A Tripartite Model of Motivation for Achievement: Attitude/Drive/Strategy*

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Abstract

This paper presents a model of motivation for achievement that includes three generic motivational factors that influence outcome attainment : (1) attitude or belief about one's capability to attain the outcome; (2) drive or desire to attain the outcome; (3) strategy or techniques employed to attain the outcome. Recent experimental research evidence is presented to illustrate the contributive influence of each proposed factor on academic engagement and achievement, followed by some empirically-derived causal models that link the various factors to achievement outcomes.

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Motivating students to achieve in school is a topic of great practical concern to teachers and parents, and of great theoretical concern to researchers. New books on the topic appear with increasing frequency and relevant research is proliferating at a rapid rate. Higher education institutions are beginning to provide assistance to students, especially new ones, in developing so-called study skills and self-regulatory skills such as time management. One of the greatest *challenges and opportunities of the 21st century* will be for schools at all levels to focus more on assisting students to become motivated in order that they can succeed in school.

The purpose of this paper is to present a proposed model of motivation for achievement, as applied particularly to the educational setting. This model focuses on three generic variables: (1) *attitude* or beliefs that people hold about themselves, their capabilities, and the factors that account for their outcomes; (2) *drive* or the desire to attain an outcome based on the value people place on it; (3) *strategy* or the techniques that people employ to gain the outcomes they desire. Each of these variables will be described in more detail, and evidence will be provided to support the contention that each exerts an important influence on motivation to achieve in an academic environment.

Achievement outcomes have been regarded as a function of two characteristics, "skill" and "will" (McCombs and Marzano, 1990), and these must be considered separately because possessing the will alone may not insure success if the skill is lacking. The focus in this model is on will, or the motivation to achieve the outcome, and it will be considered separately from level of skill. Where achievement measures such as scores on course examinations or grades are used as criteria of motivation to achieve, measures of skill have to be separated out or controlled for. To measure motivation for achievement directly, measures of *engagement* must be examined.

Cognitive engagement represents the amount of effort spent in either studying or completing assignments. It is the result of motivation, not its source. Pintrich and Schrauben (1992) review a large body of research that suggests that (1) the value of an outcome to the student affects that student's motivation, and (2) motivation leads to cognitive engagement, such engagement manifesting itself in the use or application of various learning strategies.

Many of the studies Pintrich and Schrauben describe employed self-reports of learning strategy use as a measure of cognitive engagement. Such studies become dependent on what students claimed to be doing as a way of determining that they were indeed engaged in a task. To avoid this dependence on students' self-reports, the studies I carried out (either alone or in collaboration with Tom Sexton) and report on in this paper operationalized cognitive engagement as a manifestation of effort expenditure or actual performance on the homework task of writing test items on text chapters in which students had the option to perform assignments for extra credit. In studies I carried out and report on using achievement test scores as a measure of motivation to achieve, relevant data on students' skill level was used as a control.

In the next three sections, I will briefly review findings that suggest a relationship between each of three proposed causal variables and motivation to achieve. Following that, I will present some evidence about their combined impact as revealed through causal modeling.

Attitude

The attitude that is often used in conjunction with motivation to achieve is *self-efficacy*, or how capable people judge themselves to be to perform a task successfully (Bandura, 1977). Bandura (1997) provides extensive evidence and documentation for the conclusion that self-efficacy is a key factor in the extent to which people can bring about significant outcomes in their lives. Specifically, there is considerable evidence to support the contention that self-efficacy beliefs contribute to academic achievement by enhancing the motivation to achieve. For example, Schunk (1989) in a number of studies, has shown that children with the same level of intellectual capability differ in their performance as a function of their level of self-efficacy.

In my own (collaborative) work comparing the task performance of students at high, intermediate, and low levels of self-efficacy with regard to the task (Tuckman and Sexton, 1990), the highest self-efficacy group was found to be twice as productive as the middle group, and 10 times as productive as the low group. Moreover, the high group outperformed their own expectations by 22%, the intermediate group equaled their own expectations, and the low group fell below their own expectations by 77%. The results reflect a clear relationship between self-efficacy beliefs and academic productivity.

Efficacy beliefs have also been shown to play a mediational role in academic attainment, especially between instructional or induced-strategy treatments and academic outcomes. Schunk and Gunn (1986) report that providing children with strategy instruction and training in self-monitoring and self-correcting increased performance both directly and through the enhancement of self-efficacy. Schunk and Rice (1993) found that training in verbal self-guidance increased both self-efficacy and reading comprehension skill.

In one of my (collaborative) studies (Tuckman and Sexton, 1991), encouraging feedback was found to increase self-efficacy on the task and subsequent performance on the task. Statistical analyses showed that when performance was held constant, encouragement was seen to affect self-efficacy, but when self-efficacy was held constant, encouragement had no effect on performance. Hence, self-efficacy functioned as a mediator of performance.

Using "control beliefs," a somewhat more complex construct of beliefs than self-efficacy, one that combined capacity and strategy beliefs with more generalized expectations, Skinner, Wellborn, and Connell (1990) sought to predict achievement. They found that elementary school children's perceived control influenced academic performance by promoting or undermining engagement in learning activities.

The relation between self-efficacy and performance is best summed up by Bandura (1997, p. 61).

> "The evidence is relatively consistent in showing that efficacy beliefs contribute significantly to level of motivation and performance. They predict not only the behavioral changes accompanying different environmental influences but also differences in behavior between individuals receiving the same environmental influence, and even variation within the same individual in the tasks performed and those shunned or attempted but failed."

Drive

Is attitude about one's capability alone enough to account for motivation to achieve? Evidence suggests otherwise. Kirsch (1982) presented subjects with a hypothetical feared task, specifically picking up a snake and holding it in front of their face, and asked them whether they would be able and willing to do it. They reported having neither capability nor inclination. He then offered them a progressively stronger incentive (namely, more money), and eventually reached a level where all subjects reported both the capability and willingness to perform the feared task. He also found that subjects would continuously perform a task for which they had little expectation for success, namely throwing a wadded-up piece of paper across a room into a wastebasket, if the consequence for success was a considerable reward and the punishment for failure was zero (Kirsch, 1985).

Maddux, Norton, and Stoltenberg (1986) also took issue with self-efficacy theory for disregarding outcome value as a potential influence on behavioral intentions. They showed that outcome value had a significant influence on behavioral intentions, especially among people high in self-efficacy. Also, the distinction between intrinsic and extrinsic motivation (Deci and Ryan, 1985) is an acknowledgement of the role of the value of a behavior in the determination of whether or not the behavior is performed.

One potential source of the drive to perform is the incentive value of the performance. Incentive theories of motivation (e.g., Rotter, Phares and Chance, 1972; Overmier and Lawry, 1979) suggest that people will perform an act when its performance is likely to result in some outcome they desire, or that is important to them. For example, in anticipation of a situation in which a person is required to perform, that person may expend considerable effort in preparation because of the mediation provided by the desire to achieve success or avoid failure. That desire would be said to provide incentive motivation for the person to expend the effort. Accordingly, a test, as a stimulus situation, may be theorized to provoke students to study as a response, because of the mediation of the desire to achieve success or avoid failure on that test. Studying for the test, therefore, would be the result of incentive motivation.

I was involved in four experiments on the effect of incentive motivation on academic achievement, each of which used tests as a mediator. They were done using the *spotquiz*, a weekly, announced test made up of seven completion-type items on the textbook chapter assigned for that week, as a source of incentive motivation to motivate timely processing of the text. No direct overlap existed between spotquizzes and the tests used to measure final achievement, so they would not function as a form of practice. In the first experiment (Tuckman, 1996), using a five-week segment of an undergraduate college course, students taking spotquizzes were compared to students of comparable aptitude employing the learning strategy of identifying, defining, and elaborating upon 21 key textbook terms per chapter in required homework assignments, and those who neither took spotquizzes nor completed homework assignments. The homework group was used as a control for time-on-task. Large significant differences on the final achievement test favored the spotquiz group whose performance exceeded the homework group by 16% and the control group by 24% .

In the second experiment (Tuckman, 1996), carried out over an entire 15-week college course, a spotquiz group was compared to another group of students of comparable aptitude, taking the same course at the same time, that completed the same terms-definitions-elaborations homework assignments as in the first experiment. Students were further subdivided into high, medium, and low on prior grade point average. On the three exams, results significantly favored the spotquiz group (this time by 4%), despite students reporting spending no more time studying for spotquizzes than was required by the other group to complete the homework assignments. Moreover, comparisons of treatments by GPA level yielded a significant interaction, and revealed that the major beneficiaries of the spotquizzes were low GPA students, precisely those who tend to devote the least amount of time to schoolwork. Among these low GPA students, those taking the spotquizzes outachieved homework students by an average of 14% across the three course examinations. No differences across treatments were

found for either high or medium GPA students. The spotquizzes appeared to provide students with an incentive or drive to study on a regular basis.

In the third experiment (Tuckman, 1998), weekly spotquizzes were compared to the learning strategy of chapter outlining as a weekly homework assignment. In this study, students were classified as high, medium or low procrastinators based on their scores on the *Procrastination Scale* (Tuckman, 1991), a 32-item self-report inventory on which students indicated their tendency to delay starting on tasks and assignments. Spotquiz students significantly outachieved homework students of comparable aptitude by 7% on the course examination. A significant interaction was based on the finding that, while low and medium procrastinators in the two treatment groups did not differ significantly in achievement, high procrastinators who took spotquizzes achieved 18% better on the course exam relative to the achievement of their counterparts who completed homework assignments. The incentive motivation or drive provided by frequent quizzing enabled students to manifest higher achievement, while reporting spending less time studying for spotquizzes than homework students reported spending doing their assignments. In the fourth study (Tuckman and Trimble, 1997), spotquizzes were also found to enhance the achievement of middle-school students in a science course.

Other studies support the importance of drive or value, using sources other than incentives, as a factor related to achievement (Pintrich and Schrauben, 1992). Pintrich and De Groot (1990) found a significant negative correlation between test anxiety, often considered a manifestation of drive, and achievement among seventh graders, while Bandura, Zimmerman, and Martinez-Pons (1992) found a strong relationship between high school students' grade goals, another reflection of value or drive, and their school achievement.

Wigfield and Eccles (1992), building on the work of Atkinson (1966), argue that incentive value of a task is an important determinant of task choice, and that individuals will tend to do tasks that they positively value and avoid those that they negatively value. The work by myself and others cited here tends to show that enhancing the incentive value of studying, and thereby a person's drive to engage in that task, increases level of achievement as a result, and shows drive or desire to be an important component of motivation.

Strategy

Work has been done by myself and others showing a relation between strategy and success in school and in a variety of other areas as well. Indeed, the entire concept of self-regulation has burst upon the motivation scene to reflect the connection between specific strategies and performance outcomes, exemplified by the considerable work of Schunk and Zimmerman (e.g., Schunk,1989; Schunk and Zimmerman, 1998a, b; Zimmerman, 1989; 1990; Zimmerman and Martinez-Pons;1988), including a paper given earlier in this symposium. Strategies that have been shown to have a particular impact on achievement (Zimmerman, 1989) are self-observing, self-judging, and self-reacting (e.g., goal setting, planning), and more recently, self-evaluation and monitoring, goal setting and strategic planning, strategy implementation and monitoring, and strategic outcome monitoring (Zimmerman, 1998). Another paper given earlier in this symposium by Gwen Quinn, one of my former students, deals with a detailed goal setting and planning strategy called the "Doing Something Better Plan" (Tuckman, 1995).

In one of my own studies (Tuckman, 1990), I compared goal setting, group outcome and control conditions on the performance of students at three levels of self-efficacy. I found that the unique combination of strategy condition and self-efficacy level determined the amount of performance. The goal setting strategy yielded the best performance from low self-efficacy students, the group outcome strategy yielded the best performance from middle self-efficacy students, and the no induced strategy or control yielded the best from high self-efficacy students. Similarly, Tuckman and Sexton (1992) showed that in a competitive performance situation, a feedback strategy worked better than a no feedback strategy for low and intermediate self-efficacy students while the reverse held true for high self-efficacy students.

In the last decade, the evidence compiled for the role of strategies in the motivation for achievement has been considerable, especially within the framework of self-regulated learning. Beyond believing in one's own capability, and having the desire to achieve a particular outcome, being able to carry out specific strategies associated with success in a variety of fields (e.g., writers, athletes, musicians, students) appears critical (Zimmerman, 1998).

Models of the Combined Variables

Zimmerman (1989) identified the three elements of self-regulated learning as "students' self-regulated learning strategies, self-efficacy perceptions of performance skill, and commitment to academic goals (p. 329)." Pintrich and De Groot (1990), in a correlational study of 7th graders' school achievement, identified the following five variables as predictive: (1) self-efficacy, (2) intrinsic value, (3) test anxiety, (4) strategy use, and (5) self-regulation. The first is a reflection of attitude, the second and third: drive, and the last two: strategy. I did a similar study of college students (Tuckman, 1993) using factor analysis and identified three factors: (1) an attitude factor, primarily representing self-efficacy; (2) a drive factor, representing self-reported grade importance, test anxiety, and two behavioral measures that reflected grade importance; (3) a factor that primarily represented ability (i.e., aptitude and achievement test scores). Self-regulation tended to load in the attitude factor.

Zimmerman, Bandura, and Martinez-Pons (1992) reported a path analysis for final grades of 9th and 10th graders. Predictor variables were prior grades, parent grade goals, student grade goals, self-efficacy for self-regulated learning, and self-efficacy for academic achievement. Their results show the influence on achievement (as measured by grades) of the attitude factor (the two self-efficacy measures; the direct effect of self-efficacy on performance has also been shown by Pajares and Miller, 1994) and the drive factor (as reflected by student grade goals and parent grade goals). The strategy factor could not appear because they did not include a measure of strategy use, only of the belief in being capable of it.

Another causal model of academic achievement is provided by Abry (1998) as reported in this symposium. He found metacognitive strategies (planning, monitoring, and utilization of feedback) and attitude (self-efficacy, locus of control) to predict achievement. He also included cognitive strategies (coding, elaborating, organizing) and found them to predict achievement. He did not include any measure of drive.

Finally, a causal model that Abry and I did together (Tuckman and Abry, 1998) included measures of all three constructs: attitudes (self-efficacy), drive (intrinsic value, test anxiety, student goals, parent goals), and strategy (self-regulation). It also included a somewhat skilled-based variable, prior grade point average. The model shows that all seven predictors were represented in the causal path, with significant loadings.

The model shows an interesting pattern. Student goals, based on the answers to two questions: What grade have you set as your personal goal for this course? What grade would you regard as minimally satisfying for this course? (from Zimmerman et al., 1992) appeared as the major mediating variable. It was influenced by grade point average, parent goals, and self-efficacy for course. Even though the act of setting goals is a strategy, the goals themselves are, in my estimation, a measure of drive in that the level of the goal helps propel the person toward a particular level of achievement. Locke and Latham, 1990, p. 2) define goals as "something that the person wants to achieve," and see them causing people to marshal their resources and mobilize their effort for their attainment, while Dweck (1992) considers a goal to be a specific outcome that someone is striving to achieve. The verbs "want," "mobilize," "marshal," and "strive" suggest the concept of drive.

Self-efficacy, an attitude, was found to exert its influence on achievement through student goals, rather than directly. Hence, beliefs in yourself appear to influence goals for which you strive. This relationship is consistent with that reported by Locke and Latham (1990). Zimmerman et al (1992) found self-efficacy also to influence grades indirectly through student grade goals, but they found it to influence grades directly as well.

Conclusion

While I have not provided an exhaustive literature search on the topic, the work I have described suggests that attitude, drive and strategy each make a distinguishable but interrelated contribution to motivation for achievement. Without attitude, there is no reason to believe that one is capable of the necessary action to achieve, and therefore no reason to even attempt it. Without drive, there is no energy to propel that action. And without strategy, there is nothing to help select and guide the necessary action. While other theories focused on one or two of these constructs, I would argue that a more complete understanding is provided by a consideration of all three.

There is also an implication for practice or application in educational settings, insofar as motivation for achievement is a quality with high societal value. Efforts should be made by teachers to enhance students' attitudes or beliefs in their own capability, to impel or propel engagement in the learning process, and to teach students about relevant strategies that can be used. A considerable amount of material on "teaching" motivation by changing attitudes and strategies is currently available (see, for example, Pressley, Woloshyn, and Associates, 1995; Zimmerman, Bonner, and Kovach, 1996), but the greatest unmet need regarding effective enhancement techniques would appear to be in the area of drive.

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ABSTRACT The study sought to find out the motivational strategies and its impact on productivity The purpose of the study is to provide effective motivational strategies for organizations to use to motivate employees, to improve and increase productivity in organizations.The Literature review enables us to understand the various theories on motivation and the effect have on productivity The researcher developed a questionnaire. Equity theory…..….19 2,6.7 reinforcement theory….….20 2.7 motivation strategy….….….….….….22 2.7.1 Keywords: teacher disposition; professional motivation; achievement motivation; teaching effectiveness. Teachers of natural science subjects have an average level of motivation for success (36.7%). Some educators have a moderately high level (30%). A very high level of motivation for success is observed by 16.7% and 13.3% of teachers. no significant differences in the self-attitude of teachers of both groups (t = 0.2; 0.02; 0.8; 0.7; 1.1). All. participants have the feeling of a positive global self-relationship: an internally undifferentiated sense of.