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The Nature of Prescriptive Feedback (Part 2)

Carol S. Dweck, Ph.D. • October 2007

Topic: Encouraging Girls in Math and Science
Practice: Prescriptive Feedback

Highlights

- It is important that teachers not tell girls how smart or talented they are—they instead need to teach them how to address challenges and obstacles. "Mistakes are our friend."
- When a student does not perform well on a test, focus on the student's strategies and processes as a way to improve.
- When a student does perform well, do not over-praise—the student should feel that hard work and learning are the keys to ability.
- Train students to be able to receive feedback as a tool for learning.

About the Interviewee

Carol S. Dweck, Ph.D., is a leading researcher in the field of motivation and is the Lewis and Virginia Eaton Professor of Psychology at Stanford. Her research has focused on why students succeed and how to foster their success. More specifically, her work has delineated the role of mindsets in students' motivation and has illuminated how praise for intelligence can undermine motivation and learning.

She has held professorships at Columbia and Harvard Universities, has lectured all over the world, and has been elected to the American Academy of Arts and Sciences. Her work has been prominently featured in such publications as *The New Yorker, Time, The New York Times, The Wall Street Journal, The Washington Post,* and *The Boston Globe,* and she has appeared on *Today, Good Morning America,* and *20/20.* Her recent book *Mindset* (published by Random House) has been widely acclaimed.

Full Transcript

I think it's particularly important for teachers to know they cannot give girls the gift of confidence by telling them how smart or talented they are. They have to teach them how to engage in a process that will allow them to address challenges, to remain resilient in the face of obstacles and to acquire math skills. I'm afraid that, by teachers' earnest desires to give girls confidence, they have been praising them for their abilities too much. And more and more research is showing, you must praise the process.

Here are some ways to do it. You say, suppose a girl worked hard and didn't do well, you say, "Let's look a the strategies you used. Let's look at the ways that you've studied. Let's look at your mistakes. We can learn a lot from those things." So it's like, "Let's work together on the process and together we can build your math skills."

What if a girl got an "A" on something and didn't work hard? "Well, I'm sorry I cheated you with that task. It was too easy for you. Let's work on something hard that you can learn from." Because too often, a girl will think—or anyone will think, "Oh an easy 'A', that really means ability." But what you really want them to think is hard work and learning, that's what ability is about. Praising effort, praising concentration, praising strategies.

But I also think you need to get students used to being critiqued and taking feedback as something helpful. Early on in my research one little student said, "Mistakes are our friend." And I think that students have to really learn that and take it to heart. Mistakes are our friend. Struggle is good. A teacher can say, "Who had a great struggle today? Who wants to share their struggle?" And be really proud of that student for struggling. "Who has a fabulous mistake that we can all learn from? That's a great mistake." So it puts the premium on struggling, confronting difficulty, learning and not on being effortlessly smart.

Often a girl will say, "I'm not good at math or I'm not good a geometry. I'll never be good at that." And the teacher needs to say, "Nobody is born with geometry. We build up the connections in our brain. We build up the knowledge of geometry by practicing and especially practicing things that don't come to us right away." Students often underestimate the trouble other students are having. So teachers need to say, "A lot

of students get confused at the beginning of geometry. They haven't built their geometry brain connections yet. That's normal. If we all take on the challenge, work hard, learn from our mistakes, we'll all be good at geometry by the end of the year."

It's very important to focus students on what they've done right, the steps that they've taken that have worked, and—in very matter of fact ways—the steps they have taken that haven't worked. and that they need to try another strategy for, or learn another strategy for. But teachers and coaches, too, now come to me and say, "Where are the teachable students? Where are the teachable athletes?" So many of them now think if you give them corrective feedback that you think they're not competent and they take it as a blow to their self esteem. So we need to train students to focus on the process and to want corrective feedback as a tool to learning.

Some teachers think, "Oh, it's too hard to give step by step feedback on what a student has done right or wrong." But that's what teaching is. It's not teaching to say, "That was great. You're smart." Even when it's sincere, it's not helpful information for a student. It hasn't told them how they got to their good result or what to do when they're struggling in the future. Does it mean suddenly they're not smart? Students must know that a step-by-step process leads to an outcome and that the process can go wrong. And they need to learn how to make that process right again.

So whether the teacher can fit it into the 45 minute lesson or whether the teacher has to give that feedback for homework assignments, it doesn't matter. That is how teaching and learning take place.