Achievement Goal Theory, Conceptualization of Ability/ Intelligence, and Classroom Climate

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Abstract

In this chapter, we examine relations between achievement goal theory and student engagement. Achievement goal theorists generally examine two types of goals (mastery and performance goals), each of which has been conceptualized as having both approach and avoid components. After reviewing the history and development of achievement goal theory and describing the current four-factor model, we examine correlates of achievement goal orientations; these include students' beliefs about intelligence, academic achievement, and engagement (cognitive, emotional, and behavioral). We then review research on classroom goal structures; we specifically examine how classroom contexts, as conceptualized through goal orientation theory, are related to student engagement. We also review instructional practices that are related to both mastery and performance goal structures and how those practices are related to academic achievement.

Achievement goal theory is a framework that is used to explain and study academic motivation. The theory became particularly prominent during the 1980s and 1990s and has emerged as one of the most accepted and supported theories in the field of educational psychology (Elliot, 1999;

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Maehr & Zusho, 2009). Currently, achievement goal theory informs both educational research and classroom practice, given its strong empirical support. Relevant to the present chapter, achievement goal theory has been, and continues to be, a predominant perspective used to understand students' engagement in academics.

In the present chapter, we review many aspects of achievement goal theory. In addition to describing the theory and its relation to valued educational outcomes, we also argue that achievement goal theory is related in important ways to student engagement. Although the constructs utilized by achievement goal theorists differ from the constructs used by researchers who study

engagement, there is much overlap. We believe that a more thorough examination and possible integration of research conducted by achievement goal theorists and by engagement researchers will lead to a broader and more conceptually useful understanding of academic motivation.

The Basic Tenets of Achievement Goal Theory

Achievement goal theory has a rich history within the field of motivation. This history includes both the original development of the theory, as well as more recent subtle changes in the ways in which goal theory constructs are operationalized. These changes are reflected in research examining correlates of achievement goal orientations; indeed, as measurement of goal orientations has changed over time, results of research examining the relations of goal orientations to other outcomes also have evolved.

Historical Development of Achievement Goal Theory

The study of achievement goal orientations formally began in the late 1970s, although many aspects of the theory can be traced back to much earlier conceptions of achievement motivation. Researchers at the University of Illinois were particularly prominent in early developments of the theory. In particular, Martin Maehr, Carole Ames, John Nicholls, and Carol Dweck all were influential in early work on goal orientation theory.

As we will review in this chapter, the theory has developed and changed in quite remarkable ways during the past three decades. The theory, which was originally conceptualized in terms of two types of goal orientations, has blossomed into a robust theoretical framework that now includes the original conceptions of goal orientations, as well as numerous additional distinctions between subtypes. Originally, the theory focused predominantly on students' personal goal orientations (i.e., the reasons that students give for engaging personally in specific tasks). Researchers

identified two types—"mastery" (i.e., a focus on understanding and personal improvement) and "performance" (i.e., a focus on outperforming others), although different researchers used different names. There was also some consideration, however, of students' perceptions of what is emphasized in their classrooms or schools in terms of reasons for engaging in schoolwork and the meaning of success (i.e., classroom goal structures; Ames, 1984). Although personal goal orientations continue to receive most attention, consideration of classroom goal structures has become more prevalent, consistent with the greater attention to the role of social contexts in motivational research (Anderman & Anderman, 2000; Meece, Anderman, & Anderman, 2006; Midgley, 2002).

As we will review later, goal theorists also draw strongly from the approach/avoid distinctions often made in psychology (Elliot, 1999; Elliot & Covington, 2001). Approach and avoidance motivations are distinguished by whether or not behavior is directed by desirable (*approach*) or undesirable (*avoid*) potential outcomes. As research on achievement goal theory progressed over the past two decades, in particular, psychometric studies focusing on the measurement of goal orientations have drawn in significant ways from approach/avoid distinctions (Elliot & Harackiewicz, 1996).

In addition, numerous methodological developments over the past few decades have enhanced our understanding of achievement goal orientations. Whereas many of the original studies used survey methodology to examine students' personal goal orientations, later studies have included classroom observations, discourse analyses, multilevel models, experimental designs, and mixed-method approaches. These methodological advances have allowed motivation researchers to understand the nature of achievement goals more fully, as well as their many correlates.

Variations in Operationalizations of Goal Orientations

Personal goal orientations have been defined and operationalized differently by various researchers.

Although we use the terms "mastery" and "performance" to broadly characterize goal orientations, it is important to note that a variety of developments have occurred over the years. Maehr (1984) called his version of mastery goals "task goals," which he defined as focusing on (a) an individual's involvement with a specific task and (b) an individual's perceptions of his or her competence at the task. Maehr noted in particular that when individuals hold task goals, "social comparisons of performance are remote or are virtually nonexistent" (Maehr, 1984, p. 129). In contrast, Maehr defined "ego goals"—his version of performance goals—in terms of being able to exceed a standard of performance, particularly as related to the performance of other individuals. Interestingly, Maehr distinguished ego goals from "extrinsic goals," which he described as a separate class of goals that are related to earning rewards (e.g., money or a prize) that are not directly aligned with the reasons why an individual would engage with a given task in the first place.

Nicholls (1989) described students' goals as motivational orientations; he labeled the two dimensions as task orientation and ego orientation. The specific types of survey items that he and his colleagues developed to measure these orientations focused on whether students feel "pleased" when they accomplish certain tasks. For example, a student with a high task orientation is a student who feels pleased when he or she works hard, tries hard, and understands the material. In contrast, a student with a high ego orientation feels pleased when he or she feels superior to others and beats others (Nicholls, Cobb, Wood, Yackel, & Patashnick, 1990). In contrast, Ames' (1987) descriptions of goal orientations were influenced by earlier work by Maehr and Nichols. She described task-oriented students as those who "are interested in developing their ability and gaining mastery," and ego-oriented students as those who "want to demonstrate that they have ability" (Ames, 1987, p. 127).

Dweck and her colleagues distinguished between learning (analogous to mastery) and performance goals and argued that learners frame their responses to and interpretations of events based on these goals (Dweck & Leggett, 1988; Elliott & Dweck, 1988). Learning goals are described as goals "in which individuals are concerned with increasing their competence," whereas performance goals are described as goals "in which individuals are concerned with gaining favorable judgments of their competence" (Dweck & Leggett, 1988, p. 256).

In summary, although a variety of terms have been used to describe these two broad classes of goals, we have chosen to refer to these goals as "mastery" and "performance" goals for the remainder of this chapter. All of the various definitions suggest that when students pursue mastery goals, they are interested in truly mastering the task, they are concerned with gaining competence, and they are willing and eager to exert effort in order to achieve mastery. In contrast, when students pursue performance goals, they are interested in demonstrating their ability relative to others, in outperforming others, and in being judged by others as being competent at academic tasks.

Current Four-Factor Model of Achievement Goal Theory

The mastery/performance distinction has been studied by many researchers, for many years (see Anderman & Wolters, 2006; Urdan, 1997, for reviews). However, in the mid-1990s, several researchers argued that the distinction between approach and avoid orientations also should be considered within a goal orientation framework. Elliot and Harackiewicz (1996) noted that some of the early work by achievement goal researchers such as Dweck and Nicholls did distinguish between approach and avoid forms of performance goals, but these distinctions were lost in later definitions.

A trichotomous framework for achievement goals suggests that in addition to mastery goals, a distinction should be made between performance-approach and performance-avoid goals (Elliot, 1999). Elliot and Harackiewicz (1996) initially conducted experiments in which participants were asked to solve puzzles using mastery goals, performance-approach goals, and performance-avoid

goals. Participants in the performance-approach condition were informed that students who solve the puzzles more successfully than other students at the same university "have good puzzle solving ability" (p. 468); in contrast, students in the performance-avoid condition were told that if they solved fewer puzzles than others, they would demonstrate that they "have poor puzzle solving ability" (p. 468). Results indicated that participants in the performance-avoid condition displayed lower intrinsic motivation toward the puzzles than those in the performance-approach condition.

Midgley and her colleagues developed a widely used measure of achievement goals, the *Patterns of Adaptive Learning Survey* (PALS) (Midgley et al., 2000). Initially, separate measures of performance-approach and performance-avoid goal orientations were developed (Middleton & Midgley, 1997). Using a large sample of middle school students, Middleton and Midgley demonstrated that performance goals could be separated into performance-approach and performance-avoid goal orientations. They operationalized performance-approach goals in terms of students (a) wanting to do better than other students in their class and (b) wanting to demonstrate that they are more competent than others; in contrast, performance-avoid goals were operationalized in terms of wanting to avoid appearing incompetent or "dumb." Skaalvik (1997) also examined different types of performance goals. Specifically, using a sample of Norwegian sixth and eighth grade students, Skaalvik developed a measure of self-enhancing ego orientation (similar to a performance-approach goal orientation) and a measure of a self-defeating ego orientation (similar to a performance-avoid goal orientation).

The approach/avoid distinction was also applied to mastery goal orientation, resulting in a 2×2 framework for achievement goals (Elliot & McGregor, 2001). In this model, mastery goals are broken down into mastery-approach and mastery-avoid goals, matching the separation of performance-approach and performance-avoid goals. The new addition to the model was the mastery-avoid construct. A student who endorses mastery-avoid goals wants to avoid misunderstanding or losing a sense of competence. The 2×2 model has been supported in both North American (Conroy, Elliot, & Hofer, 2003) and international samples (Bong, 2009).

Currently, goal orientation theorists generally support the 2×2 model. Nevertheless, the validity of mastery-avoid goals has been questioned (e.g., Sideridis & Mouratidis, 2008). Specifically, some researchers question whether individuals actually think about mastery-avoid goals in real-life situations. Ciani and Sheldon (2010) conducted a qualitative study in which they interviewed Division I college baseball players about their endorsement of mastery-avoid goals while playing baseball. Although players endorsed both high and low levels of mastery-avoid goals, when players who endorsed mastery-avoid goals were probed about these beliefs, results suggested that the players actually were referring to mastery-approach goals in many cases. Ciani and Sheldon suggested that one of the reasons for this may be that it is difficult to truly get study participants to understand the nuances of what a "mastery-avoid" goal is, using a survey instrument.

In addition, some research suggests some students may have difficulty distinguishing between performance-approach and performance-avoid goals. For example, Urdan and Mestas (2006) conducted an interview study with 53 high school seniors who all reported high levels of performance-avoid goals (as determined by responses to a survey). Students were probed about their responses to various survey items. Results indicated that students often did not easily distinguish between performance-approach and performance-avoid goals. In addition, students indicated that they pursue performance goals for a variety of different reasons (e.g., to look smart, to please parents, to look smart to one's peers, or simply because students enjoyed competition). Additional work on the measurement, interpretation, and predictive validity of mastery-avoid goal orientation will be an important area for future research.

Correlates of Goal Orientations

Much of the research conducted over the past two decades by achievement goal theorists has focused on relations between students' goal orientations and a variety of academic outcomes, including implicit beliefs about intelligence, academic achievement, and numerous aspects of engagement. In the following sections, we review the major findings of these studies.

Goal Orientations and Beliefs About Intelligence

Carol Dweck and her colleagues have examined students' beliefs about intelligence and how those beliefs are related to a variety of academic outcomes (Dweck, 2000). When students endorse an entity theory of intelligence, they believe that their intellectual abilities are fixed (i.e., generally unchangeable); in contrast, when students endorse an incremental view of intelligence, they believe that their intellectual abilities are malleable (Dweck & Leggett, 1988). Research generally indicates that incremental beliefs about intelligence are associated with a host of adaptive outcomes, including self-regulated learning (Dweck & Master, 2008), academic achievement (Blackwell, Trzesniewski, & Dweck, 2007), and the utilization of remedial (as opposed to defensive) strategies when self-esteem is threatened (Nussbaum & Dweck, 2008).

Beliefs about intelligence also have been examined in relation to goal orientations. Research generally indicates that when students believe that intelligence is incremental, they are likely to endorse mastery goals; in contrast, when students believe that intelligence is fixed and unchangeable, they are likely to adopt performance goals (Dweck & Leggett, 1988). Although a variety of studies have revealed similar relations between implicit theories of intelligence and goal orientations, some studies have failed to replicate these findings (e.g., Dupeyrat & Marine, 2005).

Goal Orientations and Academic Achievement

Academic achievement often is regarded as one of the most important educational outcomes. Researchers and practitioners have been particularly interested in the relations of goal orientations to achievement since academic achievement is greatly valued as an indicator of educational performance (Anderman, Anderman, Yough, & Gimbert, 2010; Hattie & Anderman, in press).

Relations between goal orientations and academic achievement are somewhat inconsistent. Although reasons are not clear, much depends on how student achievement is measured. Achievement can be measured in a variety of ways (e.g., scores on standardized tests, teacher-made tests, or teacher-assigned grades that may or may not include homework or conduct) and do not necessarily reflect students' real understanding. A mastery goal orientation, with its accompanying thoughtfulness and strategic effort, is only likely to be important if achievement tests require students to demonstrate deep understanding; if simple memorization is sufficient to score well, then a mastery goal orientation is not likely to be related differentially to test scores or grades. Furthermore, a very strong desire to outscore others may lead students to having inflated achievement scores through means such as cheating.

Mastery Goal Orientation

In a comprehensive study examining over 90 peer-reviewed articles that addressed the relations of achievement goals to academic achievement, Linnenbrink-Garcia, Tyson, and Patall (2008) reported that mastery goals appear sometimes to be beneficial for academic achievement, as expected theoretically. For example, Bong (2009) found positive correlations between upper elementary and middle school students' mastery-approach goals and math achievement. However, across studies, results are somewhat mixed; numerous studies have not shown the expected positive direct relations between mastery goals and achievement (Ames & Archer, 1988; Anderman & Johnston, 1998; Barron &

Harackiewicz, 2001; Daniels et al., 2009; Elliot & Church, 1997; Elliot & McGregor, 2001; Harackiewicz, Barron, Carter, Lehto, & Elliot, 1997; Pintrich, 2000a; Skaalvik, 1997).

In addition, results of several studies indicate that mastery goals are sometimes indirectly related to achievement. Specifically, mastery goals often are predictive of mediators, such as affect or certain types of behaviors, that are in turn related to achievement. Thus, students who endorse mastery goals are more likely to either engage in achievement-promoting behaviors or experience affect that is related to achievement. For example, in one study, adolescents who reported being mastery-oriented toward current events were more likely to engage in news-seeking behaviors outside of school; in turn, these behaviors were directly and positively predicted knowledge of current events (Anderman & Johnston, 1998). In another study, mastery orientation, although not directly predictive of achievement, was related inversely to indicators of negative affect (e.g., boredom, anxiety), which in turn were related to lower academic achievement (Daniels et al., 2009).

Performance Goal Orientation

The relations between performance-approach goals and academic achievement are fairly consistent for college students. In many studies, the adoption of performance-approach goals is related to high achievement (Church, Elliot, & Gable, 2001; Daniels et al., 2009; Elliot & Church, 1997; Elliot & McGregor, 2001; Elliot, McGregor, & Gable, 1999; Harackiewicz et al., 1997).

For younger students, a similar pattern is found in some studies, although relations at times are not as strong. For example, Bong (2009) reported a low (.19) correlation between performance-approach goals and achievement for students in middle school and lower elementary grades, but no relation for middle and upper elementary students. Wolters (2004) found a weak positive relation between performance-approach goals and math grades in middle school students. Some of these differential relations may at least in part be explained by how researchers operationalize goal orientations on survey instruments. When items

in goal measures are assessed differently, research results may vary (Hulleman, Schrager, Bodmann, & Harackiewicz, 2010).

Considering relations between performance-approach orientation and achievement for students as a whole may also mask possible differential relations depending on student characteristics. For example, there has been concern about the long-term outcomes for performance-approach oriented students who seem to do well in the short term (Midgley, Kaplan, & Middleton, 2001): What happens when these students move to a new, more competitive, or challenging environment (e.g., a larger school, a class with more advanced content or more high-achieving students)? One possibility is that students accustomed to outperforming others and being viewed that way by other people, but who are not confident about maintaining their rank, will move to an avoidance focus. This was what Middleton, Kaplan, and Midgley (2004) found. Specifically, sixth graders' performance-approach orientation predicted a performance-avoid orientation in seventh grade, but only for students with high self-efficacy in sixth grade. That is, students who were concerned with outscoring others and who felt confident of their abilities were more likely, as they progressed through middle school, to become more focused on protecting their image and not looking incompetent compared to other students. This is concerning, given the poor outcomes associated with a performance-avoid orientation.

Performance-avoid goal orientations are consistently and negatively related to achievement. These results have been documented for both college students (e.g., Elliot et al., 1999) and younger adolescents (e.g., Middleton & Midgley, 1997; Wolters, 2004).

Goal Orientations and Engagement

Since we use goal orientation theory as our framework for explaining motivation and engagement, it is important to distinguish how we are defining goal orientations and how we are defining engagement. As noted by Appleton, Christenson, and Furlong (2008), the phrase

"academic engagement" needs empirical and conceptual clarification; similar arguments have been made regarding the need for the clarification of terms in the motivation field in general (Murphy & Alexander, 2000) and within goal theory specifically (Pintrich, 2000b). For our review of the relations between goal orientations and engagement, we have adopted the model described by Fredricks, Blumenfeld, and Paris (2004). In that model, the construct of engagement is described as being multidimensional; specifically, engagement consists of behavioral, emotional, and cognitive forms of engagement. Cognitive engagement refers to learners' willingness to exert the necessary effort to understand and master complex phenomena; emotional engagement refers to learners' positive and negative affective reactions to aspects of schooling; and behavioral engagement refers to actual participation in specific activities that are related to achievement (Fredricks et al., 2004, p. 60). Specifically, the definitions of engagement provided by Fredricks and her colleagues imply that students are engaged while they are working on a specific task; thus, a student is cognitively engaged when he or she is exerting appropriate effort while completing a task; a student's emotional engagement with a task is operationalized in terms of her affective reactions to the task (while engaging with the task); and a student's behavioral engagement with the task is operationalized in terms of her actual behaviors during the task. Goal orientations, in contrast, are operationalized in terms of the goals that students have toward tasks *both prior to and during task participation*. Thus, in our conceptualization of the relations between goal orientations and engagement, the specific goal orientation that a student holds for a particular task will determine the quality of the student's engagement with the task (Ames, 1992a, 1992b). For example, when a student is highly mastery goal–oriented toward a particular task, the quality of cognitive, emotional, and behavioral engagement will likely be adaptive for learning (because the student's goal is task mastery, which requires high levels of engagement). Indeed, evidence from studies examining students' effective strategy usage and

goal orientations supports this since the adoption of mastery goals is related to more effective academic strategy usage (Graham & Golan, 1991; Nolen, 1988). In the following sections, we describe the relations of each type of engagement to goal orientations.

Cognitive Engagement

The types of goal orientations that students adopt are related to the kinds of cognitive and self-regulatory strategies they use when engaged with academic tasks. Results of numerous studies indicate that when students focus on mastery, they tend to be willing to think deeply and broadly about their academic work; they use effective learning and self-regulatory strategies, including monitoring their comprehension and thinking about how current academic tasks are related to previously learned information (e.g., Anderman & Young, 1994; Graham & Golan, 1991; Nolen & Haladyna, 1990; Pintrich & De Groot, 1990; Wolters, 2004). For example, Nolen (1988), in an early study, found that both general and task-specific mastery (task) goal orientations were related positively to middle students' use of both deep-processing strategies (e.g., figuring out how new information fits with prior knowledge, monitoring one's comprehension) and surface-level strategies (e.g., memorizing words, rehearsing information). More recent research with a large sample of South Korean adolescents, measuring both mastery-approach and mastery-avoid orientations, indicated that both were related positively to use of cognitive strategies (rehearsal, elaboration, and organizational strategies) and more adaptive self-regulation, although the associations with mastery-avoid goals were weaker (Bong, 2009).

The evidence for students holding a performance goal orientation is more mixed, although no study has identified positive links between performance-avoid goals and cognitive engagement. In Nolen's (1988) study, students' adoption of performance (ego) goals was either unrelated or negatively related to their use of deep-processing strategies and either unrelated or positively related to using surface-level strategies; approach and avoid orientations were not yet differentiated. Bong (2009) found that performance-approach

goals were related to greater use of cognitive strategies and more adaptive self-regulation, whereas performance-avoid goals were not. When students are focused on their relative performance and are busy thinking about ability differences, they simply may not have the cognitive resources to devote to the use of effective cognitive and self-regulatory strategies.

Emotional Engagement

Several researchers have examined the relations between goal orientations and various indicators of emotional engagement, such as affect and motivation. Results generally indicate that mastery goals are related to positive affect about school (e.g., Roeser, Midgley, & Urdan, 1996) and different aspects of motivation, such as intrinsic motivation, positive self-concept, and self-efficacy (e.g., Murayama & Elliot, 2009). However, the relations of performance goals to affect and motivation are somewhat mixed.

Daniels et al. (2009) examined the relations between emotions, goal orientations, and achievement in a large sample of college students. Results indicated that feelings of hopefulness were related positively to both mastery- and performance-approach goals, whereas feelings of helplessness were inversely related to mastery goals, but unrelated to performance goals. Skaalvik (1997) examined the relations between mastery (task) goals, self-defeating ego goals (i.e., performance-avoid goals), and self-enhancing ego goals (i.e., performance-approach goals), and several measures of affect. Results indicated that the adoption of mastery goals was related positively to self-esteem, and negatively to math anxiety. The adoption of performance-approach goals was related weakly and positively to self-esteem, and weakly and negatively to math anxiety. The adoption of performance-avoid goals was related negatively to self-esteem and positively to both math and verbal anxiety.

Recent research suggests that the achievement goals of early adolescents may be predicted by parental involvement and control (i.e., related to numerous aspects of students' lives, not just academics), as well as anxiety and depression during the elementary school years. In a recent study,

Duchesne and colleagues examined a longitudinal sample of 498 early adolescents (Duchesne & Ratelle, 2010). Students reported their perceptions of general parental involvement and control and completed measures of anxiety and depression at the end of the sixth grade in elementary school; students then reported their achievement goals during the following year, at the end of the first year of middle school (seventh grade). Results indicated that mastery goals were predicted by perceptions of parental involvement; however, anxiety mediated the relation between perceptions of parents as controlling and performance goals (combined approach and avoid). Specifically, students who perceived their parents as controlling experienced greater anxiety; anxiety in turn positively predicted performance goals.

Behavioral Engagement

The goal orientations that students adopt are also associated with a range of behaviors evident in the classroom. For example, a mastery orientation is associated with positive academic behaviors, such as expending effort (Miller, Greene, Montalvo, Ravindran, & Nichols, 1996), discussing schoolwork with other students (Patrick, Ryan, & Kaplan, 2007), engaging in relevant activities outside of school (Anderman & Johnston, 1998), and seeking help when needed (Ryan & Pintrich, 1997). Conversely, a performance orientation is related to avoiding seeking needed help (Ryan & Pintrich) and being disruptive during lessons (Ryan & Patrick, 2001).

Summary

Achievement goal theory has developed into a robust, empirically supported framework for examining student motivation. The types of goal orientations that students adopt are related in important ways to their achievement, affect, beliefs about the nature of intelligence, and cognitive/self-regulatory strategy use. Goal orientations also are related to cognitive, emotional, and behavioral engagement. Although goal orientations represent cognitions that are related to behavior, goals are influenced by the

social contexts in which students participate. In the next section, we examine the relations between social contexts and achievement goals.

Classroom Goal Structures

A particularly important aspect of achievement goal theory is its attention to the educational contexts within which students are, or are supposed to be, engaged. This is because, according to goal theory, students' motivation is influenced not only by their individual personal characteristics, beliefs, and achievement histories, but also by the contexts in which they learn. Within these environments, students' construals of what is valued in terms of schooling and what constitutes achievement and success influence their goal orientations and therefore play a significant role in affecting the nature and quality of engagement in learning tasks (Ames, 1992b; Maehr, 1984; Nicholls, 1989). We focus here on research within goal theory that addresses an especially critical and salient educational context—classrooms.

During the considerable amount of time students spend in classrooms, they construct meaning systems or schema about the purpose and meaning of schooling and academics from their experiences and perceptions of what is emphasized in the classroom. These perceptions of what is emphasized are termed *classroom goal structures* (Ames, 1984, 1992b). Specifically, classroom goal structures encompass students' subjective perceptions of the meaning of academic tasks, competence, success, and purposes for students' engaging in schoolwork. From a goal theory perspective, classroom goal structures represent a powerful empirical tool that can be used to examine the roles of classroom contexts in student motivation (Meece et al., 2006).

Personal mastery and performance goal orientations, reviewed in the previous section, have parallels in classroom mastery and performance goal structures. Accordingly, a classroom *mastery goal structure* involves a perception that learning and understanding are valued and that success is indicated by personal improvement. A classroom *performance goal structure* involves

a perception that achievement and success entail outperforming others or surpassing normative standards (Ames, 1992b). Classroom goal structures are usually measured by student self-report surveys, predominantly with scales from the *Pattern of Adaptive Learning Survey* (PALS; Midgley et al., 1996, 2000). Just as mastery and performance goal orientations are orthogonal, so too are classroom goal structures. That is, classrooms may be high in both mastery and performance goal structure, high in just one, low in both, or any other configuration.

Classroom goal structures are not "objective" characteristics but instead depend on how individual students perceive and give meaning to their classroom experiences (Ames, 1992b). Because students' individual past and current experiences and interpretations contribute to their current perceptions, students in the same class will not necessarily perceive the classroom goal structures in the same way (Ames, 1992b). Adding to variability in perceptions, students in the same classroom are often treated differently and therefore do not even experience the same educational context (Brophy, 1985; Turner & Patrick, 2004).

Teachers play a potent role in contributing to the classroom goal structures through explicit and implicit messages about the purpose of school activities, what counts as learning, and the role of student talk and through the norms and rules they establish for student behavior. These norms begin from the first days of the school year—indeed, they are particularly explicit at this time when teachers introduce and socialize students to their philosophies and beliefs. Early teacher practices foreshadow significant differences in mastery and performance classroom goal structures, both after a few months and near the end of the year (Patrick, Anderman, Ryan, Edelin, & Midgley, 2001; Patrick, Turner, Meyer, & Midgley, 2003).

Classroom Mastery Goal Structure

A classroom mastery goal structure involves a perception that students' real learning and understanding, rather than just memorization, are

valued and that success is accompanied by effort and indicated by personal improvement. Thus, a classroom mastery goal structure emphasizes an incremental theory of ability (Ames, 1992b). Theoretically, perceptions of a classroom mastery goal structure influence students' invoking a mastery goal orientation for themselves in that context; that is, students are likely to focus on their own improvement and understanding when these aspects are emphasized. Mastery goal orientation, in turn, is believed to influence students' optimal effort, affect, use of adaptive learning strategies, and, ultimately, achievement (Ames, 1992b). There is a considerable body of empirical studies that provide support for these tenets, as we discuss next.

Associations with Student Engagement

A classroom mastery goal structure constitutes a holistic system of meanings. Accordingly, it is associated with all aspects of engagement—emotional (e.g., enjoyment, interest, efficacy, commitment), cognitive (e.g., thoughtfulness, use of learning strategies, self-regulation), and behavioral (e.g., effort, persistence, asking for help). From both theoretical and practical standpoints, all aspects of engagement should be high in classrooms that are perceived as emphasizing mastery. Specifically, when the overarching focus in the classroom is perceived as increasing each student's understanding and skill, with success gauged by personal improvement (i.e., classroom mastery structure), it is adaptive and beneficial for students to be fully and thoroughly engaged with those tasks.

Emotional Engagement

Students' perceptions that their teacher and classroom emphasize mastery are related significantly to their personal mastery goal orientation (Nolen & Haladyna, 1990; Wolters, 2004). Also, given that *all* students can be successful when success is viewed as personal improvement, students tend to experience positive affect and motivational beliefs in mastery goal structured classrooms. Specifically, a perceived classroom mastery goal structure is related positively to students' positive school-related affect (Ames & Archer, 1988;

Anderman, 1999; Kaplan & Midgley, 1999), feelings of belonging at school (Anderman, 2003; Anderman & Anderman, 1999; Stevens, Hamman, & Olivarez, 2007), and desire to follow the school's expectations (i.e., social responsibility goal; Anderman & Anderman). Students in these environments express adaptive motivational beliefs, such as self-efficacy and intrinsic motivation (Fast et al., 2010; Murayama & Elliot, 2009; Wolters, 2004). Moreover, students express more positive views about their schoolwork, such as preference for challenge (Ames & Archer, 1988), the usefulness of learning strategies (Nolen & Haladyna, 1990), satisfaction with their learning (Nolen, 2003), and adaptive coping responses after failure (Kaplan & Midgley, 1999), compared to those in settings with low classroom mastery goal structure.

Cognitive Engagement

Not surprisingly, given students' positive affect and motivation, they tend to be more cognitively engaged in classrooms with a high (compared to low) classroom mastery goal structure. Specifically, a classroom mastery goal structure is associated positively with the use of effective cognitive strategies (e.g., elaboration) and metacognitive strategies (e.g., planning, monitoring, regulating) (Ames & Archer, 1988; Wolters, 2004), just as personal mastery goal orientation is.

Behavioral Engagement

Underscoring the close connections of emotional and cognitive engagement with behavior, classroom mastery goal structure is related positively to many forms of adaptive behavioral engagement. This is because working to learn the material is likely to pay off for students if all can experience success, rather than just a few. Classrooms that are perceived, on average, as having a high (compared to low) mastery goal structure tend to have students who expend effort, persist with tasks (Wolters, 2004), and use adaptive help-seeking strategies such as asking for explanations but not answers (Karabenick, 2004). They also have the lowest average rates of maladaptive student behaviors, including not asking for help when it is needed (Karabenick, 2004;

Ryan, Gheen, & Midgley, 1998), self-handicapping (i.e., purposefully withdrawing effort; Midgley & Urdan, 2001; Urdan & Midgley, 2003), being disruptive (Kaplan, Gheen, & Midgley, 2002), procrastinating (Wolters, 2004), and cheating (Murdock, Hale, & Weber, 2001).

Classroom Performance Goal Structure

A classroom performance goal structure conveys to students that learning is predominantly a means of achieving recognition and prestige, and it is characterized by relative ability comparisons among students. Success is indicated by outperforming others or surpassing normative standards (Ames, 1992b). An integral characteristic of classroom performance goal structure is that students are compared to each other, with an inherent assumption that this hierarchy is relatively stable and reflects some aspect of students' ability. That is, it reflects an entity view of intelligence (Dweck, 2000).

A classroom performance goal structure is different from an extrinsic goal structure; the latter conveys that the purpose of engaging in academic tasks is to gain external incentives; however, the success of any one student does not affect the success of others (see Urdan, 1997). That is, if students are graded on a curve, with grades indicating relative position, a classroom performance goal structure is invoked; however, if grades (or other incentives) are very salient but do not signify students' relative placement, a classroom extrinsic goal structure is involved.

After the recognition that personal performance goal orientations could be separated, theoretically and empirically, into approach and avoidance dimensions, some researchers have made the same distinction with classroom performance goal structure (e.g., Karabenick, 2004; Murayama & Elliot, 2009). That is, they suggest that some performance-focused classrooms emphasize approach characteristics, such as scoring better than others, whereas others emphasize avoidance characteristics, such as not doing worse than others. However, we do not find this distinction to be meaningful in classrooms, like it

is for individuals' personal orientations. During naturalistic classroom observations, we see teachers suggesting, implicitly or explicitly, that students who score the highest are "smarter" or more able than are those with lower scores; however, we have not observed teachers or classrooms promoting either a distinguishable approach or avoidance orientation. We think that students in performance-focused classrooms evaluate, perhaps subconsciously, their likelihood of being ranked highly. If they view outperforming others as realistic, they will likely take an approach orientation, and if they are pessimistic about their chances of outscoring others, they will instead likely adopt an avoidance orientation. Therefore, a general classroom performance goal structure may invoke some students taking a performance-approach orientation and others in the same classroom being performance-avoid oriented.

Associations with Student Engagement

Perceiving a classroom performance goal structure is associated with affective, cognitive, and behavioral engagement. In contrast to the mixed findings associated with a personal performance-approach goal orientation, perceiving a classroom performance goal structure is generally associated with students' beliefs and behaviors that are less conducive, and often detrimental, to learning and achievement. We review this research briefly next.

Emotional Engagement

Students' perceptions that their teacher and classroom emphasize relative ability comparisons (i.e., have a high classroom performance goal structure) are related to the adoption of personal performance-approach and/or performance-avoid goals (Wolters, 2004). A pervasive focus on how students "stack up" against each other can provoke students to focus on the outcomes of their efforts, rather than the process of learning. This state of affairs is not comfortable for many students, not just those near the bottom of the achievement continuum, and therefore students tend to experience negative affect and motivational beliefs in these types of classrooms. Students in classrooms with a strong performance

goal structure tend to express more negative affect about school (Ames & Archer, 1988; Anderman, 1999; Kaplan & Midgley, 1999), and less sense of belonging at school (Anderman & Anderman, 1999), compared to those in classrooms with low perceived performance goal structure. Similarly, students view teachers of performance-focused classrooms as less fair (Murdock, Miller, & Kohlhardt, 2004) and more to blame for student dishonesty (Murdock, Miller, & Goetzinger, 2007), compared to teachers of mastery-focused classrooms. Students' intrinsic motivation and academic self-concepts are related inversely to classroom performance goal structure (Ames & Archer, 1988; Murayama & Elliot, 2009). There is also greater use of maladaptive coping strategies after failure, such as denial or projecting blame onto other people or events (Kaplan & Midgley, 1999) or attributing failures to one's own lack of ability (Ames & Archer, 1988).

Cognitive Engagement

There is some evidence indicating that perceiving a classroom as being focused on ability differences is related to lower academic achievement. Anderman and Midgley (1997) examined the relations between perceptions of classroom performance goal structures and end-of-year grades both before and after the transition from elementary school into middle school. Results in both English and math classes indicated that when students perceived a classroom performance goal structure, their end-of-year grades after the transition were lower in both subjects than they had been a year previously. This is related in part to the fact that grading practices often become more focused on relative ability of students after the middle school transition (Eccles & Midgley, 1989; Midgley, Anderman, & Hicks, 1995). Similar patterns of relations between perceptions of classroom performance goal structures and achievement have been reported in other studies as well (e.g., Anderman & Anderman, 1999).

Behavioral Engagement

When classrooms are perceived as emphasizing a hierarchy of ability and students' relative position within that hierarchy, students are likely to report engaging in behaviors that are not conducive, and

often detrimental, to learning. With an emphasis on outcomes but not process, students may feel encouraged to disregard *how* they come to outscore others and be concerned only that they *do*. Consistent with this, cheating is most prevalent in classrooms with a high performance goal structure (Anderman, Griesinger, & Westerfield, 1998; Murdock et al., 2004). In performance-structured classrooms, students who are not successful at a task immediately may be unlikely to continue trying, given both that a hierarchy of ability tends to invoke an entity view of ability, and high effort without success is suggestive of low ability. As posited, classroom performance goal structure is related inversely to students' task persistence (Wolters, 2004).

Furthermore, in classrooms with a performance goal structure, students who are pessimistic about their chances of placing near the top of the hierarchy may find ways to avoid engaging in schoolwork and therefore protect their self-worth by not providing evidence that their ability is lower than their classmates'. Again, research supports this premise. Classrooms perceived, on average, as being highly performance-focused tend to have the highest rates of students not seeking help when they need it (Ryan et al., 1998), procrastinating (Wolters, 2004), self-handicapping (Midgley & Urdan, 2001; Urdan, 2004; Urdan, Midgley, & Anderman, 1998), and being disruptive (Kaplan et al., 2002; Ryan & Patrick, 2001).

Findings of associations between classroom performance goal structures and student achievement have been mixed across studies. For example, classroom performance goal structure has been related inversely to test scores (Nolen, 2003), but not related to grades (Wolters, 2004). Researchers have long noted, however, that the different ways that achievement is measured, including differences among teachers in how grades are assigned and differences between standardized assessments and teacher-assigned grades, make for difficulties with conducting research on these relations. In addition, grade-level differences in assessment procedures (e.g., developmental differences in grading practices across elementary and high school settings) compound these difficulties.

Teacher Practices Associated with Classroom Goal Structures

Classroom Mastery Goal Structure

Because a classroom mastery goal structure represents a particularly adaptive learning environment, goal theorists recommend that teachers create mastery goal–focused classrooms (e.g., Midgley, 1993). To this end, researchers have identified teacher practices associated with a classroom mastery goal structure. Importantly, classroom mastery goal structure is established by a coherent *set of practices* that together communicate a consistent perspective toward learning and task engagement; isolated practices are generally not sufficient to influence students' overall meaning systems.

The holistic approach to creating a mastery goal–structured classroom was first represented by Ames' (1990, 1992a) conceptual framework, where she organized teaching principles and strategies associated with a classroom mastery goal structure into six categories. This framework, represented by the acronym TARGET (see Epstein, 1983), is comprised of the academic task, authority, recognition, grouping, evaluation, and time. Specifically, *tasks* should be meaningful, challenging, and interesting, and there should be a range of task options available so that ability differences are not accentuated. The teacher should share *authority* and responsibility for rules and decisions with the students. *Recognition* should be available to all students, should involve progress or effort, and there should be few opportunities for social comparison among students. *Grouping* should be flexible and heterogeneous, and students should not be grouped by ability. *Evaluation* should be criterion-referenced, not made public, and grades and test scores should be interpreted in terms of improvement and effort. And, finally, there should be flexible use of *time* in the classroom and opportunities for student self-pacing. As mentioned, Ames was clear that practices within all six categories must be integrated in order for a classroom mastery goal structure to be evident (see also Maehr & Anderman, 1993).

Support for the relevance and utility of TARGET has come from multimethod studies, whereby survey measures were triangulated with classroom observations or students' responses to open-ended questions (Meece, 1991; Patrick & Ryan, 2008; Patrick et al., 2001). However, two other facets of classrooms associated with mastery goal structure have also been identified: social relationships and pedagogical practices.

A sizable body of research has documented the importance of social relationship features for perceptions of classroom mastery goal structure. Teachers in high mastery-focused classrooms appear to promote a more interpersonally positive climate and engage in more motivationally supportive interactions (e.g., encouraging and supporting students' persistence, using humor, showing enthusiasm) compared to teachers in low mastery-focused classrooms (Patrick et al., 2001, 2003; Turner et al., 2002). Teacher support (for students' learning and for students as people), mutual respect, positive affect, and teacher enthusiasm are salient in high, but not low, mastery-focused classrooms (Miller & Murdock, 2007; Patrick et al., 2001, 2003; Turner et al., 2002). Those findings have led to the revised acronym TARGETS. That is, for classroom mastery goal structure, in addition to features of the other six categories, *social relationships* should be respectful, supportive of students both socioemotionally and academically, and convey positive affect about both students and the content to be learned.

There is also evidence that teachers' pedagogical approaches comprise another category of practices associated with a classroom mastery goal structure (e.g., Murdock et al., 2004; Patrick & Ryan, 2008). For example, students report that the extent to which teachers make efforts to explain the material to them, help them understand, and use a variety of approaches as necessary influences their views of the classroom's mastery goal structure (Patrick & Ryan, 2008). Observational studies support this finding. High, but not low, mastery-focused teachers use active instructional approaches and adapt instruction to their students' developmental levels (Meece, 1991) and engage in academic press (Anderman, Andrzejewski, & Allen, 2011). They also provide supportive instructional discourse, or scaffolding, comprised of negotiating with students what academic tasks involve and transferring responsibility for tasks to students in accordance with their capabilities (Turner et al., 2002).

Classroom Performance Goal Structure

There has been less interest in identifying teacher practices associated with classroom performance goal structure than with classroom mastery goal structure. One reason is the possibility that the crucial element of learning environments is a high classroom mastery goal structure, regardless of the extent of classroom performance goal structure (Midgley, 2002; Midgley et al., 2001). Nevertheless, it may be valuable to identify practices associated with classroom performance goal structure, given its associations with negative indicators of students' engagement; to decrease the prevalence of practices that contribute to perceptions of a performance focus, it is necessary to know the specific practices involved. In addition, classroom mastery and performance goal structures can be perceived simultaneously within the same classroom (Midgley, 2002). For example, a science teacher can emphasize the importance of effort and persistence in order to understand and master a principle (mastery), but the same teacher can also simultaneously emphasize grades and relative ability (performance).

From classroom observation studies, it appears that teachers perceived as having a high performance focus emphasize formal assessments, grades, and students' relative performance to a substantially greater extent than do low performance-focused teachers (Patrick et al., 2001). That information, however, is considerably less than what is known about the aforementioned practices related to classroom mastery goal structure. This relative paucity of information is consistent with the argument that a focus on external incentives (i.e., classroom extrinsic goal structure) is more prevalent and salient to students than are messages about relative performance or ability (Brophy, 2005). Perhaps, ubiquitous societal messages about outscoring others do more to promote students' performance goal orientation than do more proximal teacher classroom practices.

Summary

Students' perceptions of classroom goal structures are related to valued motivational outcomes. Perceptions of a classroom mastery goal structure are generally related to beneficial outcomes, whereas perceptions of a classroom performance goal structure are related to a mixed array of outcomes. In terms of the relations of classroom goal structures to engagement, the goal structure that is perceived in the classroom is related to the quality of engagement evidenced by the student. As we have reviewed, perceptions of classroom mastery and performance goal structures are related to cognitive, emotional, and behavioral engagement in different ways. The fact that classroom goal structures are related to the types of instructional practices used by teachers in classrooms suggests that changes in instructional practices may yield benefits for student engagement.

Conclusion

In this chapter, we have reviewed the relations between personal achievement goals, classroom goal structures, and academic engagement. Whereas motivation researchers who study achievement goals and researchers who study academic engagement operationalize and discuss constructs in different ways, there is substantial and important overlap. Future research that draws upon both achievement goal theory and research on student engagement will be fruitful, particularly in terms of developing interventions designed to more fully engage students with academic tasks.

We briefly reviewed the history of the development of achievement goal theory, and we noted that the measurement of achievement goal constructs has changed in subtle yet important ways over the past three decades (for more comprehensive reviews, see Elliot, 2005, and Maehr & Zusho, 2009). We then examined the relations of personal goal orientations to a variety of educational outcomes, including achievement, strategy usage, and affect. We noted in particular that the relations between personal goal orientations and achievement are complex. Finally, we reviewed research on classroom goal structures. We noted in particular that facets of classroom contexts that are controlled by teachers (i.e., instructional practices) affect students' perceptions of classroom goal structures, which in turn affect the types of personal goal orientations that students adopt.

Throughout this chapter, we have noted that the two main classes of achievement goals (mastery and performance) are related to engagement in different ways. Engagement researchers typically discuss three distinct forms of engagement (behavioral, emotional, and cognitive) (Fredricks et al., 2004). Although these three forms of academic engagement differ, all forms of engagement focus on students' involvement with academic tasks (either behaviorally, emotionally, or cognitively).

Goal orientation theorists also are concerned with students' involvement with academic tasks. When students pursue mastery goals, the students' goal is to truly learn or "master" the task. Goal orientations can be adopted by students for many types of learning, including specific activities (e.g., a particular science lab experiment), more general academic tasks (e.g., book reports), or subject domains (e.g., mathematics) (Anderman & Anderman, 2010; Anderman & Wolters, 2006). From an engagement perspective, students who hold mastery goals are likely to be more cognitively, emotionally, and behaviorally engaged with tasks because the overarching "goal" is task mastery. In contrast, when students pursue various types of performance goals, the goal is to demonstrate one's ability at the task, or, in the case of avoidance coals, to avoid appearing incompetent at the task. When students hold such goals, their engagement may not be as deep as with mastery goals; rather, students may engage with the task at more of a surface level in order to merely demonstrate ability.

For example, a student who holds an avoidance goal may avoid extensive cognitive engagement with a task (i.e., spend little time on the actual task), in order to preserve the appearance of competence. Specifically, the student might perceive that spending a great deal of time engaged with a task would make the student "look dumb" to his or her classmates; therefore, although extensive cognitive engagement might be beneficial to the student, such engagement may be avoided in order to preserve appearances.

Future research examining more specifically the relations between the various forms of engagement and goal orientations will be important. In particular, research that examines students'

goals and engagement while students are participating in actual academic tasks may be particularly fruitful. Studies that utilize the experience sampling method (e.g., Shernoff, 2010), where students report on their motivation and engagement during actual task participation, may be especially useful. In addition, it will be particularly important to address developmental shifts in motivation and engagement. Given that much research indicates that goal orientations and classroom goal structures change as students move from elementary schools into middle schools (e.g., Anderman & Midgley, 1997), it will be important to examine changes in the relations between goals and engagement across developmental shifts.

In summary, both achievement goal orientation researchers and engagement researchers can benefit greatly from collaborative efforts. Although achievement goal researchers and engagement researchers use different terminologies and constructs, we all are concerned with students' involvement with academic tasks. As these two lines of research continue to develop, a convergence and sharing of ideas should lead to richer interventions for students and more effective training for teachers.

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