



# Literature review on achievement goals and classroom goal structure: implications for future research

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## Abstract

Since its origin in the late 1970s and early 1980s, achievement goal theory has provided significant contributions to the research and practice in education and psychology. The theory has been considered to be an influential framework for conceptualizing student motivation. The term motivation refers to the interaction dynamics of many factors in a given person-environment relationship involving goal-directed experience and behavior. The impact of learning environment on student motivation, defined as achievement goal orientations, has been the focus of many studies. This paper includes a review of literature discussing research related to achievement goal theory, stability of achievement goals, classroom goal structure, and multiple goals along with implications for future research. The findings of studies reviewed in the paper point to the importance of considering both self and group perceptions of achievement goals in academic settings. This line of inquiry will provide educators and psychologists with helpful and meaningful ways of enhancing student learning and motivation.

**Keywords:** achievement goals, motivation, learning, classroom goal structure, learning environment

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# Revisión bibliográfica sobre metas de logro y estructura de metas del aula: implicaciones para futuras investigaciones

## Resumen

Desde su origen a finales de 1970 y principios de 1980, la teoría del logro de la meta ha proporcionado importantes contribuciones a la investigación y la práctica en la educación y la psicología. La teoría ha sido considerada como un marco de influencia para la conceptualización de la motivación del estudiante. La motivación se refiere a la dinámica de la interacción de muchos factores en una determinada relación persona-medio ambiente que comporta una experiencia dirigida a una meta y el comportamiento. El impacto del entorno de aprendizaje en la motivación de los estudiantes, que se define como orientaciones de meta de logro, ha sido el foco de muchos estudios. Este documento incluye una revisión de la bibliografía presentando las investigaciones relacionadas con la teoría de logro de los objetivos, la estabilidad de las metas de logro, la estructura objetivo salón de clases, y múltiples objetivos, junto con implicaciones para futuras investigaciones. Los resultados de los estudios examinados en el trabajo apuntan a la importancia de considerar tanto las percepciones de uno mismo y el grupo de las metas de logro en el ámbito académico. Esta línea de investigación se proporcionan a los educadores y psicólogos con formas útiles y significativas de mejorar el aprendizaje y la motivación.

**Palabras clave:** las metas de logro, la motivación, el aprendizaje, la estructura objetivo aula, el aprendizaje de medio-ambiente

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## An Overview of Achievement Goal Theory

In educational motivation research, achievement goal theory has evolved within a social-cognitive framework (Dweck & Leggett, 1988; Maehr, 1989; Nicholls, 1984, 1989; Weiner, 1990). Achievement goal theorists have traditionally identified two types of achievement goals: the goal to develop ability and the goal to demonstrate ability or avoid demonstrating the lack of ability (Elliot, 1999). These two goals have alternatively been labeled learning and performance goals (Dweck, 1986), task-involvement and ego-involvement goals (Nicholls, 1984), and mastery and performance goals (Ames & Archer, 1987, 1988). Dweck and Leggett (1988) proposed that "*the goals individuals are pursuing create the framework within which they interpret and react to events*" (p. 256). Mastery goals create a framework in which inputs and outputs provide information about one's learning and mastery, whereas performance goals create a framework in which inputs and outputs are interpreted in terms of one's ability and its adequacy (Dweck & Leggett, 1988). According to achievement goal theorists, mastery goals center on the development of competence, whereas performance goals center on the outward showing of competence (Ames & Archer, 1987, 1988; Dweck, 1986; Nicholls, 1984).

Achievement goals are thought to vary across individuals (Maehr, 1983, 1984), and that positive and negative patterns of cognition and affect may be elicited by the adoption of a particular achievement goal (Ames, 1992a). From the perspective of achievement goal theory, students who adopt mastery goals are expected to persist in the face of difficult events, seek challenging activities, and have high intrinsic motivation (Ames, 1992b; Dweck, 1986; Nicholls, 1984). In comparison, students who adopt performance goals are expected to minimally persist in the face of difficult events, avoid challenging activities, and have low intrinsic motivation (Ames, 1992b; Dweck, 1986; Nicholls, 1984). Mastery goals have consistently been linked to a positive set of processes and outcomes such as deep processing of studying materials, long term retention of information, adaptive attributional patterns of success and failure, and appropriate help-seeking behavior (Ames, 1992b; Elliot, 1999). However, the effects of pursuing performance goals are less clear. Some studies have found that adoption of performance goals has negative effects when accompanied by low perceived competence (e.g., Elliot & Church, 1997; Elliot & Dweck, 1988), whereas other studies have not supported these effects (e.g., Elliot & Harackiewicz, 1996; Harackiewicz & Elliot, 1993). As a result, achievement goal theory has undergone a number of theoretical advances.

Elliot and his colleagues have proposed a trichotomous framework of achievement goals that further differentiates performance goals into approach and avoidance goals (Elliot & Church, 1997; Elliot & Harackiewicz, 1996). In this framework, three types of achievement goals are posited: mastery goals that focus on the development of competence, performance-approach goals that focus on having favorable judgments of competence, and performance-avoidance goals that focus on avoiding unfavorable judgments of competence (Elliot & Church, 1997; Elliot & Harackiewicz, 1996). A number of studies have demonstrated the validity and utility of this trichotomous framework of achievement goals.

For example, Elliot and Church (1997) created a series of items to assess achievement goals of 178 undergraduate students and used factor analytic procedures to examine whether the items separated into independent performance-approach, performance-avoidance, and mastery goal orientations. Elliot and Church also proposed and tested a hierarchical model in which motive dispositions (achievement motivation and fear of failure) and competence expectancies are posited to be direct antecedents of achievement goal adoption, and achievement goals are viewed as exerting a direct proximal influence on intrinsic motivation and graded performance. Results from the factor analysis yielded the three anticipated achievement goals: mastery, performance-approach, and performance-avoidance; with a low correlation ( $r = .38$ ) between the two types of performance goals, providing support for partitioning the performance goal orientation. Results also indicated that mastery goals were grounded in achievement motivation and high competence expectancies, performance-avoidance goals were grounded in fear of failure and low competence expectancies, and performance-approach goals were grounded in fear of failure and high competence expectancies. In addition, mastery goals facilitated intrinsic motivation; performance-approach goals enhanced graded performance; and performance-avoidance goals proved deleterious to both intrinsic motivation and graded performance. Therefore, Elliot and Church advocated the three-construct framework of achievement goals.

These results have contributed to the clarification of the relationships among performance goals, motivation and academic performance by indicating that the ability-approach and ability-avoidance goals are independent orientations with distinct determinants and a divergent set of consequences. However, there is some overlap between these two goals as revealed by Middleton and Midgley (1997) in their study of 703 sixth grade students. Middleton

and Midgley found that the scales measuring performance-approach and performance-avoidance goals were moderately correlated ( $r=.56$ ) suggesting that these two types of goals are not qualitatively different. Also, the authors found that mastery goals predicted academic self-efficacy, self-regulated learning, and lower levels of avoiding seeking academic help; performance-avoidance goals negatively predicted academic self-efficacy, and positively predicted avoiding seeking help and test anxiety; and performance-approach goals did not emerge as the most significant predictor of any of the three outcomes.

In addition to the type of participants, the difference between Elliot and Church's (1997) study and Middleton and Midgley's (1997) study can be attributed to their approach to the assessment of achievement goals. Elliot and Church's approach to the assessment was based on the conceptualization of achievement goals as "*cognitive- dynamic manifestations of two underlying competence-relevant motives, the need for achievement and the need to avoid failure*" (p. 219). As such, some of their items assessed affective components such as worries, fears, and concerns rather than reasons or purposes for engaging in academic behaviors, a definition on which Middleton and Midgley's scale was based.

Alkharusi (2010) validated the trichotomous framework of achievement goals for 1,636 ninth grade science students in Oman using Midgley and colleagues' (2000) Patterns of Adaptive Learning Scales. Results of factor analytic techniques showed the prevalence of the three types of achievement goal orientations: mastery, performance-approach, and performance-avoidance; with moderate levels of internal consistency. These results suggest that the general components of the trichotomous structure of the achievement goal theory seem to apply equally in both the United States and Oman. However, unlike studies in the United States (e.g., Kaplan, Gheen, & Midgley, 2002a; Middleton & Midgley, 1997), Alkharusi found that the three types of achievement goals correlated moderately and positively with each other, suggesting that the participating Omani students adopting one achievement goal tend to adopt the other goals to a modest degree as well. This implies that teachers expect their classes to not only master the learning materials, but also to achieve higher grades than other classes.

Elliot (1999) and Pintrich (2000) have argued that mastery goals need to be separated into approach and avoidance orientations to account for the broad spectrum of competence-based strivings. As such, Elliot and Pintrich have proposed a theoretical 2×2 conceptualization of achievement goals, in which mastery goals are bifurcated to form mastery-approach

and mastery-avoidance goals. As a result, the 2×2 achievement goal framework comprises four achievement goals: mastery-approach, mastery-avoidance, performance-approach, and performance-avoidance goals (Elliot, 1999; Pintrich, 2000). Individuals who adopt mastery-approach goals seek to achieve task mastery or improvement whereas those who hold mastery-avoidance goals seek to avoid failing achievement of task mastery (Elliot 1999; Pintrich, 2000). Individuals who adopt performance-approach goals seek to do better than others, whereas those who hold performance-avoidance goals seek to avoid doing worse than others (Elliot 1999; Pintrich, 2000). This framework has been validated for college students.

For example, Elliot and McGregor (2001) conducted three consecutive studies in undergraduate classrooms to test the 2×2 achievement goal framework, with particular emphasis on the mastery-avoidance goal construct. Factor analytic results revealed that each of the goals in the 2×2 framework represented distinct constructs. In addition, the antecedent results for mastery-avoidance goals indicated that these goals were grounded in fear of failure, low self-determination, positive perceived classroom engagement, entity and not incremental theory, mother and father person-focused negative feedback, mother and father worry induction, and competence valuation. Also, the results indicated that these goals are positive predictors of disorganized studying, anticipatory test anxiety, subsequent mastery-avoidance goals, subsequent mastery-approach goals, and subsequent performance-approach goals. The authors concluded that mastery-avoidance goals facilitated subsequent adoption of both approach goals.

The definition of achievement goal construct has been approached by two ways. The first approach construes achievement goals in terms of purposes of achievement behavior (Dweck, 1996; Maehr, 1989). Proponents of this approach have conceptualized achievement goals as a combination of both reasons for engaging in achievement situations and aims sought to be achieved (Pintrich, 2000; Urdan & Maehr, 1995). Accordingly, mastery goals have been described in terms of both development of competence and adoption of task-based evaluation of competence. In contrast performance goals have been described in terms of both displaying competence and adoption of normative evaluation of competence (Elliot & Thrash, 2001). The second approach describes achievement goals as an integrated pattern of beliefs about success, ability, effort, errors and evaluation standards that collectively lead to an orientation toward achievement goals (Ames, 1992b; Ames & Archer, 1987).

However, Elliot and Thrash (2001) contend that these definitional approaches are limited in four ways. First, these approaches define achievement goals as a network of interrelated variables, which may make it difficult to specifically identify the particular aspect of achievement goals that may be responsible for any observed effects. Second, there have been no guidelines for determining the characteristics of each achievement goal that can be considered for its adoption. Third, conceptualizing achievement goals as an interrelated set of motivational constructs implies that research linking these variables should be considered as construct validation rather than testing predictive roles of the achievement goals. Fourth, results from research conducted in this area seem to be somewhat ambiguous, in that some studies have focused on a single aspect of the achievement goal definition, whereas other studies have simultaneously focused on several aspects.

Consequently, Elliot and Thrash (2001) have theoretically proposed a hierarchical model of achievement goals. They defined achievement goal as "*a cognitive representation of a competence-based possibility that an individual seeks to attain*" (p. 144). In this model, achievement goals are conceptualized based on two dimensions: competence definition and competence valence. The definition dimension of competence represents the mastery-performance distinction of achievement goals. Mastery goals are defined in terms of absolute or intrapersonal standards of competence, whereas performance goals are defined in terms of normative standards of competence. The valence dimension of competence comprises the distinction between approach and avoidance forms of achievement goals. Approach goals are construed in terms of achieving positive desirable outcomes, whereas avoidance goals are construed in terms of avoiding negative undesirable outcomes. When the definition and valence dimensions of competence are combined, six types of achievement goals are produced. These are absolute-approach, absolute-avoidance, intrapersonal-approach, intrapersonal-avoidance, normative-approach, and normative-avoidance. Each of these goals reflects a unique type of competence-based forms of achievement goals, may draw a distinct set of processes, and leads to different outcomes. However, research to date has focused on only a subset of these goals (Elliot & Thrash, 2001). Clearly, more empirical work is needed to investigate the prevalence of these goals as well as their antecedents and consequences.

Recently, Elliot and Murayama (2008) presented several problems in the measurement of achievement goals. These problems were concerned with the inclusion of items beyond the mastery-performance distinction and not giving enough attention to the approach-avoidance



distinction. As a result, the authors created the Achievement Goal Questionnaire-Revised (AGQ-R) version of the Elliot and McGregor's (2001) questionnaire, and confirmed its structural validity and predictive utility in terms of antecedents (need for achievement and fear of failure) and consequences (intrinsic motivation and exam performance) for 229 undergraduate students. Alkharusi and Aldhafri (2010) tested the factorial invariance of the AGQ-R across gender for 117 male and 125 female undergraduate teacher education students. Results indicated that the variance-covariance matrix, factor structure, pattern of factor loadings, and factor variance-covariances were invariant across gender, supporting meaningful and interpretable comparison of mean scores between males and females on achievement goals.

Brophy (2005) argues against defining performance-goals as focusing on the demonstration of ability relative to others. In particular, the author suggests that goal theorists should phase the social component out of the performance-goals, and characterize these goals as outcome goals or some other term that does not carry the social comparison connotation. To support his argument, the author offered three situations in which performance goals are a low-incidence phenomenon. First, under natural classroom settings, elementary and middle school students rarely generate performance goals that include elements of peer comparison and competition. Second, performance goal orientations generated, by university undergraduates participating in laboratory experiments, in response to induction procedures, involve little if any of the social comparison or competition emphasis usually associated with performance goals. Third, although goal theory research has reported positive relationships between adoption of performance-approach goals and subsequent task performance, these relationships are correlational and likely to be epiphenomenal rather than causal (Brophy, 2005).

At a practical level, Brophy's (2005) argument has implications for teachers, in that, outcome goals characterize the target attainment in criterion-referenced rather than norm-referenced terms and orient students toward achievement rather than peer competition. At a theoretical level, however, this argument raises a number of future research questions that will add to the existing literature on achievement goal theory. More specifically, if we remove the need to socially display competence or remove the need of interpersonal comparison from performance goals, do we still have a performance component? In other words, could the idea of intrapersonal approach be intrapersonal competition? How does that relate to mastery? What about self-referent mastery versus task-referent mastery? Finally, what about the avoi-

dance dimension of goal orientations? Clearly, these questions warrant the need for more empirical refinements in the conceptualization of achievement goals.

### **Stability of Achievement Goals**

Another way to understand the nature of performance-approach goals would be to examine the relations of these goals with other achievement goals over time. Nicholls (1984) and Dweck (1986) suggested that individuals may start out working on an achievement task with an approach orientation but slip into an avoidance orientation when they encounter difficulties that threaten their demonstration of high ability. Moreover, Ames and Ames (1984) reported that "*Even children with generally positive self-views have been found to become self-punitive when they experience failure in competitive settings (C. Ames, 1978), suggesting that students with high self-concepts can react negatively to a competitive loss*" (p. 45). Middleton, Kaplan, and Midgley (2004) examined relations between performance goal orientations over time, with particular attention to the role of student academic self-efficacy, for 475 middle school students in mathematics, as they moved from the sixth to the seventh grade. Results indicated that performance-approach goals in the sixth grade positively predicted performance-avoidance goals in the seventh grade. Path analyses indicated that the path from performance-approach goals to performance-avoidance goals was statistically significant only among students reporting high academic self-efficacy before the transition. These results suggest that students who feel efficacious in math while endorsing a performance-approach goal orientation may be vulnerable to adopting maladaptive performance-avoidance goals over time. Although the results support Brophy's (2005) argument that performance-approach goals are counterproductive in the long run, more research with high academic self-efficacy students might help understand why do their orientation toward avoiding the demonstration of lack of ability lacks stability over time.

The stability of performance goal orientations was addressed in the initial formulation of achievement goal theory by Dweck and Elliot (1983) who pointed out that people might shift from a performance-approach to a performance-avoidance goal when their competence perceptions drop. Similarly, Elliot and Church (1997) suggested that people might switch from a performance-approach goal to a performance-avoidance goal after receiving negative competence feedback, or vice versa after receiving positive feedback, because perceived competence should determine whether one frames comparisons against others in an approach

or avoidance manner. Recently, the dynamic role of competence perceptions in altering one's achievement goal pursuit has been empirically tested for college students.

Specifically, Senko and Harackiewicz (2005) conducted two studies to investigate whether undergraduate students alter their achievement goals in response to competence feedback. The first study was conducted in a natural classroom setting to test the relationship of early exam performance with introductory psychology students' subsequent endorsement of achievement goals for the course later in the semester. The second study was conducted in a laboratory setting to test the effect of a competence feedback manipulation on subsequent goal endorsement for a novel math activity. Results from the first study indicated that although there were general tendencies toward stability in students' goal orientations, there also was a tendency for students to switch from a performance-avoidance goal to a performance-approach goal after doing well on the midterm exams, or from a performance-approach goal to a performance-avoidance goal after doing poorly. Results from the second study indicated that negative competence feedback tended to cause a decline in mastery strivings, whereas pursuit of the two performance goals was unaffected by both positive and negative feedback.

The difference in the results of the two studies conducted by Senko and Harackiewicz (2005) can be attributed to the nature of competence feedback. Self-regulation research has shown that people are more apt to regulate their goals if their competence feedback is strong and consistent (Bandura, 1986, 1991). Specifically, students in Senko and Harackiewicz's (2005) first study decreased their goal pursuit after receiving disappointing feedback from several exams rather than from just one exam. As such, students in the experimental study would have been more likely to decrease their goal pursuit after enduring another round of negative feedback. Thus, the mild feedback manipulation explains the greater resilience of the performance goals in Senko and Harackiewicz's (2005) experimental study. Clearly, future research should continue to explore the circumstances in which achievement goals are regulated in response to competence feedback.

Fryer and Elliot (2007) conducted three studies to examine stability and change in achievement goals in college classrooms using four approaches: differential continuity, mean-level change, individual-level change, and ipsative continuity. In their studies, they noted that achievement goals are expected to be stable because they stem from stable personality and classroom environmental characteristics, and they are also expected to change because they

represent a form of self-regulation. Results of their studies provided evidence for both stability and change in each achievement goal. In addition, the authors found that people who are high in fear of failure exhibited the greatest amount of change in achievement goals. In discussing their results, the authors highlighted the importance of additional research in the area of goal stability and change in relation to the goal structure of the classroom settings.

### **Classroom Goal Structure**

Research on achievement motivation has shown that situational demands can affect the salience and adoption of specific achievement goals, which lead to differential patterns of cognition, affect, and behavior (Ames & Archer, 1988). Students are exposed to a variety of instructional activities and assessment tasks in the classroom. As students process these events, they develop beliefs about the importance, utility, value, and difficulty of these tasks as well as their personal chance of success (McMillan & Workman, 1998). Educators have long recognized that the tasks used in the classroom communicate important messages to students about what is emphasized there, which in turn may influence their adoption of achievement goals (Ames, 1992b; Ames & Archer, 1988; Linnenbrink & Pintrich, 2001, 2002). For instance, classroom contexts that are structured toward challenge are likely to activate the need for achievement, which in turn leads to adoption of mastery and/or performance-approach goals; whereas classroom contexts that are structured toward threat are likely to activate fear of failure, which in turn leads to adoption of performance-avoidance and/or performance-approach goals pursuit (Elliot 1999).

Ames (1992a) described how aspects of classroom structure related to tasks, authority, recognition, grouping, evaluation, and time (TARGET) influence the salience of a mastery goal orientation, and as a consequence, elicit positive patterns of behaviors, beliefs, and affects in students. The Task (T) dimension is concerned with the design of learning activities, tasks, and assignments (Ames, 1992a). The Authority (A) dimension refers to the degree to which teachers involve students in classroom decision making (Ames, 1992a). The dimension of Recognition (R) concerns the use of rewards in the classroom (Ames, 1992a). The Grouping (G) dimension regards the way in which students are divided into learning groups (Ames, 1992a). The Evaluation (E) dimension involves the methods, standards, and criteria used to assess student learning (Ames, 1992a). The Time (T) dimension concerns the appro-

priateness of the workload, the pace of instruction, and the time designated to complete classroom work (Ames, 1992a).

Ames (1992a) noted that the following classroom practices are likely to encourage adoption of mastery goals: (a) designing classroom tasks that include challenge, variety, novelty, and active involvement; (b) giving students opportunities to make choices and decisions regarding their learning; (c) providing private recognition and rewards that focus on individual student effort and improvement; (d) creating small groups of heterogeneous abilities that encourage working effectively with others on learning tasks and developing a feeling of belongingness; (e) conducting evaluation practices that are private, assess progress, improvement, and mastery, and avoid social comparisons; and (f) allowing for time on task to vary with the nature of the task and student needs. Conversely, performance-oriented classrooms are created when students are not given varied tasks, the teacher maintains authority, students are recognized for their ability relative to others, homogeneous ability groups are used, evaluation is based on normative practices, and time for task's completion is inflexible.

In an earlier study of 176 students in grades 8-11 attending a junior high school for academically advanced students, Ames and Archer (1988) investigated how students' perceptions of the classroom goal orientation are related to their use of effective learning strategies, task choice, attitudes toward their class, and causal attributions of success and failure. Results indicated that students who perceived mastery goals as salient in the classroom reported using more effective learning strategies, preferred challenging tasks, had a more positive attitude toward the class, and a stronger belief of effort as an attribution for success. Students who perceived performance goals as salient in the classroom tended to have a negative attitude toward the class, a negative perception of ability, and attributed failure to lack of ability. The authors concluded that achievement goals need to be viewed through a broad contextual lens in addition to the personal level. Consequently, researchers have started to consider the relation between the environmental emphasis of the classroom on achievement goals and student outcomes.

For example, Church, Elliot, and Gable (2001) conducted two consecutive studies to examine the relationships among perceptions of classroom environment, adoption of achievement goals, course grade performance, and intrinsic motivation. The first study included 119 male and 89 female undergraduate students, and the second study included 103 male and

194 female undergraduate students. Perceptions of classroom environment were represented by three dimensions. These were lecture engagement, defined as "*the extent to which students perceive that the professor makes the lecture material interesting*" (p. 44); evaluation focus, defined as "*the degree to which students perceive that the professor emphasizes the importance of grades and performance evaluation*" (p.44); and harsh evaluation, defined as "*the extent to which students view the grading structure as so difficult that it minimizes the likelihood of successful performance*" (p. 44). Achievement goals were conceptualized in terms of mastery, performance-approach, and performance-avoidance goals.

Results from the two studies conducted by Church and colleagues (2001) indicated that mastery goals were positively related to lecture engagement and negatively related to evaluation focus and harsh evaluation, performance-approach goals were positively related to evaluation focus, and performance-avoidance goals were positively related to evaluation focus and harsh evaluation. When perceived classroom environment and achievement goal variables were tested together as predictors of graded performance and intrinsic motivation, results showed that the perceived classroom environment influenced adoption of achievement goals, which in turn directly influenced graded performance and intrinsic motivation after controlling for student's gender, competence valuation, and SAT scores. Apparently, these findings suggest that educators need to understand that learning environments featuring stringent evaluative standards may represent a risk factor in the achievement domain.

The effect of classroom goal structure on students' behavior has also been documented by studies conducted at the middle school level. For example, Ryan, Gheen, and Midgley (1998) investigated how classroom goal structure is related to avoidance of help seeking for 516 students across 63 seventh grade math classrooms. Results indicated that students' perceptions of a mastery classroom goal structure were associated with a lower level of help avoidance, whereas their perceptions of a performance classroom goal structure were associated with a higher level of help avoidance. Clearly, these results imply that students are less likely to avoid seeking help with their work when they need it in classrooms where students perceive the focus is on understanding, mastery and intrinsic value of learning compared to classrooms where the focus is on competition and proving one's ability.

Using the trichotomous framework of achievement goals, Phan (2008) examined the effects of classroom learning environment on students' achievement goals and reflective thin-

king practices for a sample of 298 secondary school students in Sydney. Results showed that the different facets of the classroom environment in terms of involvement, student cohesiveness, task orientation, and satisfaction exerted direct and indirect influences on students' achievement goals, reflective thinking practices, and academia performance. This signals the importance of considering the learning environment in future research as a potent mediator of students' achievement goals and academia performance.

Other researchers have studied changes in students' perceptions of classroom goal structure over time and the effects of these changes on students' cognition, emotion, and behavior. For example, Anderman and Midgley (1997) examined changes in personal achievement goals, perceptions of the classroom goal structure, and perceived academic competence during the transition from elementary to middle school for 341 students. Data were collected when these students were in the fifth grade in elementary school and again the following year when they were in the sixth grade in middle school. Results indicated that students were more oriented to task goals, perceived a greater emphasis on task goals during instruction, and felt more academically competent in the fifth grade in elementary school than in the sixth grade in middle school. The students perceived a greater emphasis on performance goals in middle school than in elementary school.

Along similar lines, Urdan and Midgley (2003) examined whether changes in students' perceptions of the mastery and performance classroom goal structures were associated with changes in their motivation (personal achievement goals and self-efficacy), positive and negative affect at school and academic performance (GPA) both when making transition from elementary to middle school (5th to 6th grade) and within the first two years of middle school (6th to 7th grade). Data were collected from 555 students who moved from the fifth to the sixth grade: and from 390 students, of the original sample of 555, when they moved from the sixth to the seventh grade. Results indicated that (a) students' perceptions of changes in the mastery goal structure of their classroom were more strongly related to changes in motivation, affect, and academic performance than are their perceptions of changes in the performance goal structure; (b) individual mastery goals, self-efficacy, positive affect, and GPA were all significantly lower, and negative affect was higher, in the 6th grade than in the 5th grade for students who perceived a decline in the classroom mastery goal structure from the 5th to the 6th grade; and (c) the effects involving changes in the perceived mastery goal structure were stronger than those involving changes in the performance goal structure were similar both

across the transition to middle school and within the first two years of the middle school. Clearly, these longitudinal studies of classroom goal structure indicate that although efforts to smooth the transition to the middle school are needed and worthwhile, there is also a need to increase students' perceptions of a mastery goal structure in their classrooms in grade levels beyond the transition year.

## **Multiple Goals**

Research examining mastery and performance goals has often contrasted the effects of these two goal orientations without exploring how these two goals may combine to influence motivation and performance. In many studies, there has been no correlation or only a weak positive correlation between mastery and performance goals (Midgely et al., 1998). This suggests that students may hold mastery and performance goals simultaneously and to varying degrees. This possibility has led some of the achievement goal theorists to suggest a multiple goal perspective, whereby endorsing both mastery and performance-approach goals may be most adaptive (Barron & Harackiewicz, 2001). However, this perspective has not been accepted by all goal theorists (Kaplan & Middleton, 2002). These later theorists perceive that mastery goals are associated with most adaptive patterns of behavior, whereas performance-approach goals have some detrimental effects (Kaplan & Middleton, 2002). Given the focus on the benefits of mastery goals, this second perspective has been called the mastery goal perspective (Barron & Harackiewicz, 2001). To resolve this debate empirically, Linnenbrink (2005) conducted a study to examine whether there is any added benefit for both mastery and performance-approach goals across multiple outcomes.

In particular, Linnenbrink (2005) examined the effects of three classroom goal conditions (mastery, performance-approach, combined mastery/performance-approach) and personal goal orientations on motivation, emotional well-being, help seeking, cognitive engagement, and academic achievement for 237 upper elementary students during a 5-week math unit emphasizing a small group instruction. Results indicated a statistically significant effect for classroom goal condition on only help seeking and academic achievement, with the combined condition showing the most beneficial pattern. Personal mastery goals had positive effects on students' academic self-efficacy, interest in math, utility of math in their lives, adaptive help seeking, self-regulation, affect, and academic achievement; whereas personal perfor-



mance-approach goals were detrimental for academic achievement and test anxiety and unrelated to the remaining outcomes.

These findings supported the multiple goal perspective for classroom goal contexts and the mastery goal perspective for personal goal orientations. More specifically, the findings for the classroom goal context suggested that the performance-approach and combined mastery-performance classroom goal contexts are most beneficial, whereas the findings for personal goals suggested that mastery goals are beneficial and performance-approach goals are detrimental. At present, however, it is clear that much more research is needed on the issue of multiple goals. We still do not know whether the most beneficial multiple goals profile may depend on student's characteristics or on achievement-context's characteristics.

### **Directions for Future Research**

The aforementioned findings suggest that the most important contributions of achievement goal theory to education have been its application to the study of classroom learning environment. For the most part, the studies have consistently shown that when students perceive their classrooms emphasizing understanding and mastery of knowledge and skills, they are more likely to use effective learning strategies and feel better about themselves than when they perceive their classrooms emphasizing normative comparison of student ability (Kaplan, Middleton, Urdan, & Midgley, 2002b). However, the majority of research on classroom goal structure has used individual student scores as the unit of analysis rather than the average score of students at the classroom level (Ames, 1992b; Ames & Archer, 1988; Church et al., 2001; Kaplan et al., 2002b). Proponents of this approach argue that students within the same classroom differ in how they interpret and perceive the various practices in the classroom as a result of differential treatment and their different prior experiences brought to the classroom (Ames, 1992b; Kaplan et al., 2002b). Nevertheless, Church and collaborators (2001) asserted that "*composite measures of perceived classroom goal structure have been shown to be internally consistent, and composite indicators yield a more comprehensive assessment of the perceived classroom environment than do individual indicators*" (p. 51). Similarly, Kaplan and colleagues (2002b) contended that "*in general, goal structures encourage the adoption of similar personal goal orientations among students, but we recognize that students vary in their interpretation of the goal messages present in the learning environment*" (p. 25).

Many studies of classroom goal structure tended to overlook the hierarchical structure of the data, in that students are nested within classrooms and classrooms are nested within schools. As might be expected, ignoring the nested nature of the data may lead to statistical and conceptual problems such as unit of analysis, violation of independence assumption, and loss of information (Raudenbush & Bryk, 2002). It may be argued that students within a classroom may share common characteristics of the teacher and his or her instructional practices, and as such even though students respond differently to the same classroom instructional process, their responses may have commonality. Therefore, their responses should be aggregated at the classroom level, and hence identified as a classroom characteristic.

A number of empirical evidences exist to support this argument. First, in their study of 516 sixth grade students situated in 63 math classrooms, Ryan et al. (1998) found a small within-class variance in students' perceptions of classroom goal structure, a situation that suggested some degree of consensus among students' perceptions within classrooms. Hence, it seemed reasonable to average students' responses about their classroom (Ryan et al., 1998). Similarly, Kaplan and colleagues (2002a) investigated whether classroom goal structure as perceived by students is related to student disruptive behavior. A sample of 388 ninth grade students nested within 60 math classrooms responded to surveys about their classroom goal structure and their involvement in classroom disruptive behavior. Prior to the analyses, Kaplan and collaborators (2002a) found a large degree of dependency among students' perceptions of classroom goal structure within classrooms. Hence, Kaplan and colleagues (2002a) aggregated students' responses to the classroom level and identified them as classroom-level predictors. Likewise, in a recent hierarchical study of 1,571 students nested within 84 math teachers in grades 5 through 12, Deevers (2005) found that students' perceptions of teacher practices that press students academically and endorse mastery goals within the classroom had significant positive effects on student's adoption of mastery goals. Thus, future studies need to take advantage of the multi-level modeling to examine the correlates and consequences of classroom goal structures.

Notably, there seems to be two conceptually-related types of perception about classroom goal structure: individual and collective. The individual perception of classroom goal structure refers to the personal perception of an individual student about the mastery and per-

formance dimensions of the classroom goal structure. The collective class perception refers to the overall shared perception of students in a classroom about the mastery and performance dimensions of the classroom goal structure, and it is reflected by the average levels of students' perceptions within the classroom. The key distinction between individual and collective goal structure involves the object: self or group perception of classroom goal structure. One may argue that the collective perception of the classroom goal structure is a potent way of characterizing the social influence of the classroom. From the perspective of social theory, norms develop to permit group members some control over their actions of others when those actions have consequences for the group (Coleman, 1985, 1987, 1990, as cited in Goddard & Goddard, 2001, p. 810). When student's beliefs are incongruent with the shared beliefs of the class, the student's beliefs can be sanctioned by the class members (Coleman, 1985, 1987, 1990, as cited in Goddard & Goddard, 2001, p. 810). In fact, Coleman argued that the severity of the social sanctions delivered to those who break norms will be equal in magnitude to the effect of norm-breaking on the collective. Yet, little research has addressed the effect of collective class perception about classroom goal structure on student's motivation and academic behavior. In addition, important questions have not been fully addressed in the research literature about the effects of collective class perception of classroom goal structure on an individual student's personal perception of classroom goal structure and personal achievement goal. Finally, the division of performance goals into approach and avoidance dimensions has proven to be valuable at the student level (Elliot, 1999). Future research needs to examine whether a similar distinction exists at the classroom level. Another line of research is needed to develop measures of the motivational and learning processes both at the classroom context's level and student's level (De La Fuente, 2004). These lines of inquiry will further research agenda in achievement goal theory.

In sum, the findings reviewed in this paper clearly point to the importance of fostering students' achievement goals in learning environments. Yet, from a sociocognitive perspective, students "*are not social isolates of the influence of those around them*" (Bandura, 1997, p. 469). This has led me to question whether an individual student's perception of goal structure and achievement goal orientation vary systematically among classes and, if so, to what extent a class collective perception of goal structure in particular is predictive of this variation. Building a collective perception of mastery goal structure in the classrooms may offer a new possibility for improving student motivational outcomes and perhaps at least lessening the reported troubling pattern of change in motivation experienced by students during the transition to

middle school and within middle school grade levels. Such a study will also have an import regarding the manner in which students influence each other, and consequently can provide a roadmap for teachers to improve the climate within their classrooms.

## Conclusion

Weiner (1990) pointed to achievement goal theory as "*a major new direction, one pulling together different aspects of achievement research*" (p. 629). The theory has been considered to be an influential framework for conceptualizing student motivation (Elliot, 1999). Since its origin in the late 1970s and early 1980s, it has provided significant contributions to the motivational research and achievement settings in education. Together, the findings of studies reviewed in this paper are evidence of a growing body of literature that documents the importance of both self and group perceptions of classroom goal structure to student achievement motivation. These studies have led me to consider whether collective beliefs of goal structure, as a way of characterizing the normative and behavioral context of a classroom, would also be related to individual beliefs of achievement goals and classroom goal structure. These lines of inquires will provide educators and psychologists with helpful and meaningful ways of enhancing motivation and learning. It should be pointed out that this review was limited to the research conducted in the United States in comparison to Oman, and as such the findings might not be generalized to other contexts. Future reviews might consider comparing Western and Eastern research on achievement goals outling cultural influences on the conceptualization of achievement goals in academic settings.

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