

THIRD
EDITION

Mindsets

in the

Classroom



BUILDING A
GROWTH MINDSET
LEARNING COMMUNITY

MARY CAY RICCI

A **Prufrock Press** Book

ROUTLEDGE

Mindsets in the Classroom

The latest edition of *Mindsets in the Classroom* provides educators with ideas and strategies to build a growth mindset school culture, wherein students are challenged to change their thinking about their abilities and potential through resilience, perseverance, and a variety of strategies.

This updated edition contains content from the first and second edition, eliminates content that is no longer relevant, and adds a layer of learning that has occurred since the original publication: lessons learned through more recent brain research, implementation of the concept by educators across the world, as well as the author's own observations and reflections after working in schools, coaching educators, and talking with teachers, administrators, parents, and students about their own mindsets.

With this book's easy-to-follow advice, tasks, and strategies, teachers can grow a love of learning while facilitating the development of resilient, successful students.

Mary Cay Ricci is an education consultant and speaker. She was previously an elementary and middle school teacher and central office administrator in three large school districts. She holds certification in gifted and talented education and administration and supervision from Johns Hopkins University, where she was previously a faculty associate in the Graduate School of Education.

Mindsets in the Classroom

Building a Culture of Success and
Student Achievement in Schools

Third Edition



Mary Cay Ricci

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For my children—Christopher, Patrick, and Isabella. You continue to inspire me. May you always believe that with effort and perseverance you can do anything.

For my late parents—Joe and Mary Ellen Marchione.
Thank you for believing in me.

For Enio—Thank you for your support and patience.

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About the Author

Mary Cay Ricci is an education author, consultant, and keynote speaker. She is the author of the *New York Times* best-selling education book, *Mindsets in the Classroom: Building a Growth Mindset Learning Community* and its partner books, the 2016 Legacy Book Award winner, *Ready-to-Use Resources for Mindsets in the Classroom*, coauthor of *Mindsets for Parents: Strategies to Encourage Growth Mindset in Kids*, children's book, *Nothing You Can't Do! The Secret Power of Growth Mindsets*, and to round off the series, *Create a Growth Mindset School: An Administrators Guide to Leading a Growth Mindset Community*.

Mary Cay is a popular keynote speaker and enjoys working with school districts across the country. She was previously an elementary and middle school teacher, the Supervisor for Advanced and Enriched Instruction for Prince George's County Public Schools, MD; Coordinator of Advanced Academics for Baltimore County Public Schools; and an instructional specialist in the Division of Enriched and Accelerated Instruction for Montgomery County Public Schools, MD. Mary Cay holds a master's degree that includes certification in Gifted and Talented Education and Administration and Supervision from Johns Hopkins University, where she was previously a faculty associate in the Graduate School of Education. She completed her undergraduate degree in elementary education at Mercyhurst University. Mary Cay previously served on the CEC-TAG board of directors for eight years. Her greatest achievement, however, is her three children, Christopher, Patrick, and Isabella, from whom she has learned the most.



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CHAPTER 1

WHAT ARE MINDSETS, AND HOW DO THEY AFFECT THE CLASSROOM?

“Look at her paper—she’s the smart one!” It was the first month of school in a third-grade classroom, and I was visiting the students to see if they had any prior knowledge about the brain. This particular school had a 70% poverty/FARMS rate (Free and Reduced Meals), and the majority of students did not have English as their first language. As I circulated around the tables, I was observing a student writing copiously when I heard it: “Look at her paper—she’s the smart one!” This announcement proudly came from one of her classmates. When I assured him that he along with his classmates were all working hard on the assignment, he agreed, but again shared that this particular classmate would have the best paper.

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What I discovered in this classroom was a profound example of a fixed mindset at play—an eight-year-old child who believed that his classmate was the “smart one,” and that no matter the amount of hard work he put in, her work would always be better. That’s where this book comes in—to help the many teachers, administrators, coaches, parents, and students like the one in this scenario realize that they can change the way they think about success and intelligence in the classroom.

Since the original *Mindsets in the Classroom* book was published in 2013 and updated in 2018, we have learned more about the impact of mindsets on teaching and learning. This updated edition contains content from the first and second edition, eliminates content that is no longer relevant, and adds a layer of learning that has occurred since that time: lessons learned through more recent brain research, implementation of the concept by educators across the world, as well as my own observations and reflections after working in schools, coaching educators, and talking with teachers, administrators, parents, and students about their own mindsets. We will continually learn more about the impact of mindsets as we implement practices into educational settings. If you are already familiar with the concept of fixed and growth mindset, go ahead and skim or skip the first part of this chapter, as it provides an explanation of growth and fixed mindsets.

Can Intelligence Be Changed?

What Are Growth Mindsets and Fixed Mindsets? The belief that intelligence, talents, and skills are malleable and can be developed is not a new concept. However, the idea that intelligence can grow in both children and adults has seen more popularity in recent years thanks to the work of Stanford University professor of psychology, Dr. Carol Dweck, and her 2006 book, *Mindset: The New Psychology of Success*. Dweck’s research and development of the fixed and growth mindset theory has contributed to a major shift in thinking about many aspects of life. I have taken her research and applied it more specifically to teaching and learning.



How Mindsets Affect the Classroom

Dweck (2006) described a belief system that asserts that intelligence and talent are malleable and can be developed—she coined the term *growth mindset* to describe this belief system. Learners who employ growth mindset thinking believe that with perseverance, resiliency, and a variety of strategies, they can learn and improve. There might be some struggle and failure along the way, but they understand that with deliberate effort and perseverance, they can succeed. The focus of a growth mindset individual is on the process of learning and growing, not on looking smart or even the final outcome or grade. An educator with a growth mindset believes that with effort, hard work, and application of strategies from the learner, all students can demonstrate significant growth and therefore all students deserve challenging instructional opportunities. Add to this belief an effective teacher armed with instructional tools that differentiate, respond to learners’ needs, and nurture critical thinking processes, and you have a recipe for optimum student learning.

Growth mindset

a belief system that suggests that one’s intelligence and/or talents can be grown or developed with persistence, effort, and a focus on learning



Dweck also presents a different belief system about intelligence: the belief that intelligence, skills, and talents are something you are born with and the level of intelligence cannot be changed—a *fixed mindset*. A person who exhibits fixed mindset thinking might truly believe that they have a predetermined amount of intelligence, skills, or talents. This belief system is problematic at both ends of the continuum. For those students who struggle or do not perceive themselves as “smart,” it becomes a self-fulfilling prophecy. Because they don’t really believe that they can be successful, they will often give up and not put forth effort. For those students who are advanced learners, they can become consumed with “looking

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smart” at all costs. They may have coasted through school without really putting forth much effort, yet they are often praised for their good grades and strong skills. Often, an advanced learner with a fixed mindset will start avoiding situations where they may fail; they can become “risk-averse.”



Fixed mindset

a belief system that suggests that a person has a predetermined amount of intelligence, skills, or talents

Think for a minute about your own mindset. A mindset is a set of personal beliefs and is a way of thinking that influences your behavior and attitude toward yourself and others. An educator’s mindset directly influences how a child feels about themselves and how they view themselves as a learner. A child’s mindset directly affects how he or she faces academic challenges. A child who utilizes growth mindset thinking perseveres even in the face of difficulty. A child who engages in fixed mindset thinking may give up easily, lack resiliency, and not engage in the learning process.

A fixed or growth mindset can directly affect family dynamics as well. It is not surprising to note that parents also have a big impact on how children view themselves. They will often view their children through specific lenses: “Joseph was born knowing his math facts,” “Domenic has always asked good questions,” and “Catherine has always known how to interpret a piece of literature.” These are all examples of a fixed mindset, even though the statements sound positive. These statements describe who these children “are,” not the effort that they have put forth. As educators, think of some occasions when you have heard a parent describe her child in a way that rationalizes perceived weaknesses: “She is just like me; math was not my thing either” or “I can understand why he does not do well in reading; I never liked to read.” (Ideas and resources for helping parents embrace a growth mindset will be discussed in

Chapter 6, or readers can pick up *Mindsets for Parents: Strategies to Encourage Growth Mindsets in Kids* Ricci & Lee, 2024.)

Shifting Mindsets

Breaking down the belief that intelligence is pre-determined at birth can be a challenge, but with the proper groundwork, education, and some time to observe and reflect, a mindset can shift little by little. Expecting a shift in mindset immediately is not realistic; after all, some of us have had fixed mindset beliefs for most of our lives. Even after someone has had a self-proclaimed mindset shift, they will need to make a conscious effort to maintain that belief. I have studied this work since 2008, given hundreds of talks and presentations, and at times still find myself fighting internal fixed mindset thinking. The truth of the matter is that we all have an area (or two or three) in our lives where we tend to have a fixed mindset—those times when we say to ourselves, “I could never... (fill in the blank),” or “I am terrible at...” Take cooking, for example. Have you ever heard someone state that they are a terrible cook? I would argue that just about anyone can learn to cook basic dishes if they put in the time, effort, and practice into learning how—the question is, do they have the motivation to want to put in the time, effort, and practice in order to learn how to cook?

Even in areas where you have a growth mindset, a fixed mindset can have an elasticity that continually wants to spring back. For example, a twice-exceptional child (a “gifted” student with learning challenges) called to share a college schedule with his mother who also happened to be an educator. The parent had a mindset “shift” several years ago and had proudly told me all she did to encourage a growth mindset culture within their home. The schedule her son shared involved 8 a.m. classes and a course roster that included macroeconomics, international business, accounting, analysis of media, and management. His mother noted that the fixed mindset mentality buried within her wanted to scream, “Are you crazy? You are setting yourself up for failure!” Instead, she responded, “It sounds like a challenging schedule, and I know that with continued effort,

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you will be able to manage it.” Believing that all children can, with effort, perseverance, and a good set of strategies, succeed is the heart of this belief.

Brain-Based Research

One of the reasons for this shift in thinking about intelligence is due to the available technology that examines the function and makeup of the brain. Neuroscience has had a significant impact on teaching and learning. Brain research dismisses the notion that intelligence is “fixed” from birth. Both formal and informal studies demonstrate that the brain can develop with the proper stimulus. A big focus in neuroscience emphasizes the concept of neuroplasticity. Neuroplasticity is the ability of the brain to change, adapt, and “rewire” itself throughout our entire life. Anyone who has ever witnessed someone recovering from a brain injury or stroke has had a front-row seat to watching neuroplasticity. In the case of a stroke, for most patients, the brain begins the rewiring process almost immediately so that patients learn to speak and become mobile again. However, it often takes the hard work and effort put forth in occupational, physical, and speech therapy for stroke patients to make significant progress. Neuroplasticity works both ways; it creates new connections and weakens or eliminates connections that are not used very often. When neurons are eliminated, it is called synaptic pruning. Synaptic pruning is the process in which neurons that are not being used are eliminated to increase brain efficiency. This process mostly occurs between early childhood and puberty. However, newer research suggests that synaptic pruning can continue into a person’s late twenties.



Neuroplasticity

the ability of the brain to change, adapt, and “rewire” itself throughout our entire lifelife

We now know so much more about the neurological aspects of the brain that it cannot help but inform the way we approach learning and instruction. This understanding directly affects teachers' beliefs and expectations about student potential and achievement. It is when educators and children (as well as their parents) learn about the brain and all of its potential and when they witness the impact that it has on learning that mindsets can begin to shift (see Chapter 8 for ideas about teaching children about the brain).

Intelligence and Measuring Intelligence

Is it possible to increase your IQ? The University of Michigan partnered with the University of Bern to conduct a study that looked at the possibility of increasing IQ. This study (see Palmer, 2011) required participants to continually play a computerized memory game that involved remembering visual patterns. Each time a different pattern appeared, the participants heard a letter from the alphabet in their headphones. They were asked to respond when either the visual pattern on the screen or the letters they were hearing in their headphones were repeated. The time between the repeating of patterns and letters became longer as the game became more difficult. The researchers found that as the participants had practice and got better at the game, scores on IQ-style tests increased (Palmer, 2011).

This research, as well as other studies, contributes to the understanding of malleable intelligence, a key factor in growth mindset and a concept many educators struggle with. In general, educators do not have a lot of background in cognitive science. I asked several groups of educators the following question: "What do cognitive abilities tests/IQ tests measure?" Without exception, there was hesitancy in responding to the question; after giving sufficient wait time, a few responses were shared: "a child's capability," "how smart they are," and "their innate ability." What surprised me more than the inaccurate responses was the observation that so many of these teachers and administrators just could not answer the question. There are many times educators are in situations where data

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is shared about a student, and that data often includes cognitive scores from gifted and talented screening processes, special education screening processes, and/or IQ tests. Who knew so many educators really have no idea what these assessments actually measure?

Cognitive ability tests measure *developed* ability. Therefore, if a child has never had an opportunity to develop the kinds of reasoning processes that these assessments measure, the outcome of one of these assessments would not be meaningful. When parents and educators review these “intelligence” scores, assumptions may be made about the child, and beliefs may kick in that place limits on the child’s potential.

The Role of Potential and Hard Work

Potential. What a great word. It is all about possibilities. However, “potential” is often used in ways that can make me slightly uncomfortable. Think of the phrase, “He is not working to his full potential” or “We will help your child reach their full potential.” How does potential become “full”? Is it something that can be checked off on a report card? Potential can never be “full”; it is never-ending and our possibilities are infinite. As a person grows, learning and experiences become more sophisticated and challenging, growth continually occurs, and potential is never reached because it is impossible to reach. Perhaps many thought Michael Phelps reached his “full” potential after earning his 16th Olympic medal in 2008—a feat he went on to shatter at the 2012 Olympics when he won six more medals, and then won an additional six in 2016. Believing that intelligence, talent, skills, and, yes, even athletic ability can be developed encourages these endless possibilities.

We are all born with potential. However, we might have some innate strength or capacity in one or more specific areas. These strengths can manifest themselves in many ways. Strengths can be shown physically, creatively, socially, academically—the possibilities are endless. Some children are born with a greater degree of specific strengths compared to their peer group. For those children

with outstanding specific strengths, their strengths deserve to be further developed.

However, it is also important to consider that all children have the potential to work side-by-side or even surpass those with intrinsic abilities.

Many educators don't realize that approximately 75% of achievement is attributed to psychosocial skills (which some researchers refer to as noncognitive factors) and only approximately 25% of innate intelligence or IQ contributes to achievement (Olszewski-Kubilius, 2013). The cultivation of these skills is imperative, especially for those students who have not yet developed their abilities and/or talents. The skills that must be deliberately modeled, taught, and cultivated include, but are not limited to, perseverance, resiliency, optimism, comfort with intellectual tension/discourse, coping skills when faced with failure, and the ability to handle critique and constructive feedback (Olszewski-Kubilius, 2013).

Think about a student who has strong innate abilities—they learn quickly and give accurate responses in class. What if this student lacked perseverance and resiliency? As soon as things get challenging or they are not finding success easily, they disengage. It would not matter how strong their innate abilities are if they have not developed perseverance and resiliency; their achievement would suffer. The opposite is also true—think of a student whose innate abilities (according to a test) are “average” (a word I really don't like using, but one that works for illustrative purposes), but they show strength in perseverance and resiliency. This student can work side-by-side with those students whose innate abilities are stronger because they have the motivation and has developed important noncognitive skills in order to stick with and embrace challenge.

Think of a time that it took you a little longer to learn a new skill. It may have been something that required physical coordination, playing a musical instrument, using a new kind of technology, or learning a new instructional strategy. Then, once you learned this

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new skill, it became a strength for you. In fact, you surpassed many others who have had this skill for years. As an adult, you had the drive, motivation, and persistence to decide that reaching this goal was important to you. No one took away the opportunity to let you learn, no one told you it was “too hard” for you, and no one told you that this was “not the right group” for you. No one put up barriers to hinder your learning.

Yet, sometimes our education system does all of the above. Our school structures eliminate opportunities, communicate low expectations, and prematurely remove students from challenging environments. Many reasons exist for hampering student potential in this way; one major obstacle is how we judge both adults and children by the speed with which things are completed.

Our society has become one that values pace. The faster, the better. If we don't get our large, oat milk, extra hot, caramel latte in less than two minutes, then we are annoyed. If our Wi-Fi connection is not instant, then we grumble or click fast and furiously. If a driver in front of us is not going at a pace we agree with, then we use the horn or moan out loud. If an educator describes a bright child in his classroom or school, then we might hear him refer to the child as “quick” and those in the bottom reading group as “slow.”

We need to step back, take a breath, and realize that it is not about how fast students master learning. It is about the perseverance and effort that they put forth and the strategies that they utilize.

Growing School Communities That Embrace a Growth Mindset

Developing ways to establish a classroom or school community that promotes the belief that intelligence is malleable is the major goal of this book. The entire school staff—administrators, teachers, paraeducators, support staff—as well as parents must truly believe that all children can be successful. At the same time, children must also accept this belief system.

It is all about beliefs and expectations. One way that contributes greatly to both children and adults embracing this belief system is learning about the brain and all of its possibilities (again, see Chapter 8 for learning tasks that both children and adults can use to learn more about the brain). Neuroscience has grown by leaps and bounds in the last several years, and educating ourselves and our students about the brain has a huge impact on student effort and motivation.

Why Mindset Matters in Schools

Carol Dweck (2006) conducted a study of middle school math students in New York City. The students showed positive growth when they believed that intelligence is malleable and when they learned about their brains. Studies have shown that many students enter middle school with the belief that we are all born with a specific, set-in-stone intelligence level or a fixed mindset (Dweck, 2006). Similarly, it was shared with me that in one Washington, DC, suburban school working on changing its students' mindsets, it was determined through student feedback and interviews that more than 60% of the children entering grade 6 believed that they were born with specific academic strengths and weaknesses and that they could not change. *Based on this statistic, I asked myself, at what point do children really begin to believe this about themselves?*

This prompted me to undertake my own studies. I began collecting data in kindergarten classes. In the fall, kindergarten students were surveyed to capture their beliefs about intelligence. The following statements, which have been adapted from *Mindset Works* (www.mindsetworks.com), were used with students in grades K–3:

- Everyone can learn new things (growth mindset belief).
- Some kids are born smarter than others (fixed mindset belief).
- We can change how smart we are (growth mindset belief).

In all of the classrooms that I surveyed (classrooms made up of high-poverty, diverse students, as well as classrooms with students