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Goal orientation and achievement behavior : an analysis of goal configurations

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GOAL ORIENTATION AND ACHIEVEMENT BEHAVIOR:
AN ANALYSIS OF GOAL CONFIGURATIONS

A Thesis

Presented to

The Faculty of the Department of Child Development
San Jose State University

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts

by

Tamara Swanson Brandt

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ABSTRACT

GOAL ORIENTATION AND ACHIEVEMENT BEHAVIOR:

AN ANALYSIS OF GOAL CONFIGURATIONS

by Tamara Swanson Brandt

Continued and increasing concern about the educational attainment of U.S. students emphasizes the need for a better understanding of the variables that influence academic achievement. The purpose of this research was to investigate more thoroughly the relationship between 2 components of achievement motivation: achievement goal orientations (learning and performance orientations) and patterns of achievement behavior (learned helpless and mastery oriented patterns). Questionnaire data were collected from 230 college students in a large metropolitan university in the San Francisco Bay Area. Results indicated that the learning goal orientation was associated with mastery oriented patterns of achievement behavior, regardless of the level of performance orientation, and the performance goal orientation was associated with the learned helpless pattern of achievement behavior, regardless of the level of learning orientation. These findings suggest that a strong learning orientation may lead to more adaptive patterns of achievement behavior thereby enabling greater educational attainment.

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CHAPTER 1

Introduction to the Problem

In the past several decades, concern about the educational attainment of the denizens of the United States has greatly increased (U.S. Department of Education, 1995a, 1995b; Stedman, 1997a, 1997b). This concern has been fueled in part by declining Scholastic Aptitude Test (SAT) scores and achievement test scores of U.S. high school students. Although research has concluded that, to some degree, the decrease in test scores is due to the demographic changes in the population of U.S. students, many researchers contend that demographic changes only partially account for the general low achievement levels of the students of the United States (see Stedman, 1997b, for a review).

Longitudinal research conducted over the past 20 years has shown consistent low levels of academic achievement, particularly of high school students, in the United States in the areas of math and science (Stedman, 1997a). For example, Stedman (1997a) reports a series of assessments reveal that the average high school student has difficulty with relatively simple seventh-grade level mathematics. In addition to deficiencies in math performance, Stedman recounts the weak performance of high school students in the areas of reading, writing, history, literature, civics, and geography.

Furthermore, international achievement comparisons show that high school students of the United States perform poorly when compared to students from other nations (National Education Goal Panel, 1995; Stedman, 1997b). For example, in the Second International Math Study, the U.S. 12th-grade students ranked "14th of 15 nations in advanced algebra, 12th of 15 in geometry, and 12th of 15 in calculus" (Bracey, 1996, p. 5).

Group differences also exist in the educational attainment of U.S. high school students. For example, in the past 25 years high school graduation rates have increased overall for both males and females of all ethnic groups (National Education Goal Panel, 1995; U.S. Department of Education, 1995c). However, despite these gains in graduation rates and the decreasing gap between the educational attainment of white and ethnic minority students, the educational disparity between students who have low socio-economic status (SES) and students who are more economically fortunate has increased.

Unfortunately, achievement at the college or university level is also not without reproach. Although the total number of students entering and graduating from U.S. colleges and universities has increased, the percentage of students who begin their college studies and eventually attain a degree has decreased (Sax, Astin, Korn, & Mahoney, 1996; U.S. Department of Education, 1995b, 1995c). In a study conducted over the last 30 years, Sax et

al. (1996) found that the self-confidence of college freshmen was at an all time high. So, not only are more high school seniors continuing on to college, but college freshmen are also more confident than ever in their ability to complete college successfully. Ironically, although these students were more confident in their ability to attain a degree, they were more likely than students of the past to skip classes and were much less motivated by, or interested in, the content of their courses (Sax et al., 1996).

In light of the documented low levels of academic achievement and motivation to achieve in the United States, it is not surprising that many parents, teachers, business leaders, and legislators have voiced concern. Since the early 1980's, this concern over achievement has led to a series of educational reforms (U.S. Department of Education, 1995a, 1995b). In recent years, legislators have focused on creating a national set of standards and national education goals that are aimed at decreasing the gap between the educational attainment of white and minority students as well as between low SES and more economically advantaged students. In addition, legislators are interested in the increased educational attainment of all U.S. students in general as well as relative to students of other nations. The Goals 2000 Educate America Act, that passed through Congress with overwhelming bipartisan support and was signed by President Clinton in 1994, attempts to increase academic achievement by supporting and

encouraging: (a) the professional development of teachers, (b) the use of technology in the classroom, (c) the development of challenging academic standards, and (d) increased involvement of parents and the community in education (U.S. Department of Education, 1995a).

In order to address the concerns of the business community and the pressing need to educate our students so that they may be a productive asset to the nation's workforce, the Educate America Act includes legislation regarding literacy and lifelong learning so that "every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy..." (National Education Goals Panel, 1995, p. 12). An important focus of this legislation is the achievement of students, particularly the ethnic minorities and economically disadvantaged. The goal is to increase substantially the number of these students completing their college degree. In addition, this legislation is motivated by an interest in fostering educational reform so that the "proportion of college graduates who demonstrate an advanced ability to think critically, communicate effectively, and solve problems will increase substantially" (p. 12).

Important to the success of the Educate America Act is the contribution of the research community in the development of the method(s) through which this Goals initiative can be implemented. The Educate America legislation created the National Educational Research Policy and Priorities Board, that

working in coordination with the Office of Educational Research and Improvement, created a set of priorities for the advancement of this vast educational reform project. In coordination, these two entities have tried to secure the active participation of "teachers and policy makers, the academic community, foundations and other sponsors of research, and public and private groups" including the business community (U.S. Department of Education, 1996, p. 1). The involvement of such a vast array of individuals and groups assures an accurate needs assessment (understanding and assessing what our students need to know). The participation of the academic community assures the provision of thoroughly studied methods of educational reform. To acquire the input of the academic community, the National Educational Research Policy and Priorities Board has solicited the help of achievement researchers.

Numerous researchers have investigated variables associated with educational attainment and academic achievement. Factors affecting academic achievement are many and varied (U.S. Department of Education, 1995a). The Educate America legislation has focused on several of the factors known to be related to academic achievement such as prenatal care and proper nutrition, high quality preschool programs, and parental and community involvement in education (National Education Goals Panel,

1995). Although these factors have been recognized in this legislation, one important factor, achievement motivation, has not been emphasized.

Achievement motivation theorists assert that the understanding of why some students succeed while other students fail may come from investigating the process through which some students become motivated to learn and persevere in the face of challenge or failure while others experience performance decrements in challenging situations (Cain & Dweck, 1995; Diener & Dweck, 1980; Dweck, 1986, 1989; Dweck & Elliott, 1983; Henderson & Dweck, 1990; Meece, Blumenfeld, & Hoyle, 1988; Schraw, Horn, Thorndike-Christ, & Bruning, 1995; Wagner, Powers, & Irwin, 1985).

Statement of the Problem and Purpose of this Study

In light of general poor academic performance of U.S. high school students and falling retention rates in U.S. colleges and universities, many are interested in understanding how to increase achievement at the high school level as well as increase post-secondary persistence and attainment (Astin, Tsui, & Avalos, 1996; Sax et al., 1996; U.S. Department of Education, 1995a, 1995b). This concern highlights the growing need to understand achievement motivation in older adolescents and adults. Although numerous theorists have focused on the development of achievement motivation in adolescence, relatively little research has been conducted on the development of achievement motivation at the college level.

Some may argue that the time to engender positive achievement motivation profiles and inoculate individuals against achievement motivation pathologies is in childhood. There is also, however, a great need to understand how positive achievement motivation can be fostered and sustained in adulthood. The current study aims to provide a more thorough picture of the process through which some college students succeed while others fail. Investigating the determinants of achievement motivation in adults is an important component in understanding how to develop new techniques and strategies for educational reform in high school and in higher education. This research, guided by an existing theoretical framework, seeks to expand upon current achievement motivation theory.

CHAPTER 2

Review of the Literature

For the past several decades, achievement motivation theorists have investigated both the antecedents and the consequences of achievement motivation. A vast amount of achievement motivation research has been conducted with students of all ages from young children (Bempechat, London, & Dweck, 1991; Benenson & Dweck, 1986; Smiley & Dweck, 1994), to school-age students (Benenson & Dweck, 1986; Cain & Dweck, 1995; Elliott & Dweck, 1988; Erdley & Dweck, 1993; Meece et al., 1988; Meece & Holt, 1993), to adolescents (Ames & Archer, 1988; Cool & Keith, 1991; Eccles, Lord, & Midgley, 1991; Eccles et al., 1993; Garcia-Celay & Tapia, 1992; Henderson & Dweck, 1990; Keith & Cool, 1992), to college students (Bouffard, Boisvert, Vezeau, & Larouche, 1995; Hayamizu & Weiner, 1991; Miller et al., 1993).

Theories of achievement motivation span the gamut from attributional and learned helplessness theory (Diener & Dweck, 1980; Dweck, 1975; Dweck & Bush, 1976; Dweck, Davidson, Nelson, & Enna, 1978; Dweck, Goetz, & Strauss, 1980; Dweck & Reppucci, 1973; Seligman, 1975; Weiner, 1986), to self-efficacy theory (Bandura, 1977, 1982a, 1982b; Schunk, 1981), to achievement goal theory (Ames, 1992a, 1992b; Ames & Archer, 1988; Dweck & Elliott, 1983; Dweck & Leggett, 1988; Nicholls, 1984; Urdan & Maehr, 1995; Wentzel, 1991). Much of the recent research attempting to hone

achievement motivation theory has investigated achievement related goals (learning and performance goals) and goal orientations (constellations of beliefs, behaviors, and attributions strongly associated with specific goals) (Ames, 1992a, 1992b; Bouffard et al., 1995; Hayamizu & Weiner, 1991; Heyman & Dweck, 1992; Jagacinski, 1992; Meece & Holt, 1993; Miller et al., 1993; Schraw et al., 1995; Urdan & Maehr, 1995; Wentzel, 1992). To follow the convention of recent research, the present study adopted the achievement goal theory (as opposed to the self-efficacy theory) as its guiding theoretical model. In addition, the present study used the learned helpless theory (the study of learned helpless and mastery oriented behaviors) to provide information about the fundamental components of achievement motivation theory, the actual patterns of behavior (and the reasons for the existence of those behaviors) that students exhibit in achievement situations.

To begin, this paper will systematically present both the learned helpless and the achievement goal theories as well as the relationships between the two theories. Specific research questions and hypotheses follow the review of literature.

Learned Helpless Theory

The Origin of the Theory

During the late 1970's and early 1980's the concept of learned helplessness, first explored and documented in animal research, was of great

interest to investigators who were beginning to take an interest in the applicability of animal research in the interpretation of human behavior (Dweck, 1975; Seligman, 1975; see Dweck & Wortman, 1982, for a review). Specifically, researchers were interested in how the findings from the studies of learned helplessness in animals might relate to human behavior in learning situations.

Learned helplessness is defined as the state in which an individual perceives no control over potential outcomes and generalizes this perception to events over which he or she, indeed, does have control. Researchers assert that learned helplessness is due to exposure to outcomes that are outside the control of the individual (Dweck & Wortman, 1982). Dweck and Reppucci (1973) were among the first to conduct research on the presence of learned helplessness in children's learning situations. They were interested in understanding to what the children would attribute their inability to solve an insoluble problem. Simply, Dweck and Reppucci's belief was that the way an individual behaved in response to an "aversive outcome" depended on what the student perceived to be the cause of that outcome.

A Focus on Attributions

In Dweck and Reppucci's (1973) study, two experimenters presented students with problems to solve. One experimenter presented the students with solvable problems. The other experimenter gave the students insoluble

problems. When the "failure" experimenter (who had presented the students with insoluble problems) presented the students with solvable problems, some students could not solve the problems, even though they had solved similar problems (in terms of difficulty) when they were with the "success" experimenter. The researchers compared the persistent students (those who persevered and tried to solve problems the "failure" experimenter presented them) with the students who gave up. In their analysis, Dweck and Reppucci found that the students who persisted (even when they failed) attributed their failure to a lack of effort. These students were identified as the mastery oriented students. Conversely, the students who gave up when they were confronted with failure had attributed their failure to a lack of ability. These students were said to have a learned helpless orientation. The researchers contended that "it is the cognitions about the causes and controllability of failure, not the failure experience itself, that affects the likelihood of subsequent deterioration in performance" (p. 103).

To substantiate this claim, Dweck (1975) initiated the investigation of the proposed connection between cognitions, attributions, and the subsequent response to failure. Her goal was to "determine whether altering attributions would alter the impact of failure on performance" (p. 103). If she could show that students would respond differently in the face of failure after an

attribution retraining period, she would provide evidence that there was indeed a causal link between cognitions, attributions, and behaviors.

Dweck (1975) examined students who exhibited helpless behavior patterns. All of the students studied had "displayed the attributions characteristic of helplessness, and all showed severe disruption of performance when even mild failure occurred" (p. 103) during the initial performance assessment. These students were placed in two groups. One group received "attribution retraining." These students were exposed to problems and taught or trained to attribute their failures to a lack of effort. The students in the second group did not receive any retraining. They were given problems that were developed to be solvable for all students in the group. Therefore, the students in the second group did not experience failure. After the training period, all students were given another problem solving task.

Dweck (1975) found that the students in the "attribution retraining" group had changed the way they responded to and thought about failure situations. In fact, she found that "for most of them failure now promoted an improvement in performance. In addition, they showed a significantly greater tendency to emphasize effort over ability as a determinant of failure" (p. 103). In contrast, the students in the "success only" group showed no changes in behavior in terms of their attributions. Therefore, they still

attributed their failures to a lack of ability. To summarize, Dweck found that helpless students who are taught to think about failures in the way of mastery-oriented students actually learned to handle failures in the custom of mastery-oriented students.

Patterns of Achievement Behavior and Academic Achievement

Patterns of achievement behavior have been found to be directly related to academic achievement. Heyman and Dweck (1992) asserted that "adaptive motivational patterns foster long-term achievement, while reflecting and promoting intrinsic goals and interests" (p. 231). The patterns of achievement behavior and their relation to academic achievement has been documented in samples of children, adolescents, and college students (Ames & Archer, 1988; Chiu, Hong, & Dweck, 1994; Diener & Dweck, 1978, 1980; Henderson & Dweck, 1990).

The relationship between patterns of achievement behavior and academic achievement was first found in Diener and Dweck's (1978, 1980) research on learned helplessness. In this seminal research on achievement patterns, students were classified as either learned helpless or mastery oriented based upon an initial assessment. The students were then given a set of tasks to complete, all of which required problem solving. The first eight problems were relatively easy, whereas the last four problems were constructed to be

extremely difficult. Of interest to the researchers were the patterns of the children's behavior as they went from success to failure experiences.

The students who engaged in helpless patterns of behavior performed very differently than those students who engaged in mastery-oriented patterns of behavior (Diener & Dweck, 1978, 1980; Dweck and Leggett, 1988). First, the helpless students reported negative self cognitions. "Specifically, they [attributed] their failures to personal inadequacy, spontaneously citing deficient intelligence, memory, or problem-solving ability as the reasons for their failure" (Dweck & Leggett, 1988, p. 257). Yet, just a few minutes earlier they were extremely successful. Therefore, despite the fact that they did not question their ability during the success period, they did question their ability during the failure trials. Secondly, they expressed boredom with or dislike of the task or voiced concerns about their performance. However, during the success trials they were completely content with the task. Additionally, over two-thirds engaged in task-irrelevant verbalizations that were usually diversionary and in an effort to point out their positive attributes. The learned helpless students tended to speak of talents in other domains instead of focusing their resources to attain success. Not surprisingly, the students who exhibited learned helpless behaviors showed a significant decrease in performance as the failure trials proceeded. With each new failure situation they employed less and less effective problem

solving strategies. By the end of the failure trials 60% of the learned helpless students were using strategies that would never result in successful solution of the problem solving tasks.

Mastery-oriented students, on the other hand, exhibited different behavior (Diener & Dweck, 1978, 1980; Dweck and Leggett, 1988). These students viewed "the unsolved problems as challenges to be mastered through effort" (Dweck & Leggett, 1988, p. 258). They not only believed that they could solve the problem if given enough time, they were excited by the challenge and opportunity to do so. In contrast to the helpless students, the mastery-oriented students maintained positive feelings toward the task. These students did not spontaneously tell researchers that they were bored with the task or speak of irrelevant matters. They focused their attention on the task at hand. They not only planned the strategic way in which they would approach the problem, they monitored their own progress and engaged in self-talk to keep themselves on task. In addition, while 80% of all the mastery-oriented students maintained the problem solving strategy level they began the tasks with, 25% of these students actually taught themselves new, more sophisticated strategies. This was in direct contrast to the helpless students, some of whom experienced a decrease in their level of problem solving ability from the beginning of the task to the end.

In this research by Diener and Dweck (1978, 1980), helpless students were found to be focused more on their ability and perceived inadequacy. Their behaviors suggested that the challenging problems in the study task threatened their self-esteem. Thus, when faced with a challenging situation, learned helpless students exhibited decreased levels of performance as they became consumed by task-irrelevant thoughts and behaviors and were, therefore, not able to focus on the task at hand. The mastery-oriented students, on the other hand, were concerned with strategy and effort. These students viewed the challenging problems as opportunities to learn something new, not a threat to their self-esteem. Thus, when faced with a challenging situation, mastery oriented students exhibited increased levels of persistence and performance.

Although one might assume that students would be learned helpless or mastery oriented based on their level of intelligence or ability, this was not supported by research findings (Dweck, 1975, 1986; Dweck & Reppucci, 1973). In fact, Dweck and Leggett (1988) reported that these early studies found that the students "who avoid challenge and show impairment in the face of difficulty are initially equal in ability to those who seek challenge and show persistence" (p. 256).

Achievement Goal Theory

Why is it that students who are initially equal in ability show drastically different patterns of achievement behavior? Why do some students attribute their failures to ability while others attribute their failures to a lack of effort? These questions led Dweck and Elliott (1988), along with many other researchers (Ames, 1984; Ames & Archer, 1988; Covington, 1984; Maehr, 1984; Nicholls, 1976, 1984) to investigate the origins of these differences. Dweck and Elliott contended that helpless and mastery-oriented students must be "pursuing different goals in achievement situations, with helpless students seeking to document their ability (but failing to do so) and mastery-oriented students seeking to increase their ability (and receiving information on how to do so)" (p. 5).

Achievement goal theory focuses on the understanding of "students' perceptions about the reasons for engaging in academic work" (Urduan & Maehr, 1995). In general, two types of achievement goals have been identified (Ames, 1984; Ames & Archer, 1988; Covington, 1984; Elliott & Dweck, 1988; Maehr, 1984; Nicholls, 1976, 1984). Performance goals, on one hand, are characterized either by an individual's preoccupation with gaining favorable judgments or avoiding negative judgments of competence. The focus of this type of goal is the judgment and validation of the capacity of one's ability. Learning goals, on the other hand, are characterized by an

individual's concern with increasing competence. The focus for someone with learning goals is to nurture existing skills and develop new abilities. Dweck (1989) asserted that achievement goals were related to specific patterns of achievement related beliefs and behaviors.

Achievement Goals and Associated Beliefs and Behaviors

Many beliefs and behaviors are associated with the achievement goals proposed by Dweck (1989). It is the beliefs and behaviors associated with each specific goal that make up each goal constellation or goal orientation. Dweck (1989) investigated the following beliefs and behaviors associated with learning and performance goals: (a) standards, (b) perceived control, (c) task choice, and (d) task pursuit. Because goal orientations are the focus of the present study, each of the behaviors and beliefs associated with achievement goals are described in detail. The relationships between the two types of achievement goals and each of the associated beliefs or behaviors are summarized in Table 1.

Standards. Dweck (1989) reported that standards in achievement situations refer to the level of performance the student believes he or she must attain to feel successful. Standards are described as being either normative or personal. Normative standards are associated with a student judging his or her performance relative to other students. For example, a normative standard would be to achieve a test score that ranks in the 95th

percentile. Personal standards, on the other hand, are associated with a student judging his or her performance relative to his or her own past performance. Therefore, a student with personal standards would not be concerned with his or her ranking relative to other students but would be concerned with personal improvement. Dweck contends that personal standards are associated with learning goals and normative standards are associated with performance goals.

Perceptions of control. Perceived control refers to the control one perceives he or she has over attaining the desired achievement related outcomes. Dweck (1989) stated that performance goals are associated with a low perception of control over achievement related outcomes. She explained that when "striving to succeed according to a normative standard, one has virtually no control over the performance of one's reference group" (p. 100). In any situation, one could perform extremely well in relation to one's past performance but very poorly in relation to others' performance. Effort may be all that is required to increase performance relative to one's past performance, but there is not a decisive action or behavior that can guarantee increased performance relative to others. Therefore, Dweck asserted that performance goals and normative standards are associated with perceptions of limited control over the achievement situation.

On the other hand, a higher level of perceived control is associated with personal standards. Dweck (1989) reported that this is due to the fact that for individuals with personal standards the final outcome does not hinge upon some other variable that the student cannot control. Personal standards are thought to be associated with learning goals. Elliott and Dweck (1988) found students with learning goals to be primarily concerned with increasing competence and relatively indifferent to the judgments of others. Because success (for the student with learning goals) is based on effort as opposed to relative ability, no other variables exist that could take away the student's control over the achievement situation.

Task choice. Task choice is another behavior associated with achievement goals. Task choice refers to the type and the difficulty level of tasks chosen by an individual. Dweck (1989) reported that some students choose tasks that are far too easy in order to insure a positive or successful achievement experience. Other students were observed to choose more challenging tasks in order to increase their ability or knowledge base. In their 1988 study, Elliott and Dweck found that students with performance goals who had a low perception of ability would choose extremely easy tasks. Students with performance goals who had high perceptions of their competence in a particular learning situation were more apt to choose more challenging tasks.

On the other hand, they found that students who had learning goals chose more challenging tasks regardless of their perceived level of competence.

Task pursuit. Task pursuit is concerned with the behaviors associated with task completion. Dweck (1989) referred to two types of task pursuit associated with achievement goals. Performance goals are thought to be associated with ego protecting task pursuit behaviors. For example, Dweck reported that students with performance goals and low ability perceptions tended to involve themselves in activities or behaviors that effectively reduced the amount of effort relegated to the task. It was Dweck's contention that this type of procrastination attempted to "introduce other factors that [could] serve as excuses for poor performance" (p. 100). Students who employ this technique could then blame a lack of effort for failure rather face negative ability judgments. Learning goals, on the other hand, are thought to be associated with attentiveness toward the task at hand. Because students with learning goals are not concerned with ability judgments, ego saving techniques are not necessary.

In addition to these major categories of behaviors and beliefs associated with achievement goals, Dweck (1989) reported that students who possess learning goals are more likely to think of instructors as resources. On the other hand, students who possess performance goals are reported to view

instructors as obstacles who could potentially provide negative judgments of competence.

Relationship Between Expectancies, Goals, and Behaviors: The Role of Confidence

Achievement related expectancies are essentially the beliefs that students have about their level of competence in an achievement situation. It is the student's confidence in his or her ability to succeed in any given achievement situation. Elliott and Dweck (1988) found that students who possess performance goals were more likely to assess their level of competence by comparing the perceptions of their own ability to the perceived ability of others. Furthermore, perceptions of success were also based on performance relative to others. For example, not only would a student with this goal orientation be concerned with a high percentile ranking as opposed to a personal performance improvement, but success would be defined by their rank. Elliott and Dweck contended before entering a challenging situation, students with performance goals need to estimate how competent they will look in comparison to others in order to attempt to avoid negative judgments or gain positive judgments of their competence.

Dweck and her colleagues found that performance goals were associated with a maladaptive constellation of beliefs and learned helpless behaviors if an individual had little confidence in his or her intelligence (see Table 1 for

summary) (Dweck, 1991; Dweck & Elliott, 1983; Dweck & Leggett, 1988; Elliott & Dweck, 1988; Henderson & Dweck, 1990; Heyman & Dweck, 1992). If, however, an individual with performance goals was confident in his or her intelligence or ability, an adaptive constellation of beliefs and mastery oriented behaviors were more likely. Learning goals, conversely, were always associated with an adaptive constellation of beliefs and the mastery-oriented pattern of behavior. Smiley and Dweck (1994) explain:

...children with learning goals may tend to choose challenging learning situations in school that allow for acquisition of new skills and insights. Children with performance goals and high confidence may choose challenging tasks when they are secure in their ability, but curtail their opportunities when they are uncertain of a good outcome or positive evaluation. Children with performance goals who lack confidence may avoid many new learning situations in order to avoid feeling inadequate, restricting the opportunities they have to acquire new skills. (p. 1742)

Students with performance goals who exhibit mastery-oriented behaviors were found to be more susceptible to regressing to helpless behaviors in the face of failure or extreme challenge. For the student with performance goals, mastery-oriented behaviors only persisted as long as the student felt confident in his or her ability to succeed. This makes the student with performance goals (as opposed to learning goals) inherently more vulnerable to achievement motivation pathologies in achievement situations.

Adaptive Goal Orientation and Goal Configurations

By simply examining the research on goals and patterns of achievement behavior, one might assume that performance goals should be avoided altogether. Heyman and Dweck (1992) suggest that this may be a hasty conclusion. Although research has found performance goals to be associated with more maladaptive beliefs and behaviors, Heyman and Dweck pointed out that the adoption of learning goals to the exclusion of performance goals may also be maladaptive. For example, there may be times when a student just is not intrinsically interested in the subject matter of a class. If a student were to adopt learning goals exclusively, and ignore performance evaluations, the student "may well be acting against their best interests, and may even be risking opportunities for future learning in that domain" (p. 244). Additionally, if one were to pursue learning goals exclusively (in college for example), one may accumulate a great deal of knowledge or academic units but never complete all requirements to achieve a degree. Heyman and Dweck suggested that a combination of goals or goal configurations may be more adaptive than the adoption of one goal or another. For example, high learning orientation in combination with high performance orientation may be more adaptive and lead to more mastery oriented behaviors than a combination of high learning and low performance orientations.

Following this rationale, researchers have begun to investigate goal configurations or combinations of goal orientations (Ames & Archer, 1988; Bouffard et al., 1995; Schraw et al., 1995). Goal configuration research has allowed researchers to understand the effect of multiple simultaneous goal orientations on various outcome variables. Each of the studies investigating goal configurations has identified four goal configurations: high performance/high learning, high performance/low learning, low performance/high learning, and low performance/low learning.

Goal configuration research has examined the relationship between combinations of learning and performance goals and (a) learning strategies (Ames & Archer, 1988; Schraw et al., 1995), (b) preference for task challenge (Ames & Archer, 1988), (c) attributions for success and failure (Ames & Archer, 1988; Schraw et al., 1995), (d) self-regulation (Bouffard et al., 1995; Schraw et al., 1995), and (e) academic achievement (Bouffard et al., 1995; Schraw et al., 1995).

Results from these studies are consistent in that the learning orientation was found to be significantly positively related to all adaptive motivational variables. Whether goal orientation interactions existed with respect to various dependent variables varied from study to study. For example, while Ames and Archer (1988) found goal configuration interactions in relation to strategy use and success and failure attributions, Schraw and his colleagues

(1995) did not find any goal interactions when investigating strategy use or metacognitive knowledge. Further research is warranted given that results of recent research are inconsistent and given that patterns of achievement behavior have not been examined specifically.

Research Question and Hypotheses

The purpose of the present study was to better understand the relationship between goal configurations (combinations of learning and performance goals) and patterns of achievement behavior (learned helpless and mastery oriented behaviors). Understanding such patterns will aid researchers in suggesting instruction strategies to engender adaptive achievement motivation profiles in adults.

In order to understand goal orientations more thoroughly, the following question must be answered: Do preferable goal configurations exist whereby adaptive patterns of achievement behavior are associated with a specific combination of goal orientations? For example, would a student who had both strong learning goals and strong performance goals exhibit more mastery oriented patterns of behavior than a student who has strong learning goals but weak performance goals? Specifically, do the patterns of achievement related behaviors change as a function of a configuration of goals?

One hypothesis consisting of two sub-components was proposed in this research. Generally, it was expected that an interaction between learning and performance goal configurations would be found in relation to both learned helpless and mastery oriented behaviors. Given Dweck's assertion that a goal configuration consisting predominantly of learning goals with relatively weak but existent performance goals may lead to the most adaptive pattern of achievement behavior, two sub-hypotheses were proposed. It was expected that (a) students who had a high learning orientation combined with a low performance orientation would be most likely to endorse the mastery oriented pattern of behavior and least likely to endorse the learned helpless pattern of behavior and (b) it was expected that students who had a low learning orientation combined with a high performance orientation would be most likely to endorse learned helpless behaviors and least likely to endorse the mastery oriented pattern of behavior.

CHAPTER 3

Methods

Participants

Two hundred and thirty ($N=230$) college students in various lower and upper division undergraduate child development courses at San Jose State University completed a questionnaire as a part of a larger study.

Figure 1

Frequency Distribution by Ethnicity

Note. AFAM = African American; ASAM = Asian American; HISPAM = Hispanic American; NATAM = Native American; EURAM = European American; OTHER = Students who identify their ethnicity as other than the

categories provided; UNSPEC = Unspecified data: Missing data and "decline to state" responses.

The participants were a predominantly female ethnically diverse group. Approximately 32% of the students listed their ethnicity as Caucasian ($n=73$), 17.4% identified themselves as being of Asian decent ($n=40$), 16.1% identified themselves as Hispanic ($n=37$), 2.6% identified themselves as African-American ($n=6$), and 2.2% reported being of Native-American decent ($n=5$). The remaining 29.1% either reported to be a member of an ethnic group other than the categories provided in the questionnaire ($n=47$) or did not specify an ethnic group ($n=22$). Figure 1 summarizes the ethnic distribution of the sample.

Of the 230 students, approximately 9% indicated they were male ($n=21$) and 85.7% indicated they were female ($n=197$) with 5.2% ($n=12$) of the students declining to state their gender. Approximately 77% of the sample reported being between 18 and 25 years of age and 76% reported being either in their junior or senior year of college.

Procedure

The data were collected in lower and upper division child development courses in the Child Development department at San Jose State University. The research team was given class time to present the students with basic information concerning the study and to distribute the questionnaire. Each

student completed an informed consent and agreement to participate form. Students had ample time to complete the questionnaire. All students were invited to meet with the research team at a later date if they were interested in the study. Virtually all students (>90%) present during data collection elected to complete the questionnaire.

Measurement of Variables

The participants were given the Student Attitudes and Perceptions Survey created by Dr. Amy Strage at San Jose State University (Strage, 1996). This questionnaire consisted of 135 questions that were intended to provide detailed information about the respondents for a larger study. The Survey consisted of several scales that evaluated the following: (a) family structure (whether they were from intact or divorced families, the age and gender of their siblings, the spacing between siblings in their family, their family size, their birth order, as well as information concerning their current family composition); (b) family process variables (respondents' perceptions of their parents' behaviors, attitudes, and beliefs); (c) other demographic information (age, gender, ethnicity, employment status, location of housing, the age their parents, level of education attained by each parent); (d) academic confidence; (e) reflective vs. impulsive behaviors; (f) social and leadership skills; (g) goal orientation; (h) patterns of achievement behavior. Because the data were collected for a more comprehensive study, the

questionnaire contained many questions that did not pertain to the specific research question and hypotheses contained in this paper.

The present study was concerned with four components of the Survey: (a) demographic information, (b) academic confidence, (c) goal orientation, and (d) patterns of achievement behavior (see Appendix for specific items). The academic confidence, goal orientation, and patterns of achievement behavior inventories were modeled after existing inventories used by Dweck and her colleagues as well as inventories used in validation studies of Dweck's model (Dweck & Henderson, 1989; Hayamizu & Weiner, 1991; Henderson & Dweck, 1989; Leggett & Dweck, 1987; Midgley, Maehr, & Urdan, 1995; Roedel, Schraw, & Plake, 1994).

Academic Achievement

The questionnaire was in a multiple choice format and the items relating to demographic information had forced choices from which the participants selected the answer that most accurately described themselves. Grade point averages were used as an index of academic achievement. Because academic achievement has been found to be significantly related to achievement motivation, it was important in the current study to factor out the effect of academic achievement before looking at the relationship between achievement goal orientations and patterns of achievement behavior.

Two items were used to assess achievement. These items asked students to identify a grade point average range that best described their GPA, both cumulative and within their academic major. The five choices were: (a) below 2.0, (b) 2.49 - 2.00, (c) 2.99 - 2.50, (d) 3.49 - 3.00, and (e) 4.00 - 3.50. A bivariate correlational analysis revealed a significant positive relationship between cumulative GPA and GPA within academic major, ($r(204) = .81, p < .001$). A composite variable was created by computing the average of the responses. A high score indicated a high GPA, $M = 3.64$, $SD = .97$. The range was 3.5 with a minimum score of 1.5 and a maximum score of 5.0.

Academic Confidence

Three items measuring academic confidence were adapted from a measure developed by Dweck and Henderson (1989). An example is: "I feel confident in my ability to complete college" (see Appendix for complete list of items). Items were rated on a 5-point Likert scale ranging from "strongly disagree" to "strongly agree". A composite variable was created by computing the average of the responses. High scores indicated high levels of academic confidence. Internal consistency of the scale (Cronbach's Alpha) was .74; $M = 4.23$; $SD = .86$. Again, because confidence has been found to be related to and affect the relationship between goals and behaviors, the removal of the portion of variance attributed to confidence was necessary before assessing the

relationship between achievement goal orientations and patterns of achievement behavior.

Goal Orientation Index

The goal orientation index was adapted from several previously developed and validated measures of goal orientation (Dweck & Henderson, 1989; Hayamizu & Weiner, 1991; Leggett & Dweck, 1987; Midgley et al., 1995; Roedel et al., 1994). The items in the goal orientation index addressed each of the following: (a) specific goals, (b) standards, (c) perceived control, (d) task choice, and (e) task pursuit. The index used in this study was expected to yield two factors. One factor was expected to represent the learning goal orientation while the other factor was expected to represent the performance goal orientation. All items were rated on a 5-point Likert scale ranging from "strongly agree" to "strongly disagree".

Following convention found in the literature, a principal factors extraction with varimax rotation and a forced two factor solution was performed on the 12 item goals inventory (Ames & Archer, 1988; Miller et al., 1993; Schraw et al., 1995). With a factor loading cut-off of .5 for inclusion of a variable in the interpretation of a factor, three of 12 items did not load on any factor. The two factors revealed accounted for 41.5% of the variation in the sample. Five items loaded on the first factor ($\alpha=.70$) which accounted for 24.5% of the sample variance and four items loaded on the second factor ($\alpha=.66$) which

accounted for an additional 17% of the sample variance. Factor 1 and factor 2 corresponded to the learning goal orientation and the performance goal orientation, respectively, as conceptualized by Dweck (1985) (see Table 2 for factor loadings, see Appendix for specific items). Composite variables were created by computing the mean of the items in each factor. The mean and the standard deviation of the performance goal index were 3.17 and .88, respectively. The mean and the standard deviation of the learning goal index were 3.53 and .75, respectively (see Table 3).

Additionally, in order to investigate goal configurations, both the learning goal variable and the performance goal variable were transformed into dichotomous variables (using a tertile split, retaining data from first and third tertile and discarding the data from the middle tertile). Composite scores in the first tertile received the value "low" whereas composite scores in the third tertile received the value "high". A tertile split and elimination of data was performed as opposed to a median split in order to maximize the difference between the two groups. See Table 3 for mean and standard deviation scores of the dichotomous performance and learning variables.

Patterns of Achievement Behavior Index

The patterns of achievement behavior index was also modeled from several previously developed and validated measures of patterns of achievement behavior (Dweck & Henderson, 1989; Hayamizu & Weiner,

1991; Midgley et al., 1995; Roedel et al., 1994). This series of questions was expected to yield two factors. One factor was expected to represent behaviors associated with learned helplessness while the other factor was expected to represent behaviors associated with a mastery orientation. All items were rated on a 5-point Likert scale ranging from "strongly agree" to "strongly disagree".

Following convention found in the literature, a principal factors extraction with varimax rotation was performed on the nine item patterns of achievement behavior inventory. Results of the factor analysis revealed two factors with eigenvalues over 1.0. With a factor loading cut off of .5 for inclusion of a variable in the interpretation of a factor, two of nine variables did not load on any factor. The two factors revealed accounted for 56% of the variation in the sample. Three items loaded on the first factor ($\alpha=.71$) and accounted for 38% of the variance in the sample. Four items loaded on the second factor ($\alpha=.78$) and accounted for an additional 18% of the sample variance. Factor 1 and factor 2 correspond to the patterns of learned helplessness and mastery orientation, respectively, as conceptualized by Dweck (1985) (see Table 4 for factor loadings, see Appendix for specific items). Composite variables were created by computing the mean of the items in each factor. The mean and the standard deviation of the learned

helpless pattern were 2.70 and .79, respectively. The mean and the standard deviation of the mastery orientation pattern were 3.84 and .74, respectively.

CHAPTER 4

Results and Discussion

Analysis of the Data

The purpose of the current study was to investigate the relationship between goal configurations and patterns of achievement behavior. It was expected that an interaction between learning and performance goal configurations would be found in relation to both learned helpless and mastery oriented behaviors. Specifically, it was expected that students who had a high learning orientation combined with a low performance orientation would be most likely to endorse the mastery oriented pattern of behavior and least likely to endorse the learned helpless pattern of behavior. In addition, it was expected that students who had a low learning orientation combined with a high performance orientation would be most likely to endorse learned helpless behaviors and least likely to endorse the mastery oriented pattern of behavior.

Correlational analyses of the relationships between academic achievement, confidence, achievement goal orientations, and patterns of achievement behavior replicated findings found in the literature (Dweck 1991; Dweck & Elliott, 1983; Dweck & Leggett, 1988; Elliott & Dweck, 1988; Henderson & Dweck, 1990; Heyman & Dweck, 1992). As shown in Table 5, academic achievement (GPA) was significantly and positively correlated to

academic confidence ($r(230) = .185, p < .001$). In addition, both academic confidence and achievement were significantly and positively correlated with the learning goal orientation and mastery oriented behaviors and significantly and negatively correlated with learned helpless behaviors (see Table 5 for summary).

To investigate the predicted interactions of the learning and performance goal orientations with patterns of achievement behavior, separate analyses of covariance (ANCOVA) were performed. The ANCOVA's were used to investigate the relationships between the independent variables (goal orientations) and each of the dependent variables (learned helpless and mastery oriented patterns of behavior) after the adjustment in the dependent variable scores for the differences associated with known covariates (Tabachnick & Fidell, 1996).

Confidence and academic achievement (GPA) variables were entered as covariates. In addition, due to the significant and negative correlation between learned helpless behaviors and mastery oriented behaviors (see Table 5), mastery oriented behaviors were entered as a third covariate when learned helpless behaviors were tested as the dependent variable. Inversely, learned helpless behaviors were entered as a third covariate when mastery oriented behaviors were the dependent variable. Covariates were entered in all ANCOVA analyses to remove the known effect of these variables on the

relationship between goals and behaviors (Tabachnick & Fidell, 1996).

Means and standard deviations of all variables are shown in Table 6. All tests were conducted at the $p < .05$ level of significance.

Hypothesis 1 predicted that an interaction between the learned helpless orientation and the performance orientation would be found in the relationship between goal orientations and both learned helpless and mastery oriented behaviors. A 2×2 between-subjects analysis of covariance was performed on both learned helpless and mastery oriented pattern of behavior variables. Independent variables consisted of performance orientation (high, low) and learning orientation (high, low), factorially combined.

The relationship between learning and performance goal orientation and the learned helpless pattern of behavior is summarized in Table 7. A significant effect was found for GPA ($F(1,226) = 17.76, p < .001$), indicating that GPA accounted for a significant amount of the variation in learned helplessness. The effect of confidence and mastery orientation did not reach statistical significance. After adjustment for the covariates, the ANCOVA revealed that the learning goal orientation did not vary significantly with the performance orientation. Results do, however, reveal a significant main effect of performance orientation ($F(2, 226) = 11.76, p < .001$). Specifically, students high in performance orientation reported more learned helpless

behaviors ($\underline{M} = 3.45$, $\underline{SD} = .86$) than students low in performance orientation ($\underline{M} = 2.62$, $\underline{SD} = .99$). The main effect of the learning orientation was not significant.

The relationship between learning and performance goal orientation and the mastery oriented pattern of behavior is summarized in Table 8. A significant effect was found for both confidence ($\underline{F} (1,226) = 30.216$, $p < .001$) and GPA ($\underline{F} (1,226) = 6.389$, $p < .05$), indicating that confidence and GPA accounted for a significant amount of variation in mastery orientation. There was no statistically significant effect for learned helplessness. Similar to the previous analysis, after adjustment by the covariates, results of the ANCOVA revealed no significant interaction between the learning goal orientation and the performance goal orientation. The results revealed a significant main effect of the learning orientation ($\underline{F} (2,226) = 9.03$, $p < .001$). Specifically, students high in the learning orientation reported more mastery oriented behaviors ($\underline{M} = 4.42$, $\underline{SD} = .61$) than students low in the learning orientation ($\underline{M} = 3.70$, $\underline{SD} = .89$). There was no main effect of the performance orientation.

Discussion

Goal Orientations and Patterns of Achievement Behavior: Revisited

The results of the analyses did not support the hypotheses proposed by the current study, but did replicate the findings of the Schraw et al. (1995)

research on goal orientations and academic achievement as well as the findings of the Pintrich and Garcia (1991) research on goal orientations and self-regulation in the college classroom. Schraw and his colleagues found a significant main effect of the learning orientation on academic achievement, but no interactions and no main effect of the performance orientation. They concluded that these findings supported the notion that learning goals "played a compensatory role in course achievement, off-setting the debilitating effects of a strong performance orientation" (p. 366). In addition, Pintrich and Garcia (1991) found that a learning orientation, but not a performance orientation, was linked to higher levels of self-regulation. Specifically, they found that college students with a learning orientation were:

...more likely to be planful as they prepare to study, to monitor their comprehension of what they are learning, and to repair any deficits in their understanding by rereading or reviewing material that is difficult to comprehend. These students also are more likely to manage their time, their study environment, and their own effort well. They also are more likely to seek help from peers or teachers than students who do not endorse a learning goal (p. 366).

Similarly, results of the current study suggest that while goal configurations do exist, the effect of the learning goal orientation on adaptive patterns of achievement behavior is so strong that it may compensate for the deleterious effect of the performance goal orientation. Therefore, while the predictions concerning the interactions of the goal orientations were not

supported by the findings of the current study, the findings do provide further support for the critical role the learning goal orientation plays in the engagement of college students in adaptive patterns of achievement behavior.

The relationship between the performance goal orientation and the learned helpless pattern of achievement behavior found in the current study also replicates the findings of Elliott and Dweck (1988). Dweck and her colleagues have consistently found that students who espouse a performance orientation may "turn away from their interests or surrender opportunities for long-term development in order to insure positive outcomes and judgments in the short term" (Heyman & Dweck, 1992, p. 243). In addition, results of the current study confirm and replicate Elliott and Dweck's (1988) finding that a significant relationship between learning goals and mastery orientation, on one hand, and performance goals and learned helpless behaviors, on the other hand, exist independent of both prior achievement and perceived ability or confidence.

Taken together these findings emphasize the active role that students take in interpreting and reacting to the learning environment. This research, in coordination with existing evidence, indicates that the goal orientations students possess and the patterns of achievement behavior students engage in have serious implications for learning and achievement.

Limitations of the Current Study

This research may serve well as a pilot study. Much of the information learned about the development of goal orientation and patterns of achievement behavior measures will be useful in future research on this topic. In addition, because there is no single inventory for both goals and achievement related behaviors, this research made progress in the development of such measures. The inability to attain significant interactions may have been due to the nature of the sample. The students in this sample were predominately female child development majors, at the junior or senior level, and had above average grade point averages as well as extremely high confidence in their ability to complete college. Therefore this study may have suffered from restricted range problems. Because score variation was relatively small, attaining statistical significance was very difficult. In addition, because data were discarded in creation of the dichotomous goal variables, the cell sizes for each goal configuration were relatively small, possibly also adding to the difficulty in finding statistically significant interactions. Finally, because the sample lacked the gender and ethnic diversity needed to investigate whether gender or ethnic differences existed in the relationships between goal orientation and patterns of achievement behavior, it is possible that these potentially extraneous

variables contributed to the inability to attain statistically significant interactions.

Another limitation of the current study relates to the inventories used to assess both goal orientations and patterns of achievement behavior. In general, because these questions were part of a much larger questionnaire, it may be that students had difficulty completing such a lengthy questionnaire that consisted of a multitude of scales and measures. It is also possible that the creation of the indices of goals and behaviors suffered because they were modeled after several validated measures as opposed to just one validated measure. Because the factor analytic analyses found that the two goal orientation factors only account for 41.5% of the variance and the two patterns of achievement behavior factors only account for 56% of the variance, there is some question about the strength of these measures and the reliability of these measures in the prediction of goals and behaviors. Future pilot work should be conducted to validate goal orientation and patterns of achievement behavior measures.

Future Research

To fully understand the development of achievement motivation and the connections between the various components of achievement motivation model, longitudinal data must be collected to accurately understand the development of achievement motivation. In addition, experimental research

should be conducted in which the learning environment is manipulated to investigate whether achievement motivation profiles can be altered.

Research by Ames and Archer (1988) found that the classroom environment greatly influenced the type of goals the students pursued. Specifically, if students perceived that the learning environment encouraged learning goals "they were more likely to report using effective learning strategies, prefer tasks that offer challenge, like their class more, and believe that effort and success covary" (p. 264). In addition to simply looking at what the learner brings to the classroom, it is necessary to investigate more thoroughly how the learning environment affects the student. Further research investigating the role of the college classroom in the engagement of college students in adaptive patterns of achievement behavior must be examined. Although the modification of the classroom learning environment may not assist the students who lack the learning strategies and skills to succeed academically, a non-competitive environment with a focus on effort as opposed to ability, has been found to be beneficial in engendering a positive orientation toward academics, thereby engendering adaptive patterns of achievement behavior.

CHAPTER 5

Conclusions

Understanding the development of achievement motivation in adults is an important component in the development of new techniques and strategies for reform in higher education. In order to meet the goals related to adult achievement and college student persistence and attainment outlined in the Educate America Act, research is needed to elucidate the variables associated with high levels of achievement in adults. Although some may argue that the time to engender positive achievement motivation profiles and to inoculate individuals from achievement motivation pathologies is in childhood, there is also a strong need to understand how positive achievement motivation can be fostered in adulthood.

This study found that students with different goal orientations espouse different patterns of achievement behavior. Students with a learning goal orientation were found to be most likely to endorse a mastery oriented pattern of achievement behaviors, regardless of their level of performance orientation. This finding suggests that the learning orientation provides some protection against the achievement motivation pathologies associated with the performance orientation. In addition, this study found that students with a performance goal orientation were most likely to endorse a learned helpless pattern of achievement behavior regardless of their level of learning

orientation. This finding provides strong evidence of the deleterious effects of a performance orientation.

Understanding the relationship between goal orientations and patterns of achievement behavior, in addition to understanding of the effects of the classroom environment on academic achievement, provides useful information for administrators and educators at the college level. For example, universities could move to de-emphasize competitive grading structures and provide professional development lectures to assist faculty members in learning skills and strategies to foster adaptive patterns of achievement behavior in their classrooms. Furthermore, a university could provide study skills workshops that focus on learning goals as opposed to performance goals and teach students to attribute failure to a lack of effort as opposed to a lack of ability. Workshops could be offered as a part of the new student orientation process or could be integrated into the general education curriculum. True change or reform, however, would require an institutional agreement regarding the importance of learning goals and a university-wide commitment to fostering learning goals.

The findings of this research suggest that a classroom environment that encourages learning goals by emphasizing effort and personal standards may help college students engage in more adaptive patterns of achievement behavior and thus increase levels of academic achievement. Although some

believe that college should be a Darwinian environment where only the strongest survive, there is a movement to increase achievement of all college students (National Education Goals Panel, 1995; U.S. Department of Education, 1995a, 1995b). Given that it is becoming increasingly difficult to find a job where some specialized skills or some post-secondary education is not required, it may be time for those who espouse the Darwinian approach to college education to rethink their position and work to ensure the success of the future generations of United State citizens.

Table 1

Summary of Achievement Goals and Associated Beliefs and Behaviors

Achievement Goal	Confidence in Ability	Belief or Behavior
Performance Goal	High	Personal standards. High perceived control. Challenging task choices. Active task pursuit. Mastery oriented behaviors.
	Low	Normative standards. Low perceived control. Extremely easy task choices. Ego-protecting task avoidance. Learned helpless behaviors.
Learning Goal	High or Low	Personal Standards. High perceived control. Challenging task choices. Active task pursuit. Mastery oriented behaviors.

Table 2

Factor Loadings of Goal Orientation Items After Varimax Rotation

Item	Factor I	Factor II
I am disappointed in myself if I get poor grades even if I feel I've learned a lot.	-.009	.667
I think of my instructors as resources to help me learn.	.693	.002
I tend to think of my mistakes and bad grades as "learning experiences".	.578	-.007
I tend to think of my mistakes and bad grades as indications of my inadequacies.	-.418	.512
An important goal for me in college is to increase my knowledge of the subject matter.	.644	.294
An important goal for me in college is to appear competent to those who are judging me.	.116	.738
An important goal for me in college is to avoid looking inadequate to those who are judging me.	-.006	.753
Given a choice between a hard course where I would learn a lot but get a poor grade and an easy course where I would get a good grade but not learn much, I would take the HARD course.	.749	-.196
Given a choice between a hard course where I would learn a lot but get a poor grade and an easy course where I would get a good grade but not learn much, I would take the EASY course.	-.578	.284
Eigenvalue	2.946	2.033
Percentage of variance	24.547	16.938
Cronbach's Alpha	.700	.655

Table 3

Means and Standard Deviations for Learning and Performance Variables.

	<u>M</u>	<u>SD</u>
Performance Orientation	3.17	.88
Learning Orientation	3.53	.75
Performance Configuration		
High	4.14	.36
Low	2.26	.47
Learning Configuration		
High	4.16	.36
Low	2.73	.43

Table 4

Factor Loadings of Patterns of Achievement Behavior Items After Varimax Rotation

Item	Factor I	Factor II
When I have an important test, I am distracted by fears of being under-prepared.	.004	.806
When I have an important test, I dwell on how hard the material is, and I can't concentrate.	-.272	.771
When I am faced with a complicated question, I get confused by all the possible answers.	.000	.744
If I get a poor grade on a test, it makes me want to work even harder for the next one.	.852	.005
If I get a poor grade on a test, it makes me not want to bother trying for the next one.	-.758	.153
When I am faced with a challenging assignment, I hang in there until it is done.	.738	-.006
When I am faced with a challenging assignment, I give up easily.	-.672	.269
Eigenvalue	3.455	1.623
Percentage of variance	38.389	18.032
Cronbach's Alpha	.784	.714

Table 5

Intercorrelations Among Academic Achievement, Confidence, Goals, and Behaviors

Variable	1.	2.	3.	4.	5.	6.
1. GPA	--					
2. CF	.185**	--				
3. LG	.131*	.353**	--			
4. PG	-.064	-.012	-.234**	--		
5. LH	-.338**	-.144*	-.180**	.421**	--	
6. MO	.289**	.475**	.428**	-.121	-.271**	--

Note. GPA = grade point average, CF = confidence, LG = learning goals, PG = performance goals, LH = learned helplessness, MO = mastery orientation.

* $p < .05$. ** $p < .01$ *** $p < .001$

Table 6

Means and Standard Deviations for Learned Helpless Behaviors and Mastery Oriented Behaviors Grouped by Goal Configurations.

Performance Orientation	Learning Orientation			
	High		Low	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
High	<u>n</u> = 25		<u>n</u> = 39	
Confidence	4.45	.52	3.82	.99
GPA	3.69	.94	3.37	.97
LH Behaviors	3.21	.87	3.60	.91
MO Behaviors	4.43	.58	3.65	.80
Low	<u>n</u> = 51		<u>n</u> = 21	
Confidence	4.47	.65	3.54	1.42
GPA	3.88	.88	3.76	1.07
LH Behaviors	2.54	.995	2.70	1.12
MO Behaviors	4.52	.53	3.54	1.07

Table 7

Analysis of Covariance for Learned Helpless Behaviors

Independent Variables	Learned Helplessness	
	<u>df</u>	<u>F</u>
Confidence	1	.130
GPA	1	17.672***
MO	1	3.553
Learning orientation (A)	2	.046
Performance orientation (B)	2	11.757***
A x B	4	.153
Error	214	(.760)

Note. MO = Mastery oriented behaviors. Values enclosed in parentheses represent mean square errors. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 8

Analysis of Covariance for Mastery Oriented Behaviors

Independent Variables	Mastery Oriented Behaviors	
	<u>df</u>	<u>F</u>
Confidence	1	30.216***
GPA	1	6.389*
LH	1	3.553
Learning orientation (A)	2	9.030***
Performance orientation (B)	2	.137
A x B	4	1.29
Error	214	(.424)

Note. LH = Learned helpless behaviors. Values enclosed in parentheses represent mean square errors. * $p < .05$. ** $p < .01$. *** $p < .001$.

REFERENCES

- Ames, C. (1984). Competitive, cooperative, and individualistic goal structures: A cognitive-motivational analysis. In R. E. Ames & C. Ames (Eds.), Research on motivation in education: Vol. 1. Student motivation (pp. 177-207). New York: Academic Press, Inc.
- Ames, C. (1987). The enhancement of student motivation. In M. L. Maehr & D. A. Kleiber (Eds.), Advances in motivation and achievement: Volume 5. Enhancing motivation (pp. 123-148). Greenwich, CT: JAI Press.
- Ames, C. (1992a). Achievement goals and the classroom motivational climate. In D. H. Schunk & J. Meece (Eds.), Student perceptions in the classroom (pp. 327-348). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Ames, C. (1992b). Classrooms: Goals, structures, and student motivation. Journal of Educational Psychology, 84, 261-271.
- Ames, C., & Archer, J. (1988). Achievement goals in the classroom: Students' learning strategies and motivation processes. Journal of Educational Psychology, 80, 260-267.
- Astin, A. W., Tsui, L., & Avalos, J. (1996). Degree attainment rates at american colleges and universities: Effects of race, gender, and institutional type. Los Angeles: Higher Education Research Institute, UCLA.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. Psychological Review, 84, 191-215.
- Bandura, A. (1982a). Self-efficacy mechanism in human agency. American Psychologist, 37, 122-147.
- Bandura, A. (1982b). The self and mechanisms of agency. In J. Suls (Ed.), Psychological perspectives on the self: Volume 1 (pp. 3-39). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Bempechat, J., London, P., & Dweck, C. S. (1991). Children's conceptions of ability in major domains: An interview and experimental study. Child Study Journal, 21, 11-36.
- Benenson, J. F., & Dweck, C. S. (1986). The development of trait explanations and self-evaluations in the academic and social domains. Child Development, 57, 1179-1187.

Blumenfeld, P. C. (1992). Classroom learning and motivation: Clarifying and expanding goal theory. Journal of Educational Psychology, 84, 272-281.

Bouffard, T., Boisvert, J., Vezeau, C., & Larouche, C. (1995). The impact of goal orientation on self-regulation and performance among college students. British Journal of Educational Psychology, 65, 317-329.

Cain, K. M., & Dweck, C. S. (1995). The relation between motivational patterns and achievement cognitions through the elementary school years. Merrill-Palmer Quarterly, 41, 25-52.

Chiu, C., Hong, Y., & Dweck, C. S. (1994). Toward an integrative model of personality and intelligence: A general framework and some preliminary steps. In R. J. Sternberg & P. Ruzgis (Eds.), Personality and intelligence (pp. 104-134). New York: Cambridge University Press.

Cool, V. A., & Keith, T. Z. (1991). Testing a model of school learning: Direct and indirect effects on academic achievement. Contemporary Educational Psychology, 16, 28-44.

Covington, M. (1984). The motive for self-worth. In R. E. Ames & C. Ames (Eds.), Research on motivation in education: Vol. 1. Student motivation (pp. 77-113). New York: Academic Press, Inc.

Covington, M. V., & Omelich, C. L. (1984). The trouble with pitfalls: A reply to Weiner's critique of attribution research. Journal of Educational Psychology, 76, 1199-1213.

Diener, C. I., & Dweck, C. S. (1978). An analysis of learned helplessness: Continuous changes in performance, strategy, and achievement cognitions following failure. Journal of Personality and Social Psychology, 36, 451-462.

Diener, C. I., & Dweck, C. S. (1980). An analysis of learned helplessness: II. The processing of success. Journal of Personality and Social Psychology, 39, 940-952.

Dweck, C. S. (1975). The role of expectations and attributions in the alleviation of learned helplessness. Journal of Personality and Social Psychology, 31, 674-685.

Dweck, C. S. (1985). Intrinsic motivation, perceived control, and self evaluation maintenance: An achievement goal analysis. In R. E. Ames & C.

Ames (Eds.), Research on motivation in education: Vol. 2. The classroom milieu (pp. 199-235). New York: Academic Press, Inc.

Dweck, C. S. (1986). Motivational processes affecting learning. American Psychologist, 41, 148-156.

Dweck, C. S. (1989). Motivation. In A. Lesgold & R. Glaser (Eds.), Foundations for a psychology of education (pp. 87-136). Hillsdale, NJ: Lawrence Erlbaum Associates.

Dweck, C. S. (1991). Self-theories and goals: Their role in motivation, personality, and development. In R. A. Dienstbier (Eds.), Nebraska symposium on motivation, 1990: Perspectives on motivation. Vol. 38. Current theory and research in motivation (pp. 199-235). Lincoln, NE.: University of Nebraska Press.

Dweck, C. S., & Bempechat, J. (1983). Children's theories of intelligence: Consequences for learning. In S. G. Paris, G. M. Olson, & H. W. Stevenson (Eds.), Learning and motivation in the classroom (pp. 239-256). Hillsdale, NJ: Lawrence Erlbaum Associates.

Dweck, C. S., Davidson, W., Nelson, S., & Enna, B. (1978). Sex differences in learned helplessness: II. The contingencies of evaluative feedback in the classroom and III. An experimental analysis. Developmental Psychology, 14, 268-276.

Dweck, C. S., & Elliott, E. S. (1983). Achievement motivation. In E. M. Hetherington (Eds.), Socialization, personality, and social development (pp. 643-691). New York: Wiley.

Dweck, C. S., & Henderson, V. L. (1989, April). Theories of intelligence: Background and measures. Paper presented at the biennial meeting of the Society for Research in Child Development, Kansas City, MO.

Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. Psychological Review, 95, 256-273.

Dweck, C. S., & Reppucci, N. D. (1973). Learned helplessness and reinforcement responsibility in children. Journal of Personality and Social Psychology, 25, 109-116.

Dweck, C. S., & Wortman, C. B. (1982). Learned helplessness, anxiety, and achievement motivation. In H. W. Krohne & L. Laux (Eds.),

Achievement, stress, and anxiety (pp. 93-125). Washington: Hemisphere Publishing Corporation.

Eccles, J. S., Lord, S., & Midgley, C. (1991). What are we doing to early adolescents? The impact of educational contexts on early adolescents. American Journal of Education, 99, 521-542.

Elliott, E. S., & Dweck, C. S. (1988). Goals: An approach to motivation and achievement. Journal of Personality and Social Psychology, 54, 5-12.

Erdley, C. A., & Dweck, C. S. (1993). Children's implicit personality theories as predictors of their social judgments. Child Development, 64, 863-878.

Garcia-Celay, I. M., & Tapia, J. A. (1992). Achievement motivation in high school: Contrasting theoretical models in the classroom. Learning and Instruction, 2, 44-57.

Hayamizu, T., & Weiner, B. (1991). A test of Dweck's model of achievement goals as related to perceptions of ability. Journal of Experimental Education, 59, 226-234.

Henderson, V. L., & Dweck, C. S. (1989, April). Predicting individual differences in school anxiety in early adolescence. Paper presented at the biennial meeting of the Society for Research in Child Development, Kansas City, MO.

Henderson, V. L., & Dweck, C. S. (1990). Motivation and achievement. In S. S. Feldman & G. R. Elliott (Eds.), At the threshold: The developing adolescent (pp. 308-329). Cambridge, MA.: Harvard University Press.

Heyman, G. D., & Dweck, C. S. (1992). Achievement goals and intrinsic motivation: Their relation and their role in adaptive motivation. Motivation and Emotion, 16, 231-247.

Jagacinski, C. M. (1992). The effects of task involvement and ego involvement on achievement-related cognitions and behaviors. In D. Schunk & J. L. Meece (Eds.), Student perceptions in the classroom (pp. 307-326). Hillsdale, NJ: Lawrence Erlbaum Associates.

Keith, T. Z., & Cool, V. A. (1992). Testing models of school learning: Effects of quality of instruction, motivation, academic coursework, and homework on academic achievement. School Psychology Quarterly, 7, 207-226.

Leggett, E. L., & Dweck, C. S. (1987, April). Children's effort/ability reasoning: Individual differences and motivational consequences. Paper presented at the biennial meeting of the Society for Research in Child Development, Baltimore, MD.

Maehr, M. L. (1984). Meaning and motivation: Toward a theory of personal investment. In R. E. Ames & C. Ames (Eds.), Research on motivation in education: Vol. 1. Student motivation (pp. 115-144). New York: Academic Press, Inc.

Maehr, M. L., & Anderman, E. M. (1993). Reinventing schools for early adolescents: Emphasizing task goals. The Elementary School Journal, 93, 593-610.

Maehr, M. L., & Midgley, C. (1991). Enhancing student motivation: A schoolwide approach. Educational Psychologist, 26, 399-427.

Meece, J. L., Blumenfeld, P. C., & Hoyle, R. H. (1988). Students' goal orientations and cognitive engagement in classroom activities. Journal of Educational Psychology, 80, 514-523.

Meece, J. L., & Holt, K. (1993). A pattern analysis of students' achievement goals. Journal of Educational Psychology, 85, 582-590.

Midgley, C., Maehr, M., & Urdan, T. (1995). Patterns of adaptive learning survey (PALS). Unpublished manuscript, University of Michigan at Ann Arbor.

Miller, R. B., Behrens, J. T., Greene, B. A., & Newman, D. (1993). Goals and perceived ability: Impact on student valuing, self-regulation, and persistence. Contemporary educational psychology, 18, 2-14.

National Education Goals Panel. (1995). The national education goals report: Building a nation of learners: 1995. Washington, DC: U.S. Government Printing Office.

Nicholls, J. (1976). Effort is virtuous, but it's better to have ability: Evaluative responses to perceptions of effort and ability. Journal of Research in Personality, 10, 306-315.

Nicholls, J. (1984). Conceptions of ability and achievement motivation. In R. E. Ames & C. Ames (Eds.), Research on motivation in education: Vol. 1. Student motivation (pp. 39-73). New York: Academic Press, Inc.

Paris, S. G., & Newman, R. S. (1990). Developmental aspects of self-regulated learning. Educational Psychologist, 25, 87-102.

Pintrich, P. R., & De Groot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. Journal of Educational Psychology, 82, 33-40.

Pintrich, P. R., & Garcia, T. (1991). Student goal orientation and self-regulation in the college classroom. In M. L. Maehr & P. R. Pintrich (Eds.), Advances in motivation and achievement: Vol. 7 (pp. 371-402). Greenwich, CT: JAI Press.

Roedel, T. D., Schraw, G., & Plake, B. S. (1994). Validation of a measure of learning and performance goal orientations. Educational and Psychological Measurement, 54, 1013-1021.

Sax, L. J., Astin, A. W., Korn, W. S., & Mahoney, K. M. (1996). The american freshman: National norms for fall 1996. Los Angeles: Higher Education Research Institute, UCLA.

Schraw, G., Horn, C., Thorndike-Christ, T., & Bruning, R. (1995). Academic goal orientations and student classroom achievement. Contemporary Educational Psychology, 20, 359-368.

Schunk, D. H. (1981). Modeling and attributional effects on children's achievement: A self-efficacy analysis. Journal of Educational Psychology, 73, 93-105.

Seligman, M. E. (1975). Helplessness: On depression, development, and death. San Francisco: W. H. Freeman and Company.

Smiley, P. A., & Dweck, C. S. (1994). Individual differences in achievement goals among young children. Child Development, 65, 1723-1743.

Stedman, L. C. (1997a). Deep achievement problems: The case for reform still stands. Educational Researcher, 26(3), 27-29.

Stedman, L. C. (1997b). International achievement differences: An assessment of a new perspective. Educational Researcher, 26(3), 4-15.

Strage, A. (1996). Student attitudes and perceptions survey. Unpublished manuscript, San Jose State University.

Tabachnick, B. G., & Fidell, L. S. (1996). Using multivariate statistics (3rd ed.). New York: Harper Collins College Publishers.

Urdan, T. C., & Maehr, M. L. (1995). Beyond a two-goal theory of motivation and achievement: A case for social goals. Review of Educational Research, 65(3), 213-243.

U.S. Department of Education (1995a, April). Goals 2000: Educate America act. [Online]. Available on World Wide Web: <http://www.ed.gov>. Available Gopher: <gopher://gopher.ed.gov:10001/11/initiatives/goals/national>.

U.S. Department of Education, National Center for Education Statistics. (1995b). The condition of education, 1995 (Publication No. NCES 95-273). Washington, DC: U.S. Government Printing Office.

U.S. Department of Education, National Center for Education Statistics. (1995c). Statistical analysis report, June 1995: National educational longitudinal study of 1988: Trends among high school seniors, 1972-1992 (Publication No. NCES 95-380). Washington, DC: U.S. Government Printing Office.

U.S. Department of Education, Office of Educational Research and Improvement. (1996, March). Where are we going with educational research? Abstracts of the national educational research and development centers, regional educational laboratories, and regional technology in education consortia (Publication No. MIS 96-6511). Washington, DC: U.S. Government Printing Office.

Wagner, M. J., Powers, S., & Irwin, P. (1985). The prediction of achievement motivation using performance and attributional variables. The Journal of Psychology, 119, 595-598.

Weiner, B. (1986). An attributional theory of motivation and emotion. New York: Springer-Verlag.

Wentzel, K. R. (1992). Motivation and achievement in adolescence: A multiple goals perspective. In D. H. Schunk & J. L. Meece (Eds.), Student perceptions in the classroom (pp. 287-306). Hillsdale, NJ: Lawrence Erlbaum Associates.

APPENDIX

Indices of Achievement MotivationAcademic Confidence

(3 items, alpha = .74)

1. I feel in control of my life and my future.
2. I feel confident in my ability to complete college.
3. My confidence in my abilities has increased since I started college.

Performance Goals

(4 items, alpha = .66)

1. I am disappointed in myself if I get poor grades even if I feel I've learned a lot.
2. I tend to think of my mistakes and bad grades as indications of my inadequacies.
3. An important goal for me in college is to appear competent to those who are judging me.
4. An important goal for me in college is to avoid looking inadequate to those who are judging me.

Learning Goals

(5 items, alpha = .70)

1. I think of my instructors as resources to help me learn.
2. I tend to think of my mistakes and bad grades as "learning experiences".
3. An important goal for me in college is to increase my knowledge of the subject matter.
4. Given a choice between a hard course where I would learn a lot but get a poor grade and an easy course where I would get a good grade but not learn much, I would take the HARD course.
5. (Reverse) Given a choice between a hard course where I would learn a lot but get a poor grade and an easy course where I would get a good grade but not learn much, I would take the EASY course.

Mastery Orientation

(4 items, alpha = .78)

1. If I get a poor grade on a test, it makes me want to work even harder for the next one.
2. (reverse) If I get a poor grade on a test, it makes me not want to bother trying for the next one.
3. When I am faced with a challenging assignment, I hang in there until it is done.
4. (reverse) When I am faced with a challenging assignment, I give up easily.

Learned Helplessness

(3 items, alpha = .71)

1. When I have an important test, I am distracted by fears of being under-prepared.
2. When I have an important test, I dwell on how hard the material is, and I can't concentrate.
3. When I am faced with a complicated question, I get confused by all the possible answers.