

# Motivation Theories on Learning

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## Editor's Note

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Not so long ago, a teacher named Barbara Fuller taught general science to elementary years students, and one of her units was about insects and spiders. As part of the unit, she had students search for insects and spiders around their own homes or apartments. They brought the creatures to school (safely in jars), answered a number of questions about them in their journals, and eventually gave brief oral reports about their findings to the class. The assignment seemed straightforward, but Barbara found that students responded to it in very different ways. Looking back, here is how Barbara described their responses:

*I remember Jose couldn't wait to get started, and couldn't bear to end the assignment either! Every day he brought more bugs or spiders—eventually 25 different kinds. Every day he drew pictures of them in his journal and wrote copious notes about them. At the end he gave the best oral presentation I've ever seen from a third-grader; he called it "They Have Us Outnumbered!" I wish I had filmed it, he was so poised and so enthusiastic.*

*Then there was Lindsey—the one who . . . always wanted to be the best in everything, regardless of whether it interested her. She started off the work rather slowly—just brought in a few bugs and only one spider. But she kept an eye on what everyone else was bringing, and how much. When she saw how much Jose was doing, though, she picked up her pace, like she was trying to match his level. Except that instead of bringing a diversity of creatures as Jose was doing, she just brought more and more of the same ones—almost twenty dead house flies, as I recall! Her presentation was OK—I really could not give her a bad mark for it—but it wasn't as creative or insightful as Jose's. I think she was more concerned about her mark than about the material.*

*And there was Tobias—discouraging old Tobias. He did the work, but just barely. I noticed him looking a lot at other students' insect collections and at their journal entries. He wasn't cheating, I believe, just figuring out what the basic level of work was for the assignment—what he needed to do simply to avoid failing it. He brought in fewer bugs than most others, though still a number that was acceptable. He also wrote*

*shorter answers in his journal and gave one of the shortest oral reports. It was all acceptable, but not much more than that.*

*And Zoey: she was quite a case! I never knew whether to laugh or cry about her. She didn't exactly resist doing the assignment, but she certainly liked to chat with other students. So she was easily distracted, and that cut down on getting her work done, especially about her journal entries. What really saved her—what kept her work at a reasonably high level of quality—were the two girls she ended up chatting with. The other two were already pretty motivated to do a lot with the assignment—create fine-looking bug collections, write good journal entries, and make interesting oral presentations. So when Zoey attempted chitchat with them, the conversations often ended up focusing on the assignment anyway! She had them to thank for keeping her mind on the work. I don't know what Zoey would have done without them.*

As Barbara Fuller's recollections suggest, students assign various meanings and attitudes to academic activities—personal meanings and attitudes that arouse and direct their energies in different ways. We call these and their associated energizing and directing effects by the term *motivation* or sometimes *motivation to learn*. As you will see, differences in motivation are an important source of diversity in classrooms, comparable in importance to differences in prior knowledge, ability, or developmental readiness. When it comes to school learning, furthermore, students' motivations take on special importance because students' mere presence in class is (of course) no guarantee that students really want to learn. It is only a sign that students live in a society requiring young people to attend school. Since modern education is compulsory, teachers cannot take students' motivation for granted, and they have a responsibility to insure students' motivation to learn. Somehow or other, teachers must persuade students to want to do what students have to do anyway. This task—understanding and therefore influencing students' motivations to learn—is the focus of this chapter. Fortunately, as you will see, there are ways of accomplishing this task that respect students' choices, desires, and attitudes.

Like motivation itself, theories of it are full of diversity. For convenience in navigating through the diversity, we have organized the chapter around six major theories or perspectives about motives and their sources. We call the topics (1) motives as behavior change, (2) motives as goals, (3) motives as interests, (4) motives as attributions about success, (5) motives as beliefs about self-efficacy, and (6) motives as self-determination. We end with a perspective called *expectancy-value theory*, which integrates ideas from some of the other six theories and partly as a result implies some additional suggestions for influencing students' motivations to learn in positive ways.

## **Motives as Behavior**

Sometimes it is useful to think of motivation not as something “inside” a student driving the student's behavior, but as *equivalent* to the student's outward behaviors. This is the perspective of behaviorism. In its most thorough-going form, behaviorism focuses almost completely on what can be directly seen or heard about a person's behavior and has relatively few comments about what may lie behind (or “underneath” or “inside”) the behavior. When it comes to motivation, this perspective means minimizing or even ignoring the distinction between the inner drive or energy of students and the outward behaviors that express the drive or energy. The two are considered the same or nearly so.

Sometimes the circumstances of teaching limit teachers' opportunities to distinguish between inner motivation and outward behavior. Certainly teachers see plenty of student behaviors—signs of motivation of some sort. But the multiple demands of teaching can limit the time available to determine what the behaviors mean. If a student asks a lot of questions during discussions, for example, is he or she curious about the material itself or just wanting to look intelligent in front of classmates and the teacher? In a class with many students and a busy agenda, there may not be a lot of time for a teacher to decide between these possibilities. In other cases, the problem may not be limited time as much as communication difficulties with a student. Consider a student who is still learning English or who belongs to a cultural community that uses patterns of conversation that are unfamiliar to the teacher or who has a disability that limits the student's general language skill. In these cases, discerning the student's inner motivations may take more time and effort. It is important to invest the extra time and effort for such students, but while a teacher is doing so, it is

also important for her to guide and influence the students' behavior in constructive directions. That is where behaviorist approaches to motivation can help.

## Operant Conditioning as a Way of Motivating

The most common version of the behavioral perspective on motivation is the theory of *operant conditioning* associated with B. F. Skinner (1938, 1957). To understand this model in terms of motivation, think of the *likelihood* of response as the motivation and the *reinforcement* as the motivator. Imagine, for example, that a student learns by operant conditioning to answer questions during class discussions: each time the student answers a question (the operant), the teacher praises (reinforces) this behavior. In addition to thinking of this situation as behavioral *learning*, however, you can also think of it in terms of *motivation*: the likelihood of the student answering questions (the motivation) is increasing because of the teacher's praise (the motivator).

Many concepts from operant conditioning, in fact, can be understood in motivational terms. Another one, for example, is the concept of *extinction*, the tendency for learned behaviors to become less likely when reinforcement no longer occurs—a sort of “unlearning” or at least a decrease in performance of previously learned behaviors. The decrease in performance frequency can be thought of as a loss of motivation, and removal of the reinforcement can be thought of as removal of the motivator. Table 1 summarizes this way of reframing operant conditioning in terms of motivation.

**Table 1.** Operant Conditioning as Learning and as Motivation

Concept	Definition phrased in terms of learning	Definition phrased in terms of motivation	Classroom Example
Operant	Behavior that becomes more likely because of reinforcement	Behavior that suggests an increase in motivation	Student listens to teacher's comments during lecture or discussion
Reinforcement	Stimulus that increases likelihood of a behavior	Stimulus that motivates	Teacher praises student for listening
Positive reinforcement	Stimulus that <i>increases</i> likelihood of a behavior by being <i>introduced</i> or <i>added</i> to a situation	Stimulus that motivates by its <i>presence</i> ; an “incentive”	Teacher makes encouraging remarks about student's homework
Negative reinforcement	Stimulus that <i>increases</i> the likelihood of a behavior by being <i>removed</i> or taken away from a situation	Stimulus that motivates by its <i>absence</i> or <i>avoidance</i>	Teacher stops nagging student about late homework
Punishment	Stimulus that <i>decreases</i> the likelihood of a behavior by being <i>introduced</i> or <i>added</i> to a situation	Stimulus that <i>decreases</i> motivation by its <i>presence</i>	Teacher deducts points for late homework
Extinction	Removal of reinforcement for a behavior	Removal of motivating stimulus that leads to decrease in motivation	Teacher stops commenting altogether about student's homework
Shaping successive approximations	Reinforcements for behaviors that gradually resemble	Stimuli that gradually shift motivation toward a final goal motivation	Teacher praises student for returning homework a bit closer to the deadline;

Concept	Definition phrased in terms of learning	Definition phrased in terms of motivation	Classroom Example
	(approximate) a final goal behavior		gradually she praises for actually being on time
Continuous reinforcement	Reinforcement that occurs <i>each</i> time that an operant behavior occurs	Motivator that occurs <i>each</i> time a behavioral sign of motivation occurs	Teacher praises highly active student for <i>every</i> time he works for five minutes without interruption
Intermittent reinforcement	Reinforcement that <i>sometimes</i> occurs following an operant behavior, but not on every occasion	Motivator that occurs <i>sometimes</i> when a behavioral sign of motivation occurs, but not on every occasion	Teacher praises highly active student <i>sometimes</i> when he works without interruption, but not every time

## Cautions about Behavioral Perspectives On Motivation

As we mentioned, behaviorist perspectives about motivation do reflect a classroom reality: that teachers sometimes lack time and therefore must focus simply on students' appropriate outward behavior. But there are nonetheless cautions about adopting this view. An obvious one is the ambiguity of students' specific behaviors; what looks like a sign of one motive to the teacher may in fact be a sign of some other motive to the student (DeGrandpre, 2000). If a student looks at the teacher intently while she is speaking, does it mean the student is motivated to learn or only that the student is daydreaming? If a student invariably looks away while the teacher is speaking, does it mean that the student is disrespectful of the teacher or that the student comes from a family or cultural group where *avoiding* eye contact actually shows more respect for a speaker than direct eye contact?

Another concern about behaviorist perspectives, including operant conditioning, is that it leads teachers to ignore students' choices and preferences and to "play God" by making choices on their behalf (Kohn, 1996). According to this criticism, the distinction between "inner" motives and expressions of motives in outward behavior does not disappear just because a teacher (or a psychological theory) chooses to treat a motive and the behavioral expression of a motive as equivalent. Students usually *do* know what they want or desire, and their wants or desires may not always correspond to what a teacher chooses to reinforce or ignore. Approaches that are exclusively behavioral, it is argued, are not sensitive enough to students' *intrinsic*, self-sustaining motivations. As it happens, help with being selective and thoughtful can be found in the other, more cognitively oriented theories of motivation. These use the goals, interests, and beliefs of students as ways of explaining differences in students' motives and in how the motives affect engagement with school. We turn to these cognitively oriented theories next, beginning with those focused on students' goals.

## Motives as Goals

One way motives vary is by the kind of goals that students set for themselves and by how the goals support students' academic achievement. As you might suspect, some goals encourage academic achievement more than others, but even motives that do not concern academics explicitly tend to affect learning indirectly.

## Goals That Contribute to Achievement

What kinds of achievement goals do students hold? Imagine three individuals, Maria, Sara, and Lindsay, who are taking algebra together. Maria's main concern is to learn the material as well as possible because she finds it interesting and because she believes it will be useful to her in later courses, perhaps at university. Hers is a mastery goal, because she wants primarily to learn or master the material. Sara, however, is concerned less about algebra than about getting top

marks on the exams and in the course. Hers is a performance goal, because she is focused primarily on looking successful; learning algebra is merely a vehicle for performing well in the eyes of peers and teachers. Lindsay, for her part, is primarily concerned about avoiding a poor or failing mark. Hers is a performance-avoidance goal or failure-avoidance goal, because she is not really as concerned about learning algebra, as Maria is, or about competitive success, as Sara is; she is simply intending to avoid failure.

As you might imagine, mastery, performance, and performance-avoidance goals often are not experienced in pure form, but in combinations. If you play the clarinet in the school band, you might want to improve your technique simply because you enjoy playing as well as possible—essentially a mastery orientation. But you might also want to look talented in the eyes of classmates—a performance orientation. Another part of what you may wish, at least privately, is to avoid looking like a complete failure at playing the clarinet. One of these motives may predominate over the others, but they all may be present.

Mastery goals tend to be associated with enjoyment of learning the material at hand and in this sense represent an outcome that teachers often seek for students. By definition, therefore, they are a form of *intrinsic motivation*. As such, mastery goals have been found to be better than performance goals at sustaining students' interest in a subject. In one review of research about learning goals, for example, students with primarily mastery orientations toward a course they were taking not only tended to express greater interest in the course, but also continued to express interest well beyond the official end of the course and to enroll in further courses in the same subject (Harackiewicz et al., 2002; Wolters, 2004).

Performance goals, on the other hand, imply *extrinsic motivation* and tend to show the mixed effects of this orientation. A positive effect is that students with a performance orientation do tend to get higher grades than those who express primarily a mastery orientation. The advantage in grades occurs both in the short term (with individual assignments) and in the long term (with overall grade point average when graduating). But there is evidence that performance-oriented students do not actually learn material as deeply or permanently as students who are more mastery oriented (Midgley, Kaplan, & Middleton, 2001). A possible reason is that measures of performance—such as test scores—often reward relatively shallow memorization of information and therefore guide performance-oriented students away from processing the information thoughtfully or deeply. Another possible reason is that a performance orientation, by focusing on gaining recognition as the best among peers, encourages competition among peers. Giving and receiving help from classmates is thus not in the self-interest of a performance-oriented student, and the resulting isolation limits the student's learning.

## Goals That Affect Achievement Indirectly

### Failure-avoidant Goals

Failure-avoidant goals by nature undermine academic achievement. Often they are a negative byproduct of the competitiveness of performance goals (Urdu, 2004). If a teacher (and sometimes also fellow students) put too much emphasis on being the best in the class and if interest in learning the material therefore suffers, then some students may decide that success is beyond their reach or may not be desirable in any case. The alternative—simply avoiding failure—may seem wiser as well as more feasible. Once a student adopts this attitude, he or she may underachieve more or less deliberately, doing only the minimum work necessary to avoid looking foolish or to avoid serious conflict with the teacher. Avoiding failure in this way is an example of self-handicapping—deliberate actions and choices that reduce chances of success. Students may self-handicap in a number of ways; in addition to not working hard, they may procrastinate about completing assignments, for example, or set goals that are unrealistically high.

### Social Goals

Most students need and value relationships, both with classmates and with teachers, and often (though not always) they get a good deal of positive support from the relationships. But the effects of social relationships are complex and at times can work both for and against academic achievement. If a relationship with the teacher is important and reasonably positive, then the student is likely to try pleasing the teacher by working hard on assignments (Dowson &

McInerney, 2003). Note, though, that this effect is closer to performance than mastery; the student is primarily concerned about looking good to someone else. If, on the other hand, a student is especially concerned about relationships with peers, the effects on achievement depend on the student's motives for the relationship as well as on peers' attitudes. The abilities and achievement motivation of peers themselves can also make a difference, but once again the effects vary depending on the context. Low achievement and motivation by peers affect an individual's academic motivation more in elementary school than in high school, more in learning mathematics than learning to read, and more if there is a wide range of abilities in a classroom than if there is a more narrow range (Burke & Sass, 2006).

In spite of these complexities, social relationships are valued so highly by most students that teachers should generally facilitate them, though also keep an eye on their nature and their consequent effects on achievement. Many assignments can be accomplished productively in groups, for example, as long as the groups are formed thoughtfully. But the majority of students' social contacts are likely always to come from students' own initiatives with each other in simply taking time to talk and interact. The teacher's job is to encourage these informal contacts, especially when they happen at times that support rather than interfere with learning.

## Encouraging Mastery Goals

Even though a degree of performance orientation may be inevitable in school because of the mere presence of classmates, it does not have to take over students' academic motivation completely. Teachers can encourage mastery goals in various ways and should in fact do so, because a mastery orientation leads to more sustained, thoughtful learning, at least in classrooms, where classmates may sometimes debate and disagree with each other (Darnon, Butera, & Harackiewicz, 2006).

How can teachers do so? One way is to allow students to choose specific tasks or assignments for themselves, where possible, because their choices are more likely than usual to reflect prior personal interests, and hence be motivated more intrinsically than usual. The limitation of this strategy, of course, is that students may not see some of the connections between their prior interests and the curriculum topics at hand. In that case it also helps for the teacher to look for and point out the relevance of current topics or skills to students' personal interests and goals. Suppose, for example, that a student enjoys the latest styles of music. This interest may actually have connections with a wide range of school curriculum, such as:

- biology (because of the physiology of the ear and of hearing)
- physics or general science (because of the nature of musical acoustics)
- history (because of changes in musical styles over time)
- English (because of relationships of musical lyrics and themes with literary themes)
- foreign languages (because of comparisons of music and songs among cultures)

Still another way to encourage mastery orientation is to focus on students' individual effort and improvement as much as possible, rather than on comparing students' successes to each other. You can encourage this orientation by giving students detailed feedback about how they can improve performance, by arranging for students to collaborate on specific tasks and projects rather than to compete about them, and in general by showing your own enthusiasm for the subject at hand.

### Reflection

Much of education focuses on comparisons in grades, test scores, publications, and awards. How can you develop more of an orientation yourself for your own growth and learning, rather than comparative norms?

## Motives as Interests

In addition to holding different kinds of goals—with consequent differences in academic motivation—students show obvious differences in levels of interest in the topics and tasks of the classroom. Suppose that two high school classmates, Frank and Jason, both are taking chemistry, specifically learning how to balance chemical equations. Frank finds the material boring and has to force himself to study it; as a result he spends only the time needed to learn the basic material and to complete the assignments at a basic level. Jason, on the other hand, enjoys the challenges of balancing chemical equations. He thinks of the task as an intriguing puzzle; he not only solves each of them, but also compares the problems to each other as he goes through them.

Frank's learning is based on effort compared to Jason's, whose learning is based more fully on interest. As the example implies, when students learn from interest, they tend to devote more attention to the topic than if they learn from effort (Hidi & Renninger, 2006). The finding is not surprising since interest is another aspect of intrinsic motivation—energy or drive that comes from within. A distinction between effort and interest is often artificial, however, because the two motives often get blended or combined in students' personal experiences. Most of us can remember times when we worked at a skill that we enjoyed and found interesting, but that also required effort to learn. The challenge for teachers is therefore to draw on and encourage students' interest as much as possible and thus keep the required effort within reasonable bounds—neither too hard nor too easy.

## Situational Interest Versus Personal Interest

Students' interests vary in how deeply or permanently they are located within students. Situational interests are ones that are triggered temporarily by features of the immediate situation. Unusual sights, sounds, or words can stimulate situational interest. A teacher might show an interesting image on the overhead projector or play a brief bit of music or make a surprising comment in passing. At a more abstract level, unusual or surprising topics of discussion can also arouse interest when they are first introduced. Personal interests are relatively permanent preferences of the student and are usually expressed in a variety of situations. In the classroom, a student may (or may not) have a personal interest in particular topics, activities, or subject matter. Outside class, though, he or she usually has additional personal interests in particular non-academic activities (e.g. sports, music) or even in particular people (a celebrity, a friend who lives nearby). The non-academic personal interests may sometimes conflict with academic interest; it may be more interesting to go to the shopping mall with a friend than to study even your most favorite subject.

## Motives Related to Attributions

**Attributions** are perceptions about the causes of success and failure. Suppose that you get a low mark on a test and are wondering what caused the low mark. You can construct various explanations for—make various attributions about—this failure. Maybe you did not study very hard; maybe the test itself was difficult; maybe you were unlucky; maybe you just are not smart enough. Each explanation attributes the failure to a different factor. The explanations that you settle upon may reflect the truth accurately—or then again, they may not. What is important about attributions is that they reflect personal beliefs about the sources or causes of success and failure. As such, they tend to affect motivation in various ways, depending on the nature of the attribution (Weiner, 2005).

## Locus, Stability, and Controllability

Attributions vary in three underlying ways: locus, stability, and controllability. **Locus** of an attribution is the location (figuratively speaking) of the source of success or failure. If you attribute a top mark on a test to your ability, then the locus is internal; if you attribute the mark to the test's having easy questions, then the locus is external. The **stability** of an attribution is its relative permanence. If you attribute the mark to your ability, then the source of success is relatively stable—by definition, ability is a relatively lasting quality. If you attribute a top mark to the effort you put in to studying, then the source of success is unstable—effort can vary and has to be renewed on each occasion or else it disappears. The **controllability** of an attribution is the extent to which the individual can influence it. If you attribute a top mark to

your effort at studying, then the source of success is relatively controllable—you can influence effort simply by deciding how much to study. But if you attribute the mark to simple luck, then the source of the success is uncontrollable—there is nothing that can influence random chance.

As you might suspect, the way that these attributions combine affects students' academic motivations in major ways. It usually helps both motivation and achievement if a student attributes academic successes and failures to factors that are internal and controllable, such as effort or a choice to use particular learning strategies (Dweck, 2000). Attributing successes to factors that are internal but stable or controllable (like ability), on the other hand, is both a blessing and a curse: sometimes it can create optimism about prospects for future success ("I always do well"), but it can also lead to indifference about correcting mistakes (Dweck, 2006), or even create pessimism if a student happens not to perform at the accustomed level ("Maybe I'm not as smart as I thought"). Worst of all for academic motivation are attributions, whether stable or not, related to external factors. Believing that performance depends simply on luck ("The teacher was in a bad mood when marking") or on excessive difficulty of material removes incentive for a student to invest in learning. All in all, then, it seems important for teachers to encourage internal, stable attributions about success.

Teachers can influence students' attributions in various ways. It's useful to frame the teachers' own explanations of success and failure around internal, controllable factors. Instead of telling a student: "Good work! You're smart!", try saying: "Good work! Your effort really made a difference, didn't it?" If a student fails, instead of saying, "Too bad! This material is just too hard for you," try saying, "Let's find a strategy for practicing this more, and then you can try again." In both cases the first option emphasizes uncontrollable factors (effort, difficulty level), and the second option emphasizes internal, controllable factors (effort, use of specific strategies).

Such attributions will only be convincing, however, if teachers provide appropriate conditions for students to learn—conditions in which students' efforts really do pay off. There are three conditions that have to be in place in particular. First, academic tasks and materials actually have to be at about the right level of difficulty. If you give problems in advanced calculus to a first-grade student, the student will not only fail them but also be justified in attributing the failure to an external factor, task difficulty. If assignments are assessed in ways that produce highly variable, unreliable marks, then students will rightly attribute their performance to an external, unstable source: luck. Both circumstances will interfere with motivation.

Second, teachers also need to be ready to give help to individuals who need it—even if they believe that an assignment is easy enough or clear enough that students should not need individual help. Third, teachers need to remember that ability—usually considered a relatively stable factor—often actually changes incrementally over the long term. Effort and its results appear relatively immediately; a student expends effort this week, this day, or even at this very moment, and the effort (if not the results) are visible right away. But ability may take longer to show itself.

## **Motivation as Self-efficacy**

In addition to being influenced by their goals, interests, and attributions, students' motives are affected by specific beliefs about the student's personal capacities. In self-efficacy theory the beliefs become a primary, explicit explanation for motivation (Bandura, 1977, 1986, 1997). Self-efficacy is the belief that you are capable of carrying out a specific task or of reaching a specific goal. Note that the belief and the action or goal are specific. Self-efficacy is a belief that you can write an acceptable term paper, for example, or repair an automobile, or make friends with the new student in class. These are relatively specific beliefs and tasks. Self-efficacy is not about whether you believe that you are intelligent in general, whether you always like working with mechanical things, or think that you are generally a likeable person. These more general judgments are better regarded as various mixtures of self-concepts (beliefs about general personal identity) or of self-esteem (evaluations of identity). They are important in their own right, and sometimes influence motivation, but only indirectly (Bong & Skaalvik, 2004). Self-efficacy beliefs, furthermore, are not the same as "true" or documented skill or ability. They are self-constructed, meaning that they are personally developed perceptions. As with confidence, it is possible to have either too much or too little self-efficacy. The optimum level seems to be either at or



slightly above true capacity (Bandura, 1997). As we indicate below, large discrepancies between self-efficacy and ability can create motivational problems for the individual.

## Effects of Self-efficacy On Students' Behavior

Self-efficacy may sound like a uniformly desirable quality, but research as well as teachers' experience suggests that its effects are a bit more complicated than they first appear. Self-efficacy has three main effects, each of which has both a "dark" or undesirable side and a positive or desirable side. The first effect is that self-efficacy makes students more willing to choose tasks where they already feel confident of succeeding. Since self-efficacy is self-constructed, furthermore, it is also possible for students to miscalculate or misperceive their true skill, and the misperceptions themselves can have complex effects on students' motivations. A second effect of high self-efficacy is to increase a persistence at relevant tasks. If you believe that you can solve crossword puzzles, but encounter one that takes longer than usual, then you are more likely to work longer at the puzzle until you (hopefully) really do solve it. This is probably a desirable behavior in many situations, unless the persistence happens to interfere with other, more important tasks (what if you should be doing homework instead of working on crossword puzzles?).

Third, high self-efficacy for a task not only increases a person's persistence at the task, but also improves their ability to cope with stressful conditions and to recover their motivation following outright failures. Suppose that you have two assignments—an essay and a science lab report—due on the same day, and this circumstance promises to make your life hectic as you approach the deadline. You will cope better with the stress of multiple assignments if you already believe yourself capable of doing both of the tasks, than if you believe yourself capable of doing just one of them or (especially) of doing neither. The bad news, at least from a teacher's point of view, is that the same resilience can sometimes also serve non-academic and non-school purposes. How so? Suppose, instead of two school assignments due on the same day, a student has only one school assignment due, but also holds a part-time evening job as a server in a local restaurant. Suppose, further, that the student has high self-efficacy for both of these tasks; he believes, in other words, that he is capable of completing the assignment as well as continuing to work at the job.

## Learned Helplessness and Self-efficacy

If a person's sense of self-efficacy is very low, he or she can develop learned helplessness, a perception of complete lack of control in mastering a task. The attitude is similar to depression, a pervasive feeling of apathy and a belief that effort makes no difference and does not lead to success. Learned helplessness was originally studied from the behaviorist perspective of classical and operant conditioning by the psychologist Martin Seligman (1995). The studies used a somewhat "gloomy" experimental procedure in which an animal, such as a rat or a dog, was repeatedly shocked in a cage in a way that prevented the animal from escaping the shocks. In a later phase of the procedure, conditions were changed so that the animal could avoid the shocks by merely moving from one side of the cage to the other. Yet frequently they did not bother to do so! Seligman called this behavior learned helplessness. In people, learned helplessness leads to characteristic ways of dealing with problems. They tend to attribute the source of a problem to themselves, to generalize the problem to many aspects of life, and to see the problem as lasting or permanent. More optimistic individuals, in contrast, are more likely to attribute a problem to outside sources, to see it as specific to a particular situation or activity, and to see it as temporary or time-limited.

## Sources of Self-efficacy Beliefs

Psychologists who study self-efficacy have identified four major sources of self-efficacy beliefs (Pajares & Schunk, 2001, 2002). In order of importance they are (1) prior experiences of mastering tasks, (2) watching others' mastering tasks, (3) messages or "persuasion" from others, and (4) emotions related to stress and discomfort. Fortunately the first three can be influenced by teachers directly, and even the fourth can sometimes be influenced indirectly by appropriate interpretive comments from the teacher or others.

## A Caution: Motivation as Content Versus Motivation as Process

A caution about self-efficacy theory is its heavy emphasis on just the process of motivation, at the expense of the content of motivation. The basic self-efficacy model has much to say about how beliefs affect behavior, but relatively little to say about which beliefs and tasks are especially satisfying or lead to the greatest well-being in students. The answer to this question is important to know, since teachers might then select tasks as much as possible that are intrinsically satisfying, and not merely achievable.

## Motivation as Self-determination

Common sense suggests that human motivations originate from some sort of inner “need”. We all think of ourselves as having various “needs”, a need for food, for example, or a need for companionship—that influences our choices and activities. This same idea also forms part of some theoretical accounts of motivation, though the theories differ in the needs that they emphasize or recognize.

According to Maslow and his hierarchy of needs, individuals must satisfy physical survival needs before they seek to satisfy needs of belonging, they satisfy belonging needs before esteem needs, and so on. In theory, too, people have both deficit needs and growth needs, and the deficit needs must be satisfied before growth needs can influence behavior (Maslow, 1970). In Maslow’s theory, as in others that use the concept, a need is a relatively lasting condition or feeling that requires relief or satisfaction and that tends to influence action over the long term. Some needs may decrease when satisfied (like hunger), but others may not (like curiosity). Either way, needs differ from the self-efficacy beliefs discussed earlier, which are relatively specific and cognitive, and affect particular tasks and behaviors fairly directly.

A recent theory of motivation based on the idea of needs is self-determination theory, proposed by the psychologists Edward Deci and Richard Ryan (2000), among others. The theory proposes that understanding motivation requires taking into account three basic human needs:

- autonomy—the need to feel free of external constraints on behavior
- competence—the need to feel capable or skilled
- relatedness—the need to feel connected or involved with others

Note that these needs are all psychological, not physical; hunger and sex, for example, are not on the list. They are also about personal growth or development, not about deficits that a person tries to reduce or eliminate. Unlike food (in behaviorism) or safety (in Maslow’s hierarchy), you can never get enough of autonomy, competence, or relatedness. You (and your students) will seek to enhance these continually throughout life

The key idea of self-determination theory is that when persons (such as you or one of your students) feel that these basic needs are reasonably well met, they tend to perceive their actions and choices to be intrinsically motivated or “self-determined”. In that case they can turn their attention to a variety of activities that they find attractive or important, but that do not relate directly to their basic needs. Among your students, for example, some individuals might read books that you have suggested, and others might listen attentively when you explain key concepts from the unit that you happen to be teaching. If one or more basic needs are not met well, however, people will tend to feel coerced by outside pressures or external incentives. They may become preoccupied, in fact, with satisfying whatever need has not been met and thus exclude or avoid activities that might otherwise be interesting, educational, or important. If the persons are students, their learning will suffer.

## Self-determination and Intrinsic Motivation

In proposing the importance of needs, then, self-determination theory is asserting the importance of intrinsic motivation. The self-determination version of intrinsic motivation emphasizes a person’s perception of freedom, rather than the presence or absence of “real” constraints on action. Self-determination means a person feels free, even if the

person is also operating within certain external constraints. In principle, a student can experience self-determination even if the student must, for example, live within externally imposed rules of appropriate classroom behavior. To achieve a feeling of self-determination, however, the student's basic needs must be met—needs for autonomy, competence, and relatedness. In motivating students, then, the bottom line is that teachers have an interest in helping students to meet their basic needs, and in not letting school rules or the teachers' own leadership styles interfere with or block satisfaction of students' basic needs.

## Using Self-determination Theory in the Classroom

What are some teaching strategies for supporting students' needs? Educational researchers have studied this question from a variety of directions, and their resulting recommendations converge and overlap in a number of ways. For convenience, the recommendations can be grouped according to the basic need that they address, beginning with the need for autonomy. A major part of supporting autonomy is to give students choices wherever possible (Ryan & Lynch, 2003). The choices that encourage the greatest feelings of self-control, obviously, are ones that are about relatively major issues or that have relatively significant consequences for students, such as whom to choose as partners for a major group project. But choices also encourage some feeling of self-control even when they are about relatively minor issues, such as how to organize your desk or what kind of folder to use for storing your papers at school. It is important, furthermore, to offer choices to all students, including students needing explicit directions in order to work successfully; avoid reserving choices for only the best students or giving up offering choices altogether to students who fall behind or who need extra help. All students will feel more self-determined and therefore more motivated if they have choices of some sort. Teachers can also support students' autonomy more directly by minimizing external rewards (like grades) and comparisons among students' performance, and by orienting and responding themselves to students' expressed goals and interests.

A second strategy for using self-determination theory is to support students' needs for competence. The most obvious way to make students feel competent is by selecting activities which are challenging but nonetheless achievable with reasonable effort and assistance (Elliott, McGregor, & Thrash, 2004). There are some strategies that are generally effective even if you are not yet in a position to know the students well. One is to emphasize activities that require active response from students. Sometimes this simply means selecting projects, experiments, discussions and the like that require students to do more than simply listen. Other times it means expecting active responses in all interactions with students. Another generally effective way to support competence is to respond and give feedback as immediately as possible.

A third strategy for using self-determination theory is to support students' relational needs. The main way of support students' need to relate to others is to arrange activities in which students work together in ways that are mutually supportive, that recognize students' diversity, and minimize competition among individuals. You can, for example, deliberately arrange projects that require a variety of talents; some educators call such activities "rich group work" (Cohen, 1994; Cohen, Brody, & Sapon-Shevin, 2004). As a teacher, you can encourage the development of your own relationships with class members. Your goal, as teacher, is to demonstrate caring and interest in your students not just as students, but as people.

## Keeping Self-determination in Perspective

In certain ways self-determination theory provides a sensible way to think about students' intrinsic motivation and therefore to think about how to get them to manage their own learning. A particular strength of the theory is that it recognizes degrees of self-determination and bases many ideas on this reality. Although these are positive features for understanding and influencing students' classroom motivation, some educators and psychologists nonetheless have lingering questions about the limitations of self-determination theory. One is whether merely providing choices actually improves students' learning, or simply improves their satisfaction with learning. Another question is whether it is possible to overdo attention to students' needs—and again there is evidence for both favoring and contradicting this possibility. Too many choices can actually make anyone (not just a student) frustrated and dissatisfied with a choice the person actually does make (Schwartz, 2004).

# Target: A Model for Integrating Ideas about Motivation

A model of motivation that integrates many ideas about motivation, including those in this chapter, has been developed by Carole Ames (1990, 1992). The acronym or abbreviated name for the program is TARGET, which stands for six elements of effective motivation:

- Task
- Authority
- Recognition
- Grouping
- Evaluating
- Time

Each of the elements contributes to students' motivation either directly or indirectly.

## Task

As explained earlier, students experience tasks in terms of their value, their expectation of success, and their authenticity. The value of a task is assessed by its importance, interest to the student, usefulness or utility, and the cost in terms of effort and time to achieve it. Expectation of success is assessed by a student's perception of the difficulty of a task. Generally a middling level of difficulty is optimal for students; too easy, and the task seems trivial (not valuable or meaningful), and too hard, and the task seems unlikely to succeed and in this sense useless. Authenticity refers to how much a task relates to real-life experiences of students; the more it does so, the more it can build on students' interests and goals, and the more meaningful and motivating it becomes.

## Authority

Motivation is enhanced if students feel a degree of autonomy or responsibility for a learning task. Autonomy strengthens self-efficacy and self-determination—two valued and motivating attitudes described earlier in this chapter. Where possible, teachers can enhance autonomy by offering students' choices about assignments and by encouraging them to take initiative about their own learning.

## Recognition

Teachers can support students' motivation by recognizing their achievements appropriately. Much depends, however, on how this is done; as discussed earlier, praise sometimes undermines performance. It is not especially effective if praise is very general and lacking in detailed reasons for the praise; or if praise is for qualities which a student cannot influence (like intelligence instead of effort); or if praise is offered so widely that it loses meaning or even becomes a signal that performance has been substandard. Many of these paradoxical effects are described by self-determination and self-efficacy theory (and were explained earlier in this chapter).

## Grouping

Motivation is affected by how students are grouped together for their work—a topic discussed in more detail in Chapter 8 ("Instructional Strategies"). There are many ways to group students, but they tend to fall into three types: cooperative, competitive, and individualistic (Johnson & Johnson, 1999). In cooperative learning, a set of students work together to achieve a common goal (for example, producing a group presentation for the class); often they receive a final grade, or part of a final grade, in common. In competitive learning, students work individually, and their grades reflect comparisons among the students (for example, their performances are ranked relative to each other, or they are "graded on a curve"). In individualistic learning, students work by themselves, but their grades are unrelated to the performance of classmates. Research that compares these three forms of grouping tends to favor cooperative learning groups, which apparently supports students' need for belonging—an idea important in self-determination theory discussed earlier in this chapter.

## Evaluation

Grouping structures obviously affect how students' efforts are evaluated. A focus on comparing students, as happens with competitive structures, can distract students from thinking about the material to be learned, and to focus instead on how they appear to external authorities; the question shifts from "What am I learning?" to "What will the teacher think about my performance?" A focus on cooperative learning, on the other hand, can have double-edged effects: students are encouraged to help their group mates, but may also be tempted to rely excessively on others' efforts or alternatively to ignore each other's contributions and overspecialize their own contributions. Some compromise between cooperative and individualistic structures seems to create optimal motivation for learning (Slavin, 1995).

## Time

As every teacher knows, students vary in the amount of time needed to learn almost any material or task. Accommodating the differences can be challenging, but also important for maximizing students' motivation. School days are often filled with interruptions and fixed intervals of time devoted to non-academic activities—facts that make it difficult to be flexible about granting individuals different amounts of time to complete academic tasks. Nonetheless a degree of flexibility is usually possible: larger blocks of time can sometimes be created for important activities (for example, writing an essay), and sometimes enrichment activities can be arranged for some students while others receive extra attention from the teacher on core or basic tasks.

## Chapter Summary

Motivation—the energy or drive that gives behavior direction and focus—can be understood in a variety of ways, each of which has implications for teaching. One perspective on motivation comes from behaviorism, and equates underlying drives or motives with their outward, visible expression in behavior. Most others, however, come from cognitive theories of learning and development. Motives are affected by the kind of goals set by students—whether they are oriented to mastery, performance, failure-avoidance, or social contact. They are also affected by students' interests, both personal and situational. And they are affected by students' attributions about the causes of success and failure—whether they perceive the causes are due to ability, effort, task difficulty, or luck.

A major current perspective about motivation is based on self-efficacy theory, which focuses on a person's belief that he or she is capable of carrying out or mastering a task. High self-efficacy affects students' choice of tasks, their persistence at tasks, and their resilience in the face of failure. It helps to prevent learned helplessness, a perception of complete lack of control over mastery or success. Teachers can encourage high self-efficacy beliefs by providing students with experiences of mastery and opportunities to see others' experiences of mastery, by offering well-timed messages persuading them of their capacity for success, and by interpreting students' emotional reactions to success, failure and stress.

An extension of self-efficacy theory is self-determination theory, which is based on the idea that everyone has basic needs for autonomy, competence, and relatedness to others. According to the theory, students will be motivated more intrinsically if these three needs are met as much as possible. A variety of strategies can assist teachers in doing so. One program for doing so is called TARGET; it draws on ideas from several theories of motivation to make practical recommendations about motivating students.

## Key Terms

Albert Bandura

Attributions of success or failure

Autonomy, need for

Behaviorist perspective on motivation

Competence, need for

Failure-avoidant goals

Intrinsic motivation

Jigsaw classroom

Learned helplessness

Mastery goals

Motivation Need for relatedness

Performance goals

Personal interests

Self-determination theory

Self-efficacy

Situational interests

TARGET

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## Further Resources

[This page lists several materials and links](#) related to motivating students in classroom situations.



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