *...to keep my students from asking hard questions*, did not load highly on either factor. These items may not clearly reflect a performance orientation, and were subsequently dropped from further analysis.

The final solution for this EFA did not reflect a performance-approach and performance-avoidance distinction as conceptualized by Butler (2007) and Nitsche and colleagues (2011). Rather, this solution distinguished between a *personal* performance orientation (both approach and avoid) and a *class-level* performance orientation (again, both approach and avoid). The

referent for these orientations is either other teachers (personal performance orientation) or other teachers' classes (for class performance orientation), with no clear dichotomy between valence (approach or avoid). This distinction between the teacher's personal competence versus their class' performance in comparison to other classes likely has important implications for the relationship between teachers' achievement goal orientations and other variables of interest, such as self-efficacy or stress. Additionally, both the mastery and work-avoidance orientations were retained for further reliability analyses, resulting in a goal orientation measure including four scales (Mastery, Personal Performance, Class Performance, Work-Avoidance).

Teachers in this sample indicate a higher degree of agreement for the class performance items ( $M = 3.25-3.72$ ) than the personal performance items ( $M = 2.01-2.36$ ). So, teachers in this sample aspire for their classes not to be behind and not to perform worse than other classes, while they aspire less to keep their colleagues and principals from viewing them as professionally weak or incompetent. Zeigler and colleagues (2008) and Nitsche and colleagues (2011) found addressee facets loaded onto distinctly super-ordinate performance approach and avoidance factors. With the present sample, however, teachers seem to view the unit of comparison, in this case either themselves or their class, as the super-ordinate category rather than to whom they approach or avoid (e.g., principals or colleagues).

Alternatively, teachers here may view class success as a proxy for their own personal success. In the case of class performance orientation, then, the locus of control is such that teachers view their actions as mediated by their students' performance, but that student performance is still related to teacher competence and practices, with the ultimate outcome being student performance on high-stakes tests. Such a view is supported by the work of Hill, Kapitula, and Umland (2011) who examined the relationship between value-added models of teacher



effectiveness and interview and observation data from teachers. They found teachers' value-added scores were significantly related to their self-reported content knowledge and quality of instruction (Hill et al., 2011). Other studies of value-added models (VAM) have found similar results (e.g., Harris, Ingle, & Rutledge, 2014; Sass, Semykina, & Harris, 2014), though the validity of such models is still hotly debated (American Statistical Association, 2014; Condie, Lefgren, & Sims, 2014; McCaffrey, Lockwood, Koretz, Louis, & Hamilton, 2004; New Mexico Public Education Department, 2012; Papay, 2011).

The two factors were named *Personal Performance Orientation* and *Class Performance Orientation*. Cronbach's alpha for the personal performance orientation and class performance orientation were acceptable ( $\alpha = 0.879$  and  $0.724$ , respectively). Additionally, Cronbach's alpha was calculated for both the mastery and Work-Avoidance scales. Cronbach's alpha for the Mastery orientation scale was high, at  $0.810$ . Cronbach's alpha for the Work-Avoidance scale was questionable, at  $0.673$ . However, these four work-avoidance items constituted a distinct factor in the original EFA and in an EFA including only work-avoidant items, and so this scale and all four items were retained for further analyses. Table 4.3 includes the final items on the *Teacher Achievement Goal Orientation Questionnaire*, including means, standard deviations, and factor loadings.

Table 4.3

*Means, standard deviations, and rotated component loadings for TAGOQ.*

Item	M	SD	Loading			
			Mastery ( $\alpha = 0.81$ )	Personal Performance ( $\alpha = 0.88$ )	Class Performance ( $\alpha = 0.72$ )	Work Avoidance ( $\alpha = 0.67$ )
<b>In my vocation, I aspire...</b>						
...to get new ideas on how to convey knowledge in my subject.	4.66	0.557	0.687			
...to understand how to best transfer knowledge in my subject.	4.41	0.767	0.565			
...to improve my pedagogical knowledge and competence.	4.36	0.736	0.783			
...to improve my content knowledge and experience.	4.54	0.584	0.773			
...to increasingly deal better with critical class situations.	4.32	0.732	0.657			
...to want to learn more.	4.54	0.620	0.528			
...to learn something new about myself.	4.03	0.877	0.727			
...for my students' questions to make me think.	4.26	0.759	0.611			
...to demonstrate to my colleagues that I know more than other teachers.	2.31	1.067		0.790		
...to conceal from my colleagues when I have more trouble meetings job demands than other teachers.	2.36	1.068		0.667		
...to demonstrate to my colleagues that I teach better than other teachers.	2.01	1.008		0.855		
...to conceal from my principal when I have more trouble meeting job demands than other teachers.	2.36	1.175		0.629		
...to demonstrate to my principal that I know more than other teachers.	2.20	1.102		0.871		
...to demonstrate to my principal that I teach better than other teachers.	2.24	1.149		0.821		
...to be one of the best teachers in my school.	4.21	0.835			0.657	

...to be praised for high teaching ability.	3.68	1.043	0.528	
...for my class not to be farthest behind	3.71	1.102	0.731	
...for my class not to score worse than other classes.	3.72	1.029	0.740	
...for my classes to score higher than others.	3.25	1.061	0.671	
...to avoid planning new lessons.	1.72	0.840		0.647
...to not have to work too hard.	1.74	0.948		0.753
...to avoid grading.	1.97	0.892		0.699
...to get through the day with little effort.	1.67	0.836		0.740

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\*All items measured on a Likert scale from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*).

Table 4.4 displays correlations among the goal orientation scales. Mastery goal orientation was significantly negatively correlated with personal performance orientation, though this correlation was small ( $r = -0.127, p < 0.01$ ). Interestingly, mastery orientation was significantly positively correlated with class performance orientation ( $r = 0.228, p < 0.01$ ). This correlation was still weak, however this can be taken to mean that a goal orientation focused on personal improvement and acquisition of skills and knowledge is positively related to a goal orientation focused on how well one's class performs and compares to other classes. Mastery goal orientation was significantly negatively correlated with Work-Avoidance goal orientation, with a stronger, though still moderate, correlation ( $r = -0.441, p < 0.01$ ). These results suggest a focus on building competence and skill is negatively related to aiming to get through the day with as little work as possible.

Personal performance goal orientation was significantly positively related to class performance orientation, with a moderate correlation ( $r = 0.410, p < 0.01$ ); a focus on personal comparison to peers and colleagues was related to a focus on how one's class compares to other classes. Both of these orientations emphasize competition and out-performing others. Additionally, personal performance orientation was significantly positively related to a work-avoidance orientation. A focus on out-performing and comparing favorably with others was related to a focus on avoiding work such as lesson planning and grading.

Table 4.4

*Correlations among teacher achievement goal orientation scales (N = 381).*

	Mean	SD	1	2	3	4
(1) Mastery	4.389	0.466	.	-0.127*	0.228*	-0.441*
(2) Personal Performance	2.247	0.865		.	0.410*	0.406*
(3) Class Performance	3.714	0.711			.	0.34
(4) Work-Avoidance	1.78	0.625				.

\* Correlation is significant at the 0.01 level

**The Teacher Self-Efficacy Scale (TSES).** The TSES (Tschannen-Moran & Woolfolk Hoy, 2001) was designed to assess teachers' perceived competence for tasks related to teaching. This scale has been validated for both in-service and pre-service teachers (Fives & Buehl, 2010; Klassen, Tze, Betts, & Gordon, 2011; Tschannen-Moran & Woolfolk Hoy, 2001) and in various contexts, including multiple countries (Klassen et al., 2009). However, this scale was subjected to EFA and reliability estimates due to the novel context in which it was administered (Tschannen-Moran & Woolfolk Hoy, 2001).

Analysis of scree plot, eigenvalues, and variance explained indicated a three factor solution for the TSES. The first factor had an eigenvalue of 5.866, the second an eigenvalue of 1.405, and the third an eigenvalue of 1.179. The first factor reflects teacher efficacy for classroom management (e.g., *How much can you do to get children to follow classroom rules?*). The second factor reflects teacher efficacy for student engagement (e.g., *How much can you do to motivate students who show low interest in school work?*). The third factor represents teacher efficacy for instructional strategies (e.g., *To what extent can you craft good questions for your students?*). These factors are consistent with Tschannen-Moran and Woolfolk Hoy's (2001) original conception of the TSES. Item means, standard deviations, and factor loadings are found in Table 4.5. Cronbach's alpha for each scale indicated acceptable internal consistency (Factor 1  $\alpha = 0.896$ ; Factor 2  $\alpha = 0.856$  Factor 3  $\alpha = 0.794$ ). All scales were moderately significantly

correlated (Table 4.6), indicating a positive relationship among each of the distinct dimensions of teacher self-efficacy, but that each dimension is unique to the construct.

Table 4.5

*Means, standard deviations, and rotated component loadings for the TSES.*

Item*	M	SD	Loading		
			Classroom Management	Student Engagement	Instructional Strategies
How much can you do to control disruptive behavior in the classroom?	4.11	0.786	0.874		
How much can you do to calm a student who is disruptive and noisy?	3.98	0.795	0.833		
How much can you do to get children to follow classroom rules?	4.28	0.710	0.827		
How well can you establish a classroom management system with each group of students?	4.39	0.688	0.723		
How much can you do to motivate students who show low interest in school work?	3.82	0.817		0.719	
How much can you do to help your students value learning?	4.06	0.776		0.844	
How much can you do to get students to believe they can do well in school work?	4.17	0.757		0.824	
How much can you assist families in helping their children do well in school?	3.67	0.877		0.701	
To what extent can you craft good questions for your students?	4.24	0.682			0.741
To what extent can you use a variety of assessment strategies?	4.06	0.830			0.801
To what extent can you provide an alternative explanation or example when students are confused?	4.36	0.674			0.698
How well can you implement alternative teaching strategies in your classroom?	4.16	0.760			0.687

\*All items measured on a Likert scale from 1 (*I can do nothing*) to 5 (*I can do a lot*)

Table 4.6

*Correlations among teacher self-efficacy scales (N = 381).*

	Mean	SD	1	2	3
(1) Classroom Management	4.189	0.652	.	0.563**	0.513**
(2) Student Engagement	3.928	0.675		.	0.556**
(3) Instructional Strategies	4.206	0.581			.

\*\* Correlation is significant at the 0.01 level

**The Teacher Perceptions of Help-Seeking Questionnaire (TPHSQ).** The TPHSQ (Butler, 2007) was developed to examine teachers' perceptions of seeking help in their profession and whether such help-seeking behaviors are beneficial or harmful to their professional persona (Butler, 2007). This measure had not previously been used in the United States prior to the present study, so validation of this measure is warranted. The TPHSQ was subjected to EFA with Varimax rotation and calculation of Cronbach's alpha as an estimate of reliability.

Analysis of scree plot, eigenvalues, and variance explained indicated a three-factor solution was preferable for this measure. The three factors displayed eigenvalues of 3.631, 1.918, and 1.138, respectively. Factor one included items such as *Asking for help is a good way to learn*, and reflected a perception of help-seeking as beneficial for one's professional persona. Factor two reflected a perception of help-seeking as harmful, with items such as *It is embarrassing to show that I am having difficulty by asking for help*. However, one item from Butler's (2007) original expedient help-seeking scale, *Asking for help can lead to more work*, loaded highly on factor two, the help-seeking as negative scale. Additionally, one item on the help-seeking as harmful scale, *Asking for help may be seen as a sign of weakness*, did not load highly on any factor. As this item also performed poorly during pilot testing, and with the lowest communality in the measure (0.513), it was deleted from the scale. Item three reflected a preference for expedient help-seeking, or seeking help so that others solve one's problems (e.g., *Asking for help is worthwhile if it saves effort and bother*; Butler, 2007). These factors reflect

Butler's original conception of the TPHSQ (2007). Cronbach's alpha for the beneficial and negative help-seeking scales are 0.848 and 0.683, respectively. These indicate acceptable reliability, though Cronbach's alpha for the harmful scale may be questionable. However, this scale performed well in both Butler's (2007) original study, and so was used for further analyses. Cronbach's alpha for the expedient help-seeking scale is 0.576, which is questionable. However, this scale was retained for further analyses because results from these analyses may aid in the development of more reliable scales of expedient help-seeking for teachers in the United States. The final TPHSQ item means, standard deviations, and factor loadings are included in Table 4.7.

Table 4.7

*Means, standard deviations, and rotated component loadings for TPHSQ scales.*

Item*	M	SD	Loading		
			Beneficial	Harmful	Expedient
Asking for help with problems is a good way to learn.	4.55	0.569	0.850		
Getting expert advice helps one become a better teacher.	4.43	0.735	0.791		
Seeking help is a way to acquire new knowledge.	4.55	0.598	0.881		
It is better to ask for help than to continue having difficulty.	4.57	0.643	0.757		
It is embarrassing to show that I am having difficulty by asking for help.	2.24	1.098		0.804	
It is better not to show that you are having a problem.	1.95	0.977		0.745	
Asking for help is worthwhile if it saves effort and bother.	3.53	1.065			0.861
Asking for help is okay if people provide a solution.	3.72	0.920			0.794

Table 4.8 displays correlations among the help-seeking scales. As with pilot testing, viewing help-seeking as beneficial is significantly correlated with a preference for expedient help-seeking. Additionally, all scales are significantly correlated, either positively (i.e., *HSB* and *HSE*; *HSH* and *HSE*) or negatively (i.e., *HSB* and *HSH*). While Butler (2007) also found



significant negative correlation between viewing help-seeking as beneficial and viewing help-seeking as harmful, the significant positive correlation between viewing help-seeking as beneficial and a preference for expedient help-seeking is a new finding. However, this measure's questionable reliability results suggest that any findings related to this scale should be interpreted with caution.

Table 4.8

<i>Correlations among teacher help-seeking scales (N = 381).</i>					
	Mean	SD	1	2	3
(1) Beneficial	4.527	0.523	.	-0.253**	0.93*
(2) Harmful	2.09	0.906		.	0.184**
(3) Expedient	3.62	0.834			.

\*Correlation significant at the 0.01 level.

\*\* Correlation significant at the 0.05 level.

### Summary of Scales

In sum, 10 scales were used in the present study. These are: the *Perceived Stress Due to High Stakes Tests Scale (PS-HST, Known Issues and Stress; Dawson, 2012)*, *Teacher Achievement Goal Orientations Scales (Mastery - TAGO-M, Personal Performance - TAGO-PP, Class Performance - TAGO-CP, Work Avoidance - TAGO-W)*, *Teacher Self-Efficacy Scale (TSES; Tschannen-Moran & Woolfolk Hoy, 2001)*, and *Teacher Perceptions of Help-Seeking Scales (Beneficial - HSB, Harmful - HSH, and Expedient - HSE; Butler, 2007)*. Though the teacher achievement goal orientation scales do not reflect Butler's (2007) and others' (e.g., Cho & Shim, 2013; Nitsche et al., 2011) findings regarding the approach and avoid distinctions of performance goal orientation, findings from multiple factor analyses in the present study suggest that a personal and class performance distinction is most salient for this sample of teachers. Incongruence between the present findings and previous research regarding teacher performance orientations (e.g., Butler, 2007, 2012; Nitsche et al., 2011) may be reflective of the lack of studies conducted with teacher goal orientations with similar populations (e.g., teachers in

southeastern states, those teaching in ESEA waiver states). These scales, as well as the *HSE* scale, were included in the inferential analyses because results may shed further light on teachers' achievement goal orientations and perceptions of help-seeking, and may aid in the development of measures for use with teachers in Virginia and the United States. All scales used in the present study, including means, standard deviations, and reliability coefficients, are included in Table 4.9.

Table 4.9

*Means, standard deviations, and Cronbach's  $\alpha$  for scales included in inferential analyses.*

<b>Measure</b>	<b>M</b>	<b>SD</b>	<b><math>\alpha</math></b>
PS-HST, Known Issues	4.59	0.536	0.870
PS-HST, Stress	4.32	0.720	0.911
TAGO-M	4.39	0.466	0.810
TAGO-PP	2.25	0.865	0.879
TAGO-CP	3.71	0.711	0.724
TAGO-W	1.78	0.625	0.673
TSES (Full)	4.11	0.531	0.898
TSES (Instruction)	4.21	0.58	0.794
TSES (Classroom Management)	4.19	0.651	0.896
TSES (Engagement)	3.93	0.675	0.856
HSB	4.53	0.523	0.848
HSH	2.09	0.906	0.683
HSE	3.62	0.834	0.576

## Preliminary Analyses

**Relationships between variables of interest.** In order to examine relationships among variables of interest, bivariate correlations were calculated. Means, standard deviations, and Pearson product moment correlations ( $r$ ) can be found in Table 4.10. Though many statistically significant correlations exist among these variables, the majority of the correlations were weak. Practically, this may mean that the relationship among these variables does not capture the entirety of those that impact teacher motivation. However, further investigation into the relationships among these variables is still warranted, as many have been found to have

important impacts on teachers (e.g., self-efficacy, Tschannen-Moran et al., 1998; Tschannen-Noran & Woolfolk Hoy, 2001). Additionally, a few correlations were found to be moderate to strong, and these are discussed below.

The Known Issues scale and Stress scale were significantly positively correlated ( $r = 0.83, p < 0.001$ ). This is consistent with Dawson's (2012) findings and indicate a strong association between the issues caused by high-stakes testing (e.g., teaching to the test) and teachers' stress. Mastery orientation was significantly negatively associated with work-avoidance orientation ( $r = -0.44, p < 0.05$ ), suggesting that teachers who focus on improving their knowledge and practice are not concerned with getting through the work day with as little work as possible.

Self-efficacy for teaching was moderately positively related to viewing help-seeking as beneficial for the professional persona ( $r = 0.41, p < 0.05$ ), and weakly positively related to school accountability status and teachers' achievement goal orientations. These findings suggest teachers who are efficacious view asking questions and seeking help from colleagues and administrators as a way to improve their professional practice. Teachers may view help-seeking as a way to help them organize and carry out the tasks required of them as effective teachers (Bandura, 1997).

Personal performance orientation was significantly moderately correlated with a number of constructs in this study. Positive correlations existed between personal performance orientation and class performance orientation ( $r = 0.41, p < 0.05$ ), work-avoidance orientation ( $r = 0.41, p < 0.05$ ), and viewing help-seeking as harmful for professional persona ( $r = 0.45, p < 0.05$ ). The latter correlation reflects findings from previous studies of teachers' achievement goal orientations, in which Butler (2007) found teachers who were both performance-approach and

avoidant oriented view help seeking as harmful for their professional persona. So, teachers who are focused on personally outperforming their colleagues and demonstrating their superior competence to others view help-seeking as a practice that may negatively impact the way others perceive them. That is, asking for help may lead administrators or colleagues to view these teachers as less competent than others because they are showing a weakness.

Personal performance orientation was also moderately related to class performance orientation. Teachers who are focused on outperforming colleagues personally also focus on their *class* outperforming other classes. Teachers who hold either orientation are focused mainly on competition and demonstration of competence, and so the two orientations are conceptually related. Both personal and class performance orientation were significantly negatively related to years of experience, though these correlations were weak ( $r = -0.22, p < .001$  and  $r = -0.17, p < .001$ , respectively). Finally, the moderate positive relationship between personal performance and work-avoidant orientation is reflective of Butler's (2007) findings regarding the relationship between performance-approach and work-avoidance orientations. These results suggest that, for this sample, teachers who aim to demonstrate competence and ability may also strive to avoid work such as grading and planning new lessons. The impact of these orientations on related constructs such as self-efficacy and perceptions of help-seeking are explored further in the sections that follow.

Table 4.10

*Means, standard deviations, and correlations among variables of interest.*

		M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	School Accountability	4.02	0.78	.															
2	PS-HST I	5.32	0.68	0.05	.														
3	PS-HST II	4.32	0.72	-0.01	0.83*	.													
4	TAGO-M	4.39	0.47	<b>0.11</b>	0.18*	0.13*	.												
5	TAGO-PP	2.25	0.86	<b>-0.12</b>	0.01	0.05	-0.13*	.											
6	TAGO-CP	3.71	0.71	0.07	0.12*	0.13*	0.23*	0.41*	.										
7	TAGO-W	1.78	0.63	-0.08	-0.07	-0.04	-0.44*	0.41*	0.034	.									
8	TSES (Full)	4.11	0.53	<b>0.10</b>	0.02	-0.01	0.36*	-0.20*	0.07	-0.36*	.								
9	TSES Instruction	4.21	0.58	0.07	0.24	-0.04	0.36*	-0.18*	0.08	-0.34*	0.81*	.							
10	TSES Manage	4.19	0.65	0.05	0.03	0.02	0.20*	-0.15*	0.04	-0.25*	0.82*	0.51*	.						
11	TSES Engage	3.93	0.68	0.12*	-0.01	-0.01	0.33*	-0.19*	0.05	-0.33*	0.86*	0.56*	0.56*	.					
12	HSB	4.53	0.52	0.06	0.01	-0.01	0.46*	-0.16*	<b>0.10</b>	-0.31*	0.41*	0.36*	0.30*	0.37*	.				
13	HSH	2.09	0.91	-0.03	0.03	0.08	-0.08	0.45*	0.27*	0.27*	-0.22*	-0.18*	<b>-0.20</b>	-0.17*	-0.25*	.			
14	HSE	3.62	0.83	0.05	0.03	0.02	-0.00	0.19*	0.21*	0.13*	0.07	0.05	0.06	0.07	<b>0.09</b>	0.18*	.		
15	Years Teaching	14.78	8.83	0.06	-0.05	0.02	0.01	<b>-0.22</b>	<b>-0.17</b>	-0.07	0.13*	0.07	0.09	<b>0.17</b>	0.00	-0.03	0.09	.	
16	Testing Status	0.57	0.50	0.04	0.12*	0.08	<b>0.13</b>	0.05	<b>0.17</b>	-0.03	-0.03	0.04	-0.11*	0.02	-0.03	0.04	-0.04	-0.12*	.

Figures in boldface indicate the correlation is significant at the 0.01 level. \* indicates the correlation is significant at the 0.05 level.

## Multivariate Analysis of Variance

To address research question 1, a one-way multivariate analysis of variance (MANOVA) was performed to determine the effect of testing status on teachers' achievement goal orientations. The purpose of the MANOVA analysis was to examine the effect of testing status (testing and non-testing) on teacher motivation, defined here as achievement goal orientation. Prior to conducting this analysis, teachers' years of experience was examined as a possible covariate for testing status in order to determine whether to include this variable as a covariate in the MANOVA analysis. That is, could years of experience explain some of the variance in teachers' achievement goal orientations based on either their testing status or their school accountability status? Since years of teaching experience has been shown to relate to teacher motivation (Fives & Buehl, 2009), it was important to determine whether this variable should be included in an examination of high-stakes testing and achievement goal orientation.

As described above, both personal and class performance orientation were significantly negatively related to years of experience, though these correlations were weak ( $r = -0.22, p < .001$  and  $r = -0.17, p < .001$ , respectively). Years of experience was not, however, related to mastery orientation or work-avoidance orientation. As these relationships were weak if at all existent, years of experience was not appropriate to include as a covariate in the MANOVA analysis (Tabachnick & Fidell, 2012).

Following the ruling out of years of teaching experience as a possible covariate, the MANOVA analysis was conducted. As discussed in the previous sections, no problems associated with missing data or outliers were noted. Box's  $M$  was used to test the assumption (i.e.,  $H_0$ ) of equality of variance-covariance matrices. Box's  $M$  equaled 16.809,  $F(10, 580678.478) = 16.809, p = 0.08$ , indicating no significant differences between covariance

matrices. Therefore, this assumption is not violated and Wilk's Lambda was determined an appropriate test statistic for these data (Olson, 1976).

Levene's test was used to evaluate the tenability of the assumption that each dependent variable has equal variances for all groups. Recall that we hope to fail to reject the null hypothesis (Dattalo, 2013). Levene's test for DV1 =  $F(1, 381) = 0.609, p = 0.436$ ; DV2 =  $F(1, 381) = 0.018, p = 0.892$ ; DV3 =  $F(1, 381) = 2.069, p = 0.151$ ; DV4 =  $F(1, 381) = 0.007, p = 0.932$ . Therefore, the assumption that each dependent variable has equal variances across groups is tenable.

Table 4.11 presents the size, means, and standard deviations of the dependent variables for the two testing status categories. Significant differences were found among the testing status categories on teacher achievement goal orientations (Wilks' Lambda = 0.961,  $F(4, 378) = 3.840, p = 0.005$ ). However, partial eta squared, which serves as a measure of effect size for MANOVA (Huberty, 2002), indicates that only about 4% of the multivariate variance of the dependent variables is attributable to the group factor, or main effect of testing vs. non-testing. So, practically, only a small percentage of the difference found among teachers in this sample on achievement goal orientations is associated with teaching in a class in which students are administered Virginia Standards of Learning exams. These results suggest other factors likely impact teachers' achievement goal orientations to a greater extent than testing status.

Table 4.11

*Size, means, and standard deviations for each AGO by testing status.*

	<b>Testing (N = 219)</b>	<b>Non-Testing (N = 164)</b>
	<b><i>M(SD)</i></b>	<b><i>M(SD)</i></b>
Mastery	4.44(0.442)	4.32(0.482)
Personal Performance	2.30(0.874)	2.22(0.850)
Class Performance	3.84(0.680)	3.60(0.742)
Work-Avoidance	1.76(0.616)	1.80(0.612)

As testing status included only two groups (testing and non-testing), post-hoc analyses were not possible. However, examining the univariate results provides a deeper look at the differences among teachers' achievement goal orientations based on testing status. Follow-up ANOVAs indicate that both teachers' mastery orientation and class performance orientation were significantly different based on testing status,  $F(1, 381) = 7.017, p < 0.01$ ;  $F(1, 381) = 11.171, p < 0.001$ , respectively. Again, however, effect sizes for these differences were small ( $\eta^2 = 0.018$  and  $0.028$ ). Personal performance and work-avoidance orientation did not differ significantly based on testing status. These findings suggest teachers whose students took Virginia SOL exams are more mastery-oriented than those whose students do not take these exams. It may be that teachers aim to increase their pedagogical and content knowledge and skill in order to prepare their students for the test. The same was true for class performance orientation; those who teach in testing subjects and grades are more class performance-oriented than their non-testing counterparts. Teachers who teach in testing grades may feel a sense of competition with other classes in those grades, comparing their class' test scores and progress on pacing guides to others.

### **Hierarchical Multiple Regressions**

To test the remaining hypotheses regarding school accountability, achievement goal orientations, self-efficacy, and teachers' perceptions of help-seeking, a series of hierarchical multiple regression analyses (HMR) were conducted. HMR allows for the development of a parsimonious model of the relationships between accountability policy and teacher motivation, as well as teacher motivation (operationalized here as achievement goal orientations) and related constructs (teaching self-efficacy and perceptions of help-seeking). Preliminary analyses, detailed in previous sections, were conducted to ensure no violation of the assumptions of



multivariate normality, linearity, homoscedasticity, and multicollinearity. Additionally, predictor variables were weakly but statistically significantly correlated to outcome variables used in each analysis, also detailed above. These correlations lend support for further examination of these relationships through hierarchical multiple regression. Correlations among demographic variables and dependent variables were examined for significant regression results.

**Impact of school accountability on teacher achievement goal orientations.** Four hierarchical regression analyses were conducted to examine the impact of school AMO (accountability) status on teachers' achievement goal orientations. Mastery orientation served as the dependent (outcome) variable for the first HMR, personal performance orientation served as the dependent variable for the second, class performance orientation for the third, and work-avoidance orientation for the fourth HMR.

***Impact of school accountability on mastery goal orientation.*** Dummy-coded demographic variables were entered into the first step of the regression model in order to control for variance. These variables were: gender, race/ethnicity, subject, grade level, and education. The results of step 1 indicated the variance accounted in mastery goal orientation by the control variables listed above was 7.0% (Adjusted  $R^2 = 0.07$ ), a statistically significant amount ( $F(12, 370) = 2.313, p < 0.01$ ).

Next, teachers' years of experience was entered into the regression model. The change in variance in mastery orientation accounted for by years of experience was 0% (Adjusted  $R^2 = 0.037, \Delta R^2 = 0.00$ ), which was not significant ( $p > 0.05$ ). Next, the PS-HST *Known Issues* and *Stress* scales were added in the third step of the model. These accounted for 3.60% ( $\Delta R^2 = 0.036$ ) of change, a statistically significant addition to the model ( $p < 0.001$ ).

In the final step, school accountability status (AMO status) was added to the model. Recall that this variable was a dummy-coded categorical variable, with “Meets AMO” status as the comparison category. School AMO status was not a significant addition to the model (Adjusted  $R^2 = 0.070$ ,  $\Delta R^2 = 0.005$ ,  $p > 0.05$ ), though the overall model remained significant ( $F(17, 365) = 2.681$ ,  $p < 0.001$ ).

Examination of the standardized coefficients in the final model provides a picture of the variables that contribute most to the variance accounted for in mastery goal orientation. In the final model, three variables were significant predictors of mastery goal orientation. These were: gender ( $\beta = 0.111$ ,  $p < 0.05$ ), subject – English/Language Arts ( $\beta = 0.117$ ,  $p < 0.05$ ), and *Known Issues* ( $\beta = 0.272$ ,  $p < 0.01$ ). It appears as though *Known Issues*, or the issues in schools caused by high stakes tests, contributes the most to variance accounted for in teachers’ mastery goal orientation. Additionally, being male significantly positively predicted a mastery goal orientation in this model, as did teaching English/Language Arts. The findings related to gender run counter to those of Butler (2007) and Cho & Shim (2013), who reported female teachers were more mastery-oriented than male teachers. However, these studies sampled teachers from all levels, including middle and secondary grades, while the present study sampled only elementary (P-6) teachers. Male elementary teachers may differ from their secondary counterparts in terms of motivation for teaching. Teachers in this sample indicated strong agreement that high-stakes testing causes issues in their school, with a mean score on this five-point scale close to 5 ( $M = 4.59$ ,  $SD = 0.54$ ).

These results suggest the issues caused by high-stakes testing that teachers find salient in their schools (*Known Issues*) significantly positively predict mastery goal orientation for teachers in this sample. Two demographic variables, gender and subject, also predict mastery orientation

for teachers, though the magnitude of these relationships ( $\beta = 0.111$  and  $0.117$ ) was smaller than that of *Known Issues* and AGO-M. Results indicated that multicollinearity was not an issue for this model (Tolerance = 0.299-0.991; VIF = 1.009 – 3.307), with low Tolerance/high VIF values belonging only to the PS-HST *Known Issues* and *Stress* scales, which are expected to correlate due to their conceptual relationship. Means, standard deviations, and correlations among predictor variables are reported in Table 4.12. Regression results are reported in Table 4.13; only significant predictors are included in this table.

Interestingly, this finding suggests that teachers who agree that these issues are present in their school espouse a goal orientation in which they are focused on development of competence. Though there was not a clear a priori hypothesis regarding the direction of the relationship between *Known Issues* and teacher goal orientations, it is interesting that this sample of teachers, who perceive a number of issues associated with high-stakes testing, are highly mastery oriented and focus on acquiring pedagogical and content knowledge and skill rather than demonstrating competence or having their class compare favorably with other classes. This may suggest that, though teachers perceive these issues in their schools, they prompt them to develop professional skill in order to prepare their students in the best way possible.

Table 4.12

*Means, standard deviations, and correlations of significant predictors of mastery goal orientation.*

	M	SD	1	2	3	4
<b>Variable</b>						
Mastery Orientation	4.387	0.463	.			
Gender	0.924	0.265	0.096	.		
Subject – English/LA	0.0731	0.261	0.133*	0.005	.	
<i>Known Issues</i>	4.588	0.536	0.189*	0.012	-0.041	.

\* $p < 0.01$

Table 4.13

*Regression results for mastery orientation model.*

	<i>R</i>	<i>R</i> <sup>2</sup>	Adjusted <i>R</i> <sup>2</sup>	$\Delta R^2$	$\Delta F$	df	<i>p</i>	<i>B</i>	<i>SE</i>	$\beta$
<b>Step 1</b>	0.264	0.070	0.040	0.070	2.313	12, 370	0.007			
Gender								0.194	0.090	0.111*
Subject-English/LA								0.209	0.089	0.117*
<b>Step 3</b>	0.326	0.106	0.070	0.036	7.442	2, 367	0.001			
<i>Known Issues</i>								0.254	0.077	0.0294***

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

***Impact of school accountability on personal performance goal orientation.*** Dummy-coded demographic variables were entered into the first step of the regression model in order to control for variance. These variables were: gender, race/ethnicity, subject, grade level, and education. The results of step 1 indicated these demographic variables did not account for any of the variance in personal performance goal orientation (AGO-PP) ( $R^2 = 0.026$ , Adjusted  $R^2 = -0.006$ ), and that this model was not significant ( $F(12, 370) = 0.823$ ,  $p > 0.05$ ).

Next, teachers' years of experience was entered into the regression model. The change accounted for by years of experience was 4% (Adjusted  $R^2 = 0.035$ ,  $\Delta R^2 = 0.042$ ), a significant amount ( $p < 0.000$ ). Next, the PS-HST *Known Issues* and *Stress* scales were added in the third step of the model. These accounted for 2.00% (Adjusted  $R^2 = 0.050$ ,  $\Delta R^2 = 0.020$ ) of change in AGO-PP, a statistically significant addition to the model ( $p < 0.05$ ).

In the final step, school accountability status (AMO status) was added to the model. Recall that this variable was a dummy-coded categorical variable, with "Meets AMO" status as the comparison category. School AMO status was a significant addition to the model (Adjusted  $R^2 = 0.070$ ,  $\Delta R^2 = 0.024$ ,  $p < 0.01$ ). The final model was significant ( $F(17, 365) = 2.703$ ,  $p < 0.00$ ).

Examination of the standardized coefficients in the final model provides a picture of the variables that contribute most to the variance accounted for in AGO-PP. In the final model, four variables were significant predictors of personal performance goal orientation. Years of experience was a significant negative predictor of AGO-PP ( $\beta = -0.219$ ,  $p < 0.000$ ). This suggests that, as teachers gain years of experience, they are less likely to hold a personal performance goal orientation. *Known Issues* was also a negative predictor of AGO-PP ( $\beta = -$

0.197,  $p < 0.05$ ), suggesting that, though teachers perceive issues relating to high-stakes tests as salient in their schools, these issues do not prompt them to focus on demonstrating competence to their colleagues or administrators. This finding makes sense in light of the previous findings regarding the positive predictive nature of issues related to high-stakes testing and mastery orientation.

Stress, though, was a significant positive predictor of personal performance goal orientation ( $\beta = 0.218$ ,  $p < 0.05$ ). This finding is interesting because teachers in this sample indicated high levels of stress ( $M = 4.36$ ,  $SD = 0.684$ ), but stress was theorized to relate to the issues stemming from high-stakes tests (Dawson, 2012). For this sample, the findings suggest that, while these issues related to testing do not prompt teachers to adopt a personal performance goal orientation, stress does predict AGO-PP, or a focus on demonstrating competence and comparing favorably to others.

Finally, teaching in a focus school, or a school that often does not meet AMO, was a positive predictor of personal performance goal orientation ( $\beta = 0.139$ ,  $p < 0.01$ ). Though fewer teachers in this sample taught in such schools than in high-performing schools (18.3%), teaching in these Focus schools may lead teachers to adopt an orientation for teaching in which they seek to outperform other teachers or to demonstrate their superior competence. Stress was a positive predictor of AGO-PP in this model, suggesting that teachers may view the school context, particularly the Focus school context, as threatening (Klassen, 2010; Klassen et al., 2013). Stress and the Focus school context may foster AGO-PP because these schools are required to develop improvement plans which may include replacing some or all faculty members. These teachers may feel the need to demonstrate superior performance in comparison to other teachers in order

to keep their jobs. These results are discussed further in Chapter 5, but they suggest an important pattern exists among the Focus school context, stress, and AGO-PP.

Results indicated that multicollinearity was not an issue for this model (Tolerance = 0.299-0.991; VIF = 1.009 – 3.343), with low Tolerance/high VIF values belonging only to the PS-HST *Known Issues* and *Stress* scales, which are expected to correlate due to their conceptual relationship. Means, standard deviations, and correlations among predictor variables are reported in Table 4.14. Regression results are reported in Table 4.15; only significant predictors are included in this table.

Table 4.14

*Means, standard deviations, and correlations of significant predictors of personal performance goal orientation.*

	<b>M</b>	<b>SD</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Variable</b>							
AGO-PP	2.269	0.864	.				
Years of Experience	14.780	8.830	-0.220*	.			
<i>Known Issues</i>	4.588	0.536	-0.003	-0.045	.		
<i>Stress</i>	4.356	0.684	0.061	0.022	0.826*	.	
Focus School	0.183	0.387	0.187*	-0.095	0.070	0.107*	.

\*p<0.01

Table 4.15

*Regression results for personal performance orientation model.*

	<i>R</i>	<i>R</i> <sup>2</sup>	Adjusted <i>R</i> <sup>2</sup>	$\Delta R^2$	$\Delta F$	df	<i>p</i>	<i>B</i>	<i>SE</i>	$\beta$
<b>Step 2</b>	0.260	0.068	0.035	0.042	16.522	1, 369	0.000			
Years of Experience								-0.021	0.005	-0.219***
<b>Step 3</b>	0.296	0.088	0.050	0.020	4.017	2, 367	0.019			
Known Issues								-0.318	0.145	-0.197*
Stress								0.275	0.113	0.218*
<b>Step 4</b>	0.334	0.112	0.070	0.024	4.954	2, 365	0.008			
Focus School								0.308	0.117	0.138**

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$



***Impact of school accountability on class performance goal orientation.*** Dummy-coded demographic variables were entered into the first step of the regression model in order to control for variance. These variables were: gender, race/ethnicity, subject, grade level, and education. The results of step 1 indicated these demographic variables accounted for about 4% of the variance in class performance goal orientation (AGO-CP) ( $R^2 = 0.067$ , Adjusted  $R^2 = 0.037$ ), and this model was significant ( $F(12, 370) = 2.210$ ,  $p < 0.01$ ).

Next, teachers' years of experience was entered into the regression model. The change accounted for by years of experience was 2% (Adjusted  $R^2 = 0.057$ ,  $\Delta R^2 = 0.023$ ), a small but significant amount ( $p < 0.01$ ). Next, the PS-HST *Known Issues* and *Stress* scales were added in the third step of the model. These accounted for 2.00% (Adjusted  $R^2 = 0.022$ ,  $\Delta R^2 = 0.013$ ) of change in AGO-CP, a statistically significant addition to the model ( $p < 0.01$ ).

In the final step, school accountability status (AMO status) was added to the model. Recall that this variable was a dummy-coded categorical variable, with "Meets AMO" status as the comparison category. School AMO status did not contribute a significant change (Adjusted  $R^2 = 0.084$ ,  $\Delta R^2 = 0.013$ ,  $p > 0.05$ ); however, the final model was significant ( $F(17, 365) = 3.055$ ,  $p < 0.001$ ).

Examination of the standardized coefficients in the final model provides a picture of the variables that contribute most to the variance accounted for in AGO-CP. In the final model, five variables were significant predictors of class performance goal orientation. Subject-other was a significant negative predictor of holding a class performance orientation ( $\beta = -0.172$ ,  $p < 0.001$ ). This suggests teachers who teach a subject other than math, English/LA, resource, science, and social studies do not hold a class performance goal orientation. The instrument used in this study

did not capture these specific “other” subjects, but these findings suggest that teachers who do not teach the core subjects or a combination of core subjects are less likely to compare their class’ performance to that of other classes. Grade level was also a significant positive predictor ( $\beta = 0.149, p < 0.01$ ), suggesting that teaching in the upper elementary grades (3-6) positively predicts holding a class performance orientation.

Years of experience was a significant negative predictor of AGO-CP ( $\beta = -0.161, p < 0.01$ ). This suggests that, as teachers gain years of experience, they are less likely to hold a class performance goal orientation. Stress was a significant positive predictor of class performance goal orientation ( $\beta = 0.201, p < 0.05$ ), but *Known Issues* was not a significant predictor. Again, teachers in this sample indicated high levels of stress ( $M = 4.36, SD = 0.684$ ), and the findings suggest that high levels of stress is positively related to a focus on one’s class outperforming other classes.

Finally, teaching in a reward school, or a school that always meets AMO, was a positive predictor of class performance goal orientation ( $\beta = 0.118, p < 0.05$ ). Twenty-four percent of teachers in this sample taught in such high-performing schools. This finding is interesting because it suggests that teachers who teach in schools that always meet AMO espouse goals for teaching in which they focus on their classes outperforming other classes on state tests, or being further ahead on a pacing guide than other classes, or otherwise comparing favorably to other classes in their school.

Results indicated that multicollinearity was not an issue for this model (Tolerance = 0.299-0.991; VIF = 1.009 – 3.343), with low Tolerance/high VIF values belonging only to the PS-HST *Known Issues* and *Stress* scales, which are expected to correlate due to their conceptual relationship. Means, standard deviations, and correlations among predictor variables are reported

in Table 4.16. Regression results are reported in Table 4.17; only significant predictors are included in this table.

Table 4.16

*Means, standard deviations, and correlations of significant predictors of class performance goal orientation.*

	<b>M</b>	<b>SD</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>Variable</b>								
AGO-CP	3.738	0.717	.					
Subject-Other	0.008	0.088	0.166*	.				
Grade Level	0.570	0.495	0.169*	0.043	.			
Years of Experience	14.780	8.830	0.167*	0.006	0.121*	.		
<i>Stress</i>	4.356	0.684	0.155*	0.028	0.075	0.022	.	
Reward School	0.235	0.425	0.060	0.090	-0.031	0.028	0.007	.

\*p<0.01

Table 4.17

*Regression results for class performance orientation model.*

	<i>R</i>	<i>R</i> <sup>2</sup>	Adjusted <i>R</i> <sup>2</sup>	$\Delta R^2$	$\Delta F$	df	<i>p</i>	<i>B</i>	<i>SE</i>	$\beta$
<b>Step 1</b>	0.259	0.067	0.037	0.067	2.210	12, 370	0.011			
Subject-Other								-1.394	0.403	-0.172***
Grade Level								0.215	0.073	0.149**
<b>Step 2</b>	0.299	0.089	0.057	0.023	9.153	1, 369	0.003			
Years of Experience								-0.013	0.004	-0.161**
<b>Step 3</b>	0.334	0.111	0.075	0.022	4.502	2, 367	0.012			
Stress								0.211	0.093	0.201*
<b>Step 4</b>	0.353	0.125	0.084	0.013	2.768	2, 365	0.064			
Reward School								0.199	0.089	0.118*

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

***Impact of school accountability on work-avoidance goal orientation.*** Dummy-coded demographic variables were entered into the first step of the regression model in order to control for variance. These variables were: gender, race/ethnicity, subject, grade level, and education. The results of step 1 indicated these demographic variables accounted for about 6.5% of the variance in work-avoidance goal orientation ( $R^2 = 0.034$ , Adjusted  $R^2 = 0.065$ ), and this model was significant ( $F(12, 370) = 2.134, p < 0.01$ ).

Next, teachers' years of experience was entered into the regression model. The change accounted for by years of experience was 0.3% (Adjusted  $R^2 = 0.035$ ,  $\Delta R^2 = 0.003$ ), and was not significant ( $p > 0.05$ ). Next, the PS-HST *Known Issues* and *Stress* scales were added in the third step of the model. These accounted for 0.6% (Adjusted  $R^2 = 0.037$ ,  $\Delta R^2 = 0.006$ ) of change in the dependent variable, which was not a statistically significant addition to the model ( $p > 0.05$ ). In the final step, school accountability status (AMO status) was added to the model. School AMO status did not contribute a significant change (Adjusted  $R^2 = 0.036$ ,  $\Delta R^2 = 0.005$ ,  $p > 0.05$ ); however, the final model was significant ( $F(17, 365) = 3.055, p < 0.05$ ).

The only significant predictor of work-avoidance orientation was gender ( $\beta = -0.136, p < 0.01$ ). This finding suggests that being male negatively predicts espousing a goal orientation for teaching focused on getting through the day with as little work (e.g., grading, lesson-planning) as possible. Recall, though, that the work-avoidance orientation scale exhibited the lowest reliability estimates of the AGO scales ( $\alpha = 0.67$ ), and so findings resulting from data collected using this scale should be interpreted with caution. Results indicated that multicollinearity was not an issue for this model (Tolerance = 0.299-0.991; VIF = 1.009 – 3.343), with low Tolerance/high VIF values belonging only to the PS-HST *Known Issues* and *Stress* scales, which

are expected to correlate due to their conceptual relationship. Means, standard deviations, and correlations among predictor variables are reported in Table 4.18. Regression results are reported in Table 4.19; only significant predictors are included in this table.

Table 4.18

*Means, standard deviations, and correlations of significant predictors of work-avoidance orientation.*

	<b>M</b>	<b>SD</b>	<b>1</b>	<b>2</b>
<b>Variable</b>				
AGO-WA	1.774	0.616	.	
Gender	0.924	0.265	-0.141*	.

\*p<0.01

Table 4.19

*Regression results for work-avoidance orientation model.*

	<i>R</i>	<i>R</i> <sup>2</sup>	Adjusted <i>R</i> <sup>2</sup>	$\Delta R^2$	$\Delta F$	df	<i>p</i>	<i>B</i>	<i>SE</i>	$\beta$
<b>Step 1</b>	0.254	0.065	0.034	0.065	2.134	12, 370	0.014			
Gender								-0.316	0.122	-0.136**

\**p*<0.05, \*\**p*<0.01, \*\*\**p*<0.001

**Impact of achievement goal orientations on teacher self-efficacy.** A hierarchical regression analysis was conducted to examine the impact of teachers' achievement goal orientations on self-efficacy for teaching. The first step of the HMR included demographic control variables. These were: gender, race/ethnicity, subject, grade level, and education. The results of step 1 indicated the variance accounted in teaching self-efficacy by the control variables listed above was 1.7%, which was not statistically significant ( $F(13, 369) = 1.520, p > 0.05$ ).

Next, teachers' years of experience was entered into the regression model. The change in variance in teaching self-efficacy accounted for by years of experience was 1.10%, which was a small but statistically significant change ( $p < 0.05$ ). Next, the PS-HST *Known Issues* and *Stress* scales were added in the third step of the model. These accounted for 0.80% of change, and were not a statistically significant addition to the model ( $p > 0.05$ ), though the model itself remained significant ( $F(16, 366) = 1.728, p < 0.05$ ).

In the final step, teachers' achievement goal orientations were added to the model. Teachers' achievement goal orientations explained almost 25% of the variance (Adjusted  $R^2 = 0.249$ ) and represented a change of 17.9% of the total variance explained for teaching self-efficacy. This model was statistically significant ( $F(20, 362) = 6.011, p < .001$ ).

In the final model, three out of the four goal orientations were significant predictors of teaching self-efficacy. Mastery orientation recorded the highest standardized Beta coefficient, with  $\beta = .300, p = .000$ . Work-avoidance orientation ( $\beta = -0.148, p < 0.01$ ) and personal performance orientation ( $\beta = -0.126, p < 0.05$ ) were both significant negative predictors of teaching self-efficacy. However, years of teaching experience, significant at step 2, was no



longer a significant predictor of teaching self-efficacy ( $\beta = 0.095, p > 0.05$ ). Interestingly, though, teaching special education became a significant positive predictor ( $\beta = 0.101, p < 0.05$ ) when achievement goal orientations were added in step 4.

To investigate this further, an interaction term for each achievement goal orientation and Special Education was created by centering the mean for each variable and then multiplying Special Education by each of the four achievement goal orientations. This resulted in the creation of four interaction terms that could be entered into a new regression equation to examine the effects of the interaction between teaching Special Education and a teacher's achievement goal orientations. Centering the mean also addressed any multicollinearity issues created by forming an interaction term, and also aided in interpretation of regression coefficients (Cronbach, 1987). These interaction variables were then added to the regression equation as a fifth step. The regression equation then was as follows:

$$\begin{aligned} DV = \beta_0 = & b_1 (\text{gender}) + b_2 (\text{ethnicity}) + b_3 (\text{education level}) + b_4 (\text{grade level}) + b_5 \\ & (\text{subject}) + b_6 (\text{years experience}) + b_7 (PS-HSD \text{ Known Issues}) + b_8 (PS-HSD \text{ Stress}) + b_9 \\ & (\text{goal orientations}) + b_{10} (\text{SpEd} * \text{Mastery}) + b_{11} (\text{SpEd} * \text{Personal Performance}) + b_{12} \\ & (\text{SpEd} * \text{Class Performance}) + b_{13} (\text{SpEd} * \text{Work-Avoidance}). \end{aligned}$$

In this model, the interaction variables were not significant predictors of teaching self-efficacy ( $\beta = -0.35 - 0.023, p > 0.05$ ) and, though the final model was significant ( $F(24, 358) = 5.244, p = 0.00$ ), the addition of the interaction terms did not account for a significant change in the model ( $\Delta R^2 = 0.008, p > 0.05$ ). Once again, mastery orientation recorded the highest standardized Beta coefficient, with  $\beta = .309, p = .000$ . Work-avoidance orientation ( $\beta = -0.138, p < 0.01$ ) and personal performance orientation ( $\beta = -0.131, p < 0.05$ ) were both significant negative predictors of teaching self-efficacy. Results indicated that multicollinearity was not an

issue for this model (Tolerance = 0.293-0.985; VIF = 1.015 – 3.415), with low Tolerance/high VIF values belonging only to the PS-HST *Known Issues* and *Stress* scales, which are expected to correlate due to their conceptual relationship. Means, standard deviations, and correlations among predictor variables are reported in Table 4.20. Regression results are reported in Table 4.21; only significant predictors are included in this table.

These results suggest that teachers who hold mastery orientations report greater self-efficacy than those who hold work-avoidance and personal performance goal orientations for teaching. Additionally, these findings suggest that teachers' achievement goal orientations account for the variance in teacher self-efficacy to a greater extent than years of experience, which has been shown to be a strong predictor of self-efficacy for teaching (Fives & Beuhl, 2009).

Table 4.20

*Means, standard deviations, and correlations of significant predictors of teaching self-efficacy.*

	<b>M</b>	<b>SD</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>Variable</b>						
Teaching Self-Efficacy	4.121	0.514	.			
Mastery	4.387	0.514	0.390*	.		
Personal Performance	2.269	0.864	-0.220*	-0.132*	.	
Work-Avoidance	1.774	0.616	-0.340*	-0.475*	-0.132*	.

\*p<0.01

Table 4.21

*Regression results for teaching self-efficacy model.*

<b>Step</b>	<b><i>R</i></b>	<b><i>R</i><sup>2</sup></b>	<b>Adjusted <i>R</i><sup>2</sup></b>	<b><math>\Delta R^2</math></b>	<b><math>\Delta F</math></b>	<b>df</b>	<b><i>p</i></b>	<b><i>B</i></b>	<b><i>SE</i></b>	<b><math>\beta</math></b>
1	0.499	0.249	0.208	0.179	21.587	4, 362	.000			
Mastery								0.33	0.06	0.30***
Work-Avoidance								-0.12	0.05	-0.15**
Personal Performance								-0.08	0.03	-0.13*

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

### **Impact of teacher achievement goal orientations on perceptions of help-seeking.**

*Help-seeking as beneficial.* A hierarchical regression analysis was conducted to examine the impact of teachers' achievement goal orientations on teachers' perceptions of their own help-seeking. For this analysis, viewing help-seeking as beneficial for one's professional persona served as the dependent variable. The first step of the HMR included demographic control variables. These were: gender, race/ethnicity, subject, grade level, and education. The results of step 1 indicated the demographic control variables did not account for any variance in viewing help-seeking as beneficial. (Adjusted  $R^2 = 0.00$ ).

Next, teachers' years of experience was entered into the regression model. Again, this variable did not account for any of the variance in the dependent variable (Adjusted  $R^2 = -0.03$ ). Next, the PS-HST *Known Issues* and *Stress* scales were added in the third step of the model. These again accounted for none of the variance associated with viewing help-seeking as beneficial (Adjusted  $R^2 = -0.03$ ).

In the final step, teachers' achievement goal orientations were added to the model. Teachers' achievement goal orientations explained 23% (Adjusted  $R^2 = 0.227$ ) and represented a change of 23% of the total variance explained for viewing help-seeking as beneficial. This model was statistically significant ( $F(21, 361) = 6.347, p = .000$ ). Results indicated that multicollinearity was not an issue for this model (Tolerance = 0.291-0.985; VIF = 1.019 – 3.464), with low Tolerance/high VIF values belonging only to the PS-HST *Known Issues* and *Stress* scales, which are expected to correlate due to their conceptual relationship. Means, standard deviations, and correlations among predictor variables are reported in Table 4.22.

Regression results are reported in Table 4.23; only significant predictors are included in this table.

These results suggest that holding a mastery orientation for teaching, or focusing on self-improvement and increasing pedagogical knowledge and skill, is predictive of viewing help-seeking as beneficial for one's professional persona. Teachers who are mastery-oriented may see help-seeking as a way to gain knowledge and skill in order to improve upon their teaching practice. Interestingly, work-avoidance orientation is a significant negative predictor of viewing help-seeking as beneficial. Teachers who seek to get through the day with as little work as possible may view help-seeking as having the potential to actually create more work than if they did not seek help at all.

Table 4.22

*Means, standard deviations, and correlations of significant predictors of viewing help-seeking as beneficial.*

	<b>M</b>	<b>SD</b>	<b>1</b>	<b>2</b>	<b>3</b>
<b>Variable</b>					
Help-seeking Beneficial	4.535	0.484	.		
Mastery	4.387	0.616	0.457*	.	
Work-Avoidance	1.774	0.616	-0.321*	-0.475*	.

\*p<0.01

Table 4.23

*Regression results for help-seeking as beneficial model.*

<b>Step</b>	<b>R</b>	<b>R<sup>2</sup></b>	<b>Adjusted R<sup>2</sup></b>	<b><math>\Delta R^2</math></b>	<b><math>\Delta F</math></b>	<b>df</b>	<b>p</b>	<b>B</b>	<b>SE</b>	<b><math>\beta</math></b>
1	0.519	0.270	0.227	0.228	28.163	4, 361	.000			
Mastery								0.432	0.058	0.414**
Work-Avoidance								-0.087	0.044	-0.110*

\*p<0.05, \*\*p<0.001

**Help-seeking as harmful.** For this analysis, viewing help-seeking as harmful to one's professional persona served as the dependent variable. The first step of the HMR included

demographic control variables. These were: gender, race/ethnicity, subject, grade level, and education. The results of step 1 indicated the variance accounted for in viewing help-seeking as harmful by the control variables listed above was 2.3%, which was not statistically significant ( $F(14, 368) = 0.621, p > 0.05$ ).

Next, teachers' years of experience was entered into the regression model. The change in variance in teaching self-efficacy accounted for by years of experience was 0.100%, which was not statistically significant ( $F(15, 367) = 0.594, p > 0.05$ ). Next, the PS-HST *Known Issues* and *Stress* scales were added in the third step of the model. These accounted for 2.20% of change in the model, significant amount ( $p < 0.05$ ), though the model itself was not significant ( $F(17, 365) = 1.036, p < 0.05$ ).

In the final step, teachers' achievement goal orientations were added to the model. Teachers' achievement goal orientations explained 21% (Adjusted  $R^2 = 0.212$ ) and represented a change of 21.0% of the total variance explained for viewing help-seeking as harmful. This model was statistically significant ( $F(21, 361) = 5.907, p = .000$ ).

In the final model, both performance goal orientations were significant predictors of viewing help-seeking as harmful for one's professional persona. Personal performance orientation recorded the highest standardized Beta coefficient, with  $\beta = .379, p = .000$ . Class performance orientation ( $\beta = 0.137, p < 0.05$ ) was also a significant predictor of viewing help-seeking as harmful. Interestingly, though, gender became a significant positive predictor ( $\beta = 0.106, p < 0.05$ ) when achievement goal orientations were added in step 4.

To investigate this further, an interaction term for each achievement goal orientation and gender was created by centering the mean for gender and then multiplying this centered variable by each of the four centered achievement goal orientations. This resulted in the creation of four

interaction terms that could be entered into a new regression equation to examine the effects of the interaction between teaching gender and a teacher's achievement goal orientations. These interaction variables were then added to the regression equation as a fifth step. The regression equation then was as follows:

$$\begin{aligned} DV = \beta_0 = & b_1 (\text{gender}) + b_2 (\text{ethnicity}) + b_3 (\text{education level}) + b_4 (\text{grade level}) + b_5 \\ & (\text{subject}) + b_6 (\text{years experience}) + b_7 (PS-HSD \textit{Known Issues}) + b_8 (PS-HSD \textit{Stress}) + b_9 \\ & (\text{goal orientations}) + b_{10} (\text{Gender} * \textit{Mastery}) + b_{11} (\text{Gender} * \textit{Personal Performance}) + b_{12} \\ & (\text{Gender} * \textit{Class Performance}) + b_{13} (\text{Gender} * \textit{Work-Avoidance}). \end{aligned}$$

In this model, the interaction variables were not significant predictors of viewing help-seeking as harmful ( $\beta = -0.90 - 0.180, p > 0.05$ ). However, gender remained a significant positive predictor of viewing help-seeking as harmful ( $\beta = 0.112, p < 0.05$ ). Results indicated that multicollinearity was not an issue for this model (Tolerance = 0.291-0.981; VIF = 1.015 – 3.464), with low Tolerance/high VIF values belonging only to the PS-HST *Known Issues* and *Stress* scales, which are expected to correlate due to their conceptual relationship. Means, standard deviations, and correlations among predictor variables are reported in Table 4.24. Regression results are reported in Table 4.25; only significant predictors are included in this table.

These results suggest teachers who are focused either on demonstration of their own competence and comparing favorably against colleagues, or their *class* comparing favorably against other classes in terms of pacing and test scores view help-seeking as potentially harmful to their professional persona. That is, seeking help from colleagues or administrators may signal that the teacher is incompetent or less competent than other teachers.

Gender, a dummy-coded demographic variable with female coded as “1” and male coded as “0,” was found to be a significant predictor of viewing help-seeking as harmful. That is, being female significantly predicted viewing help-seeking as harmful to one’s professional persona. However, since the majority of the sample was female (92.4%), these findings are somewhat misleading in that a greater number of female teachers would view help-seeking as harmful than male teachers because, in this sample, there are 12 times the number of female teachers than male teachers. Additionally, a one-way ANOVA indicated no significant difference among male and female teachers on viewing help-seeking as harmful ( $F(1, 381) = 1.614, p > 0.05$ ). Finally, interactions between gender and achievement goal orientations were non-significant, and so gender is not included as a significant predictor in this model.

Table 4.24

*Means, standard deviations, and correlations of significant predictors of viewing help-seeking as harmful.*

	<b>M</b>	<b>SD</b>	<b>1</b>	<b>2</b>	<b>3</b>
<b>Variable</b>					
Help-Seeking Harmful	2.121	0.916	.		
Personal Performance	2.269	0.864	0.441*	.	
Class Performance	3.738	0.717	0.272*	0.412*	.

\* $p < 0.01$

Table 4.25

*Regression results for teaching help-seeking as harmful model.*

<b>Step</b>	<b>R</b>	<b>R<sup>2</sup></b>	<b>Adjusted R<sup>2</sup></b>	<b><math>\Delta R^2</math></b>	<b><math>\Delta F</math></b>	<b>df</b>	<b>p</b>	<b>B</b>	<b>SE</b>	<b><math>\beta</math></b>
1	0.506	0.256	0.212	0.210	25.431	4, 361	.000			
Personal Performance								0.403	0.061	0.379**
Class Performance								0.175	0.070	0.137*

\* $p < 0.05$ , \*\* $p < 0.001$



***Preference for expedient help-seeking.*** For this analysis, expressing a preference for expedient help-seeking served as the dependent variable. The first step of the HMR included demographic control variables. These were: gender, race/ethnicity, subject, grade level, and education. The results of step 1 indicated the variance accounted for in the dependent variable by the control variables listed above was 3.3%, which was not statistically significant ( $F(14, 368) = 0.894, p > 0.05$ ).

Next, teachers' years of experience was entered into the regression model. The change in variance in the dependent variable accounted for by years of experience was 0.600%, which was not statistically significant ( $p > 0.05$ ). Next, the PS-HST *Known Issues* and *Stress* scales were added in the third step of the model. These accounted for 0.400% of change in the model, and were not significant ( $p > 0.05$ ).

In the final step, teachers' achievement goal orientations were added to the model. Teachers' achievement goal orientations explained 7% (Adjusted  $R^2 = 0.072$ ) and represented a change of about 8% of the total variance explained for preferring expedient help-seeking, or help-seeking in which others solve one's problems. Though this change was small, the model was statistically significant ( $F(21, 361) = 2.404, p < .001$ ).

In the final model, class performance goal orientation and work-avoidance orientation were significant predictors of preference for expedient help-seeking. Class performance orientation recorded the highest standardized Beta coefficient, with  $\beta = .227, p < .001$ . Work-avoidance orientation was a less important predictor, though still significant ( $\beta = 0.133, p < 0.05$ ). Interestingly, years of experience became a significant positive predictor ( $\beta = 0.150, p < 0.01$ ) when achievement goal orientations were added in step 4.

To investigate this further, an interaction term for each achievement goal orientation and years of experience was created by centering the mean for years of experience and then multiplying this centered variable by each of the four centered achievement goal orientations. This resulted in the creation of four interaction terms that could be entered into a new regression equation to examine the effects of the interaction between teaching years of experience and a teacher's achievement goal orientations. These interaction variables were then added to the regression equation as a fifth step. The regression equation then was as follows:

$$\begin{aligned} DV = \beta_0 = & b_1 (\text{gender}) + b_2 (\text{ethnicity}) + b_3 (\text{education level}) + b_4 (\text{grade level}) + b_5 \\ & (\text{subject}) + b_6 (\text{years experience}) + b_7 (PS-HSD \text{ Known Issues}) + b_8 (PS-HSD \text{ Stress}) + b_9 \\ & (\text{goal orientations}) + b_{10} (\text{Years of Experience} * \text{Mastery}) + b_{11} (\text{Years of Experience} * \\ & \text{Personal Performance}) + b_{12} (\text{Years of Experience} * \text{Class Performance}) + b_{13} (\text{Years of} \\ & \text{Experience} * \text{Work-Avoidance}). \end{aligned}$$

In this model, the interaction variables were not significant predictors of a preference for expedient help-seeking ( $\beta = -0.173 - 0.074, p > 0.05$ ). However, years of experience remained a significant positive predictor of a preference for expedient help-seeking ( $\beta = 0.150, p < 0.01$ ). The overall model also remained significant ( $F(23, 359) = 2.191, p < .001$ ). However, years of experience was not significantly correlated on its own with a preference for expedient help-seeking ( $r = 0.088, p > 0.05$ ). Therefore, years of experience was not retained as a significant predictor of a preference for expedient help-seeking.

Results indicated that multicollinearity was not an issue for this model (Tolerance = 0.291-0.985; VIF = 1.015 – 3.443), with low Tolerance/high VIF values belonging only to the PS-HST *Known Issues* and *Stress* scales, which are expected to correlate due to their conceptual relationship. Means, standard deviations, and correlations among predictor variables are reported

in Table 4.26. Regression results are reported in Table 4.27; only significant predictors are included in this table.

These results suggest that teachers who aim to get through the work-day with as little work and effort as possible prefer a type of help-seeking in which the goal is to get others to solve one's problems. This is consistent with Butler's (2007) findings. These results also suggest that teachers who are focused on their class' demonstration of competence, espousing a class performance orientation, also prefer expedient help-seeking. These teachers may view expedient help-seeking as a way to expedite the performance and demonstration of performance of their class. However, recall that the help-seeking measure presented myriad reliability issues and, given the perplexing results regarding interactions among predictor variables, inferences resulting from data gathered with this instrument should be interpreted with caution. The following chapter includes a discussion of the measurement of teachers' perceptions of help-seeking and the issues presented by the measure used here.

Table 4.26

*Means, standard deviations, and correlations of significant predictors of preferring expedient help-seeking.*

	<b>M</b>	<b>SD</b>	<b>1</b>	<b>2</b>	<b>3</b>
<b>Variable</b>					
Expedient Help-Seeking	3.668	0.808	.		
Class Performance	3.738	0.717	0.222**	.	
Work-Avoidance	1.774	0.616	0.127*	0.001	.

\* $p < 0.05$ , \*\* $p < 0.01$

Table 4.27

*Regression results for expedient help-seeking model.*

Step	<i>R</i>	<i>R</i> <sup>2</sup>	Adjusted <i>R</i> <sup>2</sup>	$\Delta R^2$	$\Delta F$	df	<i>p</i>	<i>B</i>	<i>SE</i>	$\beta$
1	0.350	0.123	0.072	0.079	8.140	4, 361	.000			
Class								0.256	0.067	0.227**
Performance										
Work-								0.174	0.081	0.133*
Avoidance										

\**p*<0.05, \*\**p*<0.01

### Summary

The data and analyses described in this chapter yielded several unique findings. The first major finding resulting from this study was the varying dimensions of teacher achievement goal orientation. Teacher achievement goal orientations here reflect similar, but uniquely distinct dimensions from those found with other teacher populations (e.g., Butler, 2007; Butler & Shibaz, 2008; Nitsche et al., 2011; Cho & Shim, 2013). Rather than an approach-avoid dichotomy for performance goal orientations, teachers in this sample espoused either a personal performance goal orientation or a class performance goal orientation. Both of these goal orientations focused on the demonstration of competence; however, teachers with a personal performance orientation viewed their colleagues and administrators as the referent, while teachers with a class performance orientation viewed the class as the referent. These teachers were concerned with either *themselves* demonstrating competence and ability when compared to others, or with their *class* demonstrating competence and ability when compared with other classes. Both dimensions included approach and avoid valences.

Secondly, this study revealed that high-stakes testing status had only a small impact on teachers' achievement goal orientations, but that teachers who were ascribed "testing" status were more mastery and class performance oriented. The third major finding was that the issues

related to high-stakes testing which teachers perceive as salient in their schools, as well as the stress related to these issues, were important predictors of teacher achievement goal orientations. School AMO status was also a predictor of both performance goal orientations, but less important than testing issues, stress, and some demographic variables.

Finally, teachers' achievement goal orientations were significant predictors of self-efficacy for teaching and teachers' perceptions of help-seeking, providing support for the validation of an achievement goal orientation framework for understanding teacher motivation. However, this study brought to light important issues related to the measurement of teachers' help-seeking perceptions. In sum, these findings contribute to the understanding of teacher motivation using a goal orientation framework, but raise still more questions about the relationship between high-stakes testing and school accountability policy on teacher motivation. Additionally, these findings suggest measurement of teacher motivation and related constructs warrants greater study, and instruments designed to measure these constructs should be refined. These findings are discussed in greater depth in Chapter 5.

## **Chapter Five: Discussion**

The purpose of the present study was to examine teachers' achievement goal orientations in relation to teachers' self-efficacy beliefs and perceptions of help-seeking. An additional aim of this study was to investigate the impact of high-stakes testing and accountability policy on teacher motivation, operationalized here as teachers' achievement goal orientations. This chapter is organized around the four research questions that guided this study:

R1: What is the impact of high-stakes testing on the four dimensions of teachers' achievement goal orientations?

R2: What is the impact of school AMO status, accounting for demographic variables, years of experience, issues related to high-stakes testing, and stress, on the four dimensions of teachers' achievement goal orientations?

R3: Do teachers' achievement goal orientations predict self-efficacy for teaching, after accounting for demographic variables, years of experience, issues related to high-stakes testing, and stress?

R4: Do teachers' achievement goal orientations predict teachers' perceptions of help-seeking, after accounting for demographic variables, years of experience, issues related to high-stakes testing, and stress?

A description of each of these variables and their hypothesized relationships can be found in Table 3.1.

### **Measurement of Achievement Goal Orientations and Perceptions of Help-Seeking**

Measuring teachers' achievement goal orientations and their perceptions of help-seeking proved to be a challenging task. It was important to examine both the TAGO and sub-scales as

well as the help-seeking scales for reliability as these measures were originally developed for use with teachers in Israel (Butler, 2007), and were also developed over seven years prior to this study. As suspected, these measures performed differently in the context of this study, specifically revealing interesting departures from Butler (2007) and colleagues' conceptions of teachers' achievement goal orientations.

### **Measuring Teachers' Achievement Goal Orientations**

For teachers in this study, achievement goal orientations reflected four dimensions (see Table 5.1). The first was Mastery orientation (AGO-M), characterized by aiming to amass and improve content and pedagogical competence. Teachers in this sample were highly mastery oriented ( $M = 4.39$ ,  $SD = 0.47$ ). Second was Personal Performance orientation (AGO-PP), which included both approach and avoidance valences and the identified the teacher as the referent. Teachers that held this orientation sought to demonstrate or avoid *not* demonstrating competence and skill when compared to other teachers. The third dimension was Class Performance orientation (AGO-CP). Teachers espousing this orientation aim for their classes to compare favorably against other classes or not to compare unfavorably with other classes. For this orientation, the class, rather than the teacher, is the referent. Finally, teachers espousing a Work-Avoidance orientation (AGO-WA) sought to get through the day with as little work or effort as possible, avoiding tasks such as grading and developing new lessons or assessments.

Table 5.1

*Dimensions of teachers' achievement goal orientations.*

<b>Dimension</b>	<b>Mastery</b>	<b>Personal Performance</b>	<b>Class Performance</b>	<b>Work- Avoidance</b>
These teachers aim...	...to amass and improve content and pedagogical knowledge	...to demonstrate or avoid not demonstrating competence and skill when compared to other teachers.	...for their class to compare favorably or not compare unfavorably against other classes.	...to get through the day with as little work as possible.

The performance orientation dimensions reflected here differ from those conceptualized by Butler (2007) and her colleagues (e.g, Cho & Shim, 2013; Shim et al, 2013; Nitsche et al, 2011). Specifically, no distinction between performance-approach and performance-avoidance was evident here, though two other performance goal dimensions emerged through factor and reliability analyses: Personal and Class Performance Orientations ( $\alpha = 0.88$  and  $0.72$ , respectively). Historically, teachers' performance goal orientations have been rather difficult to conceptualize, and a number of studies have resulted in conflicting findings regarding the adaptive or maladaptive nature of teachers' performance goal orientations. For instance, Retelsdorf and his colleagues (2010) reported inconclusive results regarding the relationship between both performance-approach and performance-avoidance goals and classroom goal structure. More recently, Shim and her colleagues found teachers who equally espoused both mastery and performance-approach orientations created performance goal structures in their classroom, but did not offer an explanation as to why performance goal orientations dominated mastery orientations as far as goal structure outcomes (2013). As evident in these studies, outcomes related to teachers' performance goal orientations have been unclear (Malmberg, 2006; Nitsche et al., 2011; Shim et al., 2013) and this may be because another dimension of teachers'



performance goal orientations is at play, identified in the present study as Class Performance orientation (AGO-CP).

Through exploratory factor analysis, AGO-CP was found to be a significant contribution to the framework of teachers' achievement goal orientations for the present sample. Particularly interesting is that teachers of grade levels subjected to high-stakes tests indicated higher levels of AGO-CP ( $M = 3.84$ ,  $SD = 0.68$ ) than those who taught in non-tested grades and subject areas ( $M = 3.60$ ,  $SD = 0.74$ ). This finding is discussed in further detail in later sections, but suggests that teachers in these grade levels and content areas may be more concerned with how their classes compare to other classes on their grade level or in their school. These findings suggest that high-stakes testing and accountability positively influence teachers' adoption of AGO-CP, or the aim for one's class to compare favorably against other teachers' classes. The adoption of this orientation may be bolstered by school practices that foster a competitive environment in the school. Superior class performance also reflects favorably on teachers, and this may be intensified by teacher evaluation practices that hinge on student test scores. School climate variables were not investigated in this study, but factors such as teacher evaluation and school or administrator practices that encourage competition among classes should be examined in terms of their effects on teacher goal orientation.

Alternatively, the design of the performance goal orientation items on the *Teacher Achievement Goal Questionnaire* may have influenced teachers' responses, leading them to agree with items in which class comparison and competition among classes was the focus (items are listed in Table 4.3). However, these items were piloted and performed well in the pilot. Additionally, both Butler (2007) and Nitsche and his colleagues (2011) reported acceptable reliability for the performance goal orientation items included in the questionnaire ( $\alpha = 0.84$  and

0.82) Scale reliabilities for Personal and Class performance goal orientations were acceptable in the present study ( $\alpha = 0.88$  and  $0.72$ , respectively), suggesting Class Performance goal orientation does constitute a distinct goal orientation for teachers in this sample, and is not due to the design of the items.

These findings suggest that a goal orientation framework is a valid conceptualization of teacher motivation for this sample. However, the results of this study suggest teachers may not view themselves as the only salient referent for performance goal orientation, but that the class may also serve as a referent for comparing performance. Contrasting with Nitsche et al. (2011) and Zeigler et al.'s (2008) findings, teachers here did not distinguish between the individuals to which they sought to demonstrate or avoid not demonstrating their competence, but instead saw the referent, either themselves or their class, as the superordinate category upon which they based their achievement goal orientations.

### **Measuring Teachers' Perceptions of Help-Seeking**

Measurement of teachers' perceptions of help-seeking using the Teachers' Perceptions of Help-Seeking Questionnaire (Butler, 2007) also proved challenging. Butler's (2007) original instrument, translated from Hebrew for the present study, yielded three dimensions: viewing help-seeking as beneficial to professional practice and persona; viewing help-seeking as harmful for professional persona; and a preference for expedient help-seeking, or having others solve one's problems. However, this measure performed rather poorly, with low to moderate alphas for both help-seeking as negative and expedient help-seeking scales ( $\alpha = 0.68$  and  $0.58$ , respectively). Additionally, correlational analysis revealed a strong, significant positive relationship between viewing help-seeking as beneficial for professional practice and a preference for expedient help-seeking, which runs counter to Butler's (2007) findings. That is,

Butler (2007) found no relationship between viewing help-seeking as beneficial and a preference for expedient help-seeking, while the two were positively related in the present study.

These results may be attributed to the ways teachers interpreted the items on the expedient help-seeking scale. These items were piloted in the spring of 2013 with 13 teachers, and demonstrated acceptable reliability ( $\alpha = 0.75$ ). The items were modified based on cognitive interview results in the pilot and then retained for the present study, but performed poorly despite their pilot performance and being modified for the context of this study.

The two expedient help-seeking items asked whether seeking help is “worthwhile if it saves effort and bother,” and whether asking for help is “okay if people provide a solution.” The second item may be interpreted as having less to do with soliciting someone to solve one’s problems and more to do with collaborating to devise a solution, or asking a more knowledgeable colleague for a solution to a problem. Expedient help-seeking has been characterized as maladaptive, as it relates to maladaptive motivations and surface-level learning strategies (Bembenutty, 2006; Butler, 1998, 2007; Newman, 1990, 1998; White, 2011). However, as teacher work and planning time is increasingly limited and filled with tasks such as Response to Intervention or analyzing test data (Nichols & Berliner, 2005), teachers may view finding a quick solution by asking someone for help an adaptive and positive behavior rather than a maladaptive behavior.

Teachers in this study mostly viewed help-seeking as beneficial for their professional persona, meaning that these teachers saw positive benefits to asking their colleagues or administrators for help to solve a teaching-related problem. As Butler (2007) and others have shown, viewing help-seeking as beneficial has positive implications for teaching, relating to teaching self-efficacy and mastery orientations (Butler, 2007; Butler & Shibaz, 2008). Similar

findings are presented here, with viewing help-seeking as beneficial relating positively to mastery orientation ( $r = 0.46, p < 0.05$ ) and teaching self-efficacy ( $r = 0.41, p < 0.05$ ).

The results of the present study indicate teachers view help-seeking as beneficial but also prefer expedient help-seeking, yet it is clear that viewing help-seeking as beneficial relates to adaptive motivations for teaching (Butler, 2007; Butler & Shibaz, 2008; White, 2011). The measure of teachers' perceptions of help-seeking, however, should be refined, particularly for teachers in the United States who may view help-seeking differently than those in other countries. Items from the *Motivated Strategies for Learning Questionnaire (MSLQ)* (Pintrich, Smith, Garcia, & McKeachie, 1991) may also be examined as possibilities for measuring help-seeking, though these items do not discriminate between different forms of help-seeking and were developed for use with college students rather than teachers. However, the *MSLQ* and similar measures, as well as Butler's (2007) original measure, may serve as the basis from which more reliable and valid measures of help-seeking may be developed for U.S. teachers. Future research should also focus on developing precise measures of expedient help-seeking and should examine the extent of the relationship between positive views of help-seeking and preferring expedient help-seeking, as well as related outcomes for teaching motivation and practice.

### **Relationships Among Variables of Interest**

*Known Issues* and *Stress* scales were positively associated, consistent with Dawson's (2012) findings. However, in light of strong relationship between these variables in Dawson's (2012) study, it was interesting that here, *Known Issues* and *Stress* had differing impacts on teachers' achievement goal orientations. These relationships are explored further below, but, for example, *Known Issues* negatively predicted personal performance orientation, while *Stress* positively predicted this orientation. These findings underscore the importance of parsing out the

two constructs as related, but separate, with distinct outcomes for teacher motivation (Dawson, 2012). Teaching self-efficacy was weakly associated with teachers' achievement goal orientations, which runs counter to Butler (2007) and Cho and Shim's findings (2013). However, teacher mastery orientation was a strong positive predictor of teaching self-efficacy, as discussed further below. The weak correlation between teacher achievement goal orientations and self-efficacy for teaching suggests that other variables may be at play, as was evident when examining the contribution of control variables in the hierarchical multiple regressions, discussed later in this section.

Additionally, personal performance orientation was significantly correlated with a number of other constructs in this study, such as class performance orientation and viewing help-seeking as harmful (see Table 5.10). This finding lends support to the importance of personal performance orientation as a viable dimension of teachers' achievement goal orientations. Further study of teachers' achievement goal orientations should not only include investigation of performance-approach and -avoidance orientations, but personal performance orientation, as well.

### **High-Stakes Testing and Teachers' Achievement Goal Orientations**

The first of four research questions that guided this study was, What is the impact of high-stakes testing status on the four dimensions of teachers' achievement goal orientations? Teacher goal orientations have been examined recently with teachers in the U.S. (i.e. Cho & Shim, 2013; Shim et al., 2013), but these studies have not examined the impact of high-stakes testing on teacher goal orientations. A multivariate analysis of variance (MANOVA) allowed for examination of group differences between teachers who taught tested classes and those who did not on their achievement goal orientations. The main effect for testing status was significant.

However, the effect size for this main effect was small ( $\eta^2 = 0.40$ ), suggesting that other variables may mediate or moderate the relationship between high-stakes testing and teachers' goal orientations. Years of experience was tested as a possible covariate prior to conducting this analysis, but was not found to be a viable covariate, and thus not included. Delving deeper into the MANOVA results, mastery orientation and class-performance orientation differed significantly for teachers ascribed testing status than for those ascribed non-testing status (see Table 4.11). These findings are discussed below.

### **Mastery Orientation**

Teachers in tested classes reported significantly higher mastery orientation than those in non-testing classes ( $M = 4.44$ ,  $SD = 0.44$ ), though again, the effect size was small ( $\eta^2 = 0.02$ ). This finding suggests that, for this sample, teachers whose students take tests are more focused on building their own skill and reference success based upon improving their own teaching competence. These teachers indicated they aim to build both pedagogical and content knowledge, as well as classroom management expertise. The goal for these strivings may be so that their improving competence makes them more effective teachers, in turn enhancing their students' performance on the tests.

Admittedly, these results were surprising. A number of studies have indicated that high-stakes testing negatively impacts teachers and creates competitive school environments (Amrein-Beardsley et al., 2010; Darling-Hammond, 2007). Interestingly, teachers in this sample who teach in classes that face high-stakes tests reported higher levels of mastery orientation on the measures included in this study than their colleagues in non-tested classes. It may be that teachers see the benefit of continually improving their expertise in order to benefit their students, and measure their progress toward goals based on continuous improvement in their teaching

proficiency. Additionally, teachers can hold both mastery and performance orientations (Shim et al., 2013), though teachers in this sample were highly mastery-oriented on the whole ( $M = 4.39$ ,  $SD = 0.51$ ). It is important to consider, here, that this sample was not random. Teachers were sampled from a teaching organization, and their membership in that organization may indicate differing characteristics from teachers who are not members. That is, member teachers may be more mastery oriented anyway, as evidenced by their membership in a professional organization that provides professional development and literature and training in pedagogy and policy matters. These teachers may be more mastery-oriented, resulting in the present sample of teachers indicating high levels of agreement with mastery orientation items.

It is also possible that the nature of the schools and districts from which teachers in this study were sampled contributes way to these teachers espousing a mastery orientation in the context of high-stakes testing. A majority of the schools in this study were high-performing, with only 16.6% of teachers reporting that their school was a focus or priority school (see Table 3.3). The teachers in this sample may have access to greater resources, such as professional development or time to collaborate with their colleagues, as a result of teaching in a high-performing school or district. These resources may contribute to teachers' adoption of a mastery goal orientation in which the focus is on continuous improvement, since they may have access to resources which allow for such a focus on improvement and development of pedagogical competence. In any case, as mastery orientation is thought to be an adaptive motivation due to its positive relationship with outcomes such as self-efficacy (Butler, 2007; Cho & Shim, 2013; Eren, 2009), promoting deep cognitive engagement in students (Retelsdorf et al., 2010; Retelsdorf & Gunther, 2011), and fostering mastery goal structure in classrooms (Shim et al., 2013), these

findings are promising and speak to the importance of the achievement goal framework for understanding teacher motivation in a high-stakes testing environment.

### **Class Performance Orientation**

Class performance orientation (AGO-CP) also increased significantly for teachers who taught in tested grades and classes ( $M = 3.84$ ,  $SD = 0.68$ ), though again the effect size was small ( $\eta^2 = 0.03$ ). These teachers aim for their class to compare favorably with other classes in terms of pacing and test scores, or not to compare unfavorably by lagging behind on the curriculum pacing guide or achieving low scores on the SOL tests. Though these antecedents were not examined in this study, a number of factors may contribute to testing teachers espousing AGO-CP. Schools may reward classes with extra recess time, parties, or school-wide recognition for achieving high test scores, contributing to competition among classes. Teacher evaluation based on student test scores is another possibility; evaluation practices which include student test scores as a measure of teacher effectiveness may encourage AGO-CP because, as a reflection on themselves, teachers may aim for their class to have the highest test scores on their grade level or in their school. These scores would contribute positively to a teacher's effectiveness rating. Yet another possibility may be that teachers want the best for their students, and view high achievement on test scores as a benefit for them. Teacher-student relationships are an important factor in schooling (Turner et al., 2013), and teachers may push their classes to outperform other classes because they may see this as motivating for their students, an indicator of a caring student-teacher relationship, and beneficial to student academic success.

Is teacher adoption of class performance orientation bad for their motivation or their students? That depends on the constructs related to class performance orientation. These relationships are discussed further in the sections that follow, but results of this study revealed no



significant relationship between class performance orientation and teaching self-efficacy, and a significant positive relationship between class performance orientation and viewing help-seeking as harmful to one's professional persona. This finding indicates the competition aspect of performance orientation (Ames, 1984; Ames & Archer, 1988) is still salient for teachers who espouse class performance orientation, and for some individuals, competition may serve as a negative motivator rather than a positive motivator. Furthermore, teaching in tested grades and subjects does impact teacher motivation (Amrein-Beardsley, Berliner, & Rideau, 2010; Darling-Hammond, 2007), with these teachers adopting a competition-focused goal orientation. Differing from the 2x2 achievement goal framework posited by Elliot and McGregor (2001) as well as Butler's achievement goal orientation (2007) framework, class performance orientation included both approach and avoid valences in this study, which is problematic because while performance-approach goals have been found to be adaptive for some individuals and in some contexts (e.g., Butler, 1992; Harackiewicz and Elliot, 1993, Koestner, et al., 1989), performance-avoidance goal orientations are almost always thought to be a maladaptive motivation (Ames, 1992; Elliot & Church, 1997; Elliot & Harackiewicz, 1996; Maehr & Zusho, 2009).

To better understand the nature of class performance orientation and its impact on other motivational constructs and teacher practices, we need to examine the antecedents and outcomes related to this orientation. Such antecedents may include school climate and administrative practices that encourage competition among classes and teachers. Future research will investigate the impact of teacher evaluation practices which include student test scores as an evaluand on teacher motivation and practices. The relationship between class performance orientation and other constructs such as self-efficacy, goal structures, teacher burnout, and teacher-student relationships should be investigated to better understand the outcomes of espousing class

performance orientation. We may need to explore school practices and climate structures which shift the focus from competition among classes to building skill in our teachers, ultimately benefiting students and likely leading to adaptive motivational outcomes for teachers.

The relationship between high-stakes testing status and teachers' achievement goal orientations was examined using Multivariate Analysis of Variance (Research Question 1). Results indicated teachers in tested classes reported significantly higher mastery orientation and class performance orientation than those in non-testing classes ( $M = 4.44$ ,  $SD = 0.44$  and  $M = 3.84$ ,  $SD = 0.68$ , respectively),

### **Accountability Status and Teachers' Achievement Goal Orientations**

Through a series of hierarchical multiple regressions, school AMO status, or the status ascribed to schools by the VA DOE (see Table 5.2, Virginia DOE, 2012) to designate high and low-performing schools based on scores on the Virginia SOLs, was examined as a predictor of teachers' achievement goal orientations.

**Table 5.2**

*School status designations under ESEA waiver.*

	<b>Priority School</b>	<b>Focus School</b>	<b>Reward School</b>
<b>Definition</b>	Non-Title I schools failing to make AMO for two consecutive years	Title I schools failing to make AMO for two consecutive years	Any school meeting AMO consistently
<b>Consequence</b>	Turn-around professionals; state takeover within 1 year of designation	Development of improvement plan; turn-around professionals; state takeover within 1 year of designation	

Additional predictors were included in the regressions, including demographic variables, years of experience, and the *Known Issues* and *Stress* scales (Dawson, 2012), measuring the

extent to which teachers perceive issues related to high-stakes testing as salient in their schools and the stress associated with these issues. AMO was entered last in order to determine the predictive nature of this variable above and beyond that of the others for teachers' AGO. Significant results of these analyses are discussed here, along with a discussion of the significant predictors of AGO in addition to AMO status.

### **Mastery Goal Orientation**

Statistically significant results emerged from the model examining demographic variables, years of experience, *Known Issues*, *Stress*, and AMO status on teacher mastery goal orientation. The model accounted a small but significant amount of variance on the whole (7%; see Table 4.13). AMO status was not a significant predictor in this model, which may be due to the large number of high-performing schools included in the sample (79.6%). However, gender ( $\beta = 0.11$ )\_ and subject – English/Language Arts ( $\beta = 0.12$ ) as well as test-related disruptions (*Known Issues*) were significant predictors ( $\beta = 0.03$ ). This model is the first to point to the significance of stress due to test-related disruptions as a predictor of achievement goal orientation, as this variable remained significant in three of the four regression models examined for research question two.

**Demographic variables contributing to Mastery Orientation.** Being male significantly predicted mastery orientation ( $\beta = 0.11$ ), as did teaching English/Language Arts ( $\beta = 0.12$ ), though these effects were small. There were far fewer male teachers than female teachers in this sample, with only 8% identifying as male (see Table 3.2). Seven percent of teachers indicated they teach only English/Language Arts, while most (88%) taught multiple subjects. Few studies of teachers' achievement goal orientations have examined gender differences in goal orientation, though Butler and Shibaz (2008) and Cho & Shim (2013) did report that women in their studies

were significantly more mastery-oriented than men. While contrary to the findings of these previous studies, the results presented here indicate that gender does impact achievement goal orientation, at least for mastery orientation, and is worth further investigation in order to better understand this relationship. Particularly because mastery orientation is thought to be adaptive for teacher motivation (Butler & Shibaz, 2010), it is worth exploring the impact of gender on the adoption of these goals.

**Testing-related disruptions (*Known Issues*).** Test-related disruptions, measured using the *Known Issues* scale (Dawson, 2012), significantly predicted mastery orientation. The magnitude of this relationship was small ( $\beta = 0.03$ ), but significant. These results suggest that teachers who perceive the issues related to standardized testing as being salient in their schools report higher levels of mastery orientation. However, teacher gender and subject were more salient predictors of mastery orientation in this model. This sample of teachers agreed that a number of issues associated with high-stakes testing are present in their schools and that these issues do cause disruptions to their work ( $M = 4.59$ ,  $SD = 0.54$  on a 5-point scale).

However, the positive relationship between test-related issues and AGO-M suggests these issues prompt teachers to focus on the development of professional skill and continuous improvement in order to be as effective as possible, perhaps to overcome these testing-related issues and their impact on their schools and students. This may be attributable to the large number of high-performing schools included in this sample (see Table 3.3). Consistently high-performing schools may differ from low-performing schools in their resources and administrative support. That is, teachers who teach in high-performing schools may be better supported by their administrators, may have access to resources such as technology and professional development, and may have more parental support (Shannon & Bylsma, 2007).

These supports may foster mastery orientation in teachers because they allow for a focus on building knowledge and continues growth in professional competence. It is unclear here how the relationship between testing-related issues and mastery orientation takes place, but this model, along with those that follow, make clear that testing-related issues is an important construct in the development of teachers' achievement goal orientations.

### **Personal Performance Goal Orientation**

School AMO status significantly predicted both performance goal orientations (personal performance orientation and class performance orientation), while testing-related disruptions was a significant negative predictor of personal performance orientation. The overall model for personal performance orientation accounted for a small but significant amount of variance (see Table 4.15), highlighting the important contributions of school accountability, years of experience, testing-related disruptions, and perceived stress related to these disruptions to teachers' personal performance orientation. Teachers' years of experience, an important factor in teacher motivation (Bandura, 1993; Woolfolk Hoy, 2000), was the most salient negative predictors of AGO-CP, while perceived stress associated with testing-related disruptions was the most important positive predictor of personal performance orientation. The findings related to personal performance orientation are discussed in detail below.

**Years of experience.** Years of experience was a significant negative predictor of teachers' personal performance orientation ( $\beta = -0.22$ ), suggesting that increased years of experience corresponds to a decrease in personal performance orientation, a goal orientation focused on personal ability and competition with colleagues. As teachers gain more experience, they are less focused on demonstrating their ability to their colleagues and administrators and are also less worried about demonstrating a lack of teaching ability. Experience is known to be an

important factor for other motivational constructs, such as teaching self-efficacy (Fives & Beuhl, 2010; Klassen & Chiu, 2010; Tschannen-Moran & Woolfolk Hoy, 2007; Woolfolk Hoy, 2000). Specifically, TSE varies in a curvilinear fashion with years of experience, such that new teachers are less efficacious than mid-career teachers, who are more efficacious than late-career teachers (Fives & Beuhl, 2010; Tschannen-Moran & Woolfolk Hoy, 2001; Woolfolk Hoy 2000). Future research will examine whether years of experience varies in a linear or curvilinear fashion with achievement goal orientation.

Furthermore, years of experience was the most important negative predictor of personal performance orientation in this model, suggesting the experience that comes with increased years on the job is one of the most salient factors impacting personal performance orientation for these teachers. More experienced teachers have greater access and exposure to competent models (Klassen & Chiu, 2010), and likely view collaboration, not competition, with these models as beneficial to their teaching competence. As years of experience was not related to mastery orientation in this study, it cannot be stated here that years of experience leads to adoption of more adaptive goal orientations for teaching. Yet, the negative relationship between years of experience and personal performance orientation suggests that, at the least, for this sample, years of experience helps to guard against the adoption of maladaptive motivations for teaching and continues to be an important factor in the development of teacher motivation (Fives & Beuhl, 2010; Klassen & Chiu, 2010; Tschannen-Moran & Woolfolk Hoy, 2007; Woolfolk Hoy, 2000).

**Testing-related disruptions.** Disruption related to high-stakes testing (*Known Issues*; Dawson, 2012) was also a significant negative predictor of personal performance orientation ( $\beta = -0.197$ ). This finding suggests that perceiving testing-related disruptions to teaching corresponds to a decrease in personal performance orientation, which is interesting in light of the positive

relationship between testing-related issues and teachers' mastery goal orientations. Years of experience and testing-related disruptions were not significantly correlated, suggesting that each provides a unique contribution to teachers' personal performance goal orientations. Contrary to findings presented by Dawson (2012), testing-related disruptions seem to contribute positively to the adoption of more adaptive motivational dimensions for teachers (e.g., mastery orientation) in the present study.

Personal performance orientation, measured here with items such as "I...strive to demonstrate...that I know more than other teachers," or "...that I teach better than other teachers," is likely viewed by these teachers as a maladaptive way to deal with the pressures of testing-related disruptions, such as "I feel pressure to make sure my students pass the test," and "There is pressure to maintain or improve our [the school's] image to the public." As highlighted in the *Known Issues* scale, teachers feel pressures uniquely related to high-stakes testing, and as highlighted by the maladaptive nature of personal performance orientation, due to its significant negative relationship with teaching self-efficacy (discussed later in this chapter), teachers may view this goal orientation as an ineffective way to face and surmount the pressures related to high-stakes testing (*Known Issues*). This model suggests a significant pattern exists between testing-related issues and the achievement goal orientations teachers adopt, which seems to relate to how adaptive these orientations are for teacher practices, performance, and motivation in the face of such pressures.

**Stress.** While testing-related disruptions related negatively to personal performance orientation, perceived stress associated with these disruptions related positively to personal performance orientation ( $\beta = 0.22$ ). This finding confirms Dawson's (2012) assertion that parsing out the distinction between test-related disruptions and the associated stress of these

disruptions is an important and beneficial step to understanding predictors of teacher motivation. A strong positive correlation between stress and *Known Issues* existed ( $r = 0.83, p < 0.01$ ), but the differing directions of these constructs with AGO-PP indicates that each contributes unique variance to the overall model. The positive association between stress and AGO-PP suggests that stress related to testing prompts teachers to focus on competition with their colleagues, to demonstrate that they are better at their jobs than other teachers in the school, or at least not worse.

As discussed further below, teaching in a low-performing or Focus school was a positive predictor of personal performance orientation, as was stress (See Table 5.2). The two were related ( $r = 0.14, p < 0.001$ ), though the correlation was weak. Teaching in a Focus school, or a school that consistently fails to meet AMO and is under an improvement plan monitored by the state (VADOE, 2012), may cause teachers more stress than teaching in a high-performing school (no significant correlation existed between teaching in a high-performing school and stress). Therefore, while the tests themselves and disruptions related to these tests do not foster personal performance orientation, stress related to these disruptions does, and this may be heightened in a school that is low-performing. An important consideration is that schools that are under improvement plans may be facing staff cuts for teachers who are deemed to be ineffective, or complete replacement of teacher staff across the board as a step to improve student performance. These heightened stakes in Focus schools may be exacerbating stress related to high-stakes tests which determine the school AMO rating, thereby leading teachers to compete against one another, to demonstrate their superior competence, in an attempt to retain their positions. Qualitative interviews with teachers in such schools may illuminate the relationship between stress, school performance, and achievement goal orientations, particularly AGO-PP which



focuses on besting colleagues and showing administrators superior competence, or hiding inferior competence so as not to be “found out.” Additionally, future research should provide a deeper investigation into the relationship between school performance and stress, including causes, moderating and mediating variables, and outcomes in addition to achievement goal orientation (e.g., burnout, mental and physical health, teacher retention).

**Teaching in a Focus school.** As discussed above, teaching in a Focus school was a small, though significant positive predictor of personal performance orientation ( $\beta = 0.14$ ). In earlier chapters, it was posited that teaching in an environment which is heavily focused on high-stakes testing, particularly an environment that is deemed as low-performing or failing as a result of poor performance on these tests, may lead teachers to adopt a performance orientation toward teaching. A driving force for this adoption may be the extreme measures that are taken when schools are deemed low-performing, such as termination of all existing staff or restructuring schools so that high-performing students are tracked to certain teachers while low-performing students are tracked to others (Amrein-Beardsley et al., 2010), or as Booher-Jennings (2006) noted, some students are pushed out of the school altogether. Such environments can lead to competition among teachers for the highest-achieving students, or for jobs (Barrett, 2009; Jones & Egley, 2004; Wolters & Daugherty, 2007).

The relationship between stress and teaching in a Focus school, along with the relationships between each of these variables and achievement goal orientation, indicate an important pattern in the development or adoption of personal performance orientation for teaching. Though fewer teachers in this sample taught in such a school (16.6%, see Table 3.3), a relationship between stress and the Focus school AMO distinction is evident. Teachers may view issues related to testing as a challenge, but in a Focus school environment, with limited resources

or the possibility of cuts to teaching positions, these challenges may be perceived as threats to the teacher, leading to stress (Klassen, 2010; Klassen et al., 2013). Klassen and his colleagues (Klassen, 2010; Klassen et al., 2013) explain that stress results when challenges are perceived as a threat to personal well-being. Teaching in a Focus school presents unique challenges for teachers, such as operating under a school improvement plan and the possibility of state take-over and layoffs (VA DOE, 2012). These challenges may be perceived by teachers as threats to their job or to their well-being (Parker, Martin, Colmar, & Liem, 2012). Teaching in a Focus school and testing-related stress were significant positive predictors of AGO-PP, while test-related disruptions was a negative predictor may be attributable to the Focus school environment which presents threats to teachers' motivation as well as their jobs (Amrein-Beardsley et al., 2010). The distinction between test-related disruptions and associated stress (Dawson, 2012) become critical because their differing impacts on personal performance orientation point to the possible impacts of the AMO label and its associated outcomes (Virginia DOE, 2012).

### **Class Performance Goal Orientation**

As with personal performance orientation, school AMO status was a significant predictor of class performance orientation, though not as important as stress associated with high-stakes testing and grade level. The overall model accounted for 8% of the variance (see Table 4.17). This amount is small yet significant, and further highlights the importance of school accountability and stress in teachers' achievement goal orientations. The specific significant predictors of AGO-CP are discussed in detail below.

**Demographic variables predicting class performance orientation.** Teaching a non-tested subject area was a significant negative predictor of class performance orientation for this sample ( $\beta = -0.17$ ). This finding suggests teaching a subject outside of a core subject area in a

non-tested subject corresponds to a decrease in class performance orientation, or comparing one's class performance to the performance of other classes. As these classes are not required to take high-stakes tests, teachers of these classes may aspire for their classes to outperform other classes on the tests or to demonstrate that their class achieves at higher levels, or at least not lower than, other classes on the same grade level or in the school.

Grade level was a significant positive predictor of class performance orientation ( $\beta = 0.15$ ), suggesting that teaching in the upper elementary grades (3-6) positively predicts holding a class performance orientation. Teachers at these grade levels typically administer Virginia SOL tests, particularly if they teach in the core subject areas. Teachers and classes in these grade levels may be encouraged by administrators or school and district incentives to compare class SOL performance against one another. For example, whole classes or sometimes whole grade levels receive incentives such as class or grade level parties if they are the top performers on state assessments and these practices may encourage teachers to adopt a performance orientation in which they aim for their class to outperform other classes to secure these rewards. Class achievement may also reflect favorably on teacher evaluations, leading teachers to push their classes to outperform others or not be the worst on the grade level. The fact that teaching in these upper grade levels predicts class performance orientation lends further credence to the results of the MANOVA discussed above, which highlighted significant differences for teachers ascribed testing status on class performance orientation.

**Years of experience.** Years of experience was a significant negative predictor of class performance orientation ( $\beta = -0.16$ ). Increases in years of experience correspond to decreases in teachers' class performance orientation. Years of experience did not exhibit a strong correlation with any of the other predictors of class performance orientation, suggesting that this factor

contributes unique variance to the class performance orientation model. This finding is similar to that of AGO-PP discussed above. Teacher experience seems to serve as a guard against performance orientation for teachers, either personal or class-focused. This may be beneficial due to potential for negative outcomes associated with both performance goal orientations (discussed below).

As Klassen and Chiu (2010) and Tschannen-Moran and Woolfolk Hoy (2007) suggest, experienced teachers have more exposure to competent models, professional development, and mastery experiences than novice teachers. Novice teachers may try to prove their competence to administrators and colleagues through the performance of their class. Alternatively, novice teachers may view student achievement on the tests as the sole or most important proxy for their own competence and ability due to their pre-service training or their own experiences with high-stakes testing. Indeed, Daniels (2013) recently found that, as teachers move from pre-service to in-service, mastery orientation decreased and personal performance goals and performance goal structure in the classroom increased. This increased focus on performance orientation may lead pre-service teachers to devalue mastery orientation in both themselves and their students, as well as caring, nurturing relationships or other factors of schooling important to the development of children. Fostering high achievement at the class level is not necessarily a negative goal for teachers, but the emerging pattern of high-stakes testing, school accountability status, and stress as significant predictors of both personal and class performance orientation is troubling because these variables have all been related to negative outcomes for teachers (Amrein-Beardsley et al., 2010; Barret, 2009; Crocco & Costigan, 2007; Darling-Hammond, 2003, 2007; Dawson, 2012; Rustique-Forrester, 2005). As with teaching self-efficacy, years of experience may mediate the negative impacts of these factors by providing a buffer, through mastery experiences and the like

(Tschannen-Moran & Woolfolk Hoy 2007), between negative impacts on teacher motivation and the goal orientations teachers adopt for their practice. Further research should investigate the mediating effects of experience on teachers' goal orientations.

**Stress.** Stress was a significant positive predictor of class performance goal orientation ( $\beta = 0.20$ ), the most salient predictor in the model for class performance orientation (see Table 4.17). Teachers in this sample indicated high levels of stress ( $M = 4.36$ ,  $SD = 0.684$ ), and the findings suggest that high stress level relates positively to a focus on one's class outperforming other classes. Interestingly, though stress associated with high-stakes testing was a significant positive predictor of AGO-CP, testing related disruptions (*Known Issues*) was not a significant predictor of this goal orientation. Results for AGO-M revealed these disruptions to positively predict mastery orientation (discussed earlier in this section). With these findings taken together, it seems pressures related to testing do not foster a focus on competition and demonstration of ability to colleagues and administrators, but that stress related to the tests does foster these aims. As discussed above, teachers may view issues related to testing (*Known Issues*) as a challenge, though these issues still result in stress, as the *Known Issues* and *Stress* scales (Dawson, 2012) in this study were highly positively correlated ( $r = 0.83$ ,  $p < 0.05$ ). However, when combined with other factors such as grade level, testing status, school climate, or AMO status, these challenges may be perceived as threats (Klassen et al., 2013), leading to stress and subsequently the adoption of class performance orientation.

**Reward school.** Finally, teaching in a reward school, or a school that always meets AMO, was a positive predictor of class performance goal orientation ( $\beta = 0.12$ ), though this variable was the least salient predictor in the model. About a quarter (24%) of this sample taught in such high-performing schools. This finding is interesting because it suggests that teachers who

teach in schools that always meet AMO espouse goals for teaching in which they focus on their classes outperforming other classes on state tests, or being further ahead on a pacing guide than other classes. These teachers measure success based on their class' performance relative to that of other classes. The use of the class as a referent may be related to how teachers and classes are rewarded in these schools for overall class performance on the state tests. This finding may also be related to administrative practices that encourage competition among classes, building a competitive, performance-oriented goal structure in the school. School performance goal structure has been shown to impact teacher practices and motivation (Skaalvik & Skaalvik, 2013), as well as student feelings of school belonging (Kumar, 2006). The investigation of school climate variables, such as administrator factors, collective efficacy (Klassen, 2010), and school goal structure was outside the scope of this study. However, the differing impacts of school AMO status suggest that a relationship exists between school climate and AMO, and this relationship impacts teacher achievement goal orientation. This pattern suggests that further study is warranted.

These findings suggest that school accountability policy as well as stress and teaching in upper grade levels positively influence teachers' adoption of class performance orientation, or the aim for one's class to compare favorably against other teachers' classes. The adoption of this orientation may be fostered by school, administrative, or district practices which support competition among classes or grade levels. Class achievement on state tests also reflects favorably on teachers, and this may be intensified by teacher evaluation practices that hinge on student test scores. School climate variables were not investigated in this study, but factors such as teacher evaluation and school or administrator practices that encourage competition among classes should be examined in terms of their effects on teacher goal orientation.

## **Work-Avoidance Orientation**

Only gender was a significant negative predictor of work-avoidance goal orientation in this model. As gender was a dichotomous dummy-coded variable, this finding can be interpreted to mean that being male was a significant negative predictor of a goal orientation in which one aims to avoid work. However, as only eight percent of this sample was male, this finding should be interpreted with caution. Additionally, gender was not a significant predictor of goal orientation in previous studies (e.g., Butler, 2007, 2012), and so measurement of work-avoidance goal orientation should be refined in order to better capture this dimension and allow for the investigation of additional significant predictors and outcomes.

## **Summary of Test and Accountability-Related Findings**

The relationship between school accountability status and teachers' achievement goal orientations was examined using hierarchical multiple regression (Research Question 2). In sum, high-stakes testing and accountability policy did marginally impact teachers' achievement goal orientations in this study. More specifically, testing-related disruptions and stress associated with these disruptions had a small but significant impact on teachers' achievement goal orientations. Interestingly, *Known Issues* positively predicted mastery orientation and negatively predicted personal performance orientation, while stress negatively predicted mastery and positively predicted personal performance. This finding is interesting because the two constructs, testing-related disruptions and the stress teachers perceive due to these disruptions, are thought to be positively associated (Dawson, 2012). While the two constructs did exhibit a strong positive correlation ( $r = 0.83$ ,  $p < 0.05$ ), the outcomes related to these constructs differed for this sample of teachers. The findings that emerged here suggest that *Known Issues* may be perceived as a healthy challenge to teachers, while stress associated with these issues indicates a threat rather

than a challenge, and these disparate perceptions lead to adoption of differing achievement goal orientations. School AMO status, particularly low and high-performing schools, also emerged as a contributor to the model such that teachers who teach in low-performing schools exhibit personal performance orientations while teachers teaching in high-performing schools espouse class performance orientations. Years of experience may serve as a mediating factor in the relationship between testing issues and stress as well as school accountability status, as it emerged as a significant predictor of performance orientations. Additionally, male teachers, though fewer in number here ( $n = 29$ ), were more mastery oriented than female teachers in this study, while teaching in subjects other than core subjects contributed to a mastery orientation. Finally, teaching in higher grade levels (3-6) positively predicted class performance orientation.

As foreshadowed by the findings related to testing and AMO status, the next step will be the development of a model, possibly through structural equation modeling or hierarchical linear modeling, which would illustrate how the system of equations work together to impact teachers' achievement goal orientations (Nachtigall, Kroehne, Funke, & Steyer, 2003). Such methods would contribute to the ongoing development of a theoretical model of teacher achievement goal orientations (e.g., Butler, 2007, 2012; Butler & Shibaz, 2008; Cho & Shim, 2013; Nitsche et al., 2010, 2011; Shim et al., 2013). Practically, we may want to shift the focus from competition among classes and teachers to practices that strengthen teachers' collective efficacy (Klassen, 2010) and lead to a shared vision and positive school culture, particularly in low-performing schools where teachers may experience heightened levels of stress related to high-stakes testing.

### **Teachers' Achievement Goal Orientations and Self-Efficacy for Teaching**

Another important aim of the present study was to investigate the relationship between teacher goal orientations and related motivational processes, including self-efficacy and



perceptions of help-seeking. Butler and others have examined this framework and similar related outcomes for teachers in other countries (Butler, 2007, 2012; Butler & Shibaz, 2008; Nitsche et al, 2011; Retelsdorf & Gunther, 2011; Retelsodrf et al., 2010), and Cho, Shim, and their colleagues have begun to investigate these constructs for teachers in the Midwestern United States (Cho & Shim, 2013; Shim et al., 2013). The present study aimed to extend this framework to a novel context, sampling teachers in a Mid-Atlantic state and in the context of high-stakes testing and accountability. Significant findings related to teachers' achievement goal orientations, self-efficacy for teaching, and perceptions of teacher help-seeking emerged.

The hierarchical multiple regression equation included demographic control variables such as gender and ethnicity, years of experience, the *Known Issues* and *Stress* scales (Dawson, 2012), and the four dimensions of teacher achievement goal orientation: mastery, personal performance, class performance, and work-avoidance orientations. The use of hierarchical multiple regression here was helpful because it allowed for determining the importance of AGO above and beyond that of control variables and other predictors. In particular, years of experience significantly impacts teaching self-efficacy (TSE; Fives & Beuhl, 2005; Klassen & Chiu, 2010; Klassen et al., 2011; Tschannen-Moran & Woolfolk Hoy, 2007), so it was important to parse out the specific impacts of years of experience and achievement goal orientations on TSE.

The findings of this analysis revealed that teacher achievement goal orientations were in fact the most important predictors of teaching self-efficacy, above and beyond years of experience and any of the other variables included in the model. The full model explained about 21% of the variance in TSE (see Table 4.20). Specifically, mastery orientation positively predicted TSE while personal performance and work-avoidance orientations negatively predicted TSE. The results are discussed in further detail below.

## **Mastery Goal Orientation**

Teacher mastery goal orientation significantly predicted TSE after controlling for demographic variables, years of experience, test-related disruptions, and stress (see Table 4.21). In addition, mastery orientation was the most important predictor in the model ( $\beta = 0.31$ ). The results suggest that teachers who are more mastery oriented are also more efficacious, including efficacy for instruction, classroom management, and student engagement. These findings support previous findings related to mastery orientation and TSE (Butler, 2007; Malmberg, 2008; Nitsche et al., 2011) and suggest an important positive relationship between mastery goal orientation and teaching self-efficacy. As TSE has been shown to be beneficial to teaching practice and well-being (Bandura, 1993; Cho & Shim, 2013; Gibson & Dembo, 1984; Tschannen-Moran et al., 1998; Tschannen-Moran & Woolfolk Hoy, 2001; Usher & Pajares, 2008; Woolfolk Hoy, 2003), this relationship between mastery orientation and TSE suggests that mastery orientation is an adaptive goal orientation for teachers with important positive outcomes (Butler, 2007, 2012; Cho & Shim, 2013; Shim et al., 2013).

## **Personal Performance Goal Orientation**

Personal performance goal orientation was a significant negative predictor of TSE after controlling for demographic variables, years of experience, test-related issues, and stress (see Table 4.21). The magnitude of this relationship was small ( $\beta = -0.13$ ), yet statistically significant. Increases in personal performance goal orientation corresponded to decreases in teacher self-efficacy, suggesting that personal performance orientation is maladaptive for teachers in this sample.

Previous studies of teacher achievement goal orientations have investigated two dimensions of performance orientation: performance approach and avoid orientations (e.g.,

Butler, 2007, 2012; Butler & Shibaz, 2008; Cho & Shim, 2013; Nitsche et al., 2010, 2011; Shim et al., 2013). The present study distinguishes not between approach and avoid dimensions, but between personal and class performance orientation dimensions. Therefore, direct comparisons between performance approach or avoid orientations and personal performance orientations cannot be made. Recall, though, that previous studies of teacher AGO suggest performance orientations lead to performance goal structures and practices in the classroom (i.e., Butler, 2007, 2012; Shim et al., 2013) as well as negative relationships with TSE, particularly for performance-avoidance orientations (i.e., Malmberg, 2008; Nitsche et al., 2011; Cho & Shim, 2013). Together with the results of the present study, these findings suggest performance orientations may be maladaptive for teachers, at least in some contexts. TSE is an important construct for teachers, and its negative relationship with AGO-PP is troubling, as the personal performance scale used in the present study included items reflecting both positive and negative valence (see Table 4.3).

Additionally, the present study illustrated the importance of teacher AGO above and beyond years of experience for TSE. This finding is striking, particularly in light of the results around AGO-PP. That is, personal performance orientation significantly influenced TSE above and beyond years of experience. If personal performance orientation is maladaptive for teachers, then even increased experience, an important positive factor in the development of TSE (Bandura, 1993; Cho & Shim, 2013; Gibson & Dembo, 1984; Tschannen-Moran et al., 1998; Tschannen-Moran & Woolfolk Hoy, 2001; Usher & Pajares, 2008; Woolfolk Hoy, 2003), does not mediate the relationship between AGO-PP and TSE. Future research should investigate possible variables that may mediate the negative effects of personal performance orientation on TSE.

### **Class Performance Goal Orientation**

Class performance goal orientation did not predict teaching self-efficacy, and was removed from the model. Without results indicating a significant relationship between the two variables, it is difficult to conjecture about how the two relate. However, as teaching self-efficacy is an important construct with many important outcomes (Bandura, 1998; Tschannen-Moran & Woolfolk Hoy, 2001, 2008), the lack of a relationship here may suggest that class performance orientation is maladaptive for teachers, because it does not relate to such an important construct. Class performance orientation was related to other constructs included in this study, though, suggesting that it is a viable dimension of teachers' achievement goal orientations. Future research should investigate the outcomes of class performance orientation with different populations; it may still be fruitful to examine the relationship between class performance orientation and self-efficacy for teaching in other contexts and with larger samples of teachers, or teachers in the upper grades.

### **Work-Avoidance Goal Orientation**

Work-avoidance goal orientation was a significant negative predictor of TSE after controlling for demographic variables, years of experience, test-related issues, and stress. The magnitude of this relationship was small ( $\beta = -0.15$ ), yet statistically significant. Increases in work-avoidance orientation corresponded to decreases in teacher self-efficacy, suggesting that AGO-W is maladaptive for teachers in this sample. This orientation is characterized by aiming to get through the day while doing as little work as possible: avoiding writing new lesson plans, creating assessments, or grading. Teachers in this sample indicated low agreement with this goal orientation on the TAGO scale ( $M = 1.77$ ,  $SD = 0.62$ ); however, this orientation's negative relationship with TSE is an important finding.

Butler (2007) found no relationship between work-avoidance goals and TSE, though Retelsdorf and Gunther (2011) found teachers who espoused work-avoidance goal orientations promoted surface-learning strategies rather than deep cognitive engagement in their students. The Teacher Achievement Goal Orientation Questionnaire (TAGOQ) measure was revised and refined in the present study and through piloting, and so items measuring the AGO-W dimension may be more sensitive, allowing for the relationship between this goal orientation and TSE to emerge. Additionally, the previous studies were conducted outside of the U.S. Teachers in the present sample may perceive AGO-W differently than teachers in the earlier studies. Though a significant relationship between AGO-W and TSE emerged here, AGO-W was not related to high-stakes testing or school accountability policies, so it is not possible to conjecture about the possible causes or antecedents of this goal orientation. Future research should work to further refine the measurement of this construct, investigate antecedents of AGO-W, and to investigate variables that may mediate the negative relationship between AGO-W and TSE.

In sum, hierarchical multiple regression was used to examine the relationship between teachers' achievement goal orientations and self-efficacy for teaching (Research Question 3). Results indicate mastery orientation significantly positively predicts self-efficacy for teaching, while personal performance and work-avoidance orientations were significant negative predictors. These results are similar to those reported by Butler (2007), and speak to the validity of the achievement goal orientation framework for understanding teacher motivation.

### **Teachers' Achievement Goal Orientations and Perceptions of Help-Seeking**

The final research question pertained to the relationship between teachers' achievement goal orientation and their perceptions of their own help-seeking. Teachers may view help-seeking as either beneficial or threatening to their professional persona (Butler, 1998), and while research on help-seeking has typically been conducted with PreK-12 students (e.g., Butler, 1998; Newman, 1998), some scholars have begun to extend this work to teachers (Butler, 2007; Butler & Shibaz, 2008). In that vein, the present study aimed to validate results found previously by Butler (2007; Butler & Shibaz, 2008) by examining the relationship between teachers' achievement goal orientations and help-seeking above and beyond other factors such as demographic information, years of experience, issues related to high-stakes testing, and stress. For this reason, hierarchical multiple regression proved useful for parsing out the unique contribution of achievement goal orientations for teachers' perceptions of their own help-seeking behaviors and their impact on their professional persona. The results of each of these analyses are discussed below.

### **Help-Seeking as Beneficial**

**Mastery Orientation.** Mastery orientation was a significant positive predictor of viewing help-seeking as beneficial for one's professional persona ( $\beta = 0.41$ ). This finding is in line with those of Butler and her colleagues (Butler, 2007; Butler & Shibaz, 2008; Karabenick, 2003; 2004; Nitsche et al., 2011; Tanaka, 2002), and suggest that holding goals for teaching which include self-improvement, comparison to one's own past performance, and increasing pedagogical knowledge and skill fosters a positive view of seeking help from colleagues or administrators. Teachers who are mastery-oriented and seek to amass knowledge and skill related to teaching, and who compare their performance to their past performance rather than to that of others, may look for opportunities to learn from and collaborate with colleagues and

administrators. Therefore, they view help-seeking as a way to work toward this learning goal, rather than as a threat to how others perceive them and their teaching ability. The findings from previous studies around help-seeking and achievement goal orientations (Butler, 2007; Butler & Shibaz, 2008; Karabenick, 2003; 2004; Nitsche et al., 2011; Tanaka, 2002), along with those presented in the present study regarding help-seeking and self-efficacy, clearly suggest that a mastery orientation is an adaptive motivation for teachers, leading to multiple positive outcomes.

**Work-Avoidance Orientation.** By contrast, espousing a work-avoidance goal orientation negatively predicted viewing help-seeking as beneficial. AGO-W contributed a small, but significant amount ( $\beta = -.11$ ), to the model. Interpreting this finding, it seems work-avoidant teachers held decreased perceptions of help-seeking as a helpful or adaptive professional behavior. A possible explanation for this finding is that teachers who hold this goal orientation may view asking for help as having the potential to create more work than if they never asked for help at all. White (2011) found that pre-service teachers would avoid asking for help if they felt that they would be asked to do more work to find the solution to a problem. The same phenomena may occur with in-service teachers, who may feel that collaboration with colleagues or administrators to solve a problem could create more work. Future research should explore the links between work-avoidance orientation and perceptions of help-seeking as beneficial, as the existing literature has mainly linked AGO-W with a preference for expedient help-seeking (Butler, 2007; Butler & Shibaz, 2008; Nitsche et al., 2011).

### **Help-Seeking as Negative**

**Personal Performance Orientation.** Both performance goal orientations were significant positive predictors of viewing help-seeking as negative or harmful for professional practice and persona. Personal performance goal orientation contributed the greatest amount to

the model ( $\beta = 0.38$ ). Butler (2007; Butler & Shibaz, 2008) found that holding a performance goal orientation (approach or avoid) related positively to viewing help-seeking as harmful. In the present study, no difference in valence (approach or avoid) was determined for personal performance orientation, but this orientation fosters a focus on comparing one's own performance or competence with that of others, which is in line with conceptions of teacher performance orientations in previous studies (Butler, 2007; Butler & Shibaz, 2008; Cho & Shim, 2013; Nitsche et al, 2011; Shim et al, 2013). The results presented here lend support to the validity of the achievement goal orientation framework for teachers, particularly the maladaptive nature of performance goal orientations for teachers.

Teachers who hold AGO-PP may feel that asking others for help makes them appear weak or incompetent. Since these teachers are concerned with how their performance compares to others', asking for help may be viewed as highlighting areas of weakness. However, viewing help-seeking as harmful is a maladaptive perception. Teachers who view help-seeking as harmful avoid asking for help, including help from colleagues and administrators with tasks such as lesson-planning, understanding of content, and behavioral issues (Butler, 2007; Butler & Shibaz, 2008). Teachers who hold this view of help-seeking avoid asking for help with these tasks, and, by doing so, may miss important opportunities to improve upon their knowledge and skill by learning from colleagues and administrators through problem-solving (White & Bembenuddy, 2013). Due to its negative relationship with self-efficacy in this study, along with its positive relationship with viewing help-seeking as harmful, AGO-PP appears to be a maladaptive goal orientation for teachers. Future research should examine the possible relationship between AGO-PP and avoidant perceptions of help-seeking, which could have detrimental impacts on teacher motivation and success, as well as that of their students.



**Class Performance Orientation.** Class-performance orientation was also a significant positive predictor of viewing help-seeking as harmful ( $\beta = 0.14$ ), though a less salient predictor than AGO-PP. The relationship between AGO-CP and help-seeking as harmful lends support to the idea mentioned in the previous chapter, that class performance orientation is related to personal performance orientation ( $r = 0.41, p < 0.01$ ), and that the class performance may be a proxy for the teacher's view of their own performance and competence. Teachers who compare their class' performance to that of other classes view their own help-seeking as harmful to their professional persona. This finding makes clear that the referent (self vs. others) is an important factor in teachers' achievement goal orientations and related outcomes.

### **Expedient Help-Seeking**

The expedient help-seeking scale exhibited low reliability ( $\alpha = 0.58$ ), and also performed poorly in pilot testing. However, class performance and work-avoidance orientation were significantly related to expedient help-seeking. The development of a more reliable scale for the measurement of expedient help-seeking preference will be an important step in understanding the relationship between teachers' achievement goal orientations and expedient help-seeking..

**Class Performance Orientation.** Class performance orientation was a positive predictor of preference for expedient help-seeking, contributing a small, but significant amount to the model ( $\beta = 0.23$ ). For this model, AGO-CP was the strongest predictor of expedient help-seeking, more important than work-avoidance orientation which was previously found to be the strongest predictor of preferring expedient help-seeking (Butler, 2007). This finding is perplexing in that it suggests teachers who are concerned with their class comparing favorably with other classes seek help for others to solve their problems. This may be because these teachers are seeking help that would facilitate the fastest way to overcome a challenge in order

for their class to remain favorably comparable to other classes (Parker et al., 2012). For example, if a teachers' class is behind other classes on the pacing guide for a particular subject, a teacher who holds a class performance orientation may seek help that would allow their class to move expeditiously through the pacing guide in order to catch up with other classes. Further investigation into this relationship was outside the scope of this study, but recall that stress was an important positive predictor of AGO-CP ( $\beta = 0.20$ ). It may be that teachers who hold a class performance orientation are under high levels of stress, leading them look to others to solve their problems, possibly due to limited time or greater constraints on resources.

**Work-Avoidance Orientation.** Work-avoidance orientation was also a significant positive predictor of a preference for expedient help-seeking, though not as salient as AGO-CP ( $\beta = 0.13$ ). Neither of these goal orientations was related, suggesting that each contributes uniquely to the variance explained in preference for expedient help-seeking. This finding is in line with previous work by Butler and her colleagues (Butler, 2007; Butler & Shibaz, 2008), who found that teachers who held a work-avoidance goal orientation sought help in order to have others, such as their colleagues or administrator, solve their teaching-related problems. However for this model, class performance orientation was a more important predictor of preferring expedient help-seeking, suggesting that other goal orientations and motivational variables may contribute to this view of help-seeking to a greater extent than holding a work-avoidance orientation.

In sum, the relationship between teachers' achievement goal orientations and perceptions of help-seeking was examined through a series of hierarchical multiple regressions (Research Question 4). Results indicate that, for this sample, mastery orientation positively predicted viewing help-seeking as beneficial, while work-avoidance orientation was a negative predictor of

this perception. Both personal and class performance orientations were positive predictors of viewing help-seeking as negative. Both class performance and work-avoidance orientation were positive predictors of a preference for expedient help-seeking.

### **Limitations**

The present study has several limitations which must be addressed. First, participants were sampled from school districts in Virginia as well as members of a state teacher's association and this sampling frame has important implications for this study. Virginia teachers elect to become members of the teacher's association and thus may have characteristics that differ from teachers who do not elect to become members. These differences may affect members' and non-members' propensity to respond to surveys as well as their responses to survey items, ultimately impacting results and limiting generalizability.

Next, this study was conducted in Virginia which, as described in previous sections, is currently operating under a waiver of the Elementary and Secondary Education Act. While most of the United States measures school accountability according to Annual Yearly Progress (AYP), Virginia measures school accountability according Annual Measurable Objectives (AMO). Therefore the results of this study may not be generalizable to teachers in other states.

Next, this study used an online survey format, and this sample was drawn from school districts that, overall, are high-performing and may have greater resources than lower-performing schools. These districts may provide their teachers with more access to technology, among other resources allowing them to take the online survey. Teachers who work in such schools may have different characteristics which may be important to the present study than teachers in low-performing schools due to their access to greater resources, such as technology, and these characteristics may impact their responses (Shannon & Bylsma, 2007). On the other hand, those

who respond to a survey measuring teachers' perceptions of accountability and the impact of such policies on their motivation may already be angered or otherwise upset about these policies, which again may impact responses to survey items and affect results. .

This study utilized a self-report measure, and there are several limitations inherent to the use of such survey measures. Perhaps one of the most important is social desirability bias (Dillman, 2009), or the bias that results when participants respond to survey items in a manner that is perceived as socially acceptable, even if these responses do not reflect their true feelings or perceptions. In this case participants' responses may not truly reflect their feelings about high-stakes testing and accountability, thus impacting the hypothesized relationship among the constructs of interest here. However, teachers were of their anonymity and that their responses would not be disaggregated by school, county, or teacher association membership. These assurances may have encouraged teachers to respond truthfully without the fear of repercussions by administrators or others.

Next, both the *Teacher Achievement Goal Orientation Questionnaire* and the *Teacher Perceptions of Help-Seeking Questionnaire* were limitations of the present study. Though both scales were piloted with a small sample of teachers prior and modified to the context of this study based on pilot data and cognitive interviews, the expedient help-seeking scale exhibited low reliability ( $\alpha = 0.58$ , see Table 4.9 ), and the scales in the TAGOQ did not perform as expected. Issues related to these measures may be related to their translation from Hebrew (Butler, 2007) to English, but these issues more likely stem from the theoretical perspective from which these items were written. For instance, both the TAGOQ and the TPHSQ were derived from the work Butler (1998) and others (e.g., Ames, 1992; Dweck, 1986; Meece et al., 2006) have conducted with students around help-seeking perceptions and achievement goal

orientations. Indeed, one of the aims of the present study was to extend achievement goal orientation framework to understanding teacher motivation. Therefore, these measures were driven by theory that has been heavily tested with students, but less so with teachers, perhaps limiting the effectiveness of the items with this sample.

Additionally, Butler (2007) and Nitsche and colleagues (2011) both aimed to provide evidence of construct validity for these measures. For a measure to have construct validity, it must adhere to a theoretical framework (Shadish et al., 2002), and these frameworks are developed over time by researchers. Though it is important to align self-report survey measures with theory, this practice is also limiting because researchers may omit elements of processes or constructs that have not been effectively captured by the theoretical framework. In other words, aligning measures to theory may restrict what is captured by those measures. Though limitations of self-report measures do exist, it is important to continue to refine these measures, including those used in the present study, and to combine self-report surveys with other methods, such as observations and interviews, in order to better understand teacher motivation.

### **Future Directions**

This study raised a number of questions and directions for future research related to teacher motivation, policy, and stress, among other constructs. First, issues related to measurement of teacher achievement goal orientations and help-seeking became evident as the study progressed. Future research should seek to continue validation of the scales used in the present study. Such research should aim to extend these findings to other samples, such as teachers in states with varying accountability and high-stakes testing policies. The items included in these measures, particularly the achievement goal orientation and help-seeking perceptions measures, should be refined to better reflect teachers' conceptions of these constructs.

Class performance goal orientation emerged as an important dimension of teachers' achievement goal orientations, and this study is the first to identify an achievement goal orientation in which teachers are focused on how their class compares to other classes. This focus on the class may be attributable to teacher evaluation policies through which a teacher's performance evaluation is based in part on the performance of their class on standardized high-stakes assessments. Teachers may also view their class' performance as a proxy for their own competence; this relationship has been made clear through studies of value-added models of teacher evaluation that have shown relationships between teacher practices and content knowledge and student achievement on high-stakes assessments (Harris et al., 2014; Sass et al., 2014). Future research on teachers' achievement goal orientations may examine how teachers' class performance orientation manifests in the classroom through observations of teaching practice and student outcomes, or how AGO-CP develops by examining the relationship between school climate or evaluation policy on teacher goal orientations. Some interesting findings around mastery orientation also became evident through this study and could lead to important work to better understand the nature of this goal orientation. Specifically, as mastery was positively related to teaching in the upper grades, which are usually tested grades, teachers may be adopting this goal orientation despite the challenges and stresses resulting from high-stakes testing. Or, as these teachers were sampled from relatively high-performing districts, they may differ on characteristics that may be important to this study, such as greater access to resources or administrative support. The findings presented in this study speak to the importance of mastery orientation for teachers, with positive relationships between mastery orientation and teacher self-efficacy and positive perceptions of help-seeking. Examining the possible protective nature of mastery orientation for teachers would be an interesting and important line of research.

Measuring teacher perceptions of help-seeking proved to be a challenging task, particularly for expedient help-seeking. Some of the poor performance of the expedient help-seeking scale may be attributable to the fact that this scale was developed for use with teachers in Israel (Butler, 2007), a context which may vary from that of the U. S. Developing a more reliable and valid measure of help-seeking perceptions will be a complex undertaking because the focus is on teachers' perceptions of the impact of their own help-seeking on their professional persona rather than capturing the actual impact of teachers' help-seeking, perhaps through the types of observational strategies used by White and her colleagues (White, 2011; White & Bembenuddy, 2013). In the measure used in the present study, teachers are asked to reflect on their help-seeking, others' responses to their seeking help, and how seeking help affects others' views of their professional competence and skill. This is a challenging, multi-step task, one which may not accurately reflect teachers' views of help-seeking and its impact on their professional persona. The development of a reliable measure of teachers' perceptions of help-seeking will allow for greater understanding into the ways teacher motivation impacts their help-seeking perceptions and behaviors, particularly for teachers in the U. S. context.

Stress proved to be more important to teachers' achievement goal orientation than accountability policies and high-stakes testing status. Stress results when environmental factors are perceived as threats (Klassen, 2010; Klassen et al., 2013); these factors could include lack of resources or, possibly in this case, the threat of losing one's job resulting from poor school performance and AMO status. Stress can lead to a negative outcomes for teachers, such as burnout (Berryhill et al., 2009) and low teaching self-efficacy (Dawson, 2012) and collective efficacy (Klassen, Usher, & Bong, 2010). Future research should investigate both the antecedents

of teacher stress as well as the outcomes associated with stress, and how policies such as school AMO status and teacher evaluation foster teacher stress.

Though outside the scope of this study, school climate variables may be at play in the relationships between school accountability and teacher motivation, as well as teacher achievement goal orientations and self-efficacy and perceptions of help-seeking, examined here. For instance, accountability policy likely impacts school climate, so this relationship warrants further study, and may provide insight into the ways school environments are created or molded by accountability structures (Amrein-Beardsley et al., 2010; Berryhill et al., 2009).

Administrative policies, collective efficacy, school goal structures, and other environmental characteristics likely serve to either foster or diminish teacher motivation. Employing mixed methods such as focus group and one to one interviews, ethnographic studies, case studies of individual schools, and observational studies may provide insight into the ways the school climate impacts teacher motivation.

Finally, the development of a model of the relationship between school accountability status, high-stakes testing and related issues, stress, and teacher achievement goal orientations, along with related outcomes, will be an important next step to better understanding how these constructs interact and work together to support either adaptive or maladaptive motivations for teaching. Using methods such as structural equation modeling or hierarchical linear modeling will allow to the development of such a model, and the inclusion of all of these variables in a framework of teacher motivation, its antecedents, and outcomes. Future research will include the development of such a model.



## Conclusions

The purpose of this study was to investigate the relationships between teachers' achievement goal orientations and high-stakes testing, school accountability policy, teaching self-efficacy, and perceptions of help-seeking. One of the aims of this study was to validate the teacher achievement goal orientation framework, previously studied with teachers in other countries (e.g., Butler, 2007; Butler & Shibaz, 2008; Malmberg, 2008; Nitsche et al., 2010; Nitsche et al, 2011) for a sample of teachers in a Mid-Atlantic state. Three hundred eighty-three teachers responded to a survey of three measures: the Teacher Achievement Goal Orientation scale (Butler, 2007), the Teaching Self-Efficacy Scale (Tschannen-Moran & Woolfolk Hoy, 2001) and the Teacher Perceptions of Help-Seeking scale (Butler, 2007). The survey also included items measuring high-stakes testing and stress related to these tests (*PS-HST Known Issues* and *Stress* scales, Dawson, 2012), school accountability status, and demographic information. Each scale was subjected to reliability testing, which revealed departures from Butler's (2007) original four-dimension achievement goal orientation framework. Specifically, Class Performance orientation emerged as a distinct dimension, while approach and avoid valences related to performance goal orientations did not constitute distinct dimensions.

Following reliability testing, MANOVA was used to assess the impact of high-stakes testing status on teacher achievement goal orientations, while HMR analyses were used to examine the relationship among teacher achievement goal orientations and AMO status, self-efficacy for teaching, and perceptions of help-seeking. Results indicate that teachers that teachers' achievement goal orientations are impacted by high-stakes testing and school accountability status, but that stress related to issues associated with high-stakes testing was a

stronger predictor of teacher achievement goal orientations. Additionally, school AMO status was predictive only of teachers' performance goal orientations (Class and Personal).

Results related to TAGO, self-efficacy for teaching, and help-seeking suggest the achievement goal orientation framework is a valid construct for operationalizing teacher motivation. Teaching self-efficacy was positively related to mastery orientation, and negatively related to personal and work-avoidance orientation. Mastery orientation predicted positive perceptions of teacher help-seeking, while work-avoidance orientation was associated with a preference for expedient help-seeking. These findings reflect those of Butler and her colleagues' (Butler, 2007; Buler & Shibaz, 2008; Retelsdorf et al, 2010).

The impact of high-stakes testing and school accountability policy on teachers' achievement goal orientations warrants further study. Additionally, as stress associated with high-stakes testing proved to be a significant predictor of teacher achievement goal orientation, future work should examine the possible negative impacts of stress on teacher motivation and related constructs, such as well-being and burnout. As evidenced by the results of this study, mastery orientation appears to be an adaptive goal orientation for teachers, as it relates positively to teaching self-efficacy and positive views of help-seeking. Conversely, personal performance orientation appears to be a maladaptive goal orientation, due to its negative relationship with self-efficacy. Future research should investigate other outcomes related to these orientations, as well as class performance orientation, such as classroom climate and student motivation and performance.

## References

- Abrams, L. M. (2004). *Teachers' views on high-stakes testing: Implications for the classroom*. (Report No. EPSL-0401-104-EPRU). Tempe, AZ: Education Policy Research Unit.
- Abrams, L. M., Pedulla, J. J., & Madaus, G. F. (2003). Views from the classroom: Teachers' opinions of statewide testing programs. *Theory into Practice*, 42(1), 19-29.
- American Statistical Association (2014). *ASA statement on using value-added models for educational assessment*. Retrieved from [www.amstat.org/policy/pdfs/ASA\\_VAM\\_Statement.pdf](http://www.amstat.org/policy/pdfs/ASA_VAM_Statement.pdf)
- Ames, C. (1992). Classrooms: Goals, structures, and student motivation. *Journal of Educational Psychology*, 84(3), 261-271.
- Ames, C. & Archer, J. (1988). Achievement goals in the classroom: Students' learning strategies and motivation processes. *Journal of Educational Psychology*, 80(3), 260-267.
- Amrein-Beardsley, A., Berliner, D. C., Rideau, S. (2010). Cheating in the first, second and third degree: Educators' responses to high-stakes testing. *Education Policy Analysis Archives*, 18(14), 1-36.
- Anderman, E. M. & Midgley, C. (1996, March). *Changes in achievement goal orientations after the transition to middle school*. Paper Presented at the Biennial Meeting of the Society for Research on Adolescence, Boston, MA.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191-215.
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, 37(2), 122-147.

- Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist*, 28(2), 117-148.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W. H. Freeman and Company.
- Barrett, B. D. (2009). No child left behind and the assault on teachers' professional practices and identities. *Teaching and Teacher Education*, 25, 1018-1025.
- Bembenutty, H. (2006). *Preservice teachers' help-seeking tendencies and self-regulation of learning*. A Paper Presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA.
- Berryhill, J., Linney, J. A., & Fromewick, J. (2009). The effects of education accountability on teachers: Are policies too stress provoking for their own good? *International Journal of Education Policy and Leadership*, 4(5), 1-14.
- Booher-Jennings, J. (2006). Rationing education in an era of accountability. *Phi Delta Kappan*, 87(10), 756-761.
- Butler, R. (1998). Determinants of help seeking: Relations between perceived reasons for classroom help-avoidance and help-seeking behaviors in an experimental context. *Journal of Educational Psychology*, 90(4), 630-643.
- Butler, R. (2007). Teachers' achievement goal orientations and associations with teachers' help seeking: Examination of a novel approach to teacher motivation. *Journal of Educational Psychology*, 99(2), 241-252.
- Butler, R. (2012). Striving to connect: Extending an achievement goal approach to teacher motivation to include relational goals for teaching. *Journal of Educational Psychology*, 104(3), 726-742.

- Butler, R. & Shibaz, L. (2008). Achievement goals for teaching as predictors of students' perceptions of instructional practices and students' help seeking and cheating. *Learning and Instruction*, 2008, 453-467.
- Cho, Y. & Shim, S. S. (2013). Predictive teachers' achievement goals for teaching: The role of perceived school goal structure and teachers' sense of efficacy. *Teaching and Teacher Education*, 32, 12-21.
- Church, M. A., Elliot, A. J., & Gable, S. L. (2001). Perceptions of classroom environment, achievement goals, and achievement outcomes. *Journal of Educational Psychology*, 93(1), 43-54.
- Ciani, K. D., Summers, J. J., & Easter, M. A. (2008). A "top-down" analysis of high school teacher motivation. *Contemporary Educational Psychology*, 33, 533-560.
- Cohen, J. (1992). Statistical power analysis. *Current Directions in Psychological Science*, 1(3), 98-101.
- Condie, S., Lefgren, L., & Sims, D. (2014). Teacher heterogeneity, value-added, and education policy. *Economics of Education Review*, 40, 76-92.
- Crocco, M. S. & Costigan, A. T. (2007). The narrowing of curriculum and pedagogy in the age of accountability: Urban educators speak out. *Urban Education*, 42(6), 512-535.
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16(3), 297-334.
- Cronbach, L. J. (1987). Statistical tests for moderator variables: Flaws in analyses recently proposed. *Psychological Bulletin*, 102(3), 414-417.

- Daniels, L. M. (2013). From pre-service to practicing teacher: Considering the stability of personal and classroom mastery and performance goals. *Educational Psychology: An International Journal of Experimental Educational Psychology*, 17, 1-22.
- Darling-Hammond, L. (2003). Keeping good teachers: Why it matters, what leaders can do. *Educational Leadership*, 60(8), 6-13.
- Darling-Hammond, L. (2007). Race, inequality, and educational accountability: The irony of 'No Child Left Behind.'. *Race Ethnicity and Education*, 10(3), 245-260.
- Dattalo, P. (2013). *Analysis of multiple dependent variables*. T. Tripodi (Ed.). Oxford: Oxford University Press.
- Dawson, H. S. (2012). *Teachers' motivational beliefs in a high-stakes testing context*. (Doctoral dissertation). Retrieved from Proquest UMI Dissertations Publishing (UMI number 3528045).
- Dawson, H. S. (2013). *Teacher perceptions of stress, self-efficacy, and high-stakes tests: Beliefs in context*. Paper Presented at the Annual Meeting of the American Psychological Association, Honolulu, HI.
- Deemer, S. (2004). Classroom goal orientation in high school classrooms: Revealing links between teacher beliefs and classroom environments. *Educational Research*, 46(1), 73-90.
- Desoff, A. (2011). High-stakes cheating. *District Administration Magazine*, April, 50-54.
- Dillman, D. A. (2009). *Internet, mail, and mixed-modes surveys: The tailored design method*. Hoboken: John Wiley and Sons, Inc.
- Donnelly, L. A. & Sadler, T. D. (2009). High school science teachers' views of standards and accountability. *Science Education Policy*, 93, 1050-1075.

- Dweck, C. S. & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review*, 95(2), 256-273.
- Elliot, A. J. (2005). A conceptual history of the achievement goal construct. In A. J. Elliot & C. S. Dweck (Ed.), *Handbook of competence and motivation* (pp. 52-72). New York: Guilford Press.
- Elliot, A. J. & McGregor, H. A. (2001). A 2x2 achievement goal framework. *Journal of Personality and Social Psychology*, 80(3), 501-519.
- Elliot, A. J., & Harackiewicz, J. M. (1996). Approach and avoidance achievement goals and intrinsic motivation: A mediational analysis. *Journal of Personality and Social Psychology*, 70, 461-475.
- Elliot, E. S. & Dweck, C. S. (1988). Goals: An approach to motivation and achievement. *Journal of Personality and Social Psychology*, 54(1), 5-12.
- Eren, A. (2009). Examining teacher efficacy and achievement goals as predictors of Turkish student teachers' conceptions about teaching and learning. *Australian Journal of Teacher Education*, 34(1), 69-87.
- Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G\*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, 39(2), 175-191.
- Field, A. (2009). *Discovering statistics using SPSS*. (3rd ed.). London: Sage.
- Finnigan, K. S. (2010). Principal leadership and teacher motivation under high-stakes accountability policies. *Leadership and Policy in Schools*, 9, 161-189.

- Finnigan, K. S. & Gross, B. (2007). Do accountability sanctions influence teacher motivation? Lessons from Chicago's low-performing schools. *American Educational Research Journal*, 44(3), 594-629.
- Fives, H. & Buehl, M. M. (2010). Examining the factor structure of the teachers' sense of efficacy scale. *The Journal of Experimental Education*, 78, 118-134.
- Freidman, I. A. & Kass, E. (2002). Teacher self-efficacy: A classroom-organization conceptualization. *Teaching and Teacher Education*, 18, 675-686.
- Gilman, R. & Gabriel, S. (2004). Perceptions of school psychological services by education professionals: Results from a multi-site survey pilot study. *School Psychology Review*, 33(2), 271-286.
- Goddard, R. D. & Goddard, Y. L. (2001). A multilevel analysis of the relationship between teacher and collective efficacy in urban schools. *Teaching and Teacher Education*, 17(807-818)
- Goddard, R. D., Hoy, W. K., & Woolfolk Hoy, A. (2000). Collective teacher efficacy: Its meaning, measure, and impact on student achievement. *American Educational Research Journal*, 37(2), 479-507.
- Groves, R. M., Fowler, F. J., Couper, M., P., Lepkowski, J. M., Singer, E., & Tourangeau, R. (2009). *Survey methodology* (2nd ed.). Hoboken: John Wiley and Sons, Inc.
- Harackiewicz, J. M. & Elliot, A. J. (1993). Achievement goals and intrinsic motivation. *Journal of Personality and Social Psychology*, 65(5), 904-915.
- Harris, D. N., Ingle, W. K., & Rutledge, S. A. (2014). How teacher evaluation methods matter for accountability: A comparative analysis of teacher effectiveness ratings by principal



- and teacher value-added measures. *American Educational Research Journal*, 51(1), 73-112.
- Hill, H. C., Kapitula, L., & Umland, K. (2011). A validity argument approach to evaluation teacher value-added scores. *American Educational Research Journal*, 48(3), 794-831.
- Horton, N. J. & Lipsitz, S. R. (2001). Multiple imputation in practice: Comparison of software packages for regression models with missing variables. *The American Statistician*, 55(3), 244-254.
- Huberty, C. J. (2002). A history of effect size indices. *Educational and Psychological Measurement*, 62(2), 227-240.
- Hulleman, C. S., Schrager, S. M., Bodmann, S. M., & Harackiewicz, J. M. (2010). A meta-analytic review of achievement goal measures: Different labels for the same constructs or different constructs with similar labels? *Psychological Bulletin*, 136(3), 422-449.
- Hursh, D. (2007). Exacerbating inequality: The failed promise of the No Child Left Behind Act. *Race, Ethnicity, and Education*, 10(3), 295-308.
- Jones, B. (2004). Voices from the frontlines: Teachers' perceptions of high-stakes testing. *Education Policy Analysis Archives*, 12(39), 2-34.
- Jones, B. D. & Egle, R. J. (2006). Looking through different lenses: Teachers' and administrator's views of accountability. *Phi Delta Kappan*, 87(10), 767-771.
- Karabenick, S. A. (2004). Perceived achievement goal structure and college student help seeking. *Journal of Educational Psychology*, 96(3), 569-581.
- Klassen, R. M. (2010). Teacher stress: The mediating role of collective efficacy beliefs. *Journal of Educational Research*, 103(5), 342-350.

- Klassen, R. M. & Chiu, S. (2010). Effects on teachers' self-efficacy and job satisfaction: Teacher gender, years of experience, and job stress. *Journal of Educational Psychology*, 102(3), 741-756.
- Klassen, R. M., Bong, M., Usher, E. L., Chong, W. H., Huan, V. S. Wong, I. Y. F., & Georgiou, T. (2009). Exploring the validity of a teachers' self-efficacy scale in five countries. *Contemporary Educational Psychology*, 34, 67-76.
- Klassen, R. M., Tze, V. C., Betts, S. M., & Gordon, K. A. (2011). Teacher efficacy research 1998-2009: Signs of progress or unfulfilled promises? *Educational Psychology Review*, 23, 21-43.
- Klassen, R. M., Usher, E. L., & Bong, M. (2010). Teachers' collective efficacy, job satisfaction, and job stress in a cross-cultural conflict. *The Journal of Experimental Education*, 78(4), 464-486.
- Klassen, R. M., Wilson, E., Siu, A. F., Hannock, W., Wong, M. W., Wongsri, N.,...Jansem, A. (2013). Pre-service teachers' work stress, self-efficacy, and occupational commitment in four countries. *European Journal of Psychology of Education*, 28(4), 1289-1309.
- Koestner, R., Zuckerman, M., & Koestner, J. (1989). Attributional focus of praise and children's intrinsic motivation: The moderating role of gender. *Personality and Social Psychology Bulletin*, 15(1), 61-72.
- Koretz, D. (2008). *Measuring up: What educational testing really tells us*. Cambridge: President and Fellows of Harvard College.
- Kumar, R. (2006). Students' experiences of home-school dissonance: The role of school academic culture and perceptions of classroom goal structure. *Contemporary Educational Psychology*, 31(3), 253-279.

- Linnenbrink, E. (2005). The dilemma of performance-approach goals: The use of multiple goal contexts to promote students' motivation and learning. *Journal of Educational Psychology, 97*(2), 197-213.
- Maehr, M. L. & Zusho, A. (2009). Achievement goal theory: The past, present, and future. In K. Wentzel & A. Wingfield (Ed.), *Handbook of motivation at school* (pp. 77-104). New York: Routledge.
- Malmberg, L. (2006). Goal-orientation and teacher motivation among teacher applicants and student teachers. *Teaching and Teacher Education, 22*, 58-76.
- Malmberg, L. (2008). Student teachers' achievement goal orientations during teacher studies: Antecedents, correlates and outcomes. *Learning and Instruction, 18*, 438-452.
- McCaffrey, D. F., Lockwood, J. R., Koretz, D., Louis, T. A., & Hamilton, L. (2004). Let's see more empirical studies on value-added modeling of teacher effects: A reply to Raudenbush, Rubin, Stuart and Zanutto, and Reckase. *Journal of Educational and Behavioral Statistics, 29*(1), 139-143.
- McCarthy, S. J. (2008). The impact of no child left behind on teachers' writing instruction. *Written Communication, 25*(4), 462-505.
- McMurrer, J. & Yoshioka, N. (March, 2013). States' perspectives on waivers: Relief from NCLB, concern about long-term solutions. Center on Education Policy. Retrieved from <http://www.cep-dc.org/displayDocument.cfm?DocumentID=418>
- Messick, S. (1995). Validity of psychological assessment. *American Psychologist, 50*, 741-749.
- Midgley, C. Kaplan, A., Middleton, M., Maehr, M. L., Urdan, T., Anderman, L. H.,...Roeser, R. (1998). The development and validation of scales assessing students' achievement goal orientations. *Contemporary Educational Psychology, 23*, 113-131.

- Miller, A. D. & Murdock, T. B. (2007). Modeling latent true scores to determine the utility of aggregate student perceptions as classroom indicators in HLM: The case of classroom goal structures. *Contemporary Educational Psychology*, 32, 83-104.
- Nachtigall, C., Kroehne, U., Funke, F., & Steyer, R. (2003). (Why) should we use SEM? Pros and cons of structural equation modeling. *Methods of Psychological Research Online*, 8(2), 1-22.
- New Mexico Public Education Department (2012). *Effective use of student test data to assess and improve teacher evaluation* (PED Report #12-21). Santa Fe, NM: Legislative Finance Committee.
- Newman, R. S. (1990). Children's help-seeking in the classroom: The role of motivational factors and attitudes. *Journal of Educational Psychology*, 82(1), 71-80.
- Newman, R. S. (1998). Students' help seeking during problem solving: Influences of personal and contextual achievement goals. *Journal of Educational Psychology*, 90(4), 644-658.
- Nichols, S. L. & Berliner, D. C. (2005). *The inevitable corruption of indicators and educators through high-stakes testing*. (Report No. EPSL-0503-101-EPRU). Tempe, AZ: Education Policy Research Unit.
- Nitsche, S., Dickhauser, O., Fasching, M. S., Dresel, M. (2013). Teachers' professional goal orientations: Importance for further training and sick leave. *Learning and Individual Differences*, 23, 272--278.
- Nitsche, S., Dickhauser, O., Fasching, M., Dresel, M. (2011). Rethinking teachers' goal orientations: Conceptual and methodological enhancements. *Learning and Instruction*, 21, 574-586.

- Olson, C. L. (1976). On choosing a test statistic in multivariate analysis of variance. *Psychological Bulletin*, 83(4), 579-586.
- Olson, C. L. (1986). Practical considerations in choosing a MANOVA test statistic: A rejoinder to Stevens. *Psychological Bulletin*, 6(1350-1352)
- Pajares, F. (1996). Self-efficacy beliefs in academic settings. *Review of Educational Research*, 66(4), 543-578.
- Papaioannou, A. & Christodoulidis, T. (2007). A measure of teachers' achievement goals. *Educational Psychology*, 3, 349-361.
- Papay, J. P. (2011). Different tests, different answers: The stability of teacher value-added estimates across outcome measures. *American Educational Research Journal*, 48(1), 163-193.
- Parker, P D., Martin, A. J., Colmar, S., & Liem, G. A. (2012). Teachers' workplace well-being: Exploring a process model of goal orientation, coping behavior, engagement, and burnout. *Teaching and Teacher Education*, 28, 503-513.
- Patrician, P. (2002). Multiple imputation for missing data. *Research in Nursing and Health*, 25, 76-84.
- Payne, S. C., Youngcourt, S. S., & Beaubien, J. M. (2007). A meta-analytic examination of the goal orientation nomological net. *Journal of Applied Psychology*, 92(1), 128-130.
- Pedulla, J., Abrams, L. M., Madaus, G., Russell, M., Ramos, M., & Miao, J. (2003). *Perceived effects of state-mandated testing programs on teaching and learning: Findings from a national survey of teachers*. Chestnut Hill, MA: Center for the Study of Testing, Evaluation, and Educational Policy, Boston College.

- Pintrich, P. R. (2000). Multiple goals, multiple pathways: The role of goal orientation in learning and achievement. *Journal of Educational Psychology*, 92(3), 544-555.
- Pintrich, P. R., Smith, D. A. F., Garcia, T., & McKeachie, W. J. (1991). *A Manual for the Use of the Motivated Strategies for Learning Questionnaire*. Washington, DC: Office of Educational Research and Improvement.
- Retelsdorf, J. & Gunther, G. (2011). Achievement goals for teaching and teachers' reference norms: Relations with instructional practices. *Teaching and Teacher Education*, 27, 1111-1119.
- Retelsdorf, J., Butler, R., Streblow, L., & Schiefele, U. (2010). Teachers' goal orientations for teaching: Associations with instructional practices, interest in teaching, and burnout. *Review of Educational Research*, 20, 30-46.
- Robins, R. W. & Pals, J. L. (2002). Implicit self-theories in the academic domain: Implications for goal orientation, attributions, affect, and self-esteem change. *Self and Identity*, 1(4), 313-336.
- Roussel, P, Elliot, A. J., & Feltman, R. (2011). The influence of achievement goals and social goals on help-seeking from peers in an academic context. *Learning and Instruction*, 21(3), 394-402.
- Runhaar, P., Sanders, K., & Yang, H. (2010). Stimulating teachers' reflection and feedback asking: An interplay of self-efficacy, learning goal orientation, and transformational leadership. *Teaching and Teacher Education*, (1154-1161)
- Rustique-Forrester, E. (2005). Accountability and the pressures to exclude: A cautionary tale from England. *Education Policy Analysis Archives*, 13(26), 2-41.

- Ryan, A. M. & Shim, H. (2011). Help-seeking tendencies during early adolescence: An examination of motivational correlates and consequences for achievement. *Learning and Instruction, 21*, 247-256.
- Ryan, A. M., Gheen, M. H., & Midgley, C. (1998). Why do some students avoid asking for help? An examination of the interplay among students' academic efficacy, teachers' social-emotional role, and the classroom goal structure. *Journal of Educational Psychology, 90*(3), 528-535.
- Ryan, A. M., Hicks, L., & Midgley, C. (1998). Social goals, academic goals, and avoiding help seeking in the classroom. *Journal of Early Adolescence, 17*(2), 152-171.
- Sass, D. A., Flores, D. B., Claeys, L., & Perez, B. (2012). Identifying personal and contextual factors that contribute to attrition rates for Texas public schools teachers. *Education Policy Analysis Archives, 20*(15), 1-25.
- Sass, T. R., Semykina, A., & Harris, D. N. (2014). Value-added models and the measure of teacher productivity. *Economics of Education Review, 38*, 9-23).
- Schafer, J. L. & Olsen, M. K. (1998). Multiple imputation for multivariate missing-data problems: A data analyst's perspective. *Multivariate Behavioral Research, 33*(4), 545-571.
- Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and Quasi-Experimental Designs for Generalized Causal Inference*. Boston: Houghton Mifflin
- Shannon, G.S. & Bylsma, P. (2007). *The Nine Characteristics of High-Performing Schools: A Research-Based Resource for Schools and Districts to Assist with Improving Student Learning, (2ndEd.)*. Olympia, WA: OSPI

- Shim, S. S., Cho, Y., & Cassady, J. (2013). Goal structures: The role of teachers' achievement goals and theories of intelligence. *The Journal of Experimental Education*, 81(1), 84-104.
- Skaalvik, E. M. & Skaalvik, S. (2007). Dimensions of teacher self-efficacy and relations with strain factors, perceived collective efficacy, and teacher burnout. *Journal of Educational Psychology*, 99(3), 611-625.
- Skaalvik, E. M. & Skaalvik, S. (2010). Teacher self-efficacy and burnout: A study of relations. *Teaching and Teacher Education*, 26, 1059-1069.
- Skaalvik, E. M. & Skaalvik, S. (2013). Teachers' perceptions of the school goal structure: Relations with teachers' goal orientations, work engagement, and job satisfaction. *International Journal of Educational Research*, 62, 199-209.
- Soodak, L. C. & Podell, D. M. (1996). Teacher efficacy: Toward the understanding of a multi-faceted construct. *Teaching and Teacher Education*, 12(4), 401-411.
- Tanaka, A., Murakami, Y., Okuno, T., & Yamauchi, H. (2002). Achievement goal, attitudes toward help seeking, and help-seeking behavior in the classroom. *Learning and Individual Differences*, 13, 23-35.
- Tschannen-Moran, M. & Woolfolk Hoy, A. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education*, 17, 783-805.
- Tschannen-Moran, M., Woolfolk Hoy, A., & Hoy, W. K. (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research*, 68(2), 202-248.
- Turner, A. B., Stemhagen, K., & Stringer, J. K. (2013). Caught between current realities and the hope of a better future: Teachers' perspectives on public schooling. *South Atlantic Philosophers of Education Yearbook*, 67-77.



- Turner, J. C., Gray, D. L., Anderman, L. H., Dawson, H. S., & Anderman, E. M. (2013). Getting to know my teacher: Does the relation between perceived mastery goal structures and perceived teacher support change across the school year? *Contemporary Educational Psychology*.
- Turner, J. C., Meyer, D. K., Midgley, C. & Patrick, H. (2003). Teacher discourse and sixth graders' reported affect and achievement behaviors in two high mastery/high performance mathematics classrooms. *The Elementary School Journal*, 103, 357-368.
- Tye, B. B. & O'Brien, L. (2002). The teacher shortage: Why are experienced teachers leaving the profession? *Phi Delta Kappan*, 84(1), 24-32.
- United States Census Bureau. (2013). *Virginia quick facts*. Retrieved September 8, 2013, from <http://quickfacts.census.gov/qfd/states/51000.html>
- Urdan, T. & Mestas, M. (2006). The goals behind performance goals. *Journal of Educational Psychology*, 98(2), 354-365.
- Urdan, T., Midgley, C., & Anderman, E. M. (1998). The role of classroom goal structure in students' use of self-handicapping strategies. *American Educational Research Journal*, 35(1), 101-122.
- Valli, L. & Buese, D. (2007). The changing roles of teachers in an era of high-stakes accountability. *American Educational Research Journal*, 44(3), 519-558.
- Virginia Department of Education (2012). ESEA Flexibility Request. United States Department of Education. Paper number 1810-070.
- Virginia Department of Education (2013). Accountability and Virginia Public Schools. Virginia Department of Education. Retrieved from [http://www.pen.k12.va.us/statistics\\_reports/school\\_report\\_card/accountability\\_guide.pdf](http://www.pen.k12.va.us/statistics_reports/school_report_card/accountability_guide.pdf)

- von der Embse, N. & Hasson, R. (2012). Test anxiety and high-stakes tests: Implications for educators. *Preventing School Failure, 56* (3), 180-187.
- White, C. S., Sturtevant, E. G., & Dunlap, K. L. (2002). Preservice and beginning teachers' perceptions of the influence of high-stakes tests on their literacy-related instructional beliefs and decisions. *Reading Research and Instruction, 42*(2), 39-62.
- White, M. C. (2011). Predicting success in teacher certification testing: The role of academic help seeking. *The International Journal of Educational and Psychological Assessment, 7*(1), 24-44.
- White, M. C. & Bembenuddy, H. (2013). Not all avoidance help seekers are created equal. *SAGE Open Access Journal, 3*(2), 1-14.
- Wolters, C. A. & Daugherty, S. G. (2007). Goal structures and teachers' sense of efficacy: Their relation and association to teaching experience and academic level. *Journal of Educational Psychology, 99*(1), 181-193.
- Zeigler, A., Dresel, M., & Stoeger, H. (2008). Addressees of performance goals. *Journal of Educational Psychology, 100*(3), 643-654.

## Appendix A

### Teacher Email

Dear Teachers:

My name is Amanda Turner. I'm a Ph.D. Candidate at Virginia Commonwealth University. You are receiving this email because you are a teacher employed in a public elementary school in Virginia, and I would love to talk with you.

There have been many public debates by politicians, the media, and education professionals about high stakes testing and its effect on student motivation, but few have discussed the impact high stakes testing may have on teachers. I am interested in how such testing and accountability policies affect teacher motivation. I want you to have a voice to express your beliefs and feelings about testing and your own motivation for teaching.

To this end, I am conducting a survey to examine teachers' motivation for their teaching practices, as well as the impact of accountability and high-stakes testing policies on teachers' motivation. As an educator, you can provide valuable insight into the impact of high stakes testing on teacher motivation and beliefs. You are being asked to participate in a brief survey designed to examine these issues.

The survey is available online through this link: . The survey will take approximately 10-20 minutes to complete, and participation is voluntary. Your answers will remain anonymous, and will not be shared with colleagues, administrators, or other school district personnel. No personal information will be collected, and only group data will be reported. Your responses to survey items will serve as the basis of dissertation research focusing on teacher motivation. If you agree to participate, you may choose not to answer any given questions, and you may withdraw your consent and discontinue your participation at any time.

If you have any questions or concerns about the nature of this study, feel free to contact either myself, Amanda Turner, or my advisor, Dr. Heather Dawson, at Virginia Commonwealth University School of Education Foundations department at (804) 828-1332. Thank you for your time and cooperation!

Sincerely,

*Amanda B. Turner*  
**Ph.D. Candidate**  
Educational Psychology  
Virginia Commonwealth University  
Foundations of Education  
1015 W. Main Street  
Richmond, Virginia 23284  
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## Appendix B

### Teacher Motivation Questionnaire

**Purpose:** The purpose of this study is to examine teacher motivation in the context of high-stakes testing and accountability. You are asked to be in this study because you are an elementary teacher in a public school system in Virginia.

**Description of your involvement:** If you agree to be part of this study, you will be asked to complete an online survey of your perceptions of high-stakes testing and your goals and motivation for teaching. You will spend approximately 10-20 minutes completing the questionnaire at a place and time that is convenient for you.

**Risks and discomforts:** There are no known risks related with your participation in this study.

**Benefits to you and others:** Your participation can provide teachers, administrators, policy-makers, and researchers with information about the impact of educational policy on teachers, which can be used to develop policies that benefit teachers and students.

**Costs and compensation:** There are no costs for participating in this study other than the time you will spend completing the online survey. No compensation will be offered for participation in this study, but participants may enter a drawing to win a \$50 Amazon gift card by emailing XXXX@gmail.com with your email address. A random drawing of emails received at this account will be conducted upon completion of data collection. The winning email will be entered into Amazon.com, which will then generate an email with the gift card. In this way, no identifying information other than your email address will be provided through the drawing.

**Alternatives:** The alternative to participating in this study is to not participate in this study.

**Confidentiality:** No personally identifying information (e.g., names) will be collected in this study. Only the lead researcher will have access to data collected as part of this survey. Electronic data files will be secured using password protection and encryption. The information may be published in scientific journals or presented at professional meetings, but the data will not identify any individual.

**Voluntary participation and withdrawal:** Your participation in this study is your choice. You are free to decide not to participate at any time without penalty. You may also choose not to answer particular questions that are asked in the study. Your decision to participate or not to participate will not affect your relationship with your school, district, or Virginia Commonwealth University.

**Questions:** You may have questions about your participation in this study. If you have any questions, complaints, or concerns about this research, contact Amanda Turner at

turnerab3@vcu.edu or 804-828-1332. If you have any questions about your rights as a participant in this study, you may contact the VCU Office of Research at 804.827.2157. You may also contact the VCU Office of Research for general questions, concerns, or complaints about this research. Please call this number if you cannot reach the lead researcher or wish to talk to someone else. Additional information about participation in research studies can be found at <http://www.research.vcu.edu/irb/volunteers.htm>.

Consent: By clicking the next button to enter the questionnaire, you are agreeing to participate in this study. You are also indicating that you have read and understood the consent form. Please print a copy of this consent page for your records if you so desire.

First, the following question asks about your years of experience:

How many years have you been teaching?

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7
- ☐ 8
- ☐ 9
- ☐ 10
- ☐ 11
- ☐ 12
- ☐ 13
- ☐ 14
- ☐ 15
- ☐ 16
- ☐ 17
- ☐ 18
- ☐ 19
- ☐ 20
- ☐ 21
- ☐ 22
- ☐ 23
- ☐ 24
- ☐ 25
- ☐ 26
- ☐ 27
- ☐ 28
- ☐ 29
- ☐ 30 or more

Next, the following question asks you about the Virginia Standards of Learning exams and your school's typical performance.

How does your school typically perform on Virginia Standards of Learning (SOL) exams?

- ☐ My school always meets acceptable pass rates each year (e.g., is "high-performing" or a "reward school").
- ☐ My school meets acceptable pass rates for most subjects each year (e.g., usually meets AMO).
- ☐ My school often does not meet acceptable pass rates in two or more subjects each year (e.g., is a "focus" or "priority" school).
- ☐ My school has not met acceptable pass rates for multiple years and is closing.
- ☐ My students are not required to take the SOL tests.

The following questions ask about your perception of high-stakes testing and the impact of these tests on your school.

In my school...

In my school...	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I feel pressure to improve standardized test scores.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This causes me stress.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tested content areas are often treated as more important than non-tested content areas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This causes me stress.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel pressured to make sure that my students pass the test.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This causes me stress.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is increased pressure in the weeks leading up to the test.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This causes me stress.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Using practice standardized tests is common.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This causes me stress.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is pressure to maintain or improve our image to the public.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This causes me stress.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is a sense of relief when the test is over.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This causes me stress.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tensions rise as testing time approaches.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This causes me stress.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The following questions ask about your goals for teaching.

In my vocation, I aspire...

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
... to get new ideas on how to convey knowledge in my subject.	( )	( )	( )	( )	( )
...to demonstrate to my colleagues that I know more than other teachers.	( )	( )	( )	( )	( )
...to conceal from my colleagues when I have more trouble meeting job demands than other teachers.	( )	( )	( )	( )	( )
...to avoid planning new lessons.	( )	( )	( )	( )	( )
...to understand how to best transfer knowledge in my subject.	( )	( )	( )	( )	( )
...to demonstrate to my colleagues that I teach better than other teachers.	( )	( )	( )	( )	( )
...to conceal from my principal when I have more trouble meeting job demands than other teachers.	( )	( )	( )	( )	( )
...to improve my pedagogical knowledge and competence.	( )	( )	( )	( )	( )
...to demonstrate to my principal that I know more than other teachers.	( )	( )	( )	( )	( )
...to avoid showing low teaching ability.	( )	( )	( )	( )	( )
...to not have to work too hard.	( )	( )	( )	( )	( )
...to improve my content knowledge and experience.	( )	( )	( )	( )	( )
...to demonstrate to my principal that I teach better than other teachers.	( )	( )	( )	( )	( )
...to keep my students from asking hard questions.	( )	( )	( )	( )	( )
...to increasingly deal better with critical class situations.	( )	( )	( )	( )	( )
...to be praised for high teaching ability.	( )	( )	( )	( )	( )
...for my class not to score worse than other classes.	( )	( )	( )	( )	( )
...to avoid grading.	( )	( )	( )	( )	( )
...to learn something new about myself.	( )	( )	( )	( )	( )
...for my classes to score higher than others.	( )	( )	( )	( )	( )
...for my class not to be farthest behind.	( )	( )	( )	( )	( )
...to want to learn more.	( )	( )	( )	( )	( )
...to be one of the best teachers in my school.	( )	( )	( )	( )	( )
...to get through the day with little effort.	( )	( )	( )	( )	( )
...for my students' questions to make me think.	( )	( )	( )	( )	( )
...to plan the best lessons.	( )	( )	( )	( )	( )



The following questions ask about your ability to complete teaching-related tasks.

For these items, consider the combination of your current ability, resources, and opportunity.

	I can do nothing	I can do a little	I can do some	I can do much	I can do a lot
To what extent can you craft good questions for your students?	( )	( )	( )	( )	( )
To what extent can you use a variety of assessment strategies?	( )	( )	( )	( )	( )
To what extent can you provide an alternative explanation or example when students are confused?	( )	( )	( )	( )	( )
How well can you implement alternative teaching strategies in your classroom?	( )	( )	( )	( )	( )
How much can you do to control disruptive behavior in the classroom?	( )	( )	( )	( )	( )
How much can you do to calm a student who is disruptive and noisy?	( )	( )	( )	( )	( )
How much can you do to get children to follow classroom rules?	( )	( )	( )	( )	( )
How well can you establish a classroom management system with each group of students?	( )	( )	( )	( )	( )
How much can you do to motivate students who show low interest in school work?	( )	( )	( )	( )	( )
How much can you do to help your students value learning?	( )	( )	( )	( )	( )
How much can you do to get students to believe they can do well in school work?	( )	( )	( )	( )	( )
How much can you assist families in helping their children do well in school?	( )	( )	( )	( )	( )

**Almost done! Thank you for your patience.**

The following questions ask about your perceptions of seeking help for teaching-related tasks.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Asking for help with problems is a good way to learn.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Getting expert advice helps one become a better teacher.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seeking help is a way to acquire new knowledge and skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is embarrassing to show that I am having difficulty by asking for help.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is better not to show you are having a problem.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is better to ask for help than to continue having difficulty.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Asking for help can lead to more work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Asking for help is worthwhile if it saves effort and bother.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Asking for help is okay if people provide a solution.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Is there anything else you would like to share about accountability, high-stakes testing, your motivation for teaching, or teaching in general?

And finally, a little about you...

What is your gender?

- ☐ Male
- ☐ Female
- ☐ Other

Please choose the ethnicity with which you most closely identify.

- ☐ White alone
- ☐ Black or African American alone
- ☐ American Indian or Alaska Native alone
- ☐ Asian alone
- ☐ Native Hawaiian or Other Pacific Islander alone
- ☐ Hispanic or Latino
- ☐ Two or More Races

Please indicate your highest level of education.

- ☐ Bachelor's
- ☐ Master's
- ☐ Doctorate (PhD or EdD)
- ☐ Post-Graduate Certificate (e.g., reading specialist)
- ☐ Other

What is the primary grade level you currently teach?

- ☐ Pre-Kindergarten
- ☐ Kindergarten
- ☐ First
- ☐ Second
- ☐ Third
- ☐ Fourth
- ☐ Fifth
- ☐ Other

What subjects do you currently teach?

- ☐ Math
- ☐ English/Language Arts
- ☐ Science
- ☐ Social Studies
- ☐ Physical Education
- ☐ Art
- ☐ Music
- ☐ Special Education

What is your school **district**?

*Thank You!*

Thank you for taking this survey. Your response is very important.