

How Can Teachers Develop Students' Motivation -- and Success?

What can teachers do to help develop students who will face challenges rather than be overwhelmed by them? Why is it that many students seem to fall apart when they get to junior high or middle school? Can the "gifted" label do more harm than good? Do early lessons set girls up for failure? Is self-esteem something that teachers can or should "give" to students? Those are some of the questions Carol Dweck, professor of psychology at Columbia University, answers for Education World. Some of her responses will surprise you!

Carol S. Dweck is a leader in the field of motivation, personality, and developmental psychology, and her research contributions have been widely recognized. Her book, [*Self-Theories: Their Role in Motivation, Personality, and Development*](#), is published by Psychology Press.

Dweck shares with Education World readers some of her thoughts about the role of motivation in learning.

Education World: Some students are mastery-oriented; they readily seek challenges and pour effort into them. Others are not. Have you been able to pinpoint in your research any direct associations between students' abilities or intelligence and the development of mastery-oriented qualities?

Carol Dweck: This is a really interesting question, and the answer is surprising. There is *no* relation between students' abilities or intelligence and the development of mastery-oriented qualities. Some of the very brightest students avoid challenges, dislike effort, and wilt in the face of difficulty. And some of the less bright students are real go-getters, thriving on challenge, persisting intensely when things get difficult, and accomplishing more than you expected.

This is something that really intrigued me from the beginning. It shows that being mastery-oriented is about having the right mind-set. It is not about how smart you are. However, having the mastery-oriented mind-set will help students become more able over time.

EW: What can teachers do to help develop mastery-oriented students -- students who will face a challenge rather than be overwhelmed by it?

Dweck: Students who are mastery-oriented think about learning, not about proving how smart they are. When they experience a setback, they focus on effort and strategies instead of worrying that they are incompetent.

This leads directly to what teachers can do to help students become more master-oriented: Teachers should focus on students' efforts and not on their abilities. When students succeed, teachers should praise their efforts or their strategies, not their intelligence. (Contrary to popular opinion, praising intelligence backfires by making students overly concerned with how smart they are and overly vulnerable to failure.)

When students fail, teachers should also give feedback about effort or strategies -- what the student did wrong and what he or she could do now. We have shown that this is a key ingredient in creating mastery-oriented students.

In other words, teachers should help students value effort. Too many students think effort is only for the inept. Yet sustained effort over time is the key to outstanding achievement.

In a related vein, teachers should teach students to relish a challenge. Rather than praising students for doing well on easy tasks, they should convey that doing easy tasks is a waste of time. They should transmit the joy of confronting a challenge and of struggling to find strategies that work.

Finally, teachers can help students focus on and value learning. Too many students are hung up on grades and on proving their worth through grades. Grades are important, but learning is more important.

EW: In your latest book, *Self-Theories: Their Role in Motivation, Personality, and Development*, you share the story of a conversation you overheard between two college students, Charles and Bob. Could you share that story with Education World's readers?

Dweck: Charles and Bob were two college students on a bus who were discussing their school experiences and their plans for the future (while I listened attentively). They both had struggled through an exceedingly difficult computer science course. One had to take it twice before he earned a decent grade. Yet they were seriously discussing whether to major in computer science! And for them the decision rested on whether they wanted to pursue something that required so much effort. The question of "ability" never entered into their discussion. Not once did either of them entertain the

idea that he might not be good at computer science. For them, it was simply a matter of what they were willing to put into it.

Charles and Bob were very different from how I had been at their age. Had I needed two attempts to master a course, I would not have aired this fact in public. Nor would I have remotely considered pursuing that course of study in the future. I greatly admired Charles and Bob for their mastery-oriented qualities, and had no doubt that if they went into computer science, they would do what it took to succeed.

EW: Learning goals were obviously more important to Charles and Bob than grades and test results (performance goals) were. Are Charles and Bob typical of most college students you meet? Or do more students seem to be performance goal-oriented? Is either of those groups of students better off?

Dweck: It's true that Charles and Bob were very learning-oriented and seemed not to be too concerned with their grade point averages. We find that many students value learning above grades. They tell us directly that it is more important to them to learn and be challenged than it is to earn the best grades. Many other students, however, tell us the reverse. They care far more about their grades than they do about learning anything or being challenged.

To my mind, it's the balance that counts -- keeping a balance between valuing learning and performance. Let's face it, grades often matter a lot, and many students who want to go on to top graduate and professional schools need good grades. Problems arise when students come to care so much about their performance that they sacrifice important learning opportunities and limit their intellectual growth.

Problems also arise when students equate their grades with their intelligence or their worth. This can be very damaging, for when they hit difficulty, they may quickly feel inadequate, become discouraged and lose their ability or their desire to perform well in that area.

For me the best mix is a combination of (a) valuing learning and challenge and (b) valuing grades but seeing them as merely an index of your current performance, not a sign of your intelligence or worth.

EW: Some students see intelligence as a fixed characteristic; it is a quality that people are born with and little can be done to change it. Others hold a more changeable view of intelligence; they think most anyone can learn new things and "stretch" their intelligence. Clearly, it seems that students with a

changeable view of intelligence might fare better when faced with a learning challenge. But can anything be done to change those students who have a fixed view of their intelligence so that they might do better when facing a challenging learning task?

Dweck: You're right. Students who believe that intelligence is a potential that they can develop do fare better when faced with challenge. For example, they often blossom across a challenging school transition when their fellow students with the fixed view are busy doubting themselves and losing their edge.

We have found with students of all ages, from early grade school through college, that the changeable view can be taught. Students can be taught that their intellectual skills are things that can be cultivated -- through their hard work, reading, education, confronting of challenges, etc. When they are taught this, they seem naturally to become more eager for challenges, harder working, and more able to cope with obstacles. Researchers (for example, Joshua Aronson of the University of Texas) have even shown that college students' grade point averages go up when they are taught that intelligence can be developed.

It is interesting to me that these beliefs about intelligence seem to be fairly stable individual differences when left to themselves. But they also can be changed fairly readily when students are confronted with the alternative view in an explicit and compelling way.

EW: Can a classroom that is very performance-oriented succeed in developing learners who willingly face new learning challenges?

Dweck: A classroom that teaches students to equate their intelligence and their worth with their performance will, in general, stifle the desire to learn and will make students afraid of challenges. After all, the next challenge may show you up and lead you to be branded as less intelligent or less worthy.

When I was in sixth grade, my teacher seemed to equate our worth with our IQ scores. We were seated around the room in IQ order. If you didn't have a high IQ, she wouldn't let you clean the blackboard erasers, carry the flag in the assembly, or carry a note to the principal. She let us know that in her mind, a high IQ reflected not only basic intelligence but also character. The lower-IQ students felt terrible, and the higher IQ-students lived in fear that

they would take another IQ test and lose their status. It was not an atmosphere that fostered love of learning and challenge.

However, this doesn't mean that a classroom that stresses performance can't also stress the importance of facing learning challenges. First and foremost, it must be made clear to students that their performance reflects their current skills and efforts, not their intelligence or worth. In this case, if students are disappointed in their performance, there is a clear and constructive implication: Work harder, avail yourself of more learning opportunities, learn how to study better, ask the teacher for more help, and so on.

Students who are taught that their performance simply measures their current skills can still relish learning challenges, for mistakes and setbacks should not be undermining.

By the way, this stance characterizes many top athletes. They are *very* performance-oriented during a game or match. However, they do not see a negative outcome as reflecting their underlying skills or potential to learn. Moreover, in between games they are very learning-oriented. They review tapes of their past game, trying to learn from their mistakes, they talk to their coaches about how to improve, and they work ceaselessly on new skills.

EW: Based on that story, it would seem that our nation's current emphasis on testing might contradict the goal of developing students who are excited about learning and who will go on to be lifelong learners.

Dweck: I think that undue emphasis on testing can be harmful if it conveys to students that the whole point of school is to do well on these tests and if it conveys to them that how well they do on these tests sums up their intelligence or their worth as a student.

The same tests might not be so harmful if they were simply seen by educators and students as assessing students' skills at that point in time and as indicating what skills students need to work on in the future. In this case, the tests needn't dampen students' excitement about learning.

The current zeal for higher standards and more testing follows a period in which many educators believed that giving students lots of successes would boost their self-esteem and love of learning. This did not work. Instead students became used to low effort and became uninterested in challenges. Their self-esteem did not rise. So, many educators are clamoring to forget about self-esteem and return to the good old days of high standards, with the

risk of widespread failure. What's the answer? Are these the only two alternatives?

There is another alternative, one that addresses students' achievement *and* their self-esteem: Teaching students to value hard work, learning, and challenges; teaching them how to cope with disappointing performance by planning for new strategies and more effort; and providing them with the study skills that will put them more in charge of their own learning. In this way, educators can be highly demanding of students but not run the risk that large numbers of students will be labeled as failures.

EW: Why is it that many students who succeed throughout their elementary school years suddenly seem to fall apart when they get to junior high or middle school?

Dweck: Many students look fine when things are easy and all is going well. But many students, even very bright ones, are not equipped to deal with challenges. When they hit more difficult work, as they often do when they get to junior high school or middle school, they begin to doubt their intelligence, they withdraw their effort, and their performance suffers. We have seen this happen to students who were top students in grade school -- they seem to lose their confidence, their liking for school, and their determination to do well.

Why is this? I have found through my research that these students hold a certain belief that undermines them at this crucial point. They believe that intelligence is a fixed trait -- that some people have it and others don't -- and that their intelligence is reflected in their performance.

Basically, these are students who thought they were really smart in grade school, when they were doing well, but now they are frightened that they are not. They are scared that the difficulty they are experiencing means that they are in fact dumb. Furthermore, they are worried that if they try hard and still do poorly, they will really prove they're dumb. So instead of digging in and doing what it takes to succeed, they start withdrawing from school and devaluing academics.

The students who blossom at this time are the ones who believe that intellectual skills are things they can develop. They see the more difficult schoolwork as a challenge to be mastered through hard work, and they are determined to do what it takes to meet these new challenges.

EW: In your research, have you seen a distinct correlation between a student's history of success and his or her ability to face future challenges?

Dweck: This is really fascinating. You might expect a correlation between a history of success and the ability to face challenges. You might think that students who had a history of success would be the ones who loved challenges and had the ability to face them constructively. After all, shouldn't past successes boost their confidence in their abilities and give them what it takes to confront difficulty?

But in fact, there is no relation between a history of success and seeking or coping with challenges. This is one of the great surprises in my research, and it goes to show that the ability to face challenges is not about your actual skills; it's about the mind-set you bring to a challenge.

Some students, even some very successful ones, feel threatened by challenge, believe that mistakes mean you're not smart, and wilt when things become difficult. They stop enjoying the task, and they stop doing well on it. Other students, even many who have not done particularly well in an area, love challenge. They see it as an opportunity to learn, they view mistakes as valuable information, and they really rev up when things get difficult.

EW: Most educators want to help students see themselves as "smart." They praise students' intelligence because they believe that helping them feel smart will help them achieve their potential. But are there different or better messages educators could be sending them?

Dweck: I was aware of the widespread belief that praising students' intelligence would help them feel smart and fulfill their potential. Yet, I had years of research showing that students who were vulnerable (who had fragile self-esteem and motivation) were the ones who were obsessed with their intelligence. They worried about it all the time: Will this task make me look smart? Will that task show I'm dumb? So it struck us that praising intelligence could actually do harm by putting the spotlight on intelligence and conveying to students that this important quality can be measured from their performance.

We set out to test this in our research. Claudia Mueller and I conducted six studies, all with powerful results. In these studies, later grade school students worked on a task, succeeded nicely on the first set of problems, and received praise. Some received praise for their intelligence, and others received praise for their effort. It turned out that praising students' intelligence, even after

truly admirable performance, made them feel good in the short run, but it had many, many negative effects. In contrast, praising students' effort had many positive effects.

First, when students were praised for their intelligence, they became so invested in looking smart that they became afraid of challenge. Most of them preferred a sure-fire success over a challenging opportunity to learn something important. When students were praised for their effort, 90 percent of them wanted the challenging learning opportunity.

Second, when students then experienced a second, difficult set of problems, those who had been praised for their intelligence now told us they felt dumb. In other words, if the success meant they were smart, the failure meant to them that they were dumb. Any self-esteem that had been promoted by the praise was very, very fragile.

In contrast, the students who had been praised for their effort saw the setback not as a condemnation of their intellect, but as simply a signal for more effort. They realized that a harder task means harder work.

Third, the students who were praised for their intelligence told us that they no longer enjoyed the task, and no longer wished to take problems home to practice. A feeling of failure made them turn away from a chance to practice their skills and improve. In contrast, the ones who were praised for their effort enjoyed the task just as much as before and were just as eager to take problems home to practice. In fact, some of them liked the task even better when it got hard and were more determined to master it.

Fourth, we gave the students a third set of problems, similar to the first set (the one on which they had succeeded). How did they do on these problems? The students who were praised for their intelligence now did significantly worse than they had initially, whereas the students who were praised for their effort did significantly better than they had done before. This means that two groups of students, who had started off with similar performance, were now very far apart.

And finally, when given a chance to write to a student in another school about the task, 40 percent of the students who received intelligence praise lied about their score. They revised it upward. Very few effort-praised students did so. This suggests that when students are praised for their intelligence, they become so over-identified with their performance, so

personally humiliated by setbacks, that they can't tell the truth even to an anonymous peer they will never meet.

In short, intelligence praise made students feel good in the moment, but it made them afraid of challenge and unable to cope with setbacks. Effort praise seemed to give students a more hardy sense of themselves as learners, a more healthy desire for challenge, and the skills to cope effectively with setbacks.

What does this mean? Does it mean we shouldn't praise our students? By no means. We should praise all we want to, but we should praise the right things. We should praise the process (the effort, the strategies, the ideas, what went into the work), not the person.

EW: If praising for intelligence can be a negative thing, what about labeling kids as "gifted"? Could that do more harm than good?

Dweck: Labeling kids as gifted can sometimes do more harm than good. The label "gifted" implies that you have received some magical quality (the gift) that makes you special and more worthy than others. Some students are in danger of getting hung up on this label. They may become so concerned with deserving the label and so worried about losing it that they may lose their love of challenge and learning. They may begin to prefer only things they can do easily and perfectly, thus limiting their intellectual growth.

Psychologists who study creative geniuses point out that the single most important factor in creative achievement is willingness to put in tremendous amounts of effort and to sustain this effort in the face of obstacles. It would be a tragedy if by labeling students as gifted, we limited their creative contributions.

However, we can prevent this by making clear to students that "gifted" simply means that if they work hard and keep on learning and stretching themselves, they will be capable of noteworthy accomplishments. Of course, that is true of many, many people.

EW: IQ scores are a way of measuring students' skills. But are they a reliable measure of students' real abilities and potential?

Dweck: IQ tests can measure current skills, but nothing can measure someone's potential. It is impossible to tell what people are capable of in the future if they catch fire and apply themselves. I will never forget a story I read in *The New York Times*. It told of a Nobel Prize-winning scientist who,

later in life, got hold of his school records and saw his IQ score. According to him, it was not high. He freely admitted that had he seen this score earlier, he would not have tried to become a scientist and he would never have tried to make path-breaking discoveries.

Research on creative geniuses shows that many of them seemed like fairly ordinary children. Yet at some point, they became obsessed with something and pursued it avidly over a long period of time, leading to unique and amazing contributions. Many of these contributions could not have been predicted by IQ scores.

EW: Some of your research seems to indicate that girls get more praise early in their schooling than boys do. During the early years, boys tend to be lectured more about paying attention and making more effort. Could it be that this dichotomy sets boys up with some valuable lessons and skills?

Dweck: Yes, boys have a much worse time than girls in grade school, but ironically, this may result in their learning some valuable lessons. They get a lot of messages about the importance of effort, which serve them well later. They also learn that criticism isn't the end of the world.

Girls, according to most teachers, are much more wonderful students in the early school years. So they are not lectured about effort, and they do not receive that much criticism. Unfortunately, they do not learn the lesson that mistakes carry a message about effort, and they often believe that mistakes or criticism tell them they have low ability. This may not hamper them in grade school where the challenges are often not great, but it can hamper them later when school becomes more difficult. In fact, this tendency to see mistakes as a measure of your abilities may be one reason many bright girls remain afraid of math and science and withdraw from them even when they have exceptional ability in those areas.

EW: Is self-esteem something that teachers can or should "give" to students?

Dweck: For the most part, self-esteem is not something teachers can hand to students. Many teachers believe that if they praise students' intelligence, they can give their students high self-esteem. My work shows this is not true. I certainly think it is important for teachers to show students respect and give them a sense they are cared for, but apart from that, the best thing teachers can do for students is to put them in charge of their own self-esteem. This is

by teaching students how to love challenges and learning and how to cope with and capitalize on setbacks.

When students learn to thrive on difficulty and get a charge from mastering new skills, they can boost their own self-esteem in constructive ways throughout their lives.

EW: In all your years of research, what findings have intrigued you the most?

Dweck: What has intrigued me most in my 30 years of research is the power of motivation. Motivation is often more important than your initial ability in determining whether you succeed in the long run. In fact [as I mentioned earlier], many creative geniuses were not born that way. They were often fairly ordinary people who became extraordinarily motivated.

By motivation, I mean not only the desire to achieve but also the love of learning, the love of challenge, and the ability to thrive on obstacles. These are the greatest gifts we can give our students.

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