

Three prescriptions offered by theories of motivation—reshape students' overall achievement orientation, create an expectation for success, and increase the specificity and value of academic outcomes—offer practical suggestions for enhancing learning.

Practical Proposals for Motivating Students

Donelson R. Forsyth, James H. McMillan

Motivation is an irrelevancy to some college educators. Laborers may need to be properly motivated by their supervisors, football players may require pumping up before the big game, and listless high school students may need to be seduced into the excitement of learning—but college students? Aren't they supposed to be self-motivated?

Certainly some students come to the classroom ready to expend considerable time and effort in their quest to learn the course material and achieve personal goals of success. Yet, for many students, the motivational pump is unprimed. Students' degree programs often require certain courses, so students may not be interested in the material, since they did not choose the course themselves, or perhaps they consider its content irrelevant to their personal goals. The course may be so challenging or so easy that discouragement or disillusionment may set in. Students also have jobs and other life pursuits to contend with, and these extracurricular activities may be far more exciting or involving than the act of learning.

Given that self-motivated learners exist only rarely in the college classroom, what can teachers do to increase their students' motivation to learn? This chapter, by building on the theoretical analyses presented in the previous chapter, focuses on needs, expectations, and goals. We first consider how one particularly important need—achievement orientation— influences motivation, by examining ways of restructuring this orientation if it is not conducive to learning. Next, because even the most motivated students will not strive to achieve when they are certain that failure is inevitable, we examine ways to create the expectation of success. Last, we turn to ways to increase the value of academic outcomes, by helping stu-

dents develop personal goals and identify the means of achieving these goals. Throughout, our focus is on methods that classroom instructors can use to modify these three determinants of motivation.

Need to Achieve

As noted in the preceding chapter, theorists have conceptualized learners' need to achieve in a variety of ways. To some, the key difference between high and low achievers is self-esteem: low achievers lack self-confidence and consider themselves failures (Purkey, 1970). Others, by contrast, emphasize individual variations in locus of control (Rotter, 1966), self-efficacy (Bandura, 1977), need for achievement (McClelland, 1985), competence motivation (White, 1959), self-control (Carver and Scheier, 1981), personal causation (deCharms, 1976, 1987), and intrinsic motivation (Deci and Ryan, 1985). These variations, however, need not be considered unalterable. Whereas early personality theorists felt that achievement orientation was a stable trait that remained constant across situations and was not easily altered, an interactional view assumes that one's general need to achieve interacts with features of the setting, to determine overall achievement motivation. A student who is unmotivated in one situation may become the epitome of the hard-striving, goal-oriented student in another. The key is to take care in structuring the classroom situation, so that motivation is gained rather than lost.

Capitalize on Intrinsic Motivation. The desire to learn—to discover, to comprehend, to synthesize, to develop—is an intrinsic part of human nature, and this intrinsic motivation to learn should be exploited. Although educators too frequently assume that students are reluctant learners, in many cases they become reluctant only after their initial intrinsic motivation is wiped away by hours of uninspired lectures in which instructors convey their own contempt for the subject matter. Instructors should do all they can to capitalize on intrinsic motivation, by taking certain simple steps (Ames, 1987; Brophy, 1987; Condry, 1987; Deci and Ryan, 1985; Lepper, 1983).

Introduce the course and each topic in an interesting, informative, and challenging way. You should not just review the syllabus during the first session or concentrate on how grades will be determined. Instead, you should highlight the stimulating intellectual tasks to be accomplished, pique students' curiosity, challenge traditional views, and hint at inconsistencies to be resolved.

Present material at a challenging level that communicates respect for your students and their abilities. Monitor the pace at which you present ideas, so that you maintain a balance between a slow pace that leads to boredom and a too-fast pace that leads to confusion.

Use varied and creative styles of teaching to avoid monotony and keep

students' interest high. You should be unpredictable but not capricious. Introduce odd but provocative ideas, take the role of devil's advocate, and let students participate in the classroom process.

Focus on higher-order learning outcomes, such as application, analysis, synthesis, and evaluation, rather than on such lower-order outcomes as knowledge and comprehension. Make certain that evaluations favor students who achieve higher-order educational outcomes.

Model enthusiasm for the course content and for learning itself. Students assume that the instructor who habitually arrives late for class, seems preoccupied, reads directly from notes or from the book, and speaks in a monotone is bored with the class.

Give responsibility for learning back to the students. Allow them to design and select their learning experiences, topics, and methods of evaluation. Promote feelings of autonomy and personal involvement.

Avoid Extrinsic Motivators. Intrinsic motivation contrasts sharply with extrinsic motivation. Students, when intrinsically motivated, "experience interest and enjoyment, they feel competent and self-determining, they perceive the locus of causality for their behavior to be internal, and in some instances they experience flow" (Deci and Ryan, 1985, p. 34). When extrinsically motivated, by contrast, students are working for impersonal, external reasons. External motivators have a long history and possibly a permanent place in the classroom, but their negative impact on learning should be minimized, whenever possible, by basic precautions.

Use tests and other forms of evaluation to give students information about their accomplishments, but not to exert control or deny students' autonomy. Grades are the basic currency of the college classroom—the reward promised to students for good performance and the punishment threatened for failure. Instructors who stress tests, evaluations, and grades over all else, however, produce students who are striving to earn a particular grade rather than to learn the course material.

Exercise care when describing the need for grades, since even subtle nuances can influence motivation. Evaluations described as feedback to see how well students are doing have a less negative impact than evaluations designed to test whether they are performing as well as they should (Ryan, Mims, and Koestner, 1983). Similarly, students who are told that a grade of A means they are doing well in a subject perform better than students who are told that the A is a reward for working hard or for learning the material (Miller, Brickman, and Bolen, 1975).

Use the weakest extrinsic motivators possible. If you must use controlling methods—deadlines, pop quizzes, extra readings for poor performance, surveillance, penalties for nonattendance—then make certain that they are minimally sufficient to achieve compliance (Condry, 1987).

Minimize competition among students. Although introducing competition among students is a popular way to prompt them to expend greater effort,

competition has many drawbacks. Competition focuses students' attention on winning, to the extent that they eventually conclude that "learning something new" is not nearly as important as "performing better than others" (Ames, 1987, p. 134). Failure in a competitive setting also undermines self-esteem and prompts students to blame their failures on lack of ability, rather than on lack of effort. Ames (1987), after thoroughly reviewing the literature, recommends excising all forms of competition from the college classroom by using criterion-based grading schemes (rather than norm-referenced schemes), by not posting grades and not grading on a curve, and by stressing the cooperative nature of learning.

Create a Mastery Orientation. Some of the most useful research into achievement motivation has been conducted by Dweck and her colleagues (Dweck, 1975; Dweck and Elliot, 1983; Dweck and Leggett, 1988). In her early research, Dweck found that students who think that their outcomes are within their control—mastery-oriented students—respond much differently from those who are helpless (Dweck and Licht, 1980; Dweck and Reppucci, 1973). After a failure, among mastery-oriented students, "effort is escalated, concentration is intensified, persistence is increased, strategy use becomes more sophisticated, and performance is enhanced"; by contrast, when helpless students fail, "efforts are curtailed, strategies deteriorate, and performance is often severely disrupted" (Dweck and Licht, 1980, p. 197). In one demonstration of these differences, Deiner and Dweck (1978) asked students who were failing on a cognitive task to "think out loud" about what they were doing. They discovered that 52 percent of the helpless questioned their ability, while none of the mastery-oriented students mentioned ability.

These findings suggest that instructors must remain sensitive to students' cognitive reactions to evaluations and test feedback. If students who do poorly in class conclude that there is nothing they personally can do to change their outcomes, then their failure may undermine their motivation and their satisfaction with themselves and academic work. If, however, the teacher encourages students to associate failure with factors that can be controlled, then the debilitating consequences of failure may be avoided. In addition, by emphasizing the importance of internal factors as causal agents after success, teachers may further ensure continued success. There are various methods for achieving this mastery orientation.

Encourage feelings of controllability in the classroom. Noel, Forsyth, and Kelley (1987) found that students who perform poorly often react very negatively and seek to blame their outcomes on lack of ability or on factors beyond their control: a poor teacher, a cold, a noisy roommate, and the like. Noel and his colleagues sought to undo these attributions by exposing some students to information that suggested that grades in college are caused by internal, controllable factors. The group was told, for example, that successful students generally believe they cause their own grades and

have control over their performance. As predicted, on subsequent tests and on final examinations, these students earned higher grades than did control students who received no training.

Emphasize the extent to which grades and performance fluctuate over time. Wilson and Linville (1982, 1985), in studies of college students, succeeded in convincing first-year students that their grades were caused by unstable rather than stable factors. By comparison with "untreated" students, the students who were told that, on the average, college students do improve their grades during their educational careers were less likely to drop out at the end of the second year, and they achieved greater increases in their grade point averages.

Identify ways for students to increase their control over their outcomes. Do not just tell students they have control; give them control over their studying, the course material, and the way it is taught. For example, you can hold workshops on study skills, time management, and effective reading; provide students with important and useful resources, such as supplementary readings, an outline of your notes, and question-and-answer sessions; and allow students to take a role in designing evaluation procedures. If students realize that they can take behavioral steps to improve their performance, their sense of autonomy and control in the classroom should prosper.

Expectations for Success

In a tradition extending back to Tolman (1955), virtually all theories of human motivation argue that individuals intuitively calculate the probability that they will succeed in a particular situation. Although these calculations initially reflect generalized expectancies based on past performances, these generalized expectations are translated into more specific expectancies as the individual gains more and more information in the particular setting. Given that even students who are high in achievement orientation may not strive for success in classes where they expect to fail, teachers should maximize positive expectations, avoid fear of failure, and help shape their students' attributions about the causes of future performances.

Maximize Optimism Regarding Outcomes. The power of positive expectations is startling. As Rosenthal and Jacobson (1968) illustrate in their study of teachers' self-fulfilling prophecies, teachers who expect a student to succeed act in ways that make the student's success more likely. Moreover, students who develop positive expectations about their performance, by comparison with students who have bleaker expectations, work harder on class assignments, take a more active role in their learning by asking questions, learn more material, and come to think of themselves as high achievers (Harris and Rosenthal, 1985; Rosenthal, 1973). Merely expecting success in no way ensures success, but a positive expectation

about performance is a crucial link in the motivation-achievement chain. This link can be made stronger if instructors take the following steps.

Develop positive expectations about students' chances of success. Rosenthal's (1973) work suggests that even instructors who try to keep their expectations private communicate these expectations to their students through subtle forms of behavior. Because negative expectations can become self-fulfilling prophecies, instructors should expect the most from their classes in general, and from specific individual students within the class. High expectations are communicated as instructors learn students' names and call on them by name, ask difficult, challenging questions, allow a long time for students to respond, provide helpful cues and prompts, and give warm, positive, non-verbal messages (Good and Brophy, 1986).

Avoid norm-referenced grading systems. When instructors grade on a curve, they ensure that some students in the class will earn failing grades. This grading scheme reinforces negative expectations, promotes competition among students, and limits the number of students who receive positive reinforcement.

Monitor the level of difficulty of tests and assignments. Evidence indicates that the perceived difficulty of the task is one of the primary determinants of subjective probability of success (Heckhausen, Schmalt, and Schneider, 1985). Students' expectations for success erode rapidly when instructors repeatedly give tests that are very difficult.

Provide students with encouraging information about future outcomes. Rather than tell students that most students fail a course at least once or that it will be the hardest course they will take in college, tell students how many people passed the course the last time you taught it or how many people improved their performance over time.

Minimize Fear of Failure. McClelland (1985) maintains that for some people, in some situations, the desire for success is replaced by the fear of failure. Individuals who fear failure tend to express negative attitudes toward achievement. They fail to set performance goals, they experience polarized emotional reactions when they succeed or fail, and they avoid evaluations if possible. As a result, they tend to become enmeshed in a negative cycle of low motivation that only serves to guarantee poor performance. This negative cycle can be short-circuited, however.

Limit the scope of the tasks attempted. Give many tests, rather than a few major tests, and provide opportunities to redress poor performance with good performance. Students should realize that a single poor performance will not do irreversible damage to their course grades.

Monitor the difficulty of the goals and tasks that students choose for themselves. Evidence indicates that individuals who are high in fear of failure tend to select tasks that are either so easy that they feel no pride in their accomplishments or so difficult that they are bound to fail (Heckhausen, Schmalt, and Schneider, 1985). Students should be counseled to select mod-

erately difficult goals that they can reasonably expect to achieve. Moreover, if they fail to establish suitable goals, you can help them identify the paths that they can take to achieve such goals. When you include help sessions, study sheets, review sessions, and workshops on study skills in your teaching, students are more likely to feel that even moderately difficult goals can be achieved.

Minimize competition and social comparison in the classroom. In competitive settings, students often take steps to minimize their embarrassment over a failure, including deliberately refusing to study, cutting classes, or expressing derisive attitudes about the class content. These self-protective mechanisms, however, interfere substantially with performance and opportunities for success.

Actively attack negative expectations based on cultural stereotypes. Instructors must be particularly sensitive to the motivational needs of minorities and women. Instructors in college courses in areas that are traditionally viewed as male- or Anglo-dominated must undo these negative stereotypes; otherwise, students may not feel that they have the ability to meet course requirements (Bartz, 1984; Farmer, 1987; Maruyama, 1984).

Encourage Attributions to Controllable Causes. Motivation prospers when students feel that their outcomes are under their personal control. Feelings of control do not just increase general feelings of personal ability; they also increase students' expectations concerning success. When success is produced by factors that students think they can control—effort, motivation, diligence—they can assume that good scores will occur again. If, however, good grades are attributed to uncontrollable, external factors—such as an easy test, an excellent teacher, or the simplicity of the topic—then successful students must wonder whether they can maintain their high level of achievement. Conversely, failing students who believe that they can control the cause of their poor performance can reasonably hope to improve on future tasks. If, however, they believe that their grades result from uncontrollable factors, such as low ability or a poor teacher, their expectations concerning future outcomes will remain negative (Forsyth and McMillan, 1981). These attributional processes can be made to work in the service of motivation, however.

Minimize references to the causal importance of uncontrollable factors, such as mood, inspired guessing, time of year, luck, the ease or difficulty of the particular unit, the presence of poor items on the test, and so on. Instead, emphasize the causal impact on performance of effort, note-taking skill, diligence, preparation, and other factors. Irrespective of performance, students who think they control the causes of their outcomes experience more positive emotions than students who think their performance is caused by uncontrollable factors (Forsyth, 1986).

Provide differentiated feedback, rather than global feedback. Even when a student tests poorly, some questions that he or she answered correctly

can be found. The student's ability to answer these items should be highlighted and explained by his or her superior learning of the material tested, rather than by the ease of the items.

Minimize the emotional repercussions of failure. Attributional reactions following failure are closely linked to emotional reactions (Weiner, 1985). Even when steps are taken to make certain that failure does not threaten self-esteem, students who perform poorly react very emotionally to their outcomes. The negative impacts of these emotional processes on motivation and on the quality of the classroom setting can be limited by discussing them in advance, avoiding confrontation in the classroom setting, and letting the feelings abate gradually over time.

Identifying Valuable Goals

Researchers exploring productivity in industrial settings discovered long ago the motivating power of goals. People working at jobs ranging from hauling logs to generating creative ideas to proofreading were found to be unproductive if their goals were vague or absent but productive if they were laboring to attain clearly established goals (Locke and Latham, 1990; Locke, Shaw, Saari, and Latham, 1981). These findings, applied to the classroom, suggest that students will perform better if they know what goals they are seeking and if those goals are personally important to them (Kleinbeck, Quast, and Schwarz, 1989).

Help Students Set Realistic Goals. Why do students take a particular class? Asking students this question can be a sobering experience for the college teacher. Such answers as "I want an A," "It meets at a good time," "It's required," "I have a friend in the class," or "I heard good things about the instructor" abound, whereas answers like "I'm seeking knowledge about this fascinating area" or "I think this material will be useful to me in my career" are relatively few.

Because goals are important sources of motivation, it may be worthwhile to spend time helping your students identify the goals they are seeking. This goal clarification can be achieved by discussing the goals of the class during the initial class session and including the goals of the class on the course syllabus. Using a brainstorming format, you can also develop a long list of goals through class discussion and then have students review the goals and suggest ways to achieve them. You can also arrange, as one of the class assignments, to have students identify their goals, or you can develop a simple goal-setting project that can be completed outside class. Whichever method you use to set goals, however, you should try to help students develop goals that are positive, behaviorally specific, realistic, and personally important (Danish, Galambos, and Laquatra, 1983).

Emphasize positive goals (things desired) rather than negative goals (things to avoid). Students should be encouraged to study more, rather than pro-

crastinate less; take clearer notes, rather than not daydream during lectures; come to class, rather than skip class.

Goals that describe a specific behavioral outcome are superior to "do your best" goals or no goals. Particularly for students who are not doing well in the class, such goals as "Take two pages of well-organized notes" and "Read five pages and make a list of the key ideas in each section" are more effective motivators than "Get an A on the next test" or "Work hard."

Goals should be ones that the student, through effort, can attain. They should be challenging but not so difficult that the student will fail. Many educators recommend a mastery approach to goal setting, whereby students begin to work toward a goal only after they have attained the previous one.

Avoid giving students goals. Instead, ask each student to identify his or her own personal goals. When students generate their own goals, their intrinsic motivation is less likely to suffer, their commitment to the goals is greater, and, in most cases, the goals themselves are viewed as much more valuable (Locke, Shaw, Saari, and Latham, 1981).

As necessary, remind students of their goals. When goals are salient, learners process information more efficiently than when goals are unspecified; "from the wealth of information available to an individual in his environment, only those aspects of the environment that serve the goal-oriented control of action are registered and processed" (Kleinbeck, Quast, and Schwarz, 1989, p. 25). The learner, awash in a sea of information, must pick and choose what to remember and what to forget.

Help students develop strategies for achieving their goals. In many cases, students will need to develop coherent plans for attaining broad, overall goals. For example, they may need to break major goals into smaller sub-goals, or they may need to identify barriers that have prevented them from succeeding in the past.

Increase the Value of Academic Goals. Simply having a goal is not sufficient to produce increases in motivation. As expectancy-value theory argues, the motivational gains generated by goals depend to a large extent on the perceived value of the goals identified. A student, after identifying a series of positive, behaviorally specific, challenging goals, may still fail to work to achieve these goals if the goals are not viewed as personally meaningful or worthwhile.

Brophy (1987), drawing on analyses of classroom motivation, offers a number of recommendations aimed at increasing the attractiveness of educational outcomes. These recommendations, some of which are incorporated into the following paragraphs, work by changing students' perceptions of the course material and providing them with overarching goals related to the class and the educational experience.

Model enthusiasm and interest in the topic and in learning. Social learning theory recommends increasing the value of educational outcomes by providing an example for students (Bandura, 1977). Instructors who are inter-

ested in the material, who display a scholarly attitude while teaching, and who seem genuinely interested in achieving understanding are more likely to produce students who also display these values.

Expect interest, not boredom. Brophy notes that students will rise to the level of their instructors' expectations. If teachers think the students will find the material boring, then students typically react with indifference and boredom. If, however, teachers treat students as "active, motivated learners who care about their learning and are trying to understand" (Brophy, 1987, p. 195), then positive motivation is much more likely (Good and Brophy, 1986).

Directly address the importance of each new topic examined. When beginning a new subject, assigning a task, or asking students to read a chapter, highlight the value of the learning activity with a short overview. For example, explain the scholar's excitement over the particular topic ("When Darwin published *The Origin of Species*, the scientific community reeled"), your own interest in the material and how it relates to some personal incident in your life ("I first read *The Old Man and the Sea* when my family was vacationing at the shore"), the practical utility of the information about to be presented ("The principle of supply and demand explains why all the things you buy each day—from a cola to a fast-food burger—cost what they do"), or the long-term usefulness of a working knowledge of the topic ("Many of the ideas we have discussed so far will be of use to you in your career, but the principles of forecasting are perhaps the most essential"). Be careful, however, in phrasing your message (Brophy and Kher, 1986). Brophy found that even when teachers take the time to tell students that the upcoming material is stimulating and personally useful in the long run, they accidentally include threatening information as well. The teacher who says, "Once we finish this section, we will understand some of the puzzles that challenged even Plato and Socrates" is also likely to say, "It is so important that we will have a quiz next session to test your comprehension."

Make the material personally relevant to students. Novel, challenging, or unfamiliar ideas are more interesting to learners when they are tied to more familiar, personally relevant ideas. According to Brophy (1987, p. 197), "Teachers can promote personal identification with the content by relating experiences or telling anecdotes illustrating how the content applies to the lives of particular individuals."

Select topics and tasks that interest students. If you have the choice to teach one of two equally worthwhile topics, select the topic that students will find more enjoyable and exciting. When a number of methods can be used to accomplish a particular learning outcome, show a preference for methods that match students' existing interests. Allow students to choose among various options. Use novel introductions and activities that diverge from your usual method of teaching, and allow students to learn actively

rather than passively. When you can, tie class activities and content to significant features of students' lives. Students' concerns about interpersonal relationships, for example, can be used to stimulate discussion about fundamental biological processes, research methods in psychology, changing views of love in art, sociological conceptions of the basis of political structures, and so on.

Take time to understand what students perceive as important and interesting. All too often, professors assume that they know what will be challenging or stimulating. Stress the importance of students' involvement in meaningful learning, and ask them to evaluate activities and content on this basis. If students do not agree with you, ask them to generate further options.

Summary

Motivation is, to a large extent, a basic dispositional quality of each learner, but savvy instructors can do much to raise motivation by structuring their classrooms carefully. The practical suggestions we have presented are based on theory, research, and our experiences as teachers. If we can keep students intrinsically motivated, provide meaningful feedback, and encourage the development of realistic, valuable, and achievable goals that students expect to achieve, their engagement in learning should be enhanced.

References

- Ames, C. "The Enhancement of Student Motivation." In M. L. Maehr and D. A. Kleiber (eds.), *Advances in Motivation and Achievement*. Vol. 5. *Enhancing Motivation*. Greenwich, Conn.: JAI Press, 1987.
- Bandura, A. *Social Learning Theory*. Englewood Cliffs, N.J.: Prentice-Hall, 1977.
- Bartz, D. E. "Remediating Social and Psychological Harm Resulting from Segregative Acts." In D. E. Bartz and M. L. Maehr (eds.), *Advances in Motivation and Achievement*. Vol. 1. Greenwich, Conn.: JAI Press, 1984.
- Brophy, J. "Socializing Students' Motivation to Learn." In M. L. Maehr and D. Kleiber (eds.), *Advances in Motivation and Achievement*. Vol. 5. *Enhancing Motivation*. Greenwich, Conn.: JAI Press, 1987.
- Brophy, J., and Kher, N. "Teacher Socialization as a Mechanism for Developing Student Motivation to Learn." In R. Feldman (ed.), *Social Psychology Applied to Education*. New York: Cambridge University Press, 1986.
- Carver, C. S., and Scheier, M. F. *Attention and Self-Regulation: A Control-Theory Approach to Human Behavior*. New York: Springer-Verlag, 1981.
- Condry, J. "Enhancing Motivation: A Social Developmental Perspective." In M. L. Maehr and D. A. Kleiber (eds.), *Advances in Motivation and Achievement*. Vol. 5. *Enhancing Motivation*. Greenwich, Conn.: JAI Press, 1987.
- Danish, S. J., Galambos, N. L., and Laquatra, I. "Life Development Interventions: Skill Training for Personal Competence." In R. D. Felner, L. A. Jason, J. N. Maritugu, and S. S. Farber (eds.), *Preventive Psychology: Theory, Research, and Practice*. New York: Pergamon Press, 1983.

- deCharms, R. *Enhancing Motivation*. New York: Irvington, 1976.
- deCharms, R. "The Burden of Motivation." In M. L. Maehr and D. A. Kleiber (eds.), *Advances in Motivation and Achievement*. Vol. 5. *Enhancing Motivation*. Greenwich, Conn.: JAI Press, 1987.
- Deci, E. L., and Ryan, R. M. *Intrinsic Motivation and Self-Determination in Human Behavior*. New York: Plenum, 1985.
- Diener, C. I., and Dweck, C. S. "An Analysis of Learned Helplessness: Continuous Changes in Performance, Strategy, and Achievement Cognitions Following Failure." *Journal of Personality and Social Psychology*, 1978, 36, 451-462.
- Dweck, C. S. "The Role of Expectations and Attributions in the Alleviation of Learned Helplessness." *Journal of Personality and Social Psychology*, 1975, 31, 674-685.
- Dweck, C. S., and Elliot, E. S. "Achievement Motivation." In E. M. Hetherington (ed.), *Handbook of Child Psychology*. Vol. 4. *Social and Personality Development*. (4th ed.) New York: Wiley, 1983.
- Dweck, C., and Leggett, E. L. "A Social-Cognitive Approach to Motivation and Personality." *Psychological Bulletin*, 1988, 95, 256-273.
- Dweck, C. S., and Licht, B. G. "Learned Helplessness and Intellectual Achievement." In M.E.P. Seligman and J. Garber (eds.), *Human Helplessness: Theory and Application*. Orlando, Fla.: Academic Press, 1980.
- Dweck, C. S., and Reppucci, N. D. "Learned Helplessness and Reinforcement of Responsibility in Children." *Journal of Personality and Social Psychology*, 1973, 25, 109-116.
- Farmer, H. S. "Female Motivation and Achievement: Implications for Interventions." In M. L. Maehr and D. A. Kleiber (eds.), *Advances in Motivation and Achievement*. Vol. 5. *Enhancing Motivation*. Greenwich, Conn.: JAI Press, 1987.
- Forsyth, D. R. "An Attributional Analysis of Students' Reactions to Success and Failure." In R. S. Feldman (ed.), *The Social Psychology of Education*. New York: Cambridge University Press, 1986.
- Forsyth, D. R., and McMillan, J. H. "Attributions, Affect, and Expectations: A Test of Weiner's Three-Dimensional Model." *Journal of Educational Psychology*, 1981, 73, 393-401.
- Good, T. L., and Brophy, J. E. *Educational Psychology: A Realistic Approach*. (3rd ed.) New York: Longman, 1986.
- Harris, M. J., and Rosenthal, R. "Mediation of Interpersonal Expectancy Effects." *Psychological Bulletin*, 1985, 97, 363-386.
- Heckhausen, H., Schmalt, H.-D., and Schneider, K. *Achievement Motivation in Perspective*. Orlando, Fla.: Academic Press, 1985.
- Kleinbeck, U., Quast, H., and Schwarz, R. "Volitional Effects on Performance: Conceptual Considerations and Results from Dual-Task Studies." In R. Kanfer, P. L. Ackerman, and R. Cudeck (eds.), *Abilities, Motivation, and Methodology: The Minnesota Symposium on Learning and Individual Differences*. Hillsdale, N.J.: Erlbaum, 1989.
- Lepper, M. "Extrinsic Reward and Intrinsic Motivation: Implications for the Classroom." In J. Levine and M. Wang (eds.), *Teacher and Student Perspectives: Implications for Learning*. Hillsdale, N.J.: Erlbaum, 1983.
- Locke, E. A., and Latham, G. P. "Work Motivation and Satisfaction: Light at the End of the Tunnel." *Psychological Science*, 1990, 1, 240-246.
- Locke, E. A., Shaw, K. N., Saari, L. M., and Latham, G. P. "Goal Setting and Task Performance: 1969-1980." *Psychological Bulletin*, 1981, 90, 125-152.
- McClelland, D. C. *Human Motivation*. Glenview, Ill.: Scott, Foresman, 1985.
- Mariyama, G. "What Causes Achievement? An Examination of Antecedents in Segregated and Desegregated Classrooms." In D. E. Bartz and M. L. Maehr (eds.), *Advances in Motivation and Achievement*. Vol. 1. Greenwich, Conn.: JAI Press, 1984.

- Miller, R. L., Brickman, P., and Bolen, D. "Attribution Versus Persuasion as a Means for Modifying Behavior." *Journal of Personality and Social Psychology*, 1975, 31, 430-441.
- Noel, J., Forsyth, D. R., and Kelley, K. N. "Improving the Performance of Failing Students by Overcoming Their Self-Serving Attributional Biases." *Basic and Applied Social Psychology*, 1987, 8, 151-162.
- Purkey, W. W. *Self-Concept and School Achievement*. Englewood Cliffs, N.J.: Prentice-Hall, 1970.
- Rosenthal, R. "The Mediation of Pygmalion Effects: A Four-Factor 'Theory.'" *Papua New Guinea Journal of Education*, 1973, 9, 1-12.
- Rosenthal, R., and Jacobson, L. *Pygmalion in the Classroom: Teacher Expectation and Pupils' Intellectual Development*. New York: Holt, Rinehart & Winston, 1968.
- Rotter, J. B. "Generalized Expectancies for Internal Versus External Control of Reinforcement." *Psychological Monographs*, 1966, 80 (entire issue 1).
- Ryan, R. M., Mims, V., and Koestner, R. "Relation of Reward Contingency and Interpersonal Context to Intrinsic Motivation: A Review and Test Using Cognitive Evaluation Theory." *Journal of Personality and Social Psychology*, 1983, 45, 736-750.
- Tolman, E. C. "Principles of Performance." *Psychological Review*, 1955, 62, 315-326.
- Weiner, B. "An Attributional Theory of Achievement Motivation and Emotion." *Psychological Review*, 1985, 92, 548-573.
- White, R. M. "Motivation Reconsidered: The Concept of Competence." *Psychological Review*, 1959, 66, 297-333.
- Wilson, T. D., and Linville, P. W. "Improving the Academic Performance of College Freshmen: Attribution Therapy Revisited." *Journal of Personality and Social Psychology*, 1982, 42, 367-376.
- Wilson, T. D., and Linville, P. W. "Improving the Academic Performance of College Freshmen with Attributional Techniques." *Journal of Personality and Social Psychology*, 1985, 49, 287-293.

Donelson R. Forsyth is director of undergraduate studies and professor in the Department of Psychology, Virginia Commonwealth University. He is currently researching the attributional and emotional consequences of students' reactions to their academic successes and failures.

James H. McMillan is associate professor of educational studies at Virginia Commonwealth University. His interests include motivation and learning of college students and assessment of educational outcomes.