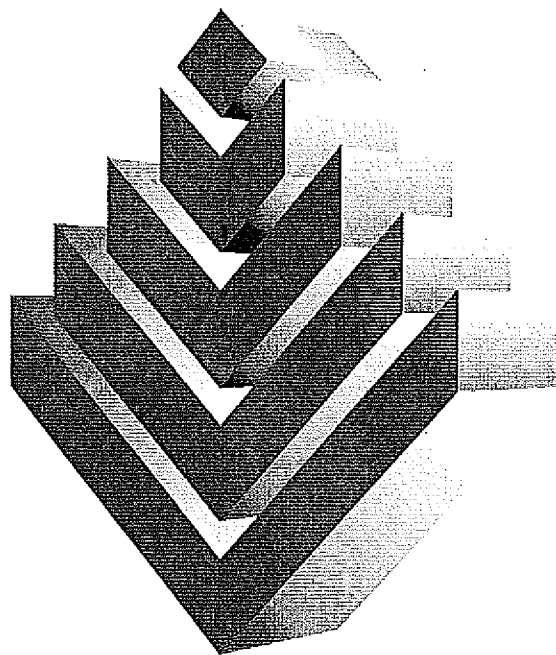


# Motivation: Er...Will That Be on the Test?

K. Patricia Cross



The Cross Papers  
Number 5

*League for Innovation in the Community College  
Educational Testing Service*

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## Foreword

In her fifth year of producing *The Cross Papers*, K. Patricia Cross has chosen to focus on student motivation. We can think of no better person for the task. Throughout her distinguished career, Pat has motivated us with the energy, enthusiasm, wisdom, and good sense she brings to conversations about teaching, learning, and the community college. As a Senior League Fellow, her *Cross Papers* series continues to motivate us to explore new ways of expanding and improving student learning. And, as a dear friend of the League, she motivates us to persist in the innovative spirit that catalyzes the community college movement.

We often talk about engaging students, but great teachers have always known that the bigger challenge is to help students engage, to help them develop the internal motivation and drive to learn and live well within and beyond our caring programs. In the pages that follow, Pat shares research and practice about what motivates students, intrinsically and extrinsically. She guides us through the various ways expectation and values influence student motivation and the drive to learn, and leaves us not only with six principles for enhancing motivation, but also with a series of teaching tips for applying those principles.

As with the other Cross Papers, you will find this monograph a useful tool for stimulating discussion, for providing orientation and training to new faculty and staff, and for designing best-practice techniques for reaching the diverse groups of students who come through our open doors every day. You may even want to share this monograph with students and have small group dialogues focusing on what they think about their motivations. However you make use of these insights, observations, and strategies, we are sure that you will enjoy once again sharing the motivational ideas of one of our favorite people in the community college movement.

Mark David Milliron, President & CEO  
Cynthia Wilson, Vice President, Publications & Research  
League for Innovation in the Community College

## MOTIVATION: ER...WILL THAT BE ON THE TEST?

*K. Patricia Cross*

One of the more annoying questions that students can ask teachers dedicated to their field of scholarly endeavor is, "Will that be on the test?" Who among us is bold enough to respond with, "No, but I think you should learn it anyway"? We know from experience that when the answer is yes, pencils come out, attention is sharpened, and students appear, momentarily at least, to be the eager learners that we dream of teaching. So pleasant is this state of classroom euphoria that we are sometimes tempted to induce such motivational nirvana ourselves by the attention-grabbing statement "Listen up. This *will* be on the test." Yet many teachers regard such motivators as desperation measures. To be motivated solely by the grade is bad enough, but more troubling questions about student motivation also arise. Why do some students bother to enroll if they don't intend to study? Why do they do things that appear to be deliberately self-defeating in their efforts to learn? Why at times do they seem not to care? What do we know about motivating students to study and to learn?

In past Cross Papers, I have explored questions of *how* students learn (Cross, 1998, 1999). This paper is concerned with *why* students learn or fail to learn. More specifically, why do some students come to class as active, involved, and conscientious learners while others prove indifferent or even resistant to learning? Why are students motivated to learn in one class but not in another, or for one class project but not another?

Educators have made enormous progress in recent years in understanding the workings of the *brain* in learning, but the role of the *heart* in learning—the desire or motivation to learn—is curiously lacking in our conversations about improving learning. Almost every faculty workshop on teaching and learning today presents some information about the necessity for students to *actively engage* their brains in learning. But how do we help students become actively engaged? Or, from the students' perspective, how

do they motivate themselves to learn? These questions are of as much interest to students as they are to their teachers.

Motivation, as it applies to learning in college courses, has been defined as "purposeful engagement in classroom tasks and study to master concepts or skills." (McMillan & Forsyth, 1991, p. 39). The critically important concept in that definition is *purposeful engagement*. We are now familiar with the concept of *active learning*; we know that the brain has to be active in making the internal connections that constitute learning (Cross, 1999). But purposeful engagement suggests something more. It includes the *motivational* component of learning.

Purposeful engagement implies an internal state, a concept that differs considerably from the external manipulation of rewards and punishment that was emphasized in the study of motivation a relatively short time ago. When I was in graduate school, we studied motivation as a response to incentives and rewards, factors that are largely dictated from sources external to the learner. Ironically, in the heyday of behavioral psychology, what went on in the mind of the individual was a black box—unknown and unstudied because it was considered unscientific to study what could not be scientifically observed. Thus, we ended up with the finding that if a hungry chimp is rewarded with food behind the blue door, he will learn to push the lever that opens the blue door. The need that provides the incentive for learning is hunger. An overly simple interpretation of this finding suggests that if a student needs to learn something and if a reward is forthcoming in the form of an "A" in the course, a better job, or the satisfaction of a college degree, he or she will be motivated to learn. Well, as we all know, human motivations are more complex.

Today's theories about motivation emphasize the importance of factors *within* the individual, particularly the variables of expectancy and value. Students' motivations are strongly influenced by what they think is important (value) and what they believe they can accomplish (expectancy). If, for example, a student believes expressing herself well in writing is important

(value) but thinks she does not have the ability to do so (expectancy), then she has little motivation to apply herself to a task she thinks is doomed to failure. Similarly, if a student thinks writing skills are not important in the future he perceives for himself, then he has little motivation to learn. Although both value and expectancy are important, expectancy is the construct that has received the most attention in recent years. Perhaps this is in part because the concept of value seems obvious—people will not devote effort to something they perceive as worthless—and in part because once a choice has been made (enrollment in a course, for example), expectancy determines the motivation to work hard to make the choice productive. Expectancy is the new wrinkle in motivation theory.

## EXPECTANCY

Expectations are bound up in self-perceptions. From the simplest self-promise to the most complex behaviors, people must believe that, with appropriate effort, they can succeed. If there is no hope, there is no motivation. Unfortunately, some community college students have serious doubts about their ability to succeed in college. Indeed, the fear of failure is so great for some students that they develop self-defeating strategies aimed at avoiding failure rather than achieving success.

### The Threat of Failure

Early in the shift from behavioral to cognitive psychology, Atkinson and Feather (1966) distinguished between two motivations: the motivation to achieve success and the motivation to avoid failure. Achievement-oriented persons have their eye on a goal, and they expect to succeed. Failure-threatened people are not so much concerned about achieving a goal as they are about avoiding failure. One of the unintentional lessons learned by students who have performed below average all the way through elementary and high school is that failure is always reaching out to grab them.

Picture a strong swimmer and a weak swimmer thrown into downstream currents above a waterfall. The strong swimmer quickly concentrates on strong swimming strokes that will get him

to safety. The weak swimmer, in contrast, sees himself helplessly dragged into swift currents where his only concern is to avoid going over the waterfall. As he thrashes around, his efforts are ineffective, and his fear of being dragged into forces beyond his ability to control is only increased. In the language of motivation theory, the strong swimmer becomes achievement-oriented while the weak swimmer becomes fear-threatened.

Achievement-oriented students are challenged by tasks they perceive to be of intermediate difficulty, tasks in which they think their probability of success is about 50-50. They are not motivated by an overly easy task because success is assured and therefore lacks the satisfaction of accomplishment, nor do they choose a task that is too hard because in that case feelings of satisfaction are too unlikely. Teachers are heartened by achievement-oriented students who seem motivated by tasks that challenge their ability and who delight in testing themselves with new tasks.

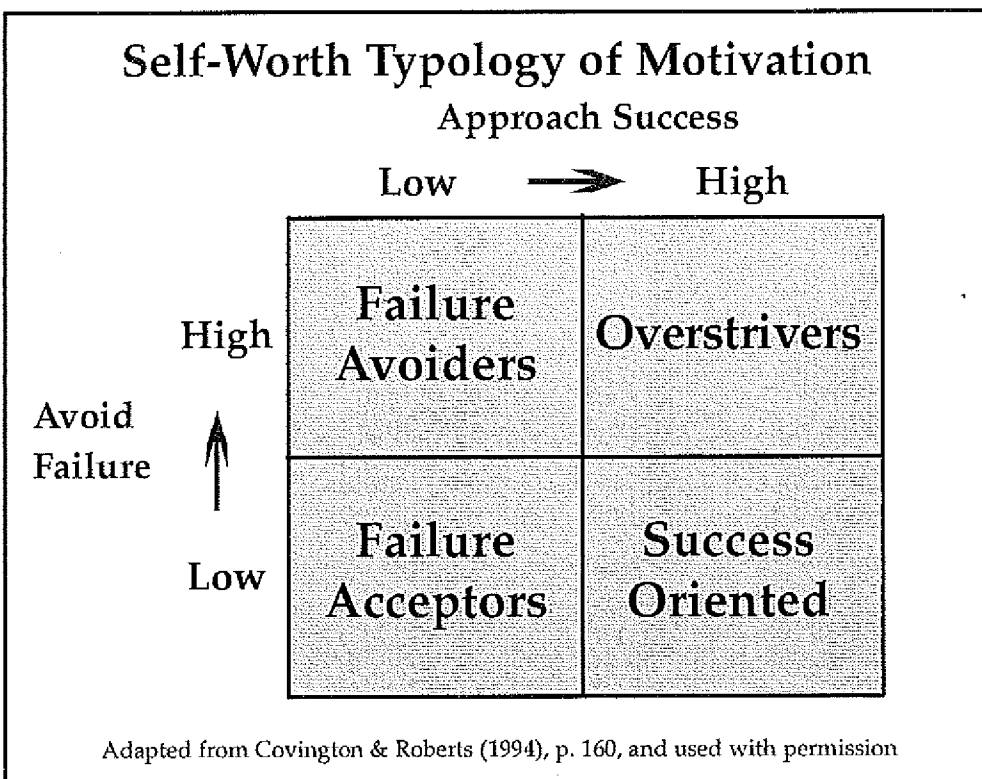
In contrast, the behavior of failure-threatened students is puzzling to teachers. These students seem reluctant to put forth the effort necessary for success; they may pretend indifference, they may choose easy learning tasks in which they are assured of success, or they may choose tasks so difficult that neither they nor others expect them to succeed. Learning tasks that involve risk are threatening to those who doubt their own abilities. Unfortunately for them, learning takes place primarily in tasks of intermediate difficulty. Learning something new inevitably presents a challenge and involves some risk. The risk is that students will prove to themselves and to others that they lack the ability to succeed.

### **The Role of Self-Worth**

Martin Covington, a professor and learning psychologist at the University of California, Berkeley, contends that one of the most basic human motivations is to protect the ego from threat. His theory of motivation, called the "self-worth" model, is of particular interest to community college teachers. It seems to explain, better than most theoretical models of motivation, the fear-of-failure behavior that is exhibited by some students who enter community college with doubts about their own ability.

Traditional schooling is seen by Covington as a competitive system with an inordinate emphasis on ability. One of the oddities of the traditional American culture, especially the youth culture, is that it is better to be thought lazy than stupid. Thus, in the competition of the classroom, students prefer to be seen by others as succeeding through ability rather than through effort. In some ways, effort is a double-edged sword (Covington & Omelich, 1979). It increases the probability of success, but it also increases doubts about ability if the effort fails. If, for example, a student works hard at an academic task (a paper, a presentation, a test) and still does poorly, the failure may be attributed to lack of ability, which is extremely damaging to feelings of self-worth. Students will devise a number of counterproductive strategies to avoid this damage. One solution for these failure-threatened students is not to try very hard. If they fail, they can then attribute the failure to lack of effort rather than lack of ability. Some students actually brag about how little they study. Moreover, there is a self-worth bonus to some strategies to avoid failure. If students do well despite putting forth little effort, then they can conclude that they must be smart since they did so well with so little effort.

Covington offers a four-way typology of motivation:



In this four-way model, success-oriented students are the ideal. High in motivation to succeed and not threatened by failure, they are serious learners who are challenged by the lesson and derive personal satisfaction from the accomplishment. Failure-avoiders, in the Covington scheme, are high in their fear of failure and low in motivation for success. They are afraid that they will prove to themselves and others that they lack the ability to succeed in college. Overstrivers are high in both fear of failure and motivation to achieve. They work hard and usually do well in class, but at considerable personal cost. They are anxious students who constantly ask about their grades and worry about their performance in class. Finally, there are failure acceptors, who accept failure and who are basically indifferent, or even antagonistic, to achievement. They may actively reject achievement values, or they may simply consider academic achievement irrelevant to their interests and unworthy of their efforts.

Although the literature often refers to failure-threatened or achievement-oriented personalities or types of people, the explanatory power of the models is stronger if we think about achievement and failure orientations to any given learning task. A person who is failure-threatened in a class in English composition may be success-oriented in basketball. Or, a person who is failure-accepting in a noncredit remedial class may be failure-threatened or overstriving in a class that is a prerequisite for transfer. But community college students who doubt their academic ability are potential dropouts. A recent case-study analysis of Latino students in higher education includes a description of such a student: "Mari felt that she was not bright or intelligent enough, that she did not belong...such students choose to fail or reject school.... As for Mari, she dropped out at the end of the semester, two years short of graduation" (Ybarra, 2000-01, p. 165). Since studies show that most dropouts occur prior to the second year of college, retention is a major concern for community colleges.

### **The Role of Attribution**

Along with issues of failure and self-worth, attribution has a role in student expectations. Attribution theorists are concerned with the

explanations or justifications that people give for success and failure, and they identify four explanations people offer for failure or success in a given task: ability, effort, task difficulty, and luck. A student may conclude that she did well on a test, for example, because she has high ability in the subject, she studied hard, she found it was an easy test, she had the good luck to study the right material the night before, or a combination of these factors. Similarly, the explanations for failure may lie in attributing the causes for poor performance to any or all of these factors. Attributions may be general or specific—she did poorly on the test because she lacked the ability or because she didn't get enough sleep the night before. Of course, these are not usually public justifications, but rather self-explanations that have a pervasive effect on self-worth.

Some of the factors people use to explain their success or failure are within their power to control; others are not. If a student attributes poor performance to lack of effort, for instance, she holds out hope that she can study harder next time and do better. If, however, she attributes her poor performance to lack of ability, then she may lose hope because she feels that there is little she can do to change her ability.

Ability is perceived by some people as unalterable, comparable to the notion of native intelligence or a fixed IQ. The idea of an all-encompassing fixed IQ was discarded long ago by those who study cognition and learning, but it is still amazingly prevalent in the general population. "I have no sense of direction, and I was never any good at reading maps" is a statement of belief that learning to find one's way is somehow innate rather than a skill acquired by those who put forth the effort. When people believe their successes and failures are attributable to factors they cannot change or control, they lose motivation to try. Years ago when I surveyed community college teachers to ask what they saw as the major obstacle to learning for low-achieving students, "Lack of effort; has quit trying" ranked first, above poor home background, poor schooling, or low intelligence (Cross, 1971).

A substantial body of research indicates that students who feel they have control over their academic performance are more

highly motivated and more likely to succeed than students who attribute their performance to external factors beyond their control. Early on, Rotter (1966) distinguished between internal and external locus of control. He showed that persons with an external locus of control believed their actions had little impact on outcomes and they could do little to control those outcomes, whereas those with an internal locus of control believed that outcomes were contingent on their actions and largely under their control. In a similar concept, de Charms (1968) distinguished between "origins," who believe that changes in their environment originate with them, and "pawns," who believe that behavior is determined by forces beyond their control. We know today that people are rarely wholly origins or pawns, but may shift their perceptions depending on the task and the context.

Unfortunately, however, a widespread tendency exists in society today to attribute poor performance to factors beyond the person's control—poor family background, poor schooling, necessity to work, and the like. These factors are especially damaging in community college settings where students, more often than not, must cope with one or more of these deterrents to motivation. But the research suggests that consistently attributing lack of success to forces beyond the control of the individual leads to "learned helplessness" (Seligman, 1969) and despair. More encouraging are the occasions when community colleges and the media capitalize on the success of people who, through their own effort and determination, overcame difficulties to achieve at high levels. It is interesting and consistent with the research that in such stories, success is almost always attributed to effort, dedication, and other factors of internal control—never to luck, a benevolent society, or an easy task. Fortunately, evidence indicates that changing attributions for success or failure is possible. Noel, Forsyth, and Kelley (1987), for example, showed that students exposed to information suggesting that grades in college are caused by internal and controllable factors did better on subsequent tests than control groups who received no training.

Motivational theory leans strongly on the twin concepts of expectancy and value, but scholars today are more interested the

role of student expectations than in the role of student values. Almost all students who are making the sacrifices necessary to get a college education believe in the value of the degree or certificate, if not always the value of the learning. Nevertheless, value is an important concept in motivation and, therefore, it may be useful to look at what the research says about how the concept of values influences the motivation of college students.

## VALUE

Motivation theorists have investigated four components of task value: attainment value, intrinsic interest value, utility value, and cost. Attainment value refers to the challenge of the task and the feelings of accomplishment that result from meeting the challenge. For example, getting a good grade in a course that has a reputation for being difficult has more attainment value, that getting a good grade in a course seen as easy or "a snap." Intrinsic value refers to the interest and enjoyment inherent in the task itself. For most students, for example, working with fellow students on a learning project is intrinsically more interesting than reading the textbook. Utility value refers to the importance of the task in meeting the student's goals. Classes that are required for transfer, for example, may not have high intrinsic interest for the student or much attainment value, but earning the credits has utility value in meeting the student's goal of a bachelors' degree. Finally, there is a cost associated with engaging in a task. Doing one thing may prevent or restrict doing something else. For example, getting good grades may take time away from dating, sports, family, or other activities, and thus the effort required is too costly for the benefits received.

## IMPLICATIONS

Expectancy and value are important constructs in our growing knowledge about student motivation, and the implications for classroom practice follow rather closely from the research and theory. In a nutshell, whatever a teacher can do to increase the *value* of the learning to students and to help students hold optimistic and positive *expectations* about their own ability to

succeed will aid motivation. Although ultimately motivation has to come from within, instructors can do a great deal to enhance students' eagerness to learn. I offer the following six principles, illustrated by tips for practice.

### Six Principles for Enhancing Motivation, with Tips for Teachers

*Principle One: Expect success.* You get what you expect, whether from yourself or from students. Ample evidence in the research on motivation supports the validity of the self-fulfilling prophecy. Teachers who expect success are more likely to get it than teachers who are resigned to minimal or mediocre performance. Expecting students to succeed and leading students to expect success of themselves may be the most important steps classroom teachers can take to increase motivation. Henry Ford, who knew a thing or two about success, stated his belief in the power of positive expectations when he said, "Whether you think you can or think you can't, you are right."

The best way to lead students to expect success of themselves is to show them that they are succeeding through their own efforts. Many of the tips offered under the five remaining principles in this section offer ways to help students learn to succeed by assigning performable but challenging tasks, by encouraging feelings of control, and by giving feedback on progress. A few general tips pertain to this all-important principle of helping students to expect success:

- *Define success in your course as competence in performing tasks and completing assignments that are relevant to your particular domain of study.* Students' perceptions of competence are usually domain specific, a factor inconsistent with the current wave of enthusiasm, especially in K-12 education, for enhancement of global self-esteem. Avoid giving insincere and generalized feedback to boost self-esteem (Pintrich & Schunk, 1996, p. 100). It is, after all, students' own feelings about their performance that matter. Telling students they did well

when they know they did not is worse than useless. It destroys trust and may send the message that the teacher does not have much confidence in the student's ability.

- *Avoid perpetuating negative stereotypes.* Because the student population in community colleges is diverse—and often group stereotyped—it is important to stay away from generalizations such as “women don’t do well in science” or “you can’t teach an old dog new tricks.”
- *Build on prior success.* Research shows that students raise aspirations with success. Encourage students to set high but attainable personal goals.

*Principle Two: Create optimal levels of challenge.* One of the most fundamental principles of learning is that tasks must be sufficiently difficult to pose a challenge, but not so hard as to turn off the willingness to try. Ideally, learning should be paced so that each step offers some newness and only a moderate risk of failure (McKeachie, 1994, p. 353).

Two modern pedagogies based on this basic principle are particularly helpful:

- *Mastery Learning* is self-paced and sequenced so that one concept is mastered before the next is presented (See Cross, 1976, Chapter 4).
- *Vygotsky's Zone of Proximal Development* presents tasks that are slightly beyond the student's current capability but within their potential (See Vygotsky, 1978; Cross, 1998).

Other strategies for assigning learning tasks at an optimal level of difficulty—not too easy and not too hard—are also available:

- *Background Knowledge Probe* is a Classroom Assessment Technique in which the instructor administers a simple questionnaire at the start of a new unit to determine prior

knowledge and readiness for new concepts (see Angelo & Cross, 1993, pp. 121-125).

- *Learning Cells* pair students to work together on a task and often strike an optimal level of challenge because students have similar but not identical levels of understanding. The technique of reciprocal questioning requires students to alternate between asking and answering questions about a reading assignment (see Millis & Cottell, 1998, p. 135; McKeachie, 1994, pp. 146-7).
- *Extra Credit Assignments* keep better students challenged, but the tasks should require demonstrably higher levels of competence rather than simply involve extra work.

*Principle Three: Encourage feelings of control.* Because “motivation prospers when students feel that their outcomes are under personal control” (Forsyth & McMillan, 1991, p. 53), teachers should make every effort to foster the belief that competence is a changeable aspect of behavior that students can manage. Students resent teachers who direct their activities too closely, but they are likely to feel anxiety when given independence that they can’t handle (McKeachie, 1994, p. 352). The trick is to balance these conflicting needs by carefully observing student progress and by offering reasonable choice and flexibility.

- *Hold a class discussion on study habits.* Encourage students to talk about ways they study for an exam, strategies they find effective, the amount of time they spend, and other behaviors that suggest their own actions affect the outcome.
- *Offer flexibility and choice when possible.* Even offering a choice among two or three possible assignments instead of one gives students expanded choices and a sense of control, and may, incidentally, enrich the diversity of class discussion.

- *Provide opportunities for students to assist in determining evaluation activities.* Have students meet in small groups to design their own tests on some units, or occasionally allow groups to devise alternative methods of demonstrating their learning.
- *Avoid messages that reinforce your power as an instructor or that emphasize extrinsic rewards* (Davis, 1993, p. 195). For example, using grades as a threat may achieve compliance, but it is almost certain to destroy motivation to learn.

*Principle Four: Capitalize on intrinsic motivation.* There is a difference between learning because you want to know and learning because you want a valued reward such as credit, a good grade, or teacher approval. Although both types of motivation are probably necessary in higher education, it is far easier on everyone concerned if intrinsic motivation is developed to the greatest extent possible. Feelings of “flow”—being totally involved in something—are exhilarating and highly motivating, whereas feelings of compliance are tiring and are perceived as hard work (Csikszentmihalyi, 1978).

- *Bring enthusiasm to the teaching and learning experience.* Teacher enthusiasm is consistently among the top-rated items on student evaluations of teaching, but enthusiasm for learning is also contagious. Teachers who show high enthusiasm for the interesting issues in their subject matter, who are lifelong learners as well as teachers of their discipline, and who come to class well prepared are most likely to generate similar motivation in their students.
- *Introduce the course and each topic in an interesting and engaging way.* For example, instead of simply handing out and reading over the syllabus on the first day of class, ask students to generate questions they would like to have answered during the course, to discuss their questions in a collaborative learning group, and then to compare their learning goals with the course syllabus (see Angelo & Cross, 1993 pp. 290-94; Millis & Cottell, 1998, pp. 44-45).

- *Create unusual or unexpected situations, engage in fantasy, and pose controversial questions.* For example, you might prepare a statement that encapsulates an important issue in your field and ask students to respond to the statement with various levels of agreement (agree strongly, agree, disagree, or disagree strongly). Assign students to small discussion groups based on similar or dissimilar responses. Another way of engaging intrinsic interest is to pose "What if?" questions. Develop a group of questions that range from pure fantasy to projections of the future.
- *Use anecdotes frequently.* Tell stories that illustrate how course content affects the lives and work of particular individuals by relating the material to personal experiences.

*Principle Five: Give informational feedback.* Providing feedback on learning is one of the most important functions of a teacher, and how, when, and in what form it is given can make a world of difference in motivation. The literature contains several tips with respect to providing feedback:

- *Provide differential rather than global feedback.* Helping students know specifically what they did well or poorly and offering precise strategies for improvement are motivating because they suggest actions students can control. General feedback such as "this is a good paper" or "everyone did poorly on this test" may at times be reassuring, but it is not motivating because it provides no information about what the student can do to improve.
- *Use praise and criticism judiciously.* Praise and criticism do not always have the effect we suspect they do. For example, praise is often more effective than criticism, but only if it is sincere, timely, and credible. The use of praise as a motivator actually shows mixed results in the research, and adults are somewhat more immune to praise than young children who desire to please the teacher. As praise is not always helpful, criticism is not always harmful.

Some evidence indicates that criticism relates to achievement in a curvilinear fashion—moderate criticism may be motivating, but effects diminish as criticism increases or decreases (Pintrich & Schunk, 1996, p. 345). Criticism is most motivating when it is offered on matters the student can control, such as effort. Even in this case, however, it is probably more effective to advise the student to put more effort into studying the topic than to suggest that the student simply needs to study more. Little research is available on the differential effects of criticism and praise for achievement-oriented and failure-threatened students. The best advice is to make feedback informational rather than judgmental.

*Principle Six: Capitalize on social motivation.* Many people find other people stimulating and desire to perform at their best in social situations. Furthermore, research shows that motivation and student satisfaction can be increased by deliberately structuring social learning groups to be supportive and interdependent, as in collaborative learning (see Cross, 2000).

- *Using social facilitation to increase motivation can be tricky.* Our earlier description of the fear-of-failure and self-worth theories of motivation suggests that if a student expects to do well, she will be motivated by the presence of others. For self-doubting students, however, exposure of inadequacy before peers may pose a threatening situation that depresses motivation. Teachers need to ensure that the overall environment is supporting and nonthreatening.
- *There is considerable debate about the value of competition in increasing motivation.* The general conclusion seems to be that although moderate competition may increase motivation, it is too easy to provoke anxiety through students' tendencies to compare themselves with one another. Researchers universally agree that public criticism, activities that pit students against one another, and the posting of grades or test scores by name are more likely to lead to anxiety, resentment, and discouragement

than to motivation. One way to capitalize on the positive aspects of competition is to have students compete as teams rather than as individuals. McKeachie (1994, p. 356) uses a quiz bowl competition in pretest review sessions for his students at the University of Michigan. The class is divided into teams, with team members consulting on the answers to previously prepared questions. Each team responds in turn and is given points for correct answers. Using competition in this way can provide a positive, motivating learning experience for students.

### CONCLUSION

The heart is as important as the head in learning. One of the great satisfactions of teaching in the community college lies in working with students who have a desire to succeed. At the same time, one of the most puzzling and frustrating aspects of community college teaching is seeing students who appear to be wasting their opportunities to learn through self-defeating strategies, through apparent indifference, and through failure to put forth the effort that learning requires.

There is a voluminous amount of research literature on motivation since it is important to every aspect of success in life. While motivation, like learning itself, is internal—something that people have to do for themselves—educators can help students raise their expectations and level of performance. Understanding the complexities that lie behind motivation is a first step toward finding a meaningful response to the next student who asks, “Will that be on the test?”

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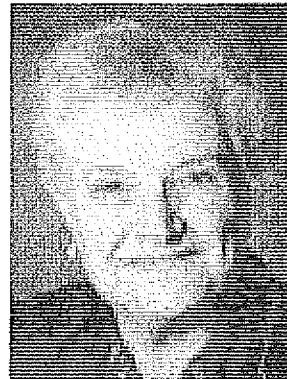
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### K. Patricia Cross

K. Patricia Cross is Professor of Higher Education, Emerita at the University of California, Berkeley, and Senior League Fellow at the League for Innovation in the Community College. Cross has had a varied and distinguished career as a university administrator (Assistant Dean of Women at the University of Illinois and Dean of Students at Cornell University), researcher (Distinguished Research Scientist at Educational Testing Service and Research Educator at The Center for Research and Development in Higher Education, University of California, Berkeley), and teacher (Professor and Chair of the Department of Administration, Planning, and Social Policy at the Harvard Graduate School of Education and Professor of Higher Education, University of California, Berkeley).



The author of nine books and more than 200 articles and chapters, Cross has been recognized for her scholarship by election to the National Academy of Education, receipt of the E. F. Lindquist Award from the American Educational Research Association, the Sidney Suslow Award from the Association for Institutional Research, and the Howard Bowen Distinguished Career Award from the Association for the Study of Higher Education.

Past Chair of the Board of the American Association for Higher Education, she has received a number of awards for leadership in education, among them the 1990 Leadership Award from the American Association of Community and Junior Colleges and the 1990 award for outstanding contributions to the improvement of instruction from the National Council of Instructional Administrators. She has been awarded 14 honorary doctorates and is listed in *Who's Who in America*.

Cross serves on the editorial boards of six national and international journals of higher education. She has lectured on American higher education widely in the United States and abroad in England, France, Sweden, Germany, the Soviet Union, Japan, Australia, Hong Kong, and Holland. Her primary areas of interest are adult learning, changing college student populations, and the improvement of teaching and learning in higher education.

Cross received her bachelor's degree in mathematics from Illinois State University and her master's degree and doctorate in social psychology from the University of Illinois.

K. Patricia Cross  
Professor of Higher Education, Emerita  
University of California, Berkeley  
Phone and Fax: 510-527-9020  
[patcross@socrates.berkeley.edu](mailto:patcross@socrates.berkeley.edu)  
Mailing address:  
904 Oxford Street, Berkeley, CA 94707



[www.league.org](http://www.league.org)

26522 La Alameda, Suite 370  
Mission Viejo, California 92691  
(949) 367-2884 • Fax (949) 367-2885

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