Robert J. Menges, Maryellen Weimer, and Associations, eds., *Teaching on Solid Ground: Using Scholarship to Improve Practice*, pp. 75-100

Chapter Four

Student Motivation from the Teacher's Perspective

Raymond P. Perry, Verena H. Menec, C. Ward Struthers
University of Manitoba

At no time in a student's education is independence and self-initiative more important than during the college years. Whether writing essays, giving oral presentations, or forming social relationships, a student is expected to acquire new skills and apply them effectively during the academic career. However, many college students do not or cannot adjust to the increased demands for autonomy, thereby placing their success in college at risk. Thus alongside the enthusiastic, determined, and responsible students sit apathetic, bored, and failure-prone students, intermingled with others somewhere between the two extremes. For college teachers, the challenge is to respond to this diversity of learning needs by offering learning opportunities responsive to them.

The challenge raises two key questions: What factors explain these differences between students? and, How does teaching relate to the factors? In studying these differences, Britton and Tesser (1991) estimate that precollege aptitude scores predict no more than 20 percent of variability in later college grades. This makes

Note: Support for this chapter was provided by the Social Sciences and Humanities Research Council of Canada (SSHRCC) in the form of a research grant (#410-91-1296) to the senior author and SSHRCC doctoral fellowships to the junior authors. Correspondence regarding the chapter should be addressed to Raymond P. Perry, Centre for Higher Education Research and Development, University of Manitoba, Win-

motivation a prime candidate for explaining some of the remaining 80 percent and an obvious answer to the first question. With motivation that important, the second question should focus on how student motivation relates to various teaching methods. Said succinctly, differences in motivation may cause some students to respond well and others poorly to the same teaching method. A related implication involves the potential of some methods to reduce differences in motivation.

Understanding what student motivation is and how it relates to teaching provides the impetus for this chapter. We begin by considering student motivation in terms of implicit theories of teaching that guide daily instructional practices. Following this is a theoretical and empirical analysis of the cognitive, emotional, and behavioral antecedents of student motivation. Two motivational profiles of students emerge: helplessness and mastery. Finally, two solutions are proposed as solutions to the negative motivation patterns of students: attributional retraining and the modification of specific teaching practices.

The Teaching-Motivation Connection

The connection between teaching and motivation relates directly to what teachers see as their primary role. Weiner (1990) distinguishes between professors who believe their job is to teach their discipline and those who claim it is to teach *students* their discipline. It is this subtle but critical difference in focus—teaching *content* versus teaching *students*—that raises the issue of motivation. To teach students requires not just mastery of the subject matter but also an understanding of students and how they learn.

These philosophical debates about the role of teaching often arise from the models faculty use to guide their teaching practices. Derived from on-the-job experiences and folk wisdom, these experiential models become the basis for much of what faculty purport to do in the classroom. Aptly labeled "implicit theories of teaching" by Gage (1978), these experiential models orient instructors in their approach to classroom dynamics much as other attitudes, beliefs, and expectations do and thereby direct social discourse. It is at this very basic level that student motivation receives a dramatically different emphasis.

Roughly speaking, the difference is revealed in three distinct models of teaching.

The Information Model of Teaching. Professors endorsing an information model see their role as imparting vital information that develops the student's knowledge base. Motivating students is not part of that role, since students are mature adults and "should be there to learn." Voluminous amounts of course material do not permit a preoccupation with issues of motivation. Imparting essential information is the primary objective.

The Motivation Model. In contrast, those who subscribe to a motivation model see themselves as instilling in students a desire to learn. Since the information is already available in the textbook, the library readings, or electronic databases, their role is to motivate the students to *want* to acquire that information. Teaching methods depart markedly from the *information* model. Here, the objective is to excite, to motivate, to "turn on" students. If students go to coffee after class and discuss issues raised during class (rather than the last football game, the weekend party, or their amorous adventures), then the professor has accomplished an important teaching objective.

The Dual-Process Model. A more holistic approach is taken by those espousing a dual-process model of teaching. Simply stated, at its most fundamental level this model proposes that teaching consists of informing and motivating students during the course of a lecture and throughout the semester. "Which students to inform, which to motivate, when, and how much" is the essence

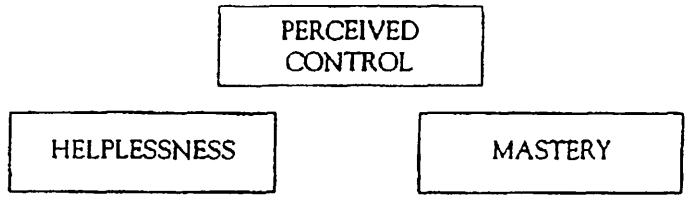
may be concerned only with getting a good grade, whereas the second may study out of interest in the material. These different reasons will have a profound impact on future study efforts. While the latter student is likely to continue learning activities such as reading textbooks and research articles, the former is unlikely to do so.

To better explain these complexities, researchers have started to incorporate constructs such as attributions, affects, expectations, and goals (Ames and Archer, 1988; Dweck and Leggett, 1988; Weiner, 1986). This approach allows them to identify adaptive versus maladaptive motivational patterns and better understand the origins of these motivational patterns. One factor that is increasingly being recognized as important is perceived control (see Figure 4.1 and Table 4.1). As Table 4.1 (left column, 'Helpless Students') shows, a low sense of control can lead to a variety of outcomes that together form a negative motivation profile. In contrast, students with a greater sense of perceived control are apt to see the situation very differently (right column,'Mastery Students')—that attending class, taking notes, and studying for tests and exams lead to academic success. Thus students with a higher sense of perceived control think, feel, and respond differently when faced with academic challenges than students with a lower sense of perceived control. These reactions are discussed in more detail subsequently.

Cognitions: An Attributional Analysis

How students explain their performance on achievement-related tasks has direct implications for student motivation. Several theoretical models, among them learned-helplessness theory (Abramson, Seligman, and Teasdale, 1978), self-efficacy theory (Bandura, 1982; Schunk, 1985), and attribution theory (Weiner, 1986), help to account for and explain the reasons students give for their success or lack of it. Weiner's (1986) attribution theory is especially useful. He points out that people routinely try to explain outcomes, particularly if they are important, negative, or unexpected. The

Figure 4.1. Perceived Control.



- At-risk
  High-risk
  Learning-disabled
  Educationally disadvantaged
- Educationally gifted
  Educationally exceptional

- Related constructs in which motivational deficits comprise a significant part of the construct

Table 4.1. Profiles of Helpless and Mastery Students.

Helpless Students	*Mastery Students*
1. Lack of ability responsible for failure	1. Lack of effort responsible for failure
2. Goal is to get good grades	2. Goal is to increase competence
3. Develops negative emotions toward task	3. Welcomes challenge of task
4. Attempts to withdraw from failure situation physically and psychologically	4. Intensifies efforts when experiencing failure
5. Fails to develop effective problem-solving strategies	5. Develops effective problem-solving strategies to reduce failure and increase success
6. Prior successes forgotten and/or viewed as irrelevant to future success	6. Past successes remembered and considered relevant to future performance
7. Loses concentration and focus for learning tasks	7. Focuses attention and concentration on learning tasks

of this model. Unlike the previous two, the dual-process model requires a keen sense of timing and balance between informing and motivating. An English grammar course for science students may require considerable effort by the professor both to inform and to motivate, whereas an anatomy course for medical students may entail little of either. Likewise, curriculum and student differences may cause a psychology professor to place less emphasis on motivation and more on information, while a philosophy professor may focus less on information and more on motivation. In all, the real issue is not whether motivation is important to effective teaching but when and how much.

Aside from these anecdotal models, other sources of information about effective teaching inform classroom practice. Though it may be surprising to some faculty, seventy years of research on college teaching (McKeachie, 1990) reveals a critical core of empirical evidence on teaching effectiveness in the college classroom (see, for example, Cohen, 1981; Costin, Greenough, and Menges, 1971; Marsh, 1984; Marsh and Dunkin, 1992; McKeachie, 1963; McKeachie and Kulik, 1975; Murray, 1991). Multiple indicators of scholastic attainment, many of which have an implicit or explicit motivational component, have been examined in relation to specific teaching behaviors; for example, both student achievement and student attrition presuppose a prior level of motivation that can enhance subsequent performance and increase willingness to attend classes. Consequently, this empirical literature is a valuable source of information about college teaching and student motivation, apart from experiential models. More will be said about the empirical approach in subsequent sections of this chapter.

Two of the three experiential models imply that increased motivation has direct, positive consequences on academic achievement and the more intangible benefits associated with a commitment to learning and education. Motivation also mediates student achievement in the empirical approach. But whichever perspective is taken, experiential or empirical, the desirability of motivation is abundantly clear. Any attempt to address motivation in the college classroom must take into account the teaching-motivation connection.

Student Motivation

Motivation has been a major research topic since the inception of psychology as a science over one hundred years ago. In fact, psychologists have long considered motivation to be the driving force behind much of human endeavor. For them, human motivation results from biological, emotional, and social factors that instigate, direct, and maintain behavior. In this chapter, however, we consider only that small part of the motivation literature directly related to academic achievement.

Two issues of interest to educational researchers and classroom practitioners underlie recent models of achievement motivation. First, motivation arises from sources both inside and outside a person. When motivation results from those sources inside the person, the student is seen as an *active*, rather than passive, participant in the learning process (Zimmerman and Schunk, 1989). External factors affecting student motivation include classroom characteristics such as instruction methods, curriculum structure, or peer pressure. Second, motivation tends to be *domain-specific*. The bored and apathetic student enrolled in a history class might be highly committed in a mathematics course or excel in physical education.

Historically characterized in terms of arousal, energy, or persistence, motivation was thought to result from achievement or from time spent on a task (Ames, 1984). However, the limitations of this view have become apparent. Consider two students who study equally hard for an upcoming test. In the traditional view, both would be described as highly motivated and would be expected to do well. Recent research indicates, however, that this is not necessarily the case (Covington, 1993). Let us assume, for example, that the two students have different *reasons* for studying. The first

threatened by the possibility of failure and as a consequence may study less and avoid challenges. The alternative to this maladaptive approach is a learning orientation based on increasing competence. These students choose challenging courses and put effort into learning the material in order to have positive feelings about academic tasks. Such a motivational profile greatly improves their chances of success in their academic careers.

Behavior: A Learning Strategies Approach

To this point, we have focused on the cognitive and affective factors that are responsible for student motivation (Weiner, 1986). It is equally important, however, to consider students' behavioral responses toward achievement tasks, specifically their learning strategies (Pintrich, 1989). Learning strategies and achievement motivation are frequently treated as separate topics, although they are, of course, interrelated. That is, students with a low sense of control, who believe that their efforts will not contribute to success, are unlikely to make use of effective learning strategies. Alternatively, even though mastery-oriented students may be highly motivated, learning will be difficult if they lack adequate study skills. As a consequence, students' perceived control is thought to mediate use of learning strategies, with mastery orientation being necessary but not sufficient for academic success. In college, students are expected to assume greater responsibility for their education than in high school. However, college teachers rarely teach students how to take notes or read text material. Using effective learning strategies, therefore, becomes essential for their academic success.

The literature on learning strategies is voluminous and describes numerous techniques, ranging from specific skills (for example, note taking and test taking) to cognitive and metacognitive activities, such as selective attention and self-monitoring (Dansereau, 1985; Kiewra, 1987). More basically, however, learning

involves a number of information-processing activities, including among others attending to and concentrating on the task at hand, processing course content, and storing relevant information in memory. Whether students effectively engage in these information-processing activities depends in part on their level of motivation. Highly motivated students, such as mastery-oriented students, should be better at concentrating on tasks, processing information, and remembering the material.

Students' learning activities are also influenced by teaching practices that can either hinder or facilitate information processing in students. During a lecture, for example, students are required to attend selectively to the lecture content, a task that involves blocking out both internal distractions (thoughts of partying, romance, or an upcoming exam) and external distractions (noise in the classroom) (Como, 1989; Kuhl, 1985). Teaching strategies (such as vocal inflection or humor) focus students' attention on the lecture, thereby diminishing the effect of the distractions. Similarly, the instructor who provides examples or analogies can facilitate students' memory of the material. Conversely, of course, instructors can hinder information-processing activities. For example, the teacher who lectures in a monotone and is disorganized makes it more difficult for students to listen and identify critical ideas. Ultimately, however, the success of teaching practices rests on how well an instructor can adapt such methods to the needs of his or her students. This interaction between teaching practices and student characteristics is discussed in more detail in the next section.

In sum, researchers have identified a number of factors critical to student motivation and academic achievement, including attributions, expectations, emotions, and learning strategies. The literature indicates that students' attributions for achievement-related events affect their expectations of future success as well as their emotions. Expectations and emotions, in turn, contribute to students' use of effective learning strategies and, ultimately, their success in college.

realities that students may need to explain include such outcomes as grades on tests, term papers, or assignments.

Although students can use numerous attributions to explain their performance, ranging from "I didn't study enough" to "the test was too difficult," attribution theory predicts that *all* attributions reflect three underlying dimensions: whether they are (1) inside or outside the person (ability vs. luck), (2) stable or unstable over time (ability vs. test difficulty), and (3) controllable or uncontrollable by the individual (effort vs. luck). These dimensions of locus, stability, and controllability then influence expectations of future success and individual effectiveness.

The different consequences of ability versus effort following failure lie at the heart of the helpless-and-mastery distinction (Dweck, 1975; Diener and Dweck, 1978). Consider the student who receives a low grade on a test and concludes that it resulted from his or her lack of ability. Such an attribution implies that failure will reoccur no matter what the student does or how hard she or he tries. As a result, self-esteem is lowered and expectations of success in the future are reduced. In effect, the student says, "Why bother trying since I'm going to fail anyway?" Not surprisingly, such a helpless-oriented student is likely to perform poorly on future tests. In contrast, mastery-oriented students tend to attribute failure to lack of effort, thereby maintaining expectations for success. In the future they are more likely to expend the effort success requires.

Emotions: A Self-Worth Analysis

A second aspect of the helpless-and-mastery distinction is related to students' self-esteem or sense of self-worth (Covington, 1993). Covington argues that students attempt to maintain and promote a positive sense of self-worth at all costs. In his research, he has identified a number of coping strategies that enable them to do so, even though these strategies are often self-defeating in the long run. Self-worth theory hinges on the assumption that students' self-worth frequently becomes tied to their ability to perform well in school or college. If they do well, it is because of high ability; if they perform poorly, they don't have the ability. Because of these assumptions, students make it a priority to avoid failure, or to fail without appearing stupid.

This dynamic explains why expending effort can become a double-edged sword (Covington and Omelich, 1979). Trying hard and failing reflects negatively on one's abilities and consequently one's sense of self-worth, which may well be what happens to the student who has put a lot of effort into studying for a test and yet receives a low grade.

One strategy, albeit a questionable one, that students sometimes use to avoid this dilemma involves working as little as possible. If failure results, it can be attributed to lack of effort, rather than lack of ability, thereby protecting their self-esteem. Alternatively, students may *appear* to try less hard, reflected in their frequent comments about how little they have studied for an upcoming test. Of course, this provides an excellent excuse for failure, and in the event of success it contributes to the impression of superior ability. Procrastination may serve a similar purpose (Covington, 1993). Cramming for a test or allowing only a few days for writing a major term paper appears to be self-defeating. However, from a self-worth perspective, procrastination may help to protect the student's sense of self-worth, since a low grade can readily be attributed to lack of studying and preparation.

In addition to these "self-handicapping" (Covington, 1993) strategies, students may alternatively maximize their chances to succeed. Some consistently choose easy courses that are quite below their capabilities. They routinely withdraw upon learning that a course involves difficult tests or assignments.

To conclude, self-worth theory posits that students differ in terms of their *reasons* for learning. These reasons can either interfere with or facilitate motivation and academic achievement. Students concerned only with obtaining good grades often feel

In our work, we have found that some college students can enhance their motivation and perform well despite threats to their control. We believe these students possess certain characteristics that shield or *buffer* them from the negative effects of academic failure. Apparently, these students think differently and possess personalitylike qualities, such as an optimistic view of life, an internal locus of control, or a feeling of self-worth, that insulate them from the demotivating effects of failure (Aspinwall and Taylor, 1992; Perry, 1991).

Mastery students who experience test failure attribute poor performance to lack of study effort or inappropriate use of study strategies. Consequently, they are more likely to remain motivated to study for subsequent tests, whereas helpless students who fail a test are more likely to be less motivated because the experience makes them believe they do not have the ability to succeed. Of course, these patterns vary depending on the quality of instruction that students experience. In spite of being in control, many college students who fail a test and face ineffective instruction are motivationally at-risk, indicating that there is only so much of the motivational and achievement burden that we can ask our students to bear.

Effective Instruction and Motivation

Generally, researchers interested in the connection between college instruction and student motivation have examined what instructors do in the classroom and the effect they have on students. In particular, considerable attention has been given to student achievement, an outcome variable that reflects motivation antecedents. To illustrate, in an extensive reanalysis of research on effective instruction, Feldman (1989) reviewed thirty-two meta-analysis studies and found several teaching behaviors to be significantly correlated with student achievement: organization, clarity,

Table 4.2. The Relation Between Teaching Behaviors and Achievement.

Teaching Behavior[a]	*Correlation Achievement*[b]
Organization/Structure • The presentation of the material is well organized. • The instructor plans the activities of each class period in detail.	.55 (30.3%)
Clarity/Skill • The instructor makes good use of examples and illustrations to get across difficult points. • The teacher effectively synthesizes and summarizes the material.	.51 (26.0%)
Interaction • Students feel free to ask questions or express opinions. • The instructor stimulates class discussion	.45 (20.3%)
Stimulation • The teacher gets students interested in the subject. • It is easy to remain attentive.	.38 (14.4%)
Elocution • The teacher has the ability to speak distinctly and be clearly heard. • The instructor changes pitch, volume, or quality of speech.	.35(12.3%)
Feedback • The teacher tells students when they have done a good job. • The teacher is prompt in returning tests and assignments.	.29 (8.4%)

Source: Modification of Table 4.3 (Perry, 1991, p. 20).

[a]Teaching behaviors and examples taken from Cohen (1987) and Feldman (1989).

[b]Average correlation coefficients between student ratings of the teaching behavior and student achievement (Cohen, 1987; Feldman, 1989). The numbers in parentheses refer to the percent of variance explained by each dimension.

We have further argued that these cognitive, emotional, and behavioral responses, resulting from students' perceived control, influence students' motivation and academic development. Helpless students believe that they will fail, regardless of how hard they try or how much they study. They attribute failure to lack of ability and are unlikely to make use of effective learning strategies, with potential consequences ranging from failure on future tests to absenteeism and dropping out. In contrast, mastery-oriented students attribute failure to lack of effort and therefore study to become competent or skilled in a given area, as well as employ effective learning strategies. As a result, they are more likely to succeed in college.

Student Motivation and Instruction

156

To complicate matters further, helpless students learn little from otherwise effective instruction, in contrast to mastery students (Perry, 1985; 1991). The typical pattern of low motivation, negative affect, and poor performance characteristics of at-risk college students can occur even in the presence of high-quality teaching. An explanation of these findings follows, along with some suggestions about what instructors can do to resolve the dilemma.

Loss of Control and Motivation

Although perceived control is important across all levels of education, it is more important during the college years. In college, students make choices about their courses, instructors, and academic majors. They face personal and academic challenges including exams, pop quizzes, and disorganized instruction, all of which cause them to experience a loss of control.

Sometimes a student's motivation, self-esteem, and personal identity hinge precariously on these capricious experiences: in some

cases, the latest test score is the most current measure. Paradoxically, while perceived control is most important to academic development at the college level, it is here that the student's sense of control is subject to greatest threat.

Our research (Perry, 1991) makes clear that classroom factors that cause loss of control have three qualities in common. First, they are likely to be unpredictable events, for example, pop quizzes. Second, they create the impression that the student can do little to change them, as in the case of poor instruction or difficult course content. Third, their occurrence is usually the prelude to a negative outcome, particularly failure on a test or social rejection. Together, these qualities engender loss of control in students and result in helplessness, which erodes a student's overall achievement motivation.

It is also clear that certain psychological qualities within students predispose them to loss of control. The common denominator between these qualities is a set of beliefs that imply that the student has little influence over his or her academic development. In the case of the locus-of-control construct, external-locus students believe that much of what happens in their academic world, good or bad, is the product of external factors, such as the professor, other students, or course content (Perry and Magnusson, 1989). Some students exhibit beliefs that disavow hard-driving, aggressive, goal-oriented behavior and thereby make them more prone to academic failure (Perry and Tunna, 1988).

Attributional style can also cause loss of control in students who attribute academic failure to the difficulty of the test (Perry and Magnusson, 1989). In these cases, the common ingredient is a belief pattern portraying disinterest or inability to personally influence academic developments, coupled with the view that such events are determined by outside forces. These belief patterns can precipitate loss of control, culminating in helplessness and lack of motivation.

interaction, stimulation, elocution, and feedback. Table 4.2 summarizes these findings.

The left-hand column lists various teaching behaviors and examples of specific questionnaire items. The right-hand column presents a value for each behavior, obtained by correlating the class-average ratings of the behavior with end-of-term class-average achievement results. Thus, a correlation of +.55 for instructor organization indicates that being well organized and planning class activities in detail are likely to contribute to higher student achievement. The +.35 correlation for instructor elocution suggests that speaking clearly and varying one's speech also may contribute to better achievement, but the relation is not as strong as for instructor organization. Based on this information, instructor organization and instructor elocution would both be considered integral to effective college teaching, but organization would be judged as more important.

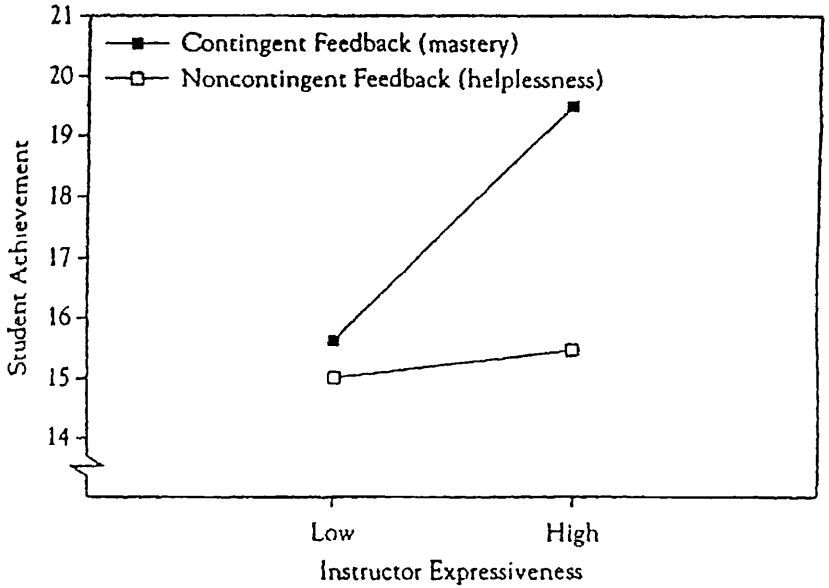
Effective Teaching and Those Who Need It Most

Common sense suggests that one sure way to assist students academically is to teach better, a solution especially pertinent to failing students. As expected, findings confirm that mastery students who receive expressive instruction perform better than those who have an unexpressive instructor (see Figure 4.2). Helpless students, on the other hand, perform poorly regardless of the quality of instruction. More importantly, even when they experience optimal learning conditions, such as expressive instruction, their motivation and achievement remain paradoxically lowered. As Perry and Penner (1990) claim, "students who are most in need of effective teaching are least likely to gain from it" (p. 262).

Theoretically, one would expect that effective instruction should overcome the debilitating motivational deficits experienced by helpless students. In practice, however, a different pattern emerges. First, college students who lack control over their aca-

Figure 4.2. The Teaching–Perceived-Control Interaction.

A perceived control by instruction interaction in which helplessness (noncontingent feedback) students are unable to benefit from effective (high expressive) teaching.



Notes: Mastery may result from contingent feedback, internal locus of control, Type A behavior, and so forth.

Helplessness may result from noncontingent feedback, external locus of control, and so forth

effective instruction because of their belief patterns (for instance, external locus). Second, students who have a sense of mastery can be disadvantaged motivationally when they face an unexpressive instructor. However, it is the helpless students who suffer more, since they do not have the internal qualities to succeed; nor do they benefit from optimal learning conditions.

In sum, empirical results support the motivational effects of perceived control, expressive instruction, and their interaction. As such, student dispositions and instructional quality are not as useful on their own as they are together in explaining student motivation.

Responding to Differences in Student Motivation

As previously noted, one of the most challenging tasks facing faculty is the effectiveness of their teaching practices when major motivation differences exist among students. From our research, we know that otherwise-effective teaching behaviors may be of little value to students lacking control over their academic performance—those most in need of optimal learning conditions. How faculty respond to this paradox is critical. An obvious solution is to eliminate the motivation deficits in helpless students by increasing their perceived control over academic performance. Once eliminated, the deficits can no longer impede otherwise-effective teaching behaviors. This solution presumes that remedial interventions are available to restore perceived control and that, once restored, it will enable these students to derive as much benefit from effective teaching as do mastery students. The next section presents two specific alternatives for enhancing perceived control in students, based on the research literature.

Enhancing Motivation Through Perceived Control

The two techniques described here were selected because they share a common quality: their potential to enhance perceived control in students, to move them from the helpless to the mastery end of the continuum.

The first technique, known as *attributional retraining*, is a remedial intervention derived from attribution theory (Weiner, 1986). It aims to change students' maladaptive thoughts about their successes and failures, thereby elevating their perceived control.

The second technique involves a systematic analysis of common teaching practices in terms of their impact on students' perceived control. Whenever perceived control is jeopardized, changes should be considered expressly to restore control.

Attributional Retraining. Faculty frequently observe that test results affect students differently. Poor performance can demotivate some, energize others, or create hostility in still others. Success seems to have equally variable consequences. As noted previously, students' explanations of their successes and failures can enhance or diminish their perceived control over their academic tasks, leading to corresponding increases or decreases in motivation and performance. Many faculty find themselves trying to assist students who appear destined for self-defeat.

For these professors, attribution theory provides an opportunity to intercede with their students using attributional retraining (Försterling, 1985; Weiner, 1986). The procedure is a highly structured, remedial intervention designed to change faulty thought patterns. Its goal is to alter undesirable attributions of success and failure to ones having positive academic outcomes. Attributing success to luck or attributing failure to lack of ability can have dire consequences for motivation and achievement striving. In each case, attribution creates the impression that achieving the goal is beyond the student's control.

These maladaptive attributions, however, can be changed to desirable ones. A "luck" attribution is replaced with a "high ability" one, "lack of ability" with a "poor strategy" attribution, and desired motivational change results (see Table 4.3). Under normal circumstances, attributional retraining is provided by trained therapists during several therapy sessions. The therapist communicates the desired attributions, while the client is engaged in structured cognitive exercises. Through repeated exchanges and analysis, the client eventually incorporates the desired attributions.

Similar dynamics occur between faculty and students, as students attempt to make sense of their academic performance. During and after class, faculty often hear students claim: "I don't have the smarts to do well," "I was lucky this time," or "This course is too difficult." Hearing these maladaptive attributions, the instructor is

Table 4.3. Interventions: Attributional Retraining.

Achievement Results	*Student Explanation*	*Perceived Control*	*Motivation and Achievement-striving*
Success	luck*	Helplessness	lack of approach toward achievement tasks
Failure	lack of ability	Helplessness	lack of persistence, avoidance of achievement tasks
		Desirable	
Success	high ability	Mastery	approach toward achievement task
Failure	lack of effort	Mastery	persistence, approach toward achievement tasks

Source: Cognitive restructuring of undesirable success-and-failure attributions to desirable ones. Taken from Försterling (1985).

*Note: There is a distinction between "It was luck" versus "I am a lucky person."

ideally situated to engage in some rudimentary attributional retraining. The instructor can encourage the student to think differently about the test or course by suggesting a more desirable attribution: "If you didn't have the smarts, you wouldn't be here"; "Forget luck; what about your effort?" or "Difficult courses get easier with enough effort." These informal, often spontaneous exchanges provide the opportunity for the instructor to apply some basic elements of attributional retraining.

Obviously, these brief encounters cannot duplicate the structure and precision of formal attributional-retraining sessions. For an analysis of the many critical differences between formal training sessions and the brief exchanges that occur in the college classroom, see Perry and others (1993). In judging the utility of formal training, however, consider the impact of desirable attributions in contrast to comments faculty can and do sometimes make: "Only

those who have the 'right stuff' will pass this course"; "The next exam will separate the wheat from the chaff"; "You'll be lucky to get through this course." The impact of such attributional statements on student motivation and self-worth can be devastating.

Likewise, the ethical implications of these admonitions require careful scrutiny. In some instances, they are seemingly well intended though misdirected (to motivate students by challenging them); in others they are inspired by more sinister motives of power or dominance. However, assiduous application of attributional retraining offers the potential to make a difference: for helpless students by increasing their motivation, and for faculty by reducing the motivational complexity of their classrooms.

Analysis of Teaching Practices. It is no surprise to faculty that their teaching practices do not have equally positive, universal effects on all students. It is disquieting, however, when they have serious negative effects, even opposite to those desired. In fact, some teaching practices intended to motivate students actually curtail their achievement striving, as we have seen with some attributional statements made by instructors. Accordingly, teaching practices require careful scrutiny to determine their impact on students' perceived control and subsequent motivation.

An analysis of teaching practices begins by identifying those considered most instrumental to one's model of effective instruction. Specific practices are usually associated with different aspects of a course, involving organization, content, assessment, feedback, and so on. Assessment, for example, generally includes several practices such as pop quizzes, scheduled tests, and homework assignments. Each practice should be examined in terms of its intended objectives and whether they have been achieved. The pop quiz is a teaching practice that will serve to illustrate this point. As Table 4.4 shows, a pop quiz may be intended to motivate students, to focus student attention, to accentuate the importance of the course, or to accustom the student to unexpected demands. Although all

Table 4.4. Teaching Practices Assumed to Influence Student Academic Development: Pop Quiz.

Intended Objectives	*Perceived Control Consequences*	*Resolutions*
• to motivate student through anticipation or anxiety • to focus student's attention on course • to emphasize importance of keeping up in course • to accustom student to unexpected academic demands and challenges	*Positive* • anticipation and excitement about meeting challenge • increased commitment excelling in course *Negative* • uncertainty and loss of control • anxiety, threat, and foreboding directed towards course and professor • problems with assignments and attending classes, perceived control	• determine degree of positive versus negative developments • if largely *positive* then continue. for small minority who have problems, approach directly • if largely *negative* then modify by a) aborting, or b) approaching class directly • if b), then discuss objectives (column 2) • if b), provide interventions for enhancing

positive, these objectives may not all be realized, as suggested in column two of the table. Negative consequences are also possible in the form of uncertainty and loss of control, negative emotions, and course attrition.

Column two of the table indicates that if the consequences are positive, practice should be continued. Negative consequences signal the need to abort the practice or, if continued, to compensate with other practices, such as attributional retraining, as described previously. Such an analysis of teaching practices provides a better fit between intended objectives (column one) and consequences (column two) through specific modifications (column three). The end result is an increased sense of control for more students, leading to a better motivation profile of the entire class.

A Role for Faculty Developers and Administrators

In the previous section, we have described some teaching techniques designed to enhance students' perceived control. Of course, effective use of such methods requires a solid grounding in the notions of perceived control, helplessness, and mastery, and their effects on student motivation and learning. Faculty developers can play an important role in conveying this information to faculty, the goal being to equip them with specific techniques designed to remediate helplessness and optimize mastery orientation in students.

For administrators, an understanding of the teaching-motivation connection can provide the impetus for developing effective instructional policies. Policies designed to improve the quality of teaching would adjust working conditions so that faculty are able to place greater emphasis on the benefits of perceived control for student motivation. Administrators need to support training opportunities for faculty. The potential consequences of such policies include better faculty morale, but perhaps more importantly, enhanced student motivation and learning.

References

Abramson, L. Y., Seligman, M., & Teasdale, J. (1978). Learned helplessness in humans: Critique and reformulation. *Journal of Abnormal Psychology, 87*, 49–74.

Ames, C. (1984). Achievement attributions and self-instructions under competitive and individualistic goal structures. *Journal of Educational Psychology, 76*, 478–487.

Ames, C., & Archer, J. (1988). Achievement goals in the classroom: Students' learning strategies and motivation processes. *Journal of Educational Psychology, 80*, 260–267.

Aspinwall, L. G., & Taylor, S. E. (1992). Modelling cognitive adaptation: A longitudinal investigation of the impact of individual differences and