CAROL S. DWYER, Ph.D.

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**Fixed Mind-set**
Intelligence is static

- Leads to a desire to look smart and therefore a tendency to...

**Growth Mind-set**
Intelligence can be developed

- Leads to a desire to learn and therefore a tendency to...

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**CHALLENGES**

- Avoid challenges
  - Leads to a desire to look smart and therefore a tendency to...

- Embrace challenges
  - Leads to a desire to learn and therefore a tendency to...

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**OBSTACLES**

- Give up easily
  - Leads to a desire to look smart and therefore a tendency to...

- Persist in the face of setbacks
  - Leads to a desire to learn and therefore a tendency to...

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**EFFORT**

- See effort as fruitless or worse
  - Leads to a desire to look smart and therefore a tendency to...

- See effort as the path to mastery
  - Leads to a desire to learn and therefore a tendency to...

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**CRITICISM**

- Ignore useful negative feedback
  - Leads to a desire to look smart and therefore a tendency to...

- Learn from criticism
  - Leads to a desire to learn and therefore a tendency to...

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**SUCCESS OF OTHERS**

- Feel threatened by the success of others
  - Leads to a desire to look smart and therefore a tendency to...

- Find lessons and inspiration in the success of others
  - Leads to a desire to learn and therefore a tendency to...

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**As a result**, they may plateau early and achieve less than their full potential.

All this confirms a **deterministic view of the world.**

**As a result**, they reach ever-higher levels of achievement.

All this gives them a **greater sense of free will.**

GRAPHIC BY NIGEL HOLMES
Even Geniuses Work Hard

Let’s give students learning tasks that tell them, “You can be as smart as you want to be.”

We can all agree that meaningful schoolwork promotes students’ learning of academic content. But why stop there? I believe that meaningful work can also teach students to love challenges, to enjoy effort, to be resilient, and to value their own improvement. In other words, we can design and present learning tasks in a way that helps students develop a growth mindset, which leads to not just short-term achievement but also long-term success.

Why Foster a Growth Mindset?
During the past several decades, my colleagues and I have conducted research identifying two distinct ways in which individuals view intelligence and learning. Individuals with a fixed mindset believe that their intelligence is simply an inborn trait—they have a certain amount, and that’s that. In contrast, individuals with a growth mindset believe that they can develop their intelligence over time (Blackwell, Trzesniewski, & Dweck, 2007; Dweck, 1999, 2007).

These two mindsets lead to different school behaviors. For one thing, when students view intelligence as fixed, they tend to value looking smart above all else. They may sacrifice important opportunities to learn—even those that are important to their future academic success—if those opportunities require them to risk performing poorly or admitting deficiencies. Students with a growth mindset, on the other hand, view challenging work as an opportunity to learn and grow. I have seen students with a growth mindset meet difficult problems, ones they could not solve yet, with great relish. Instead of thinking they were failing (as the students with a fixed mindset did), they said things like "I love a challenge," "Mistakes are our friends," and "I was hoping this would be informative!"

Students with a fixed mindset do not like effort. They believe that if you have ability, everything should come naturally. They tell us that when they have to work hard, they feel dumb. Students with a growth mindset, in contrast, value effort; they realize that even geniuses have to work hard to develop their abilities and make their contributions.

Finally, students with a fixed mindset tend not to handle setbacks well. Because they believe that setbacks call their intelligence into question, they become discouraged or defensive when they don't succeed right away. They may quickly withdraw their effort, blame others, lie about their scores, or consider cheating. Students with a growth mindset are more likely to respond to initial obstacles by remaining involved, trying new strategies, and using all the resources at their disposal for learning.

Creating a Culture of Risk Taking
Teachers who strive to design challenging, meaningful learning tasks may find that their students respond differently depending on the students’ assumptions about intelligence. Students with a growth mindset may tackle such work with excitement, whereas students with a fixed mindset may feel threatened by learning tasks that require them to stretch or take risks.
To prepare students to benefit from meaningful work, therefore, teachers need to create a
growth-mindset culture in the classroom. One way to create such a culture is by providing the
right kinds of praise and encouragement. My research has shown that praising students for the
process they have engaged in—the effort they applied, the strategies they used, the choices
they made, the persistence they displayed, and so on—yields more long-term benefits than
telling them they are “smart” when they succeed.

Teachers should also emphasize that fast learning is not always the deepest and best learning
and that students who take longer sometimes understand things at a deeper level. Students can
learn about many historical figures who were not regarded as "fast" learners in childhood. Albert
Einstein swore that he was slow to learn and that's why he pondered the same questions year
after year—with, as we know, excellent results.

Some teachers teach their students about the different mindsets directly. Teachers may
illustrate the concept of the growth mindset by having their students write about, and share with
one another, something they used to be poor at and are now very good at.

In one class, for example, the students were astounded to learn that the school's baseball star
used to be inept at baseball and only became proficient after much practice. Such discussions
encourage students not to be ashamed to struggle with something before they are good at it.

Teachers can also ask their students to choose an area in which they would like to improve and
then to establish a personal goal that would be a big reach for them. For example, a student
who is typically afraid of criticism might decide to seek critical feedback on her next art project;
an algebra student struggling to understand absolute values might commit to watching a
YouTube video on how to solve linear absolute value equations, and then teach the process to
his classmates; a student who lacks physical confidence might join a sports team; or a shy
student might approach other students she would like to befriend. Students can share their
plans and even help one another enhance their skills and reach their goal.

Another strategy is to have students write a letter to a struggling student explaining the growth
mindset, telling the struggler not to label himself or herself, and giving the student advice on
improvement strategies to try.

Through such exercises, teachers are transmitting crucial information—telling students that
they view them all as having intelligence that they can choose to develop. The teachers are also
communicating that their role is not to judge who is smart and who is not, but to collaborate with
students to make everyone smarter.

Building a Growth Mindset
Within a classroom culture that supports a growth mindset, teachers can design meaningful
learning tasks and present them in a way that fosters students’ resilience and long-term
achievement.

Emphasize Challenge, Not “Success”
Meaningful learning tasks need to challenge every student in some way. It is crucial that no
student be able to coast to success time after time; this experience can create the fixed-mindset
belief that you are smart only if you can succeed without effort.
To prevent this, teachers can identify students who have easily mastered the material and design in-class assignments that include some problems or exercises that require these students to stretch. This way, the teacher will be close at hand to guide students if necessary and get them used to (and ultimately excited about) the challenging work. Some teachers have told me that after a while, students begin to select or create challenging tasks for themselves.

When presenting learning tasks to students, the teacher should portray challenges as fun and exciting, while portraying easy tasks as boring and less useful for the brain. When students initially struggle or make mistakes, the teacher should view this as an opportunity to teach students how to try different strategies if the first ones don't work—how to step back and think about what to try next, like a detective solving a mystery.

Suppose that a student has attempted a math problem but is now stuck. The teacher can say, "OK, let's solve this mystery!" and ask the student to show the strategies he or she has tried so far. As the student explains a strategy, the teacher can say, "That's an interesting strategy. Let's think about why it didn't work and whether it gives us some clues for a new path. What should we try next?"

When, perhaps with the teacher's guidance, the student finds a fruitful strategy, the teacher can say "Great! You tried different ways, you followed the clues, and you found a strategy that worked. You're just like Sherlock Holmes, the great detective. Are you ready to try another one?" In this way, the teacher can simultaneously gain insight into what the student does and does not understand and teach the student to struggle through knotty problems.

**Give a Sense of Progress**

Meaningful learning tasks give students a clear sense of progress leading to mastery. This means that students can see themselves doing tasks they couldn't do before and understanding concepts they couldn't understand before. Work that gives students a sense of improvement as a result of effort gives teachers an opportunity to praise students for their process. That is, teachers can point out that the students' efforts were what led to the progress and improvement over time.

Some teachers make students' progress explicit by giving pre-tests at the beginning of a unit that purposely cover material students do not know. When students compare their inevitably poor performance on these pre-tests with their improved performance on unit post-tests, they get used to the idea that, with application, they can become smarter.

Homework is an especially important component of an instructional program that enhances students' sense of learning and progress. Homework assignments should not feel like mindless, repetitive exercises; rather, they should present novel problems for students to solve, require them to apply what they've learned in new ways, or ask them to stretch to the next level.

For example, suppose that students are learning about the rise and fall of civilizations. Their homework assignment might be to apply their learning by designing a civilization that would either thrive (by building in positive factors) or implode (by building in risk factors). They can write the story of their civilization and what happened to it. Or suppose students were studying Shakespeare's sonnets. For homework, they could write a sonnet to the person or animal of their choice in the style of Shakespeare.
Grade for Growth
The way teachers evaluate their students' work can also help students develop a growth mindset. At one high school in Chicago, when students don't master a particular unit of study, they don't receive a failing grade—instead, they get a grade of Not Yet. Students are not ashamed of that grade because they know that they're expected to master the material, if not the first time, then the next time, or the next.

The word "yet" is valuable and should be used frequently in every classroom. Whenever students say they can't do something or are not good at something, the teacher should add, "yet." Whenever students say they don't like a certain subject, the teacher should say, "yet." This simple habit conveys the idea that ability and motivation are fluid.

Some teachers my colleagues and I work with tell us that they've shifted their grading system to consider more growth-mindset criteria, so that no student can coast to an A and students who struggle and improve get credit for their effort. One school bases one-fourth of each student's grade on growth-mindset factors, thus rewarding students who challenge themselves, are resilient in the face of difficulty, and show clear improvement over time. Other schools give a separate grade for challenge-seeking, effort, and resilience. Of course, for that grade to be effective (and not just a consolation prize), teachers need to have reinforced the value of these qualities daily throughout the school year.

What if a student puts in great effort but does not improve? The teacher needs to factor in the effort but then work with the student to figure out what the impasse was and how the student can break through that impasse.

Long-Term Success
Meaningful work not only promotes learning in the immediate situation, but also promotes a love of learning and resilience in the face of obstacles. This kind of meaningful work takes place in classrooms in which teachers praise the learning process rather than the students' ability, convey the joy of tackling challenging learning tasks, and highlight progress and effort. Students who are nurtured in such classrooms will have the values and tools that breed lifelong success.

References


Carol S. Dweck is the Lewis and Virginia Eaton Professor of Psychology at Stanford University and the author of Mindset: The New Psychology of Success (Random House, 2006); dweck@stanford.edu.
Growth Mindset Framing

In order to create a “risk-free” classroom environment where all students are willing to take on challenges and push themselves, it is important to make the focus on learning clear, make it safe to risk mistakes, and communicate a high confidence in all students’ ability to rise to the learning challenges. Use the following statements when introducing a new topic, concept, skill, or assignment in class:

For Communicating a Learning Goal

- New material is an opportunity to stretch!
- Today’s learning objective will give everyone an opportunity to stretch.
- Today, your brain will get stronger.
- I am hoping that you all do not know this already; I wouldn’t want to waste your time!
- I really want us to stretch beyond our comfort zone on this!
- After you do this, I’m going to ask everyone to share one mistake so we can learn from it.
- I’d like everyone to share one thing that is really confusing with their partner.
- The point of the lesson is learning; I want to know what parts are unclear so we can all meet our learning target.
- Today’s target for learning is ___. By tomorrow our goal is ___
- I do not expect you to know this already. I am here to help you learn challenging material.
- Today, I want you to challenge yourself. Stretch to learn this challenging material.
- This is very dense reading/challenging material. I am not going to hold you accountable for understanding all of it right away, but I want you to give it a first try.
- This is just the first draft—you’ll have lots of chance to improve it.
- I want you to push yourselves to tackle this concept.
- You won’t be graded on this—it’s a risk-free zone!
- We’re in the learning zone today. Mistakes are our friends!

For Communicating High Expectations

- I know that you (all) have the ability to do this, so I have set the bar high.
- This will be a challenging concept to learn, but all of us can reach the goal.
- Be sure to communicate with me about your progress so I can provide support to you.
- I am going to push you all because I know if I do you will all do amazing work!
- Our classroom is a place for everyone to learn challenging material. I am here to help you meet that goal.
- This is challenging, but rewarding!
- This may be difficult right now, but you will remember it for the rest of your life.
- When you master this learning, you can be proud because this isn’t easy.
- Here is my challenge for you. I know you can meet it. I want you to challenge yourself.
- As you learn this, mistakes are expected. Your mistakes help me support you. Let’s make mistakes together!
- I have seen you stretch and succeed in the past. Let’s do it again.
## Effective Effort Rubric

*This rubric assesses the learning process—the effective effort that a learner applies.*

<table>
<thead>
<tr>
<th></th>
<th>Fixed</th>
<th>Mixed</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Taking on Challenges</strong></td>
<td>You don’t really take on challenges on your own. You feel that challenges are to be avoided.</td>
<td>You might take on challenges when you have some previous experience with success in a related challenge.</td>
<td>You look forward to the next challenge and have long range plans for new challenges.</td>
</tr>
<tr>
<td><strong>Learning from Mistakes</strong></td>
<td>You see mistakes as failures, as proof that the task is beyond your reach. You may hide mistakes or lie about them.</td>
<td>You may accept mistakes as temporary setbacks, but lack strategies to apply what you learned from the mistakes in order to succeed.</td>
<td>You see mistakes as temporary setbacks, something to be overcome. You reflect about what you learned and apply that learning when revisiting the task.</td>
</tr>
<tr>
<td><strong>Accepting Feedback and criticism</strong></td>
<td>You feel threatened by feedback and may avoid it all together. Criticism and constructive feedback are seen as a reason to quit.</td>
<td>You may be motivated by feedback if it is not overly critical or threatening. Who is giving the feedback, the level of difficulty of the task, or their personal feelings might all be factors in your motivation.</td>
<td>You invite and are motivated by feedback and criticism. You apply new strategies as a result of feedback. You think of feedback as being a supportive element in the learning process.</td>
</tr>
<tr>
<td><strong>Practice and Applying Strategies</strong></td>
<td>You do not practice and avoid practicing when you can. You do not have any strategies for accomplishing the learning goals or tasks, or you apply ineffective strategies.</td>
<td>You practice, but a big setback can make you want to quit. You are more willing to practice things you are already considered “good at.” You are open to being given a strategy to meet a challenge, but you rarely apply your own strategies unless it is something you are already “good at.”</td>
<td>You enjoy the process of practicing and see it as part of the process of getting good at something. You may create your own practice or study plans. You fluidly use many strategies, think of some of your own strategies, and ask others about their strategies.</td>
</tr>
<tr>
<td><strong>Perseverance (focus on task)</strong></td>
<td>You have little persistence on learning goals and tasks. You give up at the first sign of struggle.</td>
<td>You may persevere with prompting and support. Unless you are provided strategies for overcoming obstacles, you will stop or give up.</td>
<td>You “stick to it” and have stamina for the task(s). You keep working confidently until the task is complete.</td>
</tr>
<tr>
<td><strong>Asking Questions</strong></td>
<td>You do not ask questions or do not know which questions to ask, but you can usually say you don’t “get it” if asked.</td>
<td>You might ask questions about a portion of the task that you feel you can do. If you perceive it to be out of your ability, you probably won’t ask questions.</td>
<td>You ask specific questions, ask questions about your own thinking, and challenge the text, the task, and the teacher.</td>
</tr>
<tr>
<td><strong>Taking Risks</strong></td>
<td>You do not take risks, and if something is too hard you turn in blank work or copied work, if anything at all. You are not engaged in the process/task.</td>
<td>You will take risks if the task is already fairly familiar to you. If not, you will resort to copying or turning in partially completed work.</td>
<td>You begin tasks confidently, risk making errors, and openly share the work you produce.</td>
</tr>
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Growth Mindset Feedback

As students begin to work on their learning objectives, growth minded language guides and motivates them to ensure that they remain **persistent, resilient, and focused** on the process of learning. It is important to give learners feedback about their progress and their results so they can specifically see their growth.

*Use these language frames when interacting with your students in the following situations.*

**When they struggle despite strong effort**

- OK, so you didn’t do as well as you wanted to. Let’s look at this as an opportunity to learn.
- What did you do to prepare for this? Is there anything you could do to prepare differently next time?
- You are not there/here *yet*.
- When you think you can’t do it, remind yourself that you can’t do it *yet*.
- I expect you to make some mistakes. It is the *kinds* of mistakes that you make along the way that tell me how to support you.
- Mistakes are welcome here!
- You might be struggling, but you are making progress. I can see your growth (in these places).
- Look at how much progress you made on this. Do you remember how much more challenging this was (yesterday/last week/last year)?
- Of course it’s tough – school is here to make our brains stronger!
- If it were easy you wouldn’t be learning anything!
- You can do it – it’s tough, but you can; let’s break it down into steps.
- Let’s stop here and return tomorrow with a fresher brain.
- I admire your persistence and I appreciate your hard work. It will pay off.

**When they struggle and need help with strategies**

- Let’s think about how to improve (the accuracy of) this section/paragraph/sentence/word choice/logic/description/problem/calculation.
- Let me add new information to help you solve this....
- Here are some strategies to figure this out.
- Describe your process for completing this task.
- Let’s do one together, out loud.
- Let’s practice (skill) so we can move it from our short-term to our long-term memory.
- Just try – we can always fix mistakes once I see where you are getting held up.
- Let me explain in another way with different words.
- What parts were difficult for you? Let’s look at them.
- Let’s ask ------ for advice—s/he may be able to explain/suggest some ideas/recommend some strategies.
- Let’s write a plan for practicing and/or learning.
- If you make ______changes, we can reassess your score. Let’s discuss a plan for you.
When they are making progress

- Hey that’s a tough problem/task/concept that you’ve been working on for a while. What strategies are you using?
- I can see a difference in this work compared to ___. You have really grown (in these areas).
- I see you using your strategies/tools/notes/etc. Keep it up!
- Hey! You were working on this for awhile and you didn’t quit!
- Your hard work is clearly evident in your process/project/essay/assignment.

When they succeed with strong effort

- I am so proud of the effort you put forth to/in/with ______.
- I am very proud of you for not giving up, and look what you have to show for it!
- Congratulations – you really used great strategies for studying, managing your time (behavior, etc.).
- I want you to remember for a moment how challenging this was when you began. Look at how far you have come!
- All that hard work and effort paid off!
- The next time you have a challenge like this, what will you do?
- What choices did you make that you think contributed to your success?
- It’s exciting to see the difference in your work now when I compare it to your earlier work.
- I can see you really enjoyed learning ____.

When they succeed easily without effort

- It’s great that you have that down. Now we need to find something a bit more challenging so you can grow.
- It looks like your skills weren’t really challenged by this assignment. Sorry for wasting your time!
- I don’t want you to be bored because you’re not challenging yourself.
- We need to raise the bar for you now.
- You’re ready for something more difficult.
- What skill would you like to work on next?
- What topic would you like to learn more about next?