



**‘Critical Questions’ Series
February 2017**

If Something Isn’t Working, Do We Try Harder - Or Do Something Different?

A thoughtful colleague once posed that question at a staff meeting where tensions and emotions were running high about an issue we were grappling with. The reaction was immediate...stunned silence. I remember sitting there wondering, “What’s the right answer?” I went over the thoughts and actions that had led to that meeting and realized that we had been trying to solve a problem by doing the same things repeatedly with...unsurprisingly...the same result. At that point, the discussion took a turn for the better as we started brainstorming new ideas and strategies to solve our problem.

After 16 years of teaching grades 1-5, I became a Tier 3, middle school math teacher. That first week I looked out at my new students and saw them slouched down in their seats avoiding eye contact with me or looking back at me with boredom, challenge and even fear. I was going to have to do something different to grow their intelligence to understand the concepts and skills necessary to exit the class and change their fixed mindsets to growth mindsets. I guided my students to write mission statements like this: Use a math growth mindset to grow our math knowledge and skills so that we can exit this class and be successful in a regular math class, college, career and everyday life. I also significantly changed what I had my students learn and do in the first 2 weeks of school. The following are a few of the growth mindset learning activities I guided them through in the first few weeks:

- Learning the difference between a growth and fixed mindset
- Discussing how a growth mindset can foster success in math class and beyond
- Learning how the brain is like a muscle because it grows when it is exercised/challenged
- Connecting goal setting to practice and perseverance
- Defining/learning/strategizing about grit and overcoming obstacles
- Discussing what it means to be a “math person”
- Learning about the benefits of asking for help

Throughout the year, my students reflected on their mindset over the last unit of study and set growth mindset goals for the next. I posted growth mindset messages out in the hallway for them to see as they entered my classroom. Messages like: “What we think, or what we know, or what we believe is, in the end, of little consequence. The only consequence is WHAT WE DO”. I taught my paraeducators how to use growth mindset language with the students. I invited students to share their success “stories” so that others could learn from them.

Then our math department made the brilliant decision to read Mathematical Mindsets: Unleashing Students’ POTENTIAL through Creative Math, Inspiring Messages and INNOVATIVE TEACHING by

Jo Boaler as a book study...and I realized that there was so much more to fostering a math growth mindset! I know many of you are familiar with this research-based book that gives educators a proven, practical roadmap to mathematics success...but the question is will we now have the creativity and courage to do something different? Maybe a more important question would be, "Do we truly believe that ALL students can learn to high levels.?" And if we do, what are we willing to do differently to make that happen? Will we find a way to:

- Give ALL students access to the highest levels in math at school...stop ability grouping?
- Take the time to give students open/low floor-high ceiling math tasks that encourage the opportunity for important learning and making important connections so that students believe that math is a learning subject and NOT a performance subject?
- Teach math so that students appreciate the beauty of mathematics, explore how maths are connected and learn how to apply the subject?
- Teach in a way that shows students that math performance is NOT associated with speed...so they understand that the best mathematicians are slow at math because they are deep thinkers and want to make connections, think logically and apply the depth/breadth of mathematics to a variety of problems...so students understand that math is a creative, visual, connected and living subject to do great and everyday things?
- Not give up on one student...even if they have given up on themselves? Act like we know we are the dream-keepers?

I now pose that all-important question to my students every year on the first day of school. I give them a 3 X 5 index card and ask them to write the question on one side and their answer on the other. I guide a brief discussion about their thoughts and answers to the question, but when they ask me to tell them the right answer I reply not today. I give them a big, welcoming smile and tell them that we will find the answer together as a class. And we do. I purposefully look for every opportunity to ask that question again as individual students, collaborative groups and the whole class try to persist in solving a problem with an ineffective or inefficient strategy. I foster independence by posing that question initially instead of giving immediate scaffolding or support. They begin to understand that I am encouraging creativity and the courage to try something different. They begin to understand that there are many ways to solve problems...to change...to grow. I believe that we can change and grow as educators too. **Currently three fifths of U.S. students fail mathematics. My question to you is, "Do we try harder or do something different?"**

Amy Sperline
Instructional Coach/Mentor
Jefferson Elementary
Richland School District
amy.sperline@rsd.edu