

# Developing Non-Cognitive Skills: A Math Teacher's Perspective

By Alison Wright

Last week, I gave a short 10-question quiz in my Algebra 2 class. Student A and Student B both received a score of 6/10. Student A looked at the paper, rolled her eyes, threw the quiz on the floor, and loudly complained that the assessment was unfair and "shouldn't count." Student B, on the other hand, read my comments, reworked the problems to find her mistakes, and then after class asked to set up an after-school meeting so we could go over the assessment together and discuss her study habits.

Both students made the same grade, but the way the students handled the situation is what sets them apart. Multiply this incident by how many classes the students take, by how many assessments they will have in each class, by how many years they are in school—the possible ramifications are staggering.

This scenario is troubling to me. What is my role as a teacher to help Student A improve her motivation, self-efficacy, and overall academic drive?

In an *EdWeek* blog post entitled [Non-Cognitive Skills: Bad Name, Really Important](#), Tom Vander Ark lists three conditions set forth by Turnaround CEO Dr. Pamela Cantor that must be present in a school setting to help students develop non-cognitive skills. They include teacher practice, student support, and leadership and management. Here is the recommendation specifically geared towards teachers: "Teachers must become proficient in pro-social classroom management and in high-level instructional strategies in order to proactively develop those non-cognitive attributes (motivation, goal directions, self efficacy) that students need to truly become college and career ready."

If you are like me, you might be somewhat daunted by this task. You might want to say to Dr. Cantor, "So, let me get this straight. I have to plan lessons, contact parents, create quality formative and summative assessments, give timely and appropriate feedback—and now you want me to do what?"

The key here, according to Dr. Cantor, is that non-cognitive skill development should be embedded *within* instruction, rather than *in addition* to it. For example, here are three things that I have pledged to implement in my classroom this year.

1. **Encourage wrong answers and model the learning process as a journey, rather than a destination.** One of the best examples that I have seen of a teacher doing this is Leah Alcalá's [Teaching Channel video "My Favorite No."](#) In her warm-up activity, she demonstrates to the class that wrong answers should be welcomed because of what they can teach us. Over the years, I have seen so many math students shut down because they are so afraid of having the wrong answer and "failing." In classrooms like Ms. Alcalá's, "failing" is not something the students are worried about, and because of that they are more adventurous and are taking control of their own learning.
2. **Incorporate cooperative learning opportunities as often as possible.** Many students thrive when working and learning from each other in small groups. Not only are students developing social skills necessary for teamwork but they are also constructing arguments and providing valuable feedback to each other in a non-threatening environment. I use the Math Design Collaborative's [formative assessment lessons](#) as often as possible in my Algebra 2 class because the group challenges in those lessons encourage students to grapple with the content and own the learning process.
3. **Consider different ways of assessing student learning.** Teachers across the country are coming up with new ways to provide feedback to students. A colleague of mine in North Carolina gives her students one of two grades on assessments: "A" or "Not yet." What if I had written "Not yet" on the top of each student's quiz, rather than assigning a point value? Would Student A have been more invested in her learning, more motivated to correct her answers rather than give up?

What are you doing this year to encourage non-cognitive skill development in your classroom?

Source: [http://blogs.edweek.org/teachers/teaching\\_ahead/2013/08/developing\\_non-cognitive\\_skills\\_a\\_math\\_teachers\\_perspective.html](http://blogs.edweek.org/teachers/teaching_ahead/2013/08/developing_non-cognitive_skills_a_math_teachers_perspective.html)