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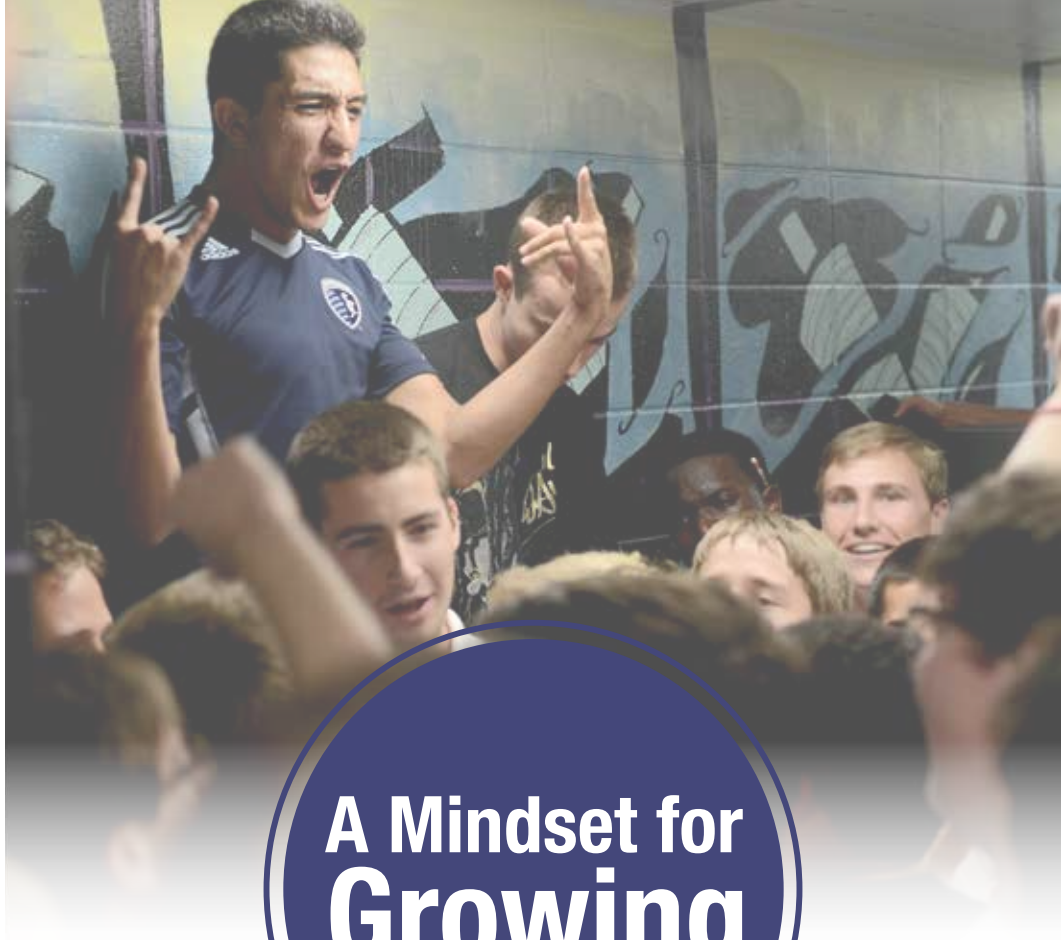


A Mindset for Growing

Train That Brain

Jostens®

A high school junior once told me about a transformative conversation she had with a teacher. Here's an edited excerpt from our exchange:

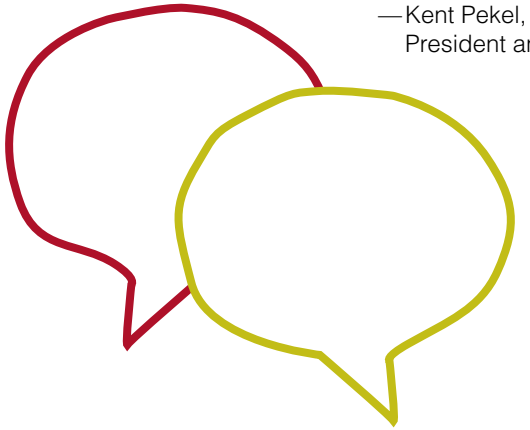
STUDENT: "I think I always felt like I was the dumb kid in my English class because even though I always took more difficult classes, for some reason I just struggled in English. But I talked to the teacher one day about it and she said, 'No, don't beat yourself up, you're actually just as good as the rest of the class.' I needed to hear that, I guess, and it really made me think about myself… Like, even if you think you're the dumb kid, you really aren't. It's all just perception. Some kids come off as super smart when really, they aren't any smarter than you."

ME: "Did that have a big impact on you when that teacher said that?"

STUDENT: "It did, actually. It really got me thinking like, 'Oh! Maybe I'm smarter than I think I am'."

In that exchange, that student began shifting from a fixed mindset to a growth mindset. Students who believe that "smart is what you work to become" are benefitting from a growth mindset. They are much more likely to work hard, learn from setbacks, and grow through the challenges they encounter. Those who believe "smart is what you are" are being limited by a fixed mindset. They are more likely to "coast" on their abilities or to give up based on the belief that they'll never get better.

Stanford psychologist Carol Dweck, a pioneer in mindset research, reminds us that "test scores and measures of achievement tell you where a student is, but they don't tell you where a student could end up." As teachers, we need to take the long view, seeking to cultivate the potential and learning in each and every student. Cultivating for ourselves and our students a growth mindset is the foundation of that commitment.



—Kent Pekel, Ed.D.
President and CEO, Search Institute

Dos and Don'ts for Cultivating Growth Mindsets

Do: Emphasize learning goals, which focus on what students will be able to do or understand as the result of completing a task.

Don't: Focus only on performance goals, such as getting a certain score on a test or a certain grade in a class. Some performance goals can be healthy, but they should not be the focus.

Do: Praise students for effort, for challenging themselves and for the methods they use to complete tasks and overcome obstacles.

Don't: Praise students for getting the right answer without trying hard or for completing a task quickly and without much effort. (Such as: "Wow! You did that quickly and you didn't even break a sweat. That's great!")

Do: Attribute success to working hard and using good strategies to accomplish goals and solve problems.

Don't: Describe certain students as "smart." Although innate ability matters, many people overestimate its importance, either in specific subjects or in general.

Do: Give opportunities for students to revise their work to correct mistakes and improve their work. Emphasize the revised work as much as the initial attempt.

Don't: Assume that if students don't get it right the first time, they won't do better the next time.

Do: Embrace mistakes. Mistakes are necessary to improve in anything. Sometimes students who get the right answers or get the skills quickly become even more afraid to make mistakes.

Don't: Reinforce students' self-criticism when they make errors; rather, recognize them for "sticking their neck out" to take a risk.

Do: Model learning from mistakes. Step back and highlight the mistake without alarm or embarrassment. Think out loud about the problem or ask the students to help you figure it out.

Don't: Maintain a fixed mindset about your own expertise or about students. When teachers do not see themselves or their students as having potential to grow and learn, it undermines growth mindsets in students.

Do: When you critique students' work, focus on giving feedback about the process uses. Say something like: "Maybe you could think of another way to do it," which encourages them to keep working on it.

Don't: Focus on the person when giving negative feedback. ("I'm very disappointed in you"). This reduces their desire to continue working on a task.

What Are Growth and Fixed Mindsets?

Many people view intelligence and ability as characteristics that are mostly fixed from birth and that don't change much over the course of a lifetime. However, the way that students think about their own intelligence affects the amount of effort they exert in school and in life, according to groundbreaking research by Stanford University's Carol Dweck. She contrasts "growth mindsets" with "fixed mindsets":

Fixed Mindsets

What are they?

> Students, teachers and parents believe there isn't much a person can do to increase her or his level of intelligence. Intelligence is static.

When people have these mindsets, they...

- See challenges or setbacks as confirming their lack of abilities. If it's hard, they must not be good enough.
- Respond with destructive thoughts (e.g., "I failed because I'm dumb"), feelings (e.g., anxious, incompetent), and behaviors (e.g., giving up).
- Worry about proving abilities rather than improving them.
- Are less likely to invest in improving the academic performance of students who struggle.

Growth Mindsets

What are they?

> Students, teachers and parents believe that it is always possible to increase intelligence with effort.

When people have these mindsets, they...

- See mistakes and failure as opportunities to learn and improve.
- Respond with constructive thoughts (e.g. "Maybe I need to change strategy."), feelings (e.g., the excitement of a challenge), and behaviors (e.g., persistence).
- Value learning and growth over looking smart and they see putting in effort as a virtue, not a sign of inability.
- Focus on long-term learning, not momentary setbacks.

In reality, each teacher, parent and student has a mixture of fixed mindsets and growth mindsets about different parts of themselves, including school subjects. (Many students have fixed mindsets about their ability to succeed in math, for example.) The opportunities lie in recognizing these aspects of each person in order to be more intentional about how to respond to challenges and new learning.

Why Growth Mindsets Matter

Students' mindsets have a strong association with many aspects of their learning and growth. Having growth mindsets:

- Can influence students' grades. Teaching students to have growth mindsets can significantly increase their grades and achievement test scores.
- Helps students continuously learn and improve, whereas those with fixed mindsets continue to struggle.
- Is particularly important for students who face stereotypes about their abilities. Having growth mindsets can keep them engaged and doing well, even in the face of stereotyping.

AN IMPORTANT CAVEAT:

Although mindsets matter, many students also face tremendous systemic obstacles and challenges to doing well, including poverty, discrimination and violence that undermine their safety, family stability and hope. Increasing students' individual abilities to have and strengthen a growth mindset does not lessen schools' or society's responsibility to address these fundamental challenges.

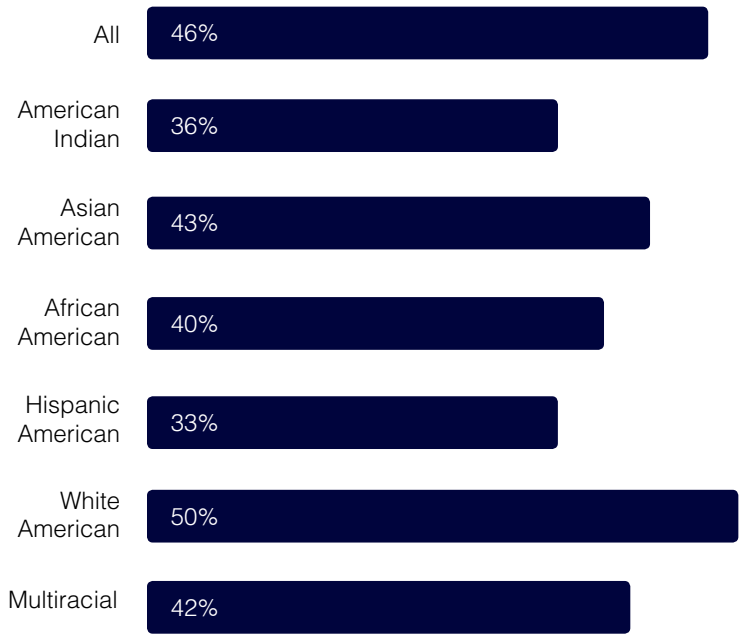
Self-Efficacy: Does What I Do Matter?

A critical part of growth mindsets is a belief that what we do will yield results that we want. If we don't believe we have the power to affect the outcomes, why bother? Students who believe they can influence their own situation (their personal power) can positively affect their motivation to learn, their academic achievement and aspirations and the career options they see for themselves. (If they believe they have personal power, they see more options and they invest in preparing themselves more for the future.)

Search Institute asked about 90,000 middle and high school students about their own sense of personal power, including whether they think they have control over things that happen to them and their ability to come up with other solutions when things don't go well.

As we would hope, this sense of personal power increases as students mature from 6th to 12th grade. (Among 6th graders, 39% report having personal power, compared to 54% among 12th graders.) However, students of color, who typically face greater social barriers or prejudice, are less likely to experience this sense of personal power.

The chart below represents the percentages of each group that report adequate levels of "personal power."



Teachers' Mindsets Matter, Too

How teachers think about intelligence can also influence students' mindsets and achievement. To document this connection, researchers measured teachers' mindsets at the beginning of the year and then monitored student achievement through the year. Some teachers had fixed mindsets, believing that they had no influence on their students' basic intellectual capabilities. Other teachers had growth mindsets, believing they could enhance their students' levels of intelligence.

How did this difference affect student achievement, particularly for those students who began the year as low achievers? When teachers with fixed mindsets taught these students, their achievement levels didn't change during the school year. However, when students with similar achievement levels were taught by teachers with a growth mindset, many became moderate or even high achievers.

Thus, it's not enough to cultivate growth mindsets in students. Educators who seek to help all young people develop growth mindsets and succeed in school also need to cultivate growth mindsets in themselves and then convey the benefits of a growth mindset to students through what they say and do in the classroom.

Self-Handicapping: A Feature of a Fixed Mindset

Sometimes students consciously or semi-consciously do things that reduce their chances of doing well, such as deciding not to study for a test, disrupting class or failing to turn in an assignment. This "self-handicapping" behavior is a particularly problematic part of a fixed mindset. Researchers have identified five forms of self-handicapping:

1. **Procrastination**
   Enables the student to blame putting off studying for poor performance rather than lack of knowledge or skill.
2. **Lost and eaten homework**
   Enables the student to blame disorganization or an animal for poor performance.
3. **Setting low goals**
   Enables the student to tell herself and others that she succeeded despite poor performance.
4. **External excuses**
   Enables the student to blame illness or a bothersome person for poor performance.
5. **Halfhearted effort**
   Enables the student to claim he would have done well had he tried harder.

Sometimes students self-sabotage to preserve self-esteem or social status. They may do it because they believe their effort won't make any difference because of forces beyond their control, such as experiencing bias because of their cultural background or income. "The teacher was never going to give me a good grade anyway," the student might say to himself or herself, "so I didn't even try."

When self-handicapping seems to be occurring, interventions that encourage a growth mindset may be particularly effective and important — especially when students' perceptions are validated and they are given opportunities to identify strategies to make good choices in the face of those biases.

Not All Goals Are Created Equal

The kinds of goals students have can either reinforce or undermine a growth mindset. Researchers highlight two kinds of goals:

- **Performance goals** focus on achieving measures of performance, such as earning a certain score on a test or a rank in a graduating class. These goals can motivate students in the short term, but they reinforce a fixed mindset.
- **Learning goals** focus on the mastery of knowledge and skills. Students who set learning goals focus on improving themselves, not just doing well. That attitude reinforces a growth mindset.

Although performance goals can motivate students to work hard to achieve valuable near-term objectives, learning goals are better predictors of long-term academic achievement. Why? Among other things, students who focus on learning goals tend to use more active learning techniques, such as asking questions, reviewing the material, and connecting new learning with prior learning. They also tend to take harder classes, even if doing so might result in a lower grade. The research points to the problem when students are motivated more by performance goals than by learning goals. The implication for schools is that if they put too much emphasis on performance (class rank, GPA, etc.) these can overshadow learning goals, which drives students to only value performance (earning the reward), not learning (more intrinsic). Further, this becomes de-motivating for students who struggle more, since they cannot see themselves performing well in comparison to stronger students.

Finally, focusing on performance goals can be particularly damaging for struggling students when they are asked to compete with stronger students to see who reaches the goal fastest or best. As a consequence, struggling students focus only on winning, not learning, and many struggling students give up altogether.

The Power of Praise and Criticism

The ways that students are praised and criticized play a significant role in how mindsets develop because they implicitly tell young people how they should think and act in the world. In addition, this feedback often happens while doing the activity, making it particularly salient. If young people are criticized and praised many times for the same reason, it amplifies or reinforces the message even more.

To understand the effect of praise, Stanford University researchers assigned some moderately difficult logic problems to groups of fifth-grade students. After working through the problems, children were randomly assigned to receive different types of praise for their efforts. After that, they were given a different set of problems to solve. Here's what the researchers found:

Group 1

Type of Praise:

Praise reinforced the idea that intelligence is set **(fixed mindset)**.

Example:

"That's a really high score. You must be very smart at these problems."

How they did on the next set of problems:

Solved 30% fewer problems than the first time and asked for only easy problems after that.

Group 2

Type of Praise:

Praise reinforced a **growth mindset**.

Example:

"That's a really high score. You must have worked hard at these problems."

How they did on the next set of problems:

Did better than the first time, and asked to do more challenging problems in the future.

Group 3

Type of Praise:

Praise acknowledged a good outcome but did not suggest what had caused that good outcome.

Example:

"That's a really high score."

How they did on the next set of problems:

Performed no better or worse than they did the first time.

Other studies show that criticism can be as or more influential than praise in fostering a growth or a fixed mindset. If criticism focuses on the person ("I'm very disappointed in you."), it reduces their desire to continue working on a task and quickly undermines self-confidence. If, however, the criticism focuses on the process that the child used to complete a task ("Maybe you could think of another way to do it."), they are more likely to keep going.

See the "Tips for Teachers: Praise Pointers to Encourage a Growth Mindset" section for specific examples of compliments that are more motivational for students.

CLASSROOM ACTIVITY: TRAIN THAT BRAIN!

Teaching students about brain's anatomy and functions introduces the key idea that intelligence can be increased with effort. It helps young people break out of the fixed mindsets in which they avoid failure and sometimes engage in destructive practices such as self-handicapping. This activity can fit naturally into several classes, including biology, psychology or other sciences.

Step 1

Post the "Train That Brain" poster and share the facts about neurons, areas of intelligence and the importance of challenging the brain.

Step 2

Watch the video from Khan Academy titled "How To Grow Your Brain," which is available at https://www.youtube.com/watch?v=WtKJrB5rOKs.

Step 3

After watching the video, ask students to think about when they did something long enough and hard enough to get really good at it. Talk about how students' brains probably changed as a result of all that practice.

Step 4

Since the brain is like a muscle, have students brainstorm what they can do to create a "fitness routine" for their brain, much like they might do if preparing for a big game or a race. For example:

- Set goals to make progress.
- Spend time practicing things that are hard.
- Ask other people to give you tips or coach you.
- Learn new techniques or strategies.
- Stay focused and avoid distractions.

Step 5

Post your class's list on the wall next to the poster as a reminder.

Additional Opportunities

Ask students to write a short letter to a real or imaginary younger student who is struggling and is hard on himself or herself. They should explain how the brain is like a muscle and that challenging the brain produces intelligence, and give examples from their lives (they could use the fitness routine activity to get ideas). The goal of the letter is to persuade the younger student to understand the importance of seeing things from a growth mindset. Writing the letter helps the writer internalize the growth mindset message. Be sure to read the students' letters and provide specific, positive feedback.

CLASSROOM ACTIVITY: FROM FIXED TO GROWTH MINDSETS

This activity helps students explore the difference between fixed mindsets and growth mindsets. It helps them think critically about the messages they receive (and tell themselves) so that they can be more intentional in reinforcing growth mindset messages, responding to failures and setbacks in ways that help them learn and grow.

Step 1

Make copies of the sheet with 16 statements included with the Renaissance Kit. (This can also be downloaded from JostensRenaissance.com/renkit on the March 2016 page.) You will need enough so that each group of two or three students can have one.

Step 2

Cut each sheet into 16 cards and keep it together as a set.

Step 3

Introduce the idea of fixed and growth mindsets to the class as different ways of viewing challenges. Explain that the two approaches can be seen as negative and positive, but the difference is more complicated than that in ways you will discuss later. Use the general examples on the next page or from the "Praise Pointers" handout if needed to help them understand.

Step 4

Divide the class into groups of two or three and give each group a set of 16 cards.

Step 5

Explain that this activity involves eight examples of someone feeling challenged, and each example includes two ways of looking at the challenge. First they should match up the eight pairs of perspectives and lay them out next to each other. Then the second step is to determine which statement shows the fixed mindset and which shows the growth mindset, and arrange the cards with fixed on the left and growth on the right. Give them plenty of time to discuss, and start with an example if they seem frustrated.

Step 6

As a class, go through the pairs and discuss which is the fixed and which is the growth example, and why. **General examples:**

People with **fixed** mindsets tend to...	People with **growth** mindsets tend to...
• Finish a task and focus on what went wrong.	• Finish a task and focus on what they achieved.
• See failures or mistakes as signs that they aren't good enough.	• See failures or mistakes as opportunities to grow and learn.
• Be perfectionists or they set really low expectations for themselves.	• Have high standards but keep a positive outlook when they don't reach them.
• Be self-critical and overly concerned about what others think.	• Be more self-motivated and have better decision-making abilities.

Additional Opportunities

- When students have a good understanding of the subject, have them complete the "Reframing Common Quotes and Clichés" worksheet, or explain it and write one saying on the board at a time and discuss as a class.
- Adapt these questions to address the specific subject matter in the classroom, tying the students' growth mindset statements to study habits and expectations for learning.

CLASSROOM ACTIVITY:
LESSONS LEARNED FROM LIFE MISTAKES

Helping young people reconsider the meaning of failure is an important aspect of helping them build growth mindsets. This activity puts a positive face on failure by having students interact with caring adults who describe the ways they learned from mistakes and failures that were initially painful but that ultimately led to valuable improvements.

Step 1

Gather the stories of people from diverse backgrounds to tell about lessons they've learned from failures or disappointment in their lives. You can do this in two ways:

1. Convene a panel of people from diverse backgrounds to talk with your school or class.
2. Assign students to interview someone about what they have learned from failures and setbacks in life, asking the questions below. Then have them write up the lessons they hear, and/or briefly share with the class.

Step 2

Use these questions to guide the conversations:

- Please tell us in detail about a time in your life when you made a mistake or failed at something. How did you feel during the experience?
- How did the experience make you feel about your abilities?
- What did others say or do after your mistake or failure? If you responded to them, what did you say?
- Did you learn any lessons from this mistake or failure?
- Did any other good things happen because of this mistake or failure?
- How do you try to approach mistakes and failure in your life today?

Step 3

After the stories have been shared, write this quote from writer Samuel Beckett on the board:

"Ever Tried. Ever Failed. No matter. Try again. Fail again. Fail better."

Have students talk about what they think it means to "fail better."

Step 4

Ask students to identify an area of their lives in which it might be good for them to "fail better." Have them think of one specific strategy they will try in the next week to get started.

Critical Thinking Questions

- The examples in the card activity make it seem like the difference between the fixed and growth mindset is similar to the difference between negative and positive framing. But there is more to it than that. Explain how the growth examples aren't just positive thinking, but are reframing the challenge.
- Think about the last time you faced a challenge that left you feeling frustrated. Was your reaction more like a fixed mindset or more like a growth mindset? How could you have thought about it with more of a growth mindset?
- What happens in school (with teachers and peers) that reinforces or encourages one mindset or the other?
- What happens at home that reinforces or encourages one mindset or the other?
- What are ways we can do more to focus on using our mistakes and failures as opportunities to grow and learn?