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Contemporary Motivation Learning Theories: A Review

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Abstract: A systematic review was conducted to highlight the current trends in contemporary motivation theory in the context of education. It compares and contrasts motivation theories, such as need for achievement, attribution theory, achievement goal theory and theories of self-regulated learning. The review focuses on theoretical developments that have stemmed from correcting earlier theoretical misconstructions. More importantly, this review draws particular consideration to the transition stages that the theory of motivation went through. It shows how theories are criticized on both conceptual and empirical grounds and how new theoretical perspective emerges to guide the research. Furthermore, it identifies how certain variables play an important role in most cognitive theories of achievement motivation. In addition, this review discusses the research that examined the different theoretical perspectives of motivation and also provides different directions for new research. Moreover, the relationship between the different constructs of motivational theories and the students' academic achievement is discussed.

Key words: Motivation, learning, theory, cognitive, goals.

1 Introduction

Many theories have been proposed over the years to explain human behavior fall under two major perspectives. One perspective focuses on the environment to explain human behavior. Reinforcement theory of motivation is an example that represents this perspective. This perspective assumes that motivation is not in the person and the changes in students' behaviors are produced by changing their environment. In contrast, the second perspective focuses on forces within the individual with paying attention to the environment to explain human behavior. Social cognitive motivational theory and cognitive theories of motivation are examples that reflect the view of this perspective. These theories differently emphasized on expectations, goals, beliefs, and other variables as the direct causes of human behavior. Different theories, in both perspectives, have proposed diverse lists of motivators, some containing a few divers, others holding a varied collection of specific divers. In this review, the current trends in contemporary motivation theory in the context of education are discussed. This status quo review presents a various research for a motivation learning theories. In this review, references are various; some are primary and others are secondary and most of them are studies form academic journals. The references have not furthered been analyzed in which several studied been compared and contrast. It flows in a way or another smoothly in which the reader can find some sense of coherence and cohesion while reading the review.

Students and others find challenges in making the connections between motivation learning theories. This review provides good starting point for students and researchers to understand the transition stages that the motivation learning theories went through. Main purpose is to identify patterns and trends in the literature. For example, this review shows how theories are criticized on both conceptual and empirical grounds and how new theoretical perspective emerges to guide the research. Furthermore, it identifies how certain variable (e.g., perception of ability) play an important role in most cognitive theories of achievement motivation. In addition, this review discusses the research that examined the different theoretical perspectives of motivation and also provides different directions for new research. Moreover, the relationship between the different constructs of motivational theories and the students' academic achievement is addressed and discussed in this review.

2 Review Approach

To limit the papers to be reviewed, the researcher implemented a search and selection strategy using keywords in multiple electronic databases.

3 Search Strategy

Multiple electronic databases were used to find articles. The search strategy focused on finding articles that are related to the

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purpose of the current review. Only articles published in journals have been included for review, with some exceptions. For example, important data that shows transitions into theories were found in books. Initially, search terms like "motivation", "education", "theory" and "learning" were keyed in but in order to narrow down the results. Nine theories were searched. Some theories include several models (e.g., self-regulation theory).

4 Selection Strategy

To serve the purpose of the current review, articles reviewed were not limited to certain years. The current status quo review presents the research for motivation learning theories. Data sources were varies research articles. One selection criteria were used for selecting articles. The criteria focused on how related the selected article to the topic investigated. In addition, exclusion criteria was utilized in the current review. Studies that reported similar results or presented similar information were excluded.

5 Discussion

This section is divided by theories. It provides theory description, analysis, and research implications. It presents how theories are merged and the relationships among them.

5.1 Reinforcement Theory (learning theories)

At the beginning, it is important to note that reinforcement theory was originally developed to explain all human behavior, and then to achievement-related behavior. For many years, the reinforcement model of motivation was the prevailing theory in educational psychology literature. The main assumption of reinforcement theory is that behavior is caused by events external to the person and that behavior can be understood in terms of simple laws that apply to both human beings and animals. Whatever the advantages this assumption provided to understanding human behavior, it is criticized because it does not adequately address the question "Why do people behave in certain ways?" Accordingly, a great deal of research has shed light on issues that direct reinforcement theorists' work. In the following paragraphs, the reviewer seeks to address how reinforcement theory stemmed from the early work of Pavlov, Thorndike, and Skinner. The descriptions of major assumptions are discussed and the research that has been used to guide classroom practice is presented.

The Russian physiologist Ivan Pavlov (1927) developed a theory of learning, which is now commonly known as classical conditioning. From Pavlov's perspective, learning begins with a stimulus-response connection in which a particular stimulus (e.g., meat) leads to a particular response (e.g., salivation). Whenever that stimulus is repeatedly presented in association with one or more other stimuli (e.g., laboratory assistant), those other stimuli begin to elicit similar responses. The process of classical conditioning contained some forms of reinforcement (meat); however, Pavlov focused only on the term "conditioning". This process of classical conditioning appeared in the work of other psychologists (e.g., Thorndike and Skinner).

Edward Thorndike (1911) introduced another theory of learning that emphasized the role of experiences on one's life. More specifically, this role is understood in the strengthening and weakening of stimulus-response (S-R) connections. Thorndike derived the law of effect principle from his observations of food-deprived cats placed inside a box with food outside. In their attempts to escape, the animals would, by accident, eventually operate a device that released the door, allowing them to consume the food. The animals subsequently operated the device more rapidly when placed in the box. Thus, an accidental behavior that originally had very low probability occurred with increasing frequency as a result of its consequence. According to the law of effect, behavior is determined by its consequences. Responses become more likely to occur as the result of some consequences and less likely as the result of others.

Skinner (1974) expanded Thorndike's law of effect by systematically manipulating consequences and studying their effects on behavior. In his theory of operant conditioning, he used the principle of reinforcement to establish a behavior. His approach presented a switch in reinforcement theory from focusing on S-R habit. More specifically, Skinner defined consequences that increased the probability of behaviors that were contingent upon positive reinforcement, and consequences that reduced the probability of behavior as punishment.

Skinner (1974) discussed the manipulation of words and sentences: "A child does not seem to acquire a verbal repertoire at an amazing speed, but we should not overestimate the accomplishment or attribute it to invented linguistic capacities. A child may learn to use a word as the effect of a single reinforcement" Giving this, it is quite obvious that Skinner only focused on reinforcement as a tool to encourage a child to use a word and he underestimated the individual differences in cognitive abilities, and simply emphasized differences on the experiences people have.

Reinforcement motivation theory is considered mechanistic because no reference is made to such unobservable variables as

choices, beliefs, expectations, or emotions (Graham & Weiner, 1996). The reinforcement motivation theory emphasis is only on the environment and on observable behaviors. A strict reinforcement theorist, such as Skinner, assumes that a person's behavior at any given time is fully determined by his or her reinforcement history and the contingencies in the present environment. Thoughts and feelings are considered irrelevant. According to the theory, human motivation is considered as a modifiable state that is influenced almost solely by the environment. Therefore, we should look only at the environment to understand behavior, not to inner thoughts, such as self-perceptions of competence and expectations for success, not to emotions such as fear and anxiety.

Reinforcement motivation theory does not consider motivation as a characteristic of the individual. Presented with a student who is not working in school, a reinforcement theorist would ask, "What is wrong with the environment?" rather than "What is wrong with this student?" The only way to change students' behavior is to change the reward contingencies in the classroom.

A great deal has been written about the application of reinforcement theory in classrooms. There is an increasing body of literature showing that the administration of extrinsic rewards such as money, awards, etc., result in a subsequent decrease in intrinsic motivation. There have been two general theories or ideas to explain the decline of interest that follows the administration of extrinsic rewards. In their books, both Deci (1975) and DeCharms (1968) argued that extrinsic rewards undermine intrinsic motivation by decreasing one's sense of personal control and/or by decreasing one's sense of competence. One study conducted by Harter (1978b) examined the effect of intrinsic reward on children's preferences for challenging problems. During the practice phase, four anagrams that have different levels of difficulty (nonsensical arrangements of letters) were used. During this phase of the experiment, which aimed to acquaint subjects with each difficulty level, each subject was given an example with two anagrams at each of the four difficult levels. A given subject received one of two orders of the same list of anagrams, and was asked to make a word out of the letters presented. During phase two, each subject asked to do four piles, one at a time, for each difficulty level. Subjects were informed that they could choose from whichever pile they wished. Prior to the choices phase, only one group (grade condition) of subjects was told that they will receive extrinsic reward for correct answers and the second group of subjects was told nothing. The subjects in grade condition were given additional instructions. More specifically, these subjects were shown a chart displaying that if they got all eight anagrams correct, they would receive an A, six correct would earn them a B, four correct would be a C, and only two correct would be a D. Subjects who were offered extrinsic rewards chose significantly less difficult problems than subjects who were not offered rewards for correct answers. As we can see, in this instance, this study demonstrated how extrinsic reinforcement may negatively affect students' motivation.

5.2 Social Cognitive Theory

In part, reinforcement theory was modified because it could not explain the results of new studies. Studies found, for example, that when people were not aware of the reinforcement they received for a particular behavior, their behavior was not affected by it (Dulany, 1968). Estes (1972) argued against the widespread resistance of many psychologists to accepting reinforcement approach and the techniques of operant conditioning as the main approach to the modification of human behavior. Estes (1972) claims that any reinforcement event may convey enforcement as to what action can be expected to lead to reward in the future; moreover, if people were led to believe that previously reinforced behavior would not be reinforced in the future, they would not engage in the behavior.

With these findings in mind, Bandura (1977, 1986) proposed that people are not entirely regulated by external forces, and that they are not passive respondents to environmental contingences. As an alternative to reinforcement theory, he developed a social cognitive theory, which focuses specifically on people's expectations about the consequences of a behavior. He claims that reinforcement theory does not necessarily have a direct affect on people's expectations. Rather, people's beliefs are filtered through personal memory, interpretation, and biases. Thus, for example, students might not expect to get a reward for working on a task if students think the teacher does not like them or is difficult grader even if a reward was received in the past.

The cognitive side of the social cognitive theory of motivation is evident in the expectations, cognitive processing, and awareness of response-consequence contingencies. Bandura' social cognitive motivational theory argues that people interpret events and develop expectations about reinforcement. These interpretations and expectations, then, affect their behavior. According to his theory, personal experience with reinforcement and punishment are not even required for behaviors to be manifested. What matters is what a person believes will happen in the future, not what has happened in the past. A meaningful expectancy analysis requires an individual to do a detailed assessment of the expectations.

The social cognitive theory emphasizes the role of cognition, which leads to solve a problem the reinforcement theory has in explaining new behavior. Reinforcement theory relies on the principle of shaping to explain how children learn new behaviors that have not previously been reinforced. Reinforcement theory assumes the response elements are selected from

overt performance by providing modeling cues and rewarding actions. But this explanation is not satisfying because it would be too difficult for every behavior to be shaped or modeled by reinforcing successive approximations. According to Bandura's theory, behavior is learned symbolically through the central processing of response information before it is performed. Individuals form ideas of how they are supposed to act before they perform.

Bandura (1986) departs from reinforcement theory in stressing the importance of personal evaluation as positive reinforcement. He claims that most people value the self-respect and the self-satisfaction derived from a job well done more highly than they value material rewards. As such, achieving personal goals and experiencing the accompanying self-satisfaction can serve effectively as reinforcement. In addition, goals also play a central role in social cognitive theory. Bandura argues that one way to influence students' behavior is to influence their goals. Most students set goals in any academic situation they encounter; discrepancies between their goals and their accomplishments create self-dissatisfaction, which serves as an incentive for them to make enhanced effort. The feeling of satisfaction for achieving a goal serves as a reward, which then increases future effort. A cognitive-based source of motivation operates through the intervening influence of goal setting and self-regulated reinforcement. Self-motivation requires standards against which performance is evaluated. The motivational effects do not derive from the goals themselves, but rather from the fact that people respond evaluatively to their own behaviors. In Bandura's theory, goals specify the conditional requirements for positive self-evaluation.

Furthermore, social cognitive theory considers individuals to be active agents in their behavior. Bandura, in his theory, argues that the cognitive representations of behavior and its consequences guide future behavior. For example, children in a classroom in which the teacher dismisses the quietest student first may quiet down quickly before recess in the future, because they have a cognitive representation of the teacher's reaction to a quiet group of students.

According to Bandura (1986), many of the behaviors people exhibit have been acquired through observing and modeling what others do. Modeling is a general term that refers to behavioral, cognitive, and affective changes deriving from observing one or more models. It is one of the central concepts of social cognitive theory. Accordingly, Bandura argues that motivation is one of four conditions that are essential for modeling to occur. In his theory, Bandura emphasized the role of two variables, self-efficacy and self-regulation, that affect individuals' behaviors.

Bandura argues that people are more likely to engage in certain behaviors when they believe they are capable of executing those behaviors successful. This occurs when they have high self-efficacy. Academic self-efficacy refers to students' beliefs about their ability to perform in academic tasks at designated levels (Schunk, 1991). Bandura (1977) defined self-efficacy as personal judgments of one's capabilities to organize and execute actions to attain designated goals. Self-efficacy for learning involves assessing what will be required in the learning context and how well one can use one's knowledge to perform. Perceived self-efficacy affects behavioral functioning by influencing people's choice of academic activities. The higher one's perceived self-efficacy, the greater is one's continued involvement in the activities and subsequent achievements (Al- Harthy & Aldhafri, 2014; Al-Harthy & Was, 2013; Schunk, 1981).

A non-experimental study conducted by Barkley (2006) investigated whether sixth, seventh, and eighth grade students' efficacy beliefs were predictors of reading comprehension achievement as measured by a reading comprehension subtest score on the Stanford Achievement Test. The survey was designed to measure the students' efficacy beliefs about four strategies that improve reading comprehension (prior knowledge, self-monitoring, cooperative learning, and using graphic organizers.) Results of this study demonstrated a positive correlation between subjects' efficacy beliefs about prior knowledge, self monitoring, and graphic organizers and their reading comprehension achievement.

Another study conducted by Paulsen and Gentry (1995) examined the relationships among motivational variables (intrinsic and extrinsic goal orientation, task value, control of learning, test anxiety, and self-efficacy), cognitive learning-strategy variables (rehearsal, elaboration, and organization), self-regulation learning-strategy variables (time, study, and effort), and students' academic performance (final grade) in an Introduction to Financial Management course. A total of 353 undergraduate students were asked to complete the Motivation Strategies for Learning Questionnaire (MSLQ). The researchers found that all motivational variables were significantly related to academic performance (final grade in the course). More interestingly, a path analysis demonstrated that the strongest predictor of performance was self-efficacy. In Paulsen and Gentry's study, self-efficacy mediated the impact on performance of all motivational variables and partially mediated the effects of time, study, and effort regulation.

Self-regulation is another variable in the social cognitive theory of motivation. Self-regulation entails at least four components: setting standards and goals, self-observation, self-judgment, and self-reaction (Bandora, 1986; Schunk, 1989, 1996). Self-regulation is discussed latter in this review.

For all three motivational theories in the next section, changes in behavior are assumed to require changes in cognition. Reinforcement theory may affect those cognitions, but the cognition in these theories, not the consequences of the behavior, are what actually influence behavior. The theories differ, however, from social cognitive theory and from each other with

regard to the particular beliefs they emphasize.

5.3 Atkinson's Expectancy x Value Theory.

Different expectancy *x* value models were presented in the literature (Lewin, Dembo, Festinger, & Sears, 1944; Rotter, 1954). The major contribution of the Atkinson' theory to other expectancy *x* value models is in its consideration of the need for achievement as an explicit source of individual differences in tendencies to approach success or to avoid failure. The main goal of Atkinson's theory was to be able to predict whether a person would approach or avoid an achievement task. The achievement behavior was conceptualized in his theory as a conflict between two tendencies, one to approach tasks and another to avoid tasks. These two opposing tendencies are strengthened or weakened by stable individual differences in motives and by expectations about the likelihood of accomplishing a particular goal. The first stable factor affecting the tendency to approach tasks is an unconscious motive for success (MS), or need to achieve (Nach). This tendency functions to direct individuals toward achievement tasks. MS represents a relatively stable disposition to strive for success, conceptualized in the theory as a "capacity to experience pride in accomplishment" (Atkinson, 1964, p. 214).

The second stable tendency in Atkinson's theory is the motive to avoid failure (MAF), conceived of as a capacity to experience shame-given failure, which directs people away from achievement tasks. Atkinson argues that any achievement activity is assumed to elicit both tendencies, which are associated with positive (hope of success) and negative (fear of failure) emotional motives. Emotions, in addition to cognition, play important roles in Atkinson's theory and Weiner's attribution theory, which will be discussed below. People develop emotional associations to achievement contexts (pride or shame) as a consequence of their experiences in early childhood, and these emotions are evoked in achievement situations when they are older.

Although Atkinson assumes the motives to strive for success and to avoid failure are unconscious, he also believes that people's behavior in achievement situations is influenced by their conscious beliefs about that particular situation. The conscious variables are believed to direct people toward achievement tasks-the perceived probability of success (Ps) and the expectation to feel proud-incentive value of success (Is). Atkinson assumes that people who expect to succeed (probability) in a particular task are more likely to approach it than people who are less certain about their chances for success. The other two situational variables inhibit one's efforts are, perceptions of the probability of failure (Pf), and the anticipation of shame-incentive value of failure (If). In short, the tendency to approach tasks is determined by an unconscious stable factor (MS) and two conscious situational factors (Ps) and (Is). On the other hand, the tendency to avoid tasks is determined by an unconscious stable factor (MAF) and two conscious situational factors (Pf) and (If). In the theory, the two motivational tendencies (MS and MAF) are represented as opposing forces. The resultant tendency to approach or avoid an achievement activity (TA) is a function of the strength of the tendency to approach, minus the strength of the tendency to avoid the task. If the tendency to approach is stronger, the person will approach the task, if the tendency to avoid is stronger, the person will avoid it.

Atkinson and Litwin (1960) demonstrated the hypothesized effects of MS and MAF on human behavior. Their study involved a ring toss game (throwing rings to hand around an upright peg). Subjects with higher MS and MAF were identified before the experiment began and were told that they could stand wherever they wished, within a 15-foot range, as they attempted to throw 10 rings, one at a time, around the peg. Most students with high MS opted to stand about 8 to 12 feet away from the peg (taking on a moderate challenge). Only half of the MAF students stood in the 8 to 12 foot range, the other half stood either within 7 feet of the peg (making the task an easy one) or at least 13 feet away from it (making the task extremely difficult). Findings such as these demonstrated that those with a higher MS tend to choose activities or classes of moderate difficulty, whereas those with a higher MAF choose either very easy or very difficult.

However, certain problems have been observed in Atkinson's theory. More specifically, the two major variables in the theory (MS and MAF) are difficult to measure. Since they are believed to be unconscious, they can be measured only indirectly. Another problem is that the values (Is and If) are fully determined by the probability of success (Ps) or failure (Pf), regardless of the importance or the value of the task. The theory also assumes that task value is inversely associated with the probability of success, which argues that people value success in tasks that they expect to fail more than in tasks they expect to succeed.

Most research argues that the definition provided by Atkinson is very narrow. New research assesses values using a broader definition suggests the opposite, that individual's place more value on tasks for which they believe they have high competence (Al-Harthy & Aldhafri, 2014; Al-Harthy, Was, & Isaacson, 2010; Eccles & Wigfield, 1995; Wigfeld & Eccles, 1992). For example, Eccles, in his revised expectancy *x* value theory, offers broader conceptualizations of the value component. Eccles proposed three kinds of values relevant to achievement (Wigfield & Eccles, 1992). These values are attainment value, utility value, and intrinsic value. The attainment value is determined by how the task or the domain fulfills a person's needs; it concerns the relevance of an activity to a person's actual or ideal self-concept. The utility value concerns

the usefulness of a task as a means to achieve goals that might not be related to the task itself. The intrinsic value is the immediate enjoyment one gets for doing a task. Eccles points out that value needs to be considered in the context of costs in energy, psychological risks, and alternative activities. For example, college students who do not work hard in a particular class are not necessarily lazy or unmotivated. They have more likely chosen to exert their effort in other domains. They may put their energy into other courses or nonacademic domains.

In addition, researchers have noted that the need for achievement does not necessarily remain constant or stable throughout a person's lifetime. For example, Eccles & Midgley (1989) argue that the transition from elementary school to middle or junior high school is associated with negative changes in young adolescents' motives, beliefs, values, and behaviors. Thus, the need for achievement may get changed in any transition stage students encounter. More research is needed to investigate how and why transition stages that most students go through affect students' motivational beliefs.

Furthermore, Atkinson's theory assumes that the need for achievement is thought to be a general characteristic that people exhibit consistently in a variety of tasks across many domains. More recently, however, it has been proposed that this need may instead be somewhat specific to particular tasks and occasions. For example, research indicates that most males and females have greater achievement motivation in areas that are stereotypically appropriate for their gender (Berk, 1989; Lueptow, 1984).

5.4 Rotters' Social Learning Theory

Rotter (1966, 1975, 1990), like Bandura, proposed that it is not the reward itself that increases the frequency of a behavior, but a person's beliefs about what brings about rewards. If people do not believe the rewards they receive are caused by something related to their personal characteristics or behavior, rewards will not influence their future behavior. According to reinforcement theory, any behavior that precedes reinforcement should be repealed. Rotter's theory would predict increased behavior only if a student believed that certain behavior (e.g., particular study strategy) causes the desired reward (e.g., good grade).

Rotter, like Atkinson, assumes that expectancies of reinforcements and their value determine behavior. In his theory, the value is conceptualized more broadly than Atkinson. Reinforcement value in Rotter's theory is linked not just to the probability of success, but also to a person's needs and to associations with other reinforcements. For example, a college student wants to get an "A" in chemistry class because in the hope of becoming a doctor and believes that good grades in chemistry will help gain admission to medical school. The students' efforts in chemistry are determined by the expectation that hard work results in valued reinforcement. Another important distinction is that Rotter's theory focuses less on emotions that are associated with reinforcement or achievement, whereas in Atkinson's and Weiner's theory, emotions are considered central role.

Rotter argues that expectancies are not always accurate, but that they are based on subjective perceptions of the probability that a behavior will be reinforced. In addition, an individual's experiences play an important role in Rotter' theory. More specifically, expectancies in a particular situation are determined not only by beliefs about reinforcement in that situation, but also by generalized expectancies based on experiences in other similar situations. Rotter refers to people's generalized beliefs about the contingency of reinforcement as locus of control (LOC). He claims that people who generally believe that events or outcomes are contingent on their own behavior or on a personal characteristic, such as ability, have an internal locus of control. People who believe that events are caused by factors beyond their control have an external locus of control. Thus, while Atkinson focused on individuals' expectations for reward, Rotter is concerned with their beliefs about what causes them to receive or not to receive rewards.

Rotter (1975) addressed the misunderstanding of his theory. He clarifies that his theory focuses on three important variables: expectations (general and specific), value, and psychological situation. For example, Rotter argues that it is not sufficient (if we would want to predict student participation in some activity) to determine whether these activities are internal or external according to some tests. Skinner (1995) agrees with Rotter that the focus should not be only on whether an individual is intrinsically or extrinsiclly motivated in order to understand his or her behaviors. He argues that the perceived control is often thought of as a personality construct. He claims that the locus of control scales are used to identify individual differences and individuals are labeled as either having an internal or external locus of control. Skinner continued to argue that this misperception about control have been corrected in recent research that usually considers the perception of control as a flexible set of interrelated beliefs, which are organized around interpretations of prior interactions in specific domains. In contrast to personality traits, the beliefs about control are viewed as constructed by individuals; hence, they are open to new experiences and can be altered. This means that a person may have an external locus of control with regard to mathematics, but an internal locus of control with regard to learning a foreign language.

Skinner (1995) presented a model as an attempt to integrate major constructs from theories of locus of control, causal

attributions, learned helplessness, self-efficacy, and performance expectations. Skinner's model proved useful in identifying individual beliefs as well as combinations or profiles of perceived control. Skinner makes a distinction between strategy (means-ends) beliefs and capacity (agency) beliefs that is not in Rotter's theory. Strategy beliefs concern the extent to which certain strategies or means are sufficient to cause particular ends. Capacity beliefs refer to the extent to which a person has access to those means. Logically, a perception of control requires both beliefs.

Deci & Ryan (1985) agree with White's idea that people are intrinsically motivated to develop their competencies, and feelings of competence enhance intrinsic interest in activities. They viewed LOC from another window focusing on an individuals' perception of causality. Deci and Ryan added another innate need-the need to feel self-determining. They propose that people naturally want to believe that they are engaging in activities by their own volition, because they want to rather than because they have to (DeCharms, 1976; 1984; Deci, 1975; Deci & Ryan, 1985). Deci and Ryan differentiated between situations in which people perceive themselves as the cause of their own behavior, which they refer to as an internal locus of causality, and situations in which people believe that they are engaging in behavior to achieve rewards or please another person, Deci and Ryan refer to this as external locus of causality. According to their theory, the activity can be more motivating when one chooses to engage in it than when it is done for some external purpose.

Deci suggests that intrinsic motivation is a naturally occurring phenomenon that grows out of two innate human needs, the need to feel competent and the need to feel self-determined. Deci, in his theory, argues that intrinsic motivation will be undermined when a person's competence is threatened and/ or his self-controlled is denied.

Deci's self-determination theory assumes that people have three innate psychological needs. First is the ability to function effectively in the environment (the need for competence). Second is the need to feel independence and to have the ability to alter the environment when necessary (the need for autonomy). Autonomy as described in self-determination theory is similar to locus of control (Rotter, 1966), which is discussed above. Third is the need of being connected to others in one's social environment (the need for relatedness). Students who feel as though they belong and who receive personal support from their teachers report more interest in their class work and describe it as more important than students whose teachers are distant (Goodenow 1993).

5.5 Weiner's Attribution Theory

Although in some respects attribution theory is a refinement and elaboration of Rotter's locus of control principle, it differs in significant ways. A primary difference is that attribution theorists, unlike social learning theorists, assume that humans are motivated primarily to understand themselves and the world around them. Attribution theory assumes that people naturally search for understanding of why events occur, especially when the outcome is important or unexpected. For example, a student who expects to get an "A" on his math exam but receives an "F" will seek information to answer the question, "Why did I fail that test?" Locus of control theorists, discussed above, study expectations related to future events, whereas attribution theorists study perceptions of the cause of events that occurred in the past. Perceptions of the cause of outcomes are referred to as causal attributions.

Fritz Heider (1958), the acknowledged "founder" of attribution theory, explains this. He writes:

The causal structure of the environment is such that we are usually in contact only with what may be called the offshoots or manifestations of underlying core processes or core structures. For example, if I find sand on my desk, I shall want to find out the underlying reason for this circumstance. I make this inquiry not because of idle curiosity, but because only if I refer this relatively insignificant offshoot event to an underlying core event will I attain a stable environment and have the possibility of controlling it. Should I find that the sand comes from a crack in the ceiling and that this crack appeared because of the weakness in one of the walls, then I have reached the layer of understanding conditions which is of vital importance for me. (p 80)

It is obvious that attribution theorists, like Heider and Weiner, are concerned with perceptions of causality, or the perceived reasons for a particular event's occurrence. Kelley, one of the leading psychologists in the area of attribution, assumes that humans are motivated to attain a cognitive mastery of the causal structure of the environment. Kelley (1967) systematized the factors that result in causal attributions to either personal or environmental factors.

Ability and effort are the most common attributions for performance outcomes. Weiner (1986, 1992, 1994, 2000) claims that the specific causal attribution (e.g., luck) is less important than the underlying dimension of the attribution. The causal dimensions he describes represent an elaboration and refinement of Rotter's internal-external locus of control dimension. Weiner points out that whether a cause is perceived as internal or external does not tell the full story, especially if our goal is to predict behavior in achievement situations. Weiner distinguishes between different kinds of internal causes of achievement outcomes with regard to their stability and controllability. The control and stability dimensions that Weiner added to Rotter's

original internal and external dimension allow much more specific behavioral predictions from beliefs about the cause of reinforcement.

Before Weiner's theory is discussed, it is important to describe how previous research approaches the perception of causality that led Weiner to his theory. The domination of the internal-external distinction arrived in psychology with the work of Rotter (1966) and the classification of individuals into either internally or externally controlled became a dominant focus in psychology. A number of subsequent researches was guided by the construct between perceptions of internal versus external control. For example, DeCharms (1968) classified individuals as origins (internally directed) and pawns (externally driven). The argument was then made by Weiner that a second dimension of causality is required. Weiner argued that among the internal causes of behavior, some fluctuate, while others remain relatively constant. For example, ability is perceived as a constant capacity, whereas causal factors, such as effort and mood, are perceived as more variable. In addition, among the external causes the same reasoning applies: success in rowing across the lake may be perceived as due to the narrow width of the lake or the presence of wind. The structure of the lake is fixed, but the wind might vary from hour to hour or from day to day. Accordingly, Weiner introduced a second dimension of causality (stability). Figure 1 shows four dominant causes of achievement success and failure as classified on the two dimensions of locus and stability. Figure 1 points out that ability and luck differ not only in locus, but also in stability. Thus, the Rotter's dimension of LOC classification is inadequate in that it blurs two dimensions of causality.

	Internal	External
Stable	Ability	Task Difficulty
Unstable	Effort	Luck

Figure 1: Four dominant causes of achievement success and failure as classified on the two dimensions of locus and stability.

A third dimension of causality was established with the same deductive reasoning that led to the naming of the stability dimension. Causes were first identified within each of the four cells shown in Figure 1. The causes within a cell were then discriminated on a particular property, and this property was used to describe all the remaining causes. The argument that led to the need for the third dimension is that an individual can increase or decrease expenditure of effort (internal and unstable cause), this is not typically true of mood. The same distinction is found among the internal and stable causes. A trait such as laziness is perceived as under volitional or optional control. This is not characteristic of other internal and stable causes of success and failure, such as mathematical aptitude. Thus, controllability is added as a third dimension of attribution theory (Weiner, 1979). Figure 2 shows four causes of achievement success and failure as classified on three dimensions: locus, stability, and controllability.

	Internal	External
Stable	Ability (Incremental View)	Task Difficulty (Choices are available)
Unstable	Effort (Self-regulation)	Luck

Figure 2: Four dominant causes of achievement success and failure as classified on three dimensions: locus, stability, and controllability.

Graham (1994) discussed the classroom motivation from an attributional perspective. She questioned how students arrive at attributions about, for example, ability versus effort. The teacher is constantly asking himself: "Did the student fail because she did not try hard enough or because she is not able?" Also students are constantly asking themselves the same question and other questions, such as, "Am I smart? Am I willing to do what it takes? Can I succeed?" Therefore, this self-reflective process affects students' motivation and eventually their performance. A number of informational cues such as prior performance history and social norm information also influence causal attributions. For example, if a student has been doing poorly in a course all semester and fails a test on which everyone else gets an "A", this student might infer that he is of low ability based on this salient sources of information. Graham (1997) discussed principles from attribution theory concerned with perceived responsibility in self and others to be used a conceptual framework for examining social and academic motivation in African American youth. Graham conducted a content analysis of six major APA journals. She was drawn to attribution theory in these studies of peer aggression partly because attribution theory allowed her to manage the complexity of social and academic problems. The basic assumption she inferred is that within an achievement context, as within a social context, the individual is faced with the decision of ascribing responsibility for achievement outcomes to self or to factors for which the individual cannot be held responsible, such as poor teaching. Giving this, we are getting a sense that classroom research is highly advised to use attribution theory dimensions to analysis students' behaviors in different classroom settings.

5.6 Self-Worth Theory

The concept of self appears in different motivational variables. We read, for example, about students who spend less or more effort to protect themselves from being criticized or punished. The word self is involved in almost all motivational theories. For example, Bandura's social cognitive motivational theory focuses on self-efficacy as a central construct that affects behavior. Before discussing Covington's self-worth theory, it is important to describe Maslow's and White's work.

An early perspective of motivation was espoused by Abraham Maslow (1959). Maslow's theory is a critical aspect of humanism, a movement in psychology that gained prominence in the 1960s and 1970s. Based on his informal observations of human behavior, Maslow proposed that people have five different sets of needs. First are the psychological needs: people are motivated to satisfy needs related to their immediate physical survival-needs for food, water, oxygen, warmth, sex, and others. The second need in Maslow's model is safety needs: people have a need to feel safe and secure in their environments. Third, love and belongingness needs: people seek affectionate relationships with others and like to feel that they belong and are accepted as part of a group. Fourth, esteem needs: people need to feel good about themselves and to believe that others also feel positively about them. Fifth, there is a need for self-actualization: people have a need to self-actualize-to develop and become all they are capable of becoming.

White (1959) proposed that people have an intrinsic need to feel competent-to believe that they can deal effectively with their environment or, as social learning theorists would put it, to have a sense of self-efficacy. According to White, the need for competence has biological significance: it motivates people to develop ways of dealing more effectively with environmental conditions and thus increases their chances of survival.

Perception of ability is another essential principle that must be discussed before Covington's theory is investigated. Perceptions of ability play an important role in all cognitive theories of achievement motivation. People usually need to have confidence in their ability to be high in self-efficacy, which is a central construct in Bandura's social cognitive theory. In Atkinson's theory, the higher people rate their competencies related to a task, the higher they rate the probability of their success. In Rotter's LOC theory, people who believe they are academically competent are more likely to believe they control rewards associated with academic success. That is, they believe they have the capacity to achieve the performance upon which rewards are contingent. And in Weiner's attribution theory, people who believe they are competent at a task tend to attribute success to their ability and effort, and failure to some other causes; in contrast, those who believe they are incompetent will attribute failure to their lack of ability.

More recently, Covington (1984, 1992) has proposed that protecting one's sense of competence—something he refers to as self-worth—is a high priority for most people. For example, one way to maintain self-worth is to achieve success on a regular basis. But consistent success is almost impossible. In such instances, students in school may protect their sense of self-worth by making excuses that seemingly justify their poor achievement, or they may refuse to engage in the tasks at all (Covington, 1992). They may also do things that actually undermine their chances of success, a phenomenon know as self-handicapping. Practically, students should probably have a reasonably accurate sense of what they can and cannot accomplish. Students who underestimate their abilities will set unnecessarily low goals for themselves and give up easily in the face of temporary failure. Those who overestimate their abilities may set themselves up for failure by forming unrealistically high expectations for themselves or by not exerting a sufficient amount of effort to succeed (Pintrich & Schunk, 1996). The main elements of the self-worth model are presented in Figure 3. The basic assumption is that several factors influence one's sense of worth and adequacy, including performance level, self-estimates of ability, and degree of effort expenditure. In all cases, the arrows in Figure 3 imply causality.

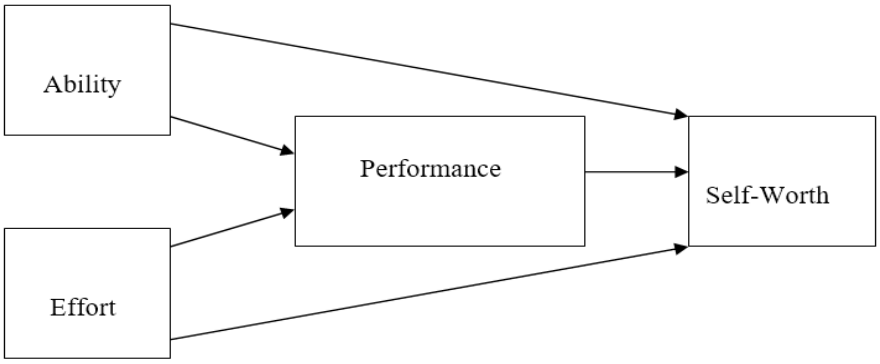

Figure 3: Main elements of the self-worth theory.

A fundamental assumption of Covington's self-worth theory is that human beings naturally strive to maintain a sense of self-worth. Covington, as well as Bandura, Atinkson, and Weiner, focuses on emotions as an important variable in his theory. Outcomes that make people look competent or incompetent in achievement situations have important implications for their emotional experiences as well as their sense of self-worth (Covington & Omelich, 1981). More specifically, failure produces greater shame and distress when it is seen as a reflection of low ability than when it can be attributed to some other causes. Shame may be stronger for entity theorists than for incremental theorists (discussed later in this review) because a judgment of low ability has more negative long-term implications. When failure is expected or experienced, the student's task is to avoid having the failure interpreted as evidence of incompetence. Students use different strategies to avoid school failure. These strategies include minimizing participation, not trying, procrastination, setting unattainable performance goals, and so on. From a more practical point of view, self-worth theory assumes that a central part of all classroom achievement is the need for students to protect their sense of worth or personal value. Perception of ability is critical to this self-protective process. Ability is widely perceived as a major cause of success, and success then reflects well on the individuals.

The self-worth theory of achievement motivation is derived from the basic cognitive position and shares with it the view that achievement behavior can be most meaningfully conceptualized in terms of self-perceptions of causality. However, unlike attribution theory, self-worth theory also incorporates a motivational component, and for this reason it forms the basis for a conceptual approach between cognitive and motivational theories. More specifically, Weiner only focused on the causes of certain behaviors by looking at the attributions people make about their failure or success, whereas the self-worth theory implements more motivational variables, such as goals. As we will read later, self-worth theory contributes importantly to the goals setting or adaption in achievement situations.

5.7 Self-Regulation Theories

In the last two decades, the topic of self-regulation (SR) has gained particular attention. Several new theoretical models of self-regulation have emerged. Puustinen & Pulkkinen (2001) presented a review of five models of self-regulated learning that have received great empirical support. These five different self-regulation models are discussed in this review. To start with, as cited in Puustinen & Pulkkinen (2001) Poekaert (1992, 1995, 1996a, 1996b) developed a model of adaptable learning. This model has different elements: identification, interpretations, primary and secondary appraisal, goal setting and goal striving. Identification refers to the recognition of an input in any academic situation. Interpretations are assumed to be related to a personal or internal reference. Boekaert differentiates between two internal references: metacognitive knowledge and motivational beliefs. Poekaert's self-regulation learning (SRL) model is centered around goal processes. In this model, two general action patterns are introduced. The first is an automatic processing pattern proceeding from recognition of an input through primary appraisals directly to goal striving. In primary appraisals, a student may ask question, such as "Is this situation threatening for my well being?" This pattern is activated in frequently repeated learning situations. The second pattern corresponds to those learning situations that demand consciousness and deliberation. It contains all elements of the model. Based on the interpretations, goal setting is either task or self-focused, and goal striving either positive or negative and problem or emotion focused. Problem-focused goal striving is assumed to feedback to metacognitive knowledge, whereas emotion-focused goal striving is assumed to feed back to motivational beliefs. However, the SRL in this model does not necessarily proceed in a linear way through the different phases of the model.

The second self-regulation model is Borkowski's process-oriented model of metacognitive. In this model, the characteristics of a good strategy user or information processor are defined. The development of self-regulation begins when children are taught the use of a learning strategy. Children progressively gain knowledge about every strategy they have used. Children also develop other perceptions, such as self-efficacy, and attributional beliefs. Through these perceptions, the strategy use is

linked to motivational states. With time, children will have specific strategy knowledge available to them and some information about success (or failure) and its related causes. In addition, the feedback has an important role in shaping motivational states which enriches the strategy knowledge. In short, it is clear that links between motivational variables and self-regulation form the focus of Borkowski's model.

The third self-regulation model is proposed by Pintrich as cited in Puustinen & Pulkkinen (2001). Pintrich (2000) developed a general framework for self-regulation learning (SRL) that is comprised of four phases: forethought, monitoring, control and reflection. For each phase, self-regulatory activities are listed in four separate areas, including motivational and affective, cognitive, behavioral and contextual areas. The forethought phase refers to influential processes and beliefs that precede efforts to learn and set the stage for such learning. It includes prior knowledge and metacognitive knowledge activation, efficacy judgments and adoption of goal orientation, time and effort planning, and perception of task and context. The monitory phase consists of awareness and monitoring of cognition, motivation, affect, time use, effort, and task and context conditions. The control phase refers to the selection and adaptation of strategies for managing learning, thinking, motivation and affect. Finally, the reflection phase refers to include personal evaluation, affective reactions, making choices, and task, and context evaluation. In Pintrich's model, SRL is assumed to follow the above mentioned time ordered sequence. Later on, Pintrich further analyzes the role of motivation in SRL. Specifically, he discussed the way in which goal orientations are related to SRL, which is discussed latter.

Winne's four-stage is another model of SRL. This model describes SRL as an event. SRL is defined as metacognitively guided behavior enabling students to adaptively regulate their use of cognitive tactics and strategies in the face of a learning task. This model includes four distinct stages. Task definition is the first stage and is characterized by the perceptions that students generate about the task. Goal setting and planning is the second stage, whereas the third stage is enacting tactics and strategies planned in stage two. Finally, metacognitively adapting studying techniques with specific consideration to future needs is the focus of the fourth stage. In this final stage, individuals examine the outcomes of the previous three stages. In addition, each stage in Winne's model shares the same general structure referred to as the COPES (conditions, operations, products, evaluations, and standards). Conditions include information about the task conditions (resources) and cognitive conditions (goal orientations), which influence how the task will be engaged. Operations are defined as the cognitive processes, tactics and strategies students use, whereas products refer to information created by operations. Evaluations (internal or external feedback) include information about the products. Finally, standards include information about the criteria against which the products are monitored. More importantly, the metacognitive monitoring is a central element in Winne's model, producing internal feedback about the discrepancy between products and standards at each stage. Even these stages are assumed to proceed from stage 1 through stages 2 and 3 to stage 4. Admittedly, the system is sequenced and different patterns may also exist.

Finally, Zimmerman's social cognitive model of SRL is based on Bandura's social cognitive theory that is discussed earlier in this review. The model assumes that SR is cyclical in nature and involves three classes of determinants. First, covert self-regulation involves monitoring and adjusting cognitive and affective states. Second, behavioral SR consists of self-observing and strategically adjusting performance processes. Third, environmental self-regulation includes observing and adjusting environmental conditions or outcomes.

In addition, the cyclical phases of S-R include three phases. First, the forethought phase refers to influential processes and beliefs that precede efforts to learn, which is the similar to forethought phase in Pintrich's model. This phase includes two categories of processes: task analysis process (goal setting) and self-motivation beliefs process (i.e. self-efficacy). Second, the performance and volitional control phase refers to processes that occur during learning efforts and affect concentration and performance. This phase includes two processes: self-control processes help learners to concentrate on the task and optimize their efforts while self-observation processes refer to tracing specific aspects of one's own performance. Third, the self-reflection phase involves processes that occur after learning efforts and influence a learners' reaction to that experience. These self-reaction processes, in turn, influence the first phase regarding subsequent learning efforts.

Puustinen & Pulkkinen (2001) implied that two kinds of definitions of SRL seem to emerge from these models: a goal-oriented definition, which is adapted by Boekaerts, Pintrich and Zimmerman's models of SRL, and a metacognitively weighted definition, which is adapted by Borkowski and Winne. Although all models vary, they all agree on that self-regulation learning (SRL) operates first with processing prior and input knowledge about the task, through the actual performance, to evaluation and adaptation state.

Cascallar and Boekaerts (2006) claim that the assessment process of self-regulation (SR) involves the use of standardized instruments, as well as the collection of data based on qualitative instruments, observational techniques, self-reporting questionnaires, interviews, think-aloud protocols, diaries, and other techniques. They argue that SR is essentially a multi-component, iterative, self-steering process that modulates environmental, cognitive, affective, and behavioral elements. Its goal is to maximize achievement of individual goals. On the other hand, whatever advantages these models of SR have, one

challenge in the field of SRL is that there are too many conceptualizations with overlapping constructs and fuzzy concept definitions. There is no evidence that each process represented in the models truly represent a separate process showing local independence from all other elements in the model, including separate effects on the variables of interest.

Several studies have investigated the cognitive processes that the self-regulated learners involve in their learning. For example, diverse studies have recognized the degree in which different achievement goals influence regulation of learning. For example, Wolters (1998) investigated what strategies 115 college students enrolled in an introductory psychology course reported for regulating their motivation and examined whether different motivation problems could lead to different strategy use. To assess students' regulation of motivation, subjects were given an open-ended questionnaire to report their behavior with regard to 12 academic situations (4 scenarios x 3 motivational problems). More specifically, the questionnaire provided four short scenarios representing common tasks faced by college students in this specific course. After reading the scenarios, students were presented with three motivational problems and were required to report how they would maintain the task for each problem. First, students were told to imagine that the material is unimportant. Second, students were told that the material is difficult, whereas in the third scenario students were told the material is boring. After reading the problem, students were asked to report what they would do if they wanted to get themselves to continue working on the task. Students' goal orientation (mastery vs. performance) was measured by creating two surveys, whereas the students' use of strategies was measured by adapting a scale from the motivated strategies for learning questionnaire (MSLQ).

Students' final course grades were collected from instructors. The results of Wolters' study revealed 14 categories representing the subjects' responses to the 12 situations: performance goals, extrinsic rewards, task value, interest, efficacy, master goals, cognition, help seeking, environment, attention, willpower, emotion, other motivation, and other. In addition, findings indicated that students' reported use of volition, information-processing, and extrinsic and intrinsic regulation strategies varied across different motivational problems. For example, the students reported using an information-processing strategy to address situations within which material were described more difficult than situations within which material were described as unimportant. This result supports the view that self-regulated learners adapt or modify their strategy use to fit situational demands. Wolters's study also showed some relationships between the strategy use and other motivational variables. For example, students who used more intrinsic regulation strategies also tended to report a mastery goal, whereas students who reported more extrinsic regulation strategies tended to adapt performance goal orientation.

There still exists a limited amount of educational research that outlines how students regulated their level of motivation. Educational psychology field also needs more research that examines the multiplicative relations in classrooms between both motivational and cognitive components of learning, such as performance-goal orientation and metacognitive component of self-regulation and how this relationship could affect the learning strategies and academic performance.

In short, self-regulated learners have a large arsenal of cognitive and metacognitive strategies that they readily deploy, when necessary, to accomplish academic tasks. They have adaptive learning goals and are persistent in their efforts to reach those goals. They are proficient at monitoring and modifying their strategy use in response to shifting task demands.

5.8 Achievement Goal Motivation Theory

The achievement goal approach originated in the late 1970s and early 1980s with the work of (Ames, 1984; Dweck, 1986; Maehr & Nicholls, 1980; Nicholls, 1984) and has emerged as the most prominent account of individuals' affect, cognition, and behavior in competence relevant settings. As mentioned in Dowson and McInerney (2001) and based on achievement goal theory, goals are defined as "cognitive representations of the different purposes students may adopt for their learning in achievement situations" (p. 35).

Most research in the achievement goal orientation has attended to two types of goals: mastery and performance goals. Mastery goals focus on the development of competence and task mastery (Ames & Archer, 1988). Students who adopt mastery goals in certain achievement tasks believe that competence develops over time through practice and effort. They choose tasks that maximize opportunities for learning, invest considerable effort in tasks, use learning strategies that promote true comprehension of course material, evaluate their own performance in terms of the progress they make, persist in the face of failure, and view errors as a normal and useful part of the learning process, subsequently use their errors to help improve performance.

The second type of goal is performance goals, which focus on the demonstration of competence relative to others. Students who adapt performance goal for learning believe that competence is a stable characteristic. They choose tasks that maximize opportunities for demonstrating competence and avoid tasks that might make them look incompetent, invest the minimal effort needed to success, evaluate their own performance in terms of how they compare to others, view errors as a sign of failure and incompetence, and give up easily when they fail and avoid tasks that have previously led to failure.

Although Elliot and his colleagues (Elliot, 1997; Elliot & Church, 1997; Elliot & Harackiewicz, 1996) have proposed a trichotomous achievement goal framework that represents a revision of the performance-mastery dichotomy, the distinction between approach and avoidance measure was acknowledged by researchers early in the study of motivation. More specifically, theorists working in the attribution and self-worth theory make early use of the approach and avoidance distinction. For example, Weiner develops a cognitive interpretation of Atkinson's theory, which contained Atkinson's notion of approach (MS) and avoidance (MAF) tendencies, but Weiner uses the language of attribution. In addition, Covington, in his self-worth theory, asserts that students possess two independent achievement dispositions, success orientation and a failure-avoidance orientation that combine interactively produce achievement behavior to feel competent or to avoid feeling incompetent.

In the trichotomous framework, the performance goal construct is divided into an approach and avoidance, and three independent achievement goals are defined: a performance-approach goal focuses on the attainment of competence relative to others, a performance-avoidance goal focuses on the avoidance of incompetence relative to others, and a mastery goal focuses on the development of competence and task mastery. Each of these goals is hypothesized to lead to a unique pattern of achievement-relevant process and outcomes.

A fundamental premise of the trichotomous framework is that performance-approach and performance-avoidance goals represent separately independent achievement orientations. Several studies support this distinction (Elliot and Church, 1997; Harackiewicz, 1996). A study conducted by Elliot and Church (1997) demonstrated that the two types of performance goals could also by measured separately. They presented different measures for performance and mastery goals. The factor analysis yielded three factors with an Eigen value greater than 1. All items were loaded higher than .40 on their expected factor, and for the performance-approach and performance-avoidance items, there was an average difference of .60 between each item's primary loading and its loading on the other factor. Each of the three achievement goal motivations evidenced a moderate to high degree of internal consistency.

Elliot (1999) also discusses the 2 *x* 2 achievement goal framework. He argues that like performance goals, mastery goals may be separated into approach and avoidance orientations. Mastery-avoidance goals are focused on avoiding self-referential or task-referential incompetence. The environmental cues that are likely to evoke mastery-avoidance goals include those that highlight improvement and task mastery rather than norm-based evaluation and the possibility of facing difficulties or failure rather then the possibilities of success. In the 2 *x* 2 achievement goal framework, there are four independent goals, mastery-approach, mastery-avoidance, performance-approach, and performance-avoidance. Elliot (1999) argues that empirical data regarding mastery-avoidance are not available and that predictions are somewhat difficult to generate because of the two conceptions of these goals would seem to evoke a rather divergent set of processes. A second distinction in mastery orientation is that of task-referential versus past-referential orientation. Past-referent oriented students use past performance as the measure of achievement, and as a scale by which to set new goals, whereas mastery task-referent orientated students measure their competence according to whether they complete or fully understand the task at hand. More research is required to investigate the antecedents and consequences of mastery-avoidance goals in real classroom settings.

Work-avoidant is another goal orientation that has received little attention in the academic goal orientation literature compared to the goal orientations discussed above. Students who are work-avoidant avoid failure without hard work and they view achievement as completing the task at hand with little effort as possible (Brophy, 1983b). Regardless of the little research in this area, the work that has been done provides evidence that work-avoidant goals are detrimental of students' learning and performance (Archer, 1994; Dowson and McInerney, 2001). Archer (1994) explored the motivation of 893 first-year college students. A scale was developed to measure student's goals (mastery, performance, alienation). Alienation goals are defined as completing the academic tasks with the minimum of the effort. A scale of 15 items was adapted from Ames and Archer (1988) to measure students' learning strategies as cited in Archer (1994). Different questions were developed to measure subjects' enjoyment, willingness to take more courses, relevance, preference for difficulty, causal attributions, and self-perception of ability. The questionnaire was introduced toward the end of the academic semester where the subjects almost complete the courses. The results demonstrated that students, who adapted alienation goal orientation for their course show little use of effective learning strategies, did not produce positive attributions toward learning, and they preferred easy tasks to the difficult ones.

The previously discussed goal orientations may be characterized and approached as academic goal orientations. It is not surprising, then, that these goals are concerned with the academic reasons that motive students to work in certain academic tasks. Another important class of goals, however, is students' social goals. Students' social goals are concerned with the social reasons for trying to achieve or not trying to achieve in academic settings (Urdan & Maehr, 1995). Several researchers (Blumenfeld, 1992; Dowson & McInerney, 2001; Wentzel, 1993, 1994) argue that the social goal orientation needs to be investigated whenever the students' goals are approached. Blumenfeld (1992) says that "learning is presumed to be social in nature: interaction and exchange among learners and between teachers and learners promote understanding" (p. 277).

Blumenfeld (1992) claims that the relationship between goal orientations and the influence of social goals on students' performance are other important areas of inquiry that require more research. This literature provides reasons to investigate which social goals may be of the most importance to students in schooling contexts and how social goals are related to the academic goals.

In a study conducted by Dowson and McInerney (2001), 86 middle school students were observed and interviewed to explore social and work avoidance goals they may hold with respect to their academic achievement and to investigate the particular components of these goals. The results show that social goal orientation was associated with academic effort, positive feelings, and with a variety of adaptive approaches to learning that promote academic understanding. The results also revealed that the students' work avoidance goal orientations emerged as an important aspect of their academic motivation and were associated with a variety of effort minimization strategies (such as trying to find ways to get other students to do the work for them and not attempting) and feelings of laziness, boredom, inertia, and anger. Dowson and McInerney argue that these feelings distracted the students from engaging effectively in academic tasks at hand, which affect students' performance. Unlike mastery goals, the work-avoidant students do not value hard work and effort, and unlike performance-approach goals, the work-avoidant students do not have a need to be ego-social and they do not want to compete.

Pintrich (2000b) investigated how the developmental trends in four general categories of outcomes (motivational beliefs, affect, strategy use, and classroom performance) vary as a function of multiple goals. The MSLQ was administered to 150 eighth and ninth graders in three waves; Wave 1 at the beginning of eighth grade, Wave 2 at the end of the eighth grade year, and Wave 3 at the end of the ninth grade year. Mastery goals and performance goals were measured. The motivational beliefs were self-efficacy, task value, and test anxiety, whereas there were two affect scales: one for negative affects (feeling shamed, embarrassed, and angry) and one for positive affect (feeling happy, proud, and good) experienced in school. Four strategies used (rehearsal, elaboration, organization, and metacognitive) with two motivational strategies of self-handicapping and risk taking were measured. Students' grades for mathematics were collected. Four groups of students were examined and comparisons were made between high-mastery/high-performance students, high-mastery/low-performance students, low-mastery/high-performance students, and low-mastery/low-performance students. The key issue was whether group membership moderated the developmental trends in outcomes.

The results showed that the high-mastery/low-performance and high-mastery/high-performance groups did not differ significantly from one another. They were equal in self-efficacy, cognitive strategy use, and metacognitive use over time. They differed in terms of anxiety, affect, self-handicapping, and risk taking. The pathways were similar for these two groups. The results showed that low-mastery/high-performance group, at the begging of the study, was high in self-efficacy for math and high task value, and had positive affects about the math class, but was at the lowest level at Wave 3 similar to the low-mastery/low-performance group. The results showed that a high performance goal, when coupled with high mastery goals, does not reduce the general positive effect of high mastery goals. This study provides support for the multiple goal perspective, which proposes that the students adopt different goals at different moments. More research needs to be done to investigate this perspective in relation to other motivational variables.

There is growing research literature investigating the impact of goal orientation on students' performance. In the literature, the goal orientations were approached in different ways as we see in the discussion below. In recent years, we have seen a convergence of theory and research around goal orientation (see Elliot, 2005; Was, 2006 for a review). These goals represent different ways of pursuing competence in achievement situations as it was discussed above. Not only is the relationship between the goal orientation and students' achievement investigated, but also the relationships of these goals with other theories' constructs, such as self-efficacy, task value, and self-regulation receives great attention. Many studies have found that mastery goals are positively related to a high sense of self-efficacy (Anderman & Young, 1994; Meece, Blumenfeld, & Hoyle, 1988; Middlleton, Kaplan, & Midgley, 1998; Middleton & Midgley, 1997; Midgley & Urdan, 1995; Roeser, Midgley, & Urdan, 1996; Skaalvik, 1997; Turner, Thorpe, & Meyer, 1998; Wolters, Yu, & Pintrich, 1996). For example, Middleton and Midgley (1997) examined the relationship between 703 sixth-graders' self-efficacy, self-regulation, academic goals, and academic achievement in mathematics. They used a trichotomous framework of goal orientation. Scales were adapted from Patterns of Adaptive Learning Survey (PALS) to measure mastery goals, performance-approach goals, and academic efficacy. They also developed another scale to measure performance-avoidance goals. The self-regulated learning scale was adapted from measures developed by Zimmerman and Martines-Pons (1988) and Pintrich, Smith, Garcia, and McKeachie (1991) (as cited on Middleton and Midgley, 1997). Students' academic achievement was computed on the basis of students' final grade in math in the previous year. Middleton and Midgley found that mastery goal orientation positively predicted academic self-efficacy and reports of the use of self-regulated learning strategies. In contrast, performance-avoidance goals were a moderate negative predictor of self-efficacy and positive predictors of test anxiety. Surprisingly, performance-approach goals did not significantly predict self-efficacy or self-regulated learning, which is consistent with other studies.

However, these results contradict other investigations in which the relationship between self-efficacy and performance-approach goals has been found to be positive (Midgley & Urdan, 1995; Wolters, et al. 1996). For instance, Wolters et al. (1996) investigated the relationship between goals orientation, motivational beliefs, self-regulation and the academic performance of seventh and eighth graders in four different subject areas, math, English, social studies and science. They defined different components of goal orientation including learning goals, extrinsic goals, and relative ability goals. Relative ability goal orientation was defined as students' reflection of how strongly they adopted goals related to doing better than other students. The goal-orientation scale was adapted from the PALS. The motivational beliefs included task value, self-efficacy, test anxiety, and cognitive strategy use, the last of which included organizational, rehearsal, and elaboration strategies. Subscales from MSLQ were adapted to measure the motivational variables and self-regulation.

Students' grades in four subject areas in the first and second semesters (Time 1 and Time 2) were collected from school records and were standardized within classrooms. The results demonstrated that learning goals as well as relative ability goal orientation positively predicted motivational beliefs, strategy use, and self-regulation, but it was not related to test anxiety. More interestingly, learning goal orientation was not a strong predictor of students' grade in any of four subjects at Time 1, whereas relative ability goal orientation positively predicted students' task value, self-efficacy, performance, and cognitive strategy and self-regulatory strategy use. Moreover, the results of the Wolters et al. (1996) study demonstrated that learning goal orientation was the single best predictor of task value. This study produced results similar to those of other research regarding the positive relationship between mastery goal orientation and the use of effective learning strategies (Ames & Archer, 1988; Anderman & Young, 1994; Nolen, 1988; Sankaran & Bui, 2001; Somuncuoglu & Yildirim, 1999).

As we can see in these instances, there is inconsistency in the literature regarding the relationship between both performance-approach and performance-avoidance goals, self-efficacy and learning-strategies. Accordingly, more research is needed to investigate these variables in academic settings.

5.9 Implicit Self-Theories of Intelligence

Perception of ability and how it was incorporated in different motivational theories is discussed under the self-worth theory section. This perception is also incorporated in Dweck' theory but it is approached from a different window. As mentioned in Was (2006), the motivational model proposed by Dweck and her colleagues, two implicit theories of intelligence, places different emphasis on goal-orientation, learning strategies, affect and behavior. Dweck (1999) in his social-cognitive model of motivation, describes a series of empirical studies that investigate how people develop beliefs about themselves and how these self-theories create different thoughts and feelings, and eventually lead to different behaviors.

Similar to theories of motivation, Dweck's theory tries to provide answers for why some students are motivated to work harder and why others fall into patterns of helplessness. More specifically, she focuses on exploring the implications of self-esteem and its role under the umbrella of motivation. Dweck focuses on the differences in the way students approach performance tasks due to the implicit theories they retain regarding their own intelligence. Two views of intelligence are distinguished: incremental and entity. According to Dweck (1999), an incremental view treats intelligence as changeable. Students who hold this view see satisfaction coming from the process of learning and often see opportunities to get better. They do not focus on what the outcome will imply about them, but rather what they can attain from taking part in the venture. Conversely, the students who hold an entity view see intelligence as a stable fixed trait and they have a high desire to prove themselves to others, so as to be seen as smart and avoid looking unintelligent. Unfortunately, few studies have examined the implicit self-theories of intelligence and its relationship to students' academic achievement and other motivational variables.

Roedel and Schraw (1995) examined three relationships. The first suggests that beliefs about intelligence are related to goals. Second, goals are related to behavioral responses, and third is beliefs about the controllability of intelligence are related to behavioral responses. A sample of 157 undergraduate students completed a 10-item questionnaire measuring the beliefs about transfer. Two statements that assess beliefs about the controllability of intelligence were embedded within the questionnaire. Next, an eight-item multiple choice test about calculating probabilities and solving combinatorial problems was introduced to all subjects. In the third stage of the experiment, subjects were asked to choose either test A or B. Before choosing, subjects were informed that test A is somewhat easier than the one they jut completed. Test B is somewhat more difficult than the one they just completed and they may not do as well, though it is more interesting and challenging. In stage four, participants are introduced to a 25-item survey to measure the goal orientation (mastery vs. performance), which was adapted from the goals inventory (Roedel, Schraw, & Plake, 1994, as cited in Roedel and Schraw, 1995). The results showed that a belief in fixed ability was related to the performance goal orientation and showed that the subjects who choose a more challenging task (test B) hold mastery goals for their learning, but not performance goals. The results showed that the relationship between beliefs about the controllability of intelligence and behavior under stress was mediated by goal orientation.

Was (2006) used a broader definition of goal-orientation compared to the study conducted by Roedel and Schraw (described above). He investigated the relationship between the self-implicit theory of intelligence and goal orientation in 322 undergraduate students distributed among four different classes. A questionnaire of 34 items was designed to measure four goal orientations (mastery, performance-approach, performance-avoidance and work avoidant) and six questions were designed to measure the view of intelligence held by the students. One interesting finding of this study was that the implicit self-theories of intelligence are related to how one sets achievement goals. More specifically, the results support the hypothesis that students who set mastery goals are likely to have an incremental view of intelligence. More research is needed to examine the relationship between the implicit self-theories of intelligence and motivational variables, such as self-efficacy, self-regulation, and learning strategies.

6 Conclusion

All contemporary theory of achievement motivation has evolved from earlier drive theories that emphasized the satisfaction of basic human needs, such as hunger. However, as we have seen, because of the obvious limitations of a strictly physiological approach to a general theory of human motivation, researchers eventually broadened their focus to include learned drives or psychological motives, such as the need for approval. For example, cognitive theorists consider unobservable thoughts and feelings to be important factors in understanding achievement behavior. In addition, as noticed, the research has shown different results regarding the relationships between different constructs of theoretical perspectives and students' academic achievement. New areas of research are identified.

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