

# Growth Mindsets: A Literature Review



Source: <http://wordsfrompropagate.com/2015/01/12/expression-of-2014-growth-mindset/>

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## Introduction

In the early 20<sup>th</sup> century Alfred Binet, the inventor of the IQ test, wrote:

*A few modern philosopher's assert that an individual's intelligence is a fixed quantity, a quantity which cannot be increased. We must protest and react against this brutal pessimism.... With practice, training, and above all, method, we manage to increase our attention, our memory, our judgment and literally to become more intelligent than we were before.*

Today, experts agree that success is not merely found in one's natural ability but rather in their continuous development of those abilities. Thanks to leaders in a variety of fields like Carol S Dweck, Gilbert Gottlieb, and Robert Stemberg, there is a growing literature as to the benefits to prescribing to a growth mindset.

Below, we will discuss what the difference is between a fixed mindset and a growth mindset and how that effects one's ability to learn and ultimately succeed.

## Defining Fixed and Growth Mindsets

"Benjamin Barber, an eminent sociologist, once said, 'I don't divide the world into the weak and the strong, or the successes and the failures... I divide the world into learners and nonlearners.'

Carol S Dweck, PhD is the leading researcher in the field of motivation and is the scholar behind "mindset." A mindset is a belief about oneself and one's basic qualities<sup>1</sup>. According to Dweck, there are two different types of mindsets – fixed and growth.<sup>23</sup>

A person who has a fixed mindset (entity theory of intelligence) believes that their qualities such as intelligence, creativity, and talent are predetermined and finite, fixed traits. These qualities, or so people with fixed mindsets believe, are so set that whatever you lack, you will continue to lack.

On the other hand, a person with a growth mindset (incremental theory of intelligence) believes that their basic abilities can continue to be developed through hard work and dedication. These innate qualities are just starting points with success being the fruit of effort, learning, and persistence.

In a school setting, fixed and growth mindsets manifest themselves differently<sup>4</sup>. For one, students who view intelligence as fixed, they value *looking* smart above all else and therefore will miss out on critical learning opportunities if it may result in them performing poorly or admitting deficiencies. Students with growth mindset meet difficult problems with great relish and value the effort put in. As Dweck wrote, "even geniuses have to work hard to develop their abilities and make their contributions."

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<sup>1</sup> Source: <http://www.mindsetonline.com/whatisit/themindsets/index.html>

<sup>2</sup> Dweck states in her book *Mindset* that 40% of people endorsing growth mindset, 40% the fixed, and the remainder are in the middle and can not make up their minds.

<sup>3</sup> Source: <http://www.mindsetonline.com/whatisit/about/index.html>

<sup>4</sup> Source: <http://www.ascd.org/publications/educational-leadership/sept10/vol68/num01/Even-Geniuses-Work-Hard.aspx>

## Studies on Mindsets

Dweck started her academic career at Yale where she studied the motivation of animals and the effects of “learned helplessness.” This work led her to contemplate, “what makes a really capable child give up in the face of failure, where other children may be motivated by the failure?”<sup>5</sup> This question became her PhD dissertation. To answer it, Dweck and her assistants ran an experiment on elementary school children with whom school personnel identified as helpless; students who became discouraged after failure and attributed these failures to lack of ability. Through a series of exercises, Dweck’s idea was supported, attributes were a key ingredient driving success.

Dweck expanded on this thought and eventually shifted attribution theory from an emphasis of attributional errors and biases to the consequences to *why* it matters what attributions people make. Over the next decades, Dweck continued her work. One of the studies conducted by Lisa Blackwell, Kali Trzesniewski, and Dweck<sup>6</sup> involved studying several hundred students in New York City. They measured the student’s mind-sets and monitored their grades to see how they coped with challenges. By end of the first term, despite similar math skills, the students jumped apart in grades. Blackweel et al observed that students with growth mind sets focused on learning, effort, and were resilient to challenges. On the other hand, students with fixed mind-set worried about *looking* smart and being *perfect*. They tended to avoid challenges, give up easily, ignore feedback, and be threatened by other’s success. Over the two year study, the achievement gap widened and it became evident - students with growth mind set significantly outperformed their counterparts who held fixed mindsets.

Based on those findings, the trio designed a workshop to teach students a growth mind set. In this study they divided the students with declining math skills into two groups: the control group would attend eight sessions of a workshop that taught study skills while the other half would be taught both study skills and receive training in the growth mind set. The latter learned that their brain was a muscle that could become stronger if used. This, they were told, would cause their brain to form new connections and, eventually, make them smarter overtime. The result was clear and the students who were subjected to the growth mind set workshop showed improvement in their grades. Even without knowing, the teachers noted an increased motivation to learn from the students who attended the growth mind set workshop.

Dweck’s mindset concept continues to be studied inside and outside of the classroom. Rheinberg, a research in Germany, measured teacher’s mind sets as their effect on students. He monitored the student’s achievements over the school year. He found that students who had a teacher with fixed mindsets, the belief that students had fixed intelligence and that they had no influence on their students’ intellectual skills, did not improve over the year. If they entered as low achievers, they remained low achievers. When teachers had a growth mindset their low achieving students improved their grades to become moderate or even high achievers. Rheinberg’s study shows that teachers that believe their students can learn, and are committed to finding a way to ensure they continue to do so, can influence not only test scores but overall attitudes towards learning.

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<sup>5</sup> Source: [https://alumni.stanford.edu/get/page/magazine/article/?article\\_id=32124](https://alumni.stanford.edu/get/page/magazine/article/?article_id=32124)

<sup>6</sup> Source: <https://web.stanford.edu/dept/psychology/cgi-bin/drupal/system/files/Implicit%20Theories%20of%20Intelligence%20Predict%20Achievement%20Across%20a%20Adolescent%20Transition.pdf>

Looking outside of the classroom, Dweck has taken her concept to collegiate sports<sup>7</sup>. At the beginning of the year, Dweck and colleagues asked athletes if they thought their coaches believed success came from natural talent or from practice and hard work. Over the year, Dweck noticed that athletes who thought their coaches believed in hard work over natural talent performed better. The athletes picked up on their coach's messages and acted on them.

Similar to what was seen on the field, in 1998 Dweck and Mueller<sup>8</sup> noted that there can be negative effects of praising student's intelligence as opposed to praising their effort. In this study Dweck and Mueller gave over 400 fifth graders a relatively easy test consisting of nonverbal puzzles. After the students finished the test, the researchers told the students their score and gave them a single line of praise. Half the students were praised on their intelligence, the other half on their effort. The students were then allowed to choose between two different subsequent tests – one more difficult than the other. Nearly 90% of the students that received praise for their effort choose the harder test.

Next, Dweck and Mueller test the students' fear of failure and gave the students yet another test that was designed to be extremely difficult. During this test, the students who received praise for their effort worked hard to figure out the puzzle while their counterparts got quickly discouraged. The study continued with the students been giving the option at either looking at the exams of students who performed better or worst. Once again, the students who received praise for their hard work were interested in the higher scoring exams; they wanted to see their mistakes and learn from their errors so that they may excel next time.

Lastly, Dweck and Mueller readministered the initial test. Students who were praised for their effort exhibited an improvement, raising their score by 30%. For students who were praised for their intelligence, they scored 20% lower their then their first time – the students regressed.

This study shows that when teachers use personal praise it puts students in a fixed mindset. In other words, when adults praise natural intelligence or skill over performance, they are sending a fixed mindset message. On the contrary, adults who praise effort or the strategies it took to achieve something, are building up students through a growth mindset. This taught students to learn from their mistakes and challenge themselves, essentially, the mindset to succeed.

Today, Dweck continues to study the effects growth mindset as on students and individuals. She has conducted studies on people's brain waves and the efforts of teaching a growth mindset. Through her software program called Brainology and other initiatives like PERTs, Dweck continues to explore the power of mindsets and the benefits to changing the way people view their natural talents, creativity, and intelligence.

## Benefits of a Growth Mindset

For students with a growth mindset, the possibilities are endless. Here are just some of the positive effects a growth mindset has had on students:

- Growth mindset training can increase test scores (Blackwell et al., 2007; Yeager and Dweck, 2012; Good, Aronson, & Inzlicht, 2003).<sup>9</sup>

<sup>7</sup> Source: <http://www.principals.org/Content.aspx?topic=61219>

<sup>8</sup> Source: [http://www.itari.in/categories/ability\\_to\\_learn/praise\\_for\\_intelligence\\_can\\_undermine\\_childrens.pdf](http://www.itari.in/categories/ability_to_learn/praise_for_intelligence_can_undermine_childrens.pdf)

<sup>9</sup> Source: <http://www.highpoint.edu/qep/files/2014/08/Growth-Mindset-White-Paper.pdf> (bullet points 1 -3)

- Growth mindedness causes students to use deeper learning strategies and to better recover from an initial poor grade (Grant and Dweck, 2003)
- Growth mindset intervention staged the summer before a students freshman year in college can increase the percentage of students earning 12+ credits during their first term (a strong predictor of on-time graduation) from 3-10% (Yeager et al., 2013).
- Teaching a growth mind-set seems to decrease or even close achievement gaps. When Black and Latino students adopt a growth mind-set, their grades and achievement test scores look more similar to those of their non-stereotyped peers. When female students adopt a growth mind-set, their grades and achievement test scores in mathematics become similar to those of their male classmates. In these studies, every group seemed to benefit from holding a growth mind-set, but the stereotyped groups gained the most (Aronson et al., 2002; Blackwell et al., 2007; Good et al., 2003).<sup>10</sup>

## Best Practices

Thanks to Dweck and collaborators work, there is a good understanding of the best practices for creating a growth mindset in individuals. On Dweck’s website, MindsetOnline.com, she lists out the 4 simple steps to change<sup>11</sup>:

- Step 1: Learn to hear your fixed mindset “voice.”
- Step 2: Recognize that you have a choice.
- Step 3: Talk back to it with a growth mindset voice.
- Step 4: Take the growth mindset action.

Echoed throughout many best practices, it is important that the educator has a growth mindset. As stated by The Origins Program, “teaching is most successful when the teacher believes in the capacity of all people to grow, and when the teacher cultivates in the students a belief in their own growth<sup>12</sup>.”

Dweck and Blackwell developed their own best practices to establishing a classroom as a growth mindset environment. They are as follows<sup>13</sup>:

1. Establish high expectations (not just standards). Challenge students so they know that they have the ability to meet those expectations.
2. Create a risk-tolerant learning zone. Provide an environment that values challenge-seeking, learning, and effort above perfection.
3. Give feedback focused on process – things students can control not their personal abilities. Avoid praising children for their intelligence and instead focus on explaining the importance of their actions towards success.
4. Introduce students to the concept of the malleable mind. Show students that our brains develop through effort and learning.

<sup>10</sup> Source: <http://www.principals.org/Content.aspx?topic=61219>

<sup>11</sup> Source: <http://mindsetonline.com/changeyourmindset/firststeps/>

<sup>12</sup> The Origin Program also includes other important mindsets for teachers to have such as “action mindset” and “objective mindset.” Source:

[http://www.originonline.org/sites/default/files/downloads/classroom\\_discipline\\_chapter2.pdf](http://www.originonline.org/sites/default/files/downloads/classroom_discipline_chapter2.pdf)

<sup>13</sup> Source:

[http://blogs.edweek.org/teachers/classroom\\_qa\\_with\\_larry\\_ferlazzo/2012/10/response\\_classroom\\_strategies\\_to\\_foster\\_a\\_growth\\_mindset.html](http://blogs.edweek.org/teachers/classroom_qa_with_larry_ferlazzo/2012/10/response_classroom_strategies_to_foster_a_growth_mindset.html)

However influencing a growth mindset does not just start and stop in the classroom. Maggie Wray, PhD utilized Dweck's book to create her own 4 things parents and educators can do to help teens change to a growth mindset<sup>14</sup>:

1. Praise them for their effort, not their results.
2. Avoid praising results that required little or no effort
3. Focus on what they can change about their approach in order to do better next time
4. Be a growth mindset role model

Organizations have taken on Dweck's mindset concept to help the kids in their programs. For example, Step It Up 2 Thrive has their own 3 tips to help youth shape their mindset<sup>15</sup>:

- Tip #1: Promote Effort & Learning
- Tip #2: Feed the Brain! Food, Sleep, Exercise, Challenge
- Tip #3: Focus!

Other tactics they use include<sup>16</sup>:

- Teaching youth about growth versus fixed mindsets through self-assessment and discussion.
- Discouraging labels (such as "smart" or "dumb") that convey intelligence as a fixed ability.
- Praising effort, strategies and progress, not intelligence or abilities.
- Presenting youth with opportunities to be challenged, conveying that challenging activities are fun, and that mistakes help them learn and improve.

## Concluding Thoughts

Through the research conducted by Dweck and her colleagues, the language surrounding education and intelligence has changed. It is understood that innate or natural ability does not translate into success. As written by Gregory Citotti, there are two ways in which talent matters 1) as a head start and 2) in edge cases where talent adds that little something extra.<sup>17</sup> However hard work is the major contributor to long-term success. In other words, a brain can be taught and can grow.

It is believed that 40% of people have a growth mindset, 40% have a fixed mindset, and the rest, well, are not too sure. Today, Dweck's mindset concept has been used in all facets of life way beyond the classroom. Corporations, sports teams, and even love advice<sup>18</sup> uses the concept of a growth mindset to improve their performance and situation. Even scholars outside of the field of psychology are looking to find the effects of mindsets on the brain and other aspects of life.

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<sup>14</sup> Source: <http://creatingpositivefutures.com/fixed-vs-growth-mindset/>

<sup>15</sup> Source: [http://www.stepitup2thrive.org/downloads/2-mindset/mindset\\_parent\\_brief.pdf](http://www.stepitup2thrive.org/downloads/2-mindset/mindset_parent_brief.pdf)

<sup>16</sup> Source: <http://stepitup2thrive.org/downloads/2-mindset/introduction/2.1-mindset-anchor-paper.pdf>

<sup>17</sup> Source: <http://www.sparringmind.com/growth-mindset/>

<sup>18</sup> Source: <http://www.brainpickings.org/2014/01/29/carol-dweck-mindset/>

Here are just some of the highlights discussed above<sup>19</sup>:

- *The plasticity of the brain*: ability and intelligence grow with effort and practice.
- *The importance of students' mindsets for learning*: when students believe that everybody's ability can grow, their achievement improves significantly.
- *The importance of teachers' mindsets for teaching*: when teachers believe that everybody's ability can grow, and they give all students opportunities to achieve at high levels, students achieve at high levels.
- *The effects of ability grouping in all its different forms*: these grouping practices communicate damaging fixed mindset beliefs to students.

## Programs, Organizations, and Tools that Use the Mindset Concept

[Mindset Works](#) is a company with the mission to “enable a world in which people seek and are fulfilled by ongoing learning and growth.” Developed by Carol S Dweck, PhD and Lisa Sorich Blackwell, PhD, Mindset Work's products Brainology<sup>20</sup> and EducatorKit translate lessons from universities into programs that schools can use to “increase student motivation and learning.”

[Step-It-Up-2-Thrive](#), created by Thrive Foundation for Youth, offers a four stage program meant to motive youth to achieve personal development goals. The second stage focuses on shifting youth to a growth mindset. By teaching youth that the brain acts as a muscle and how the brain learners, Step-It-Up-2-Thrive helps youth respond to challenges with effort and strategies. With one-to-one mentoring sessions and group lessons, youth utilizes the Brain Toolkit to explore the concept of a growth mindset.

[The Origins Program](#) is a nonprofit with the mission “to promote an equitable and humane multicultural society through quality education for all.” They offer workshops and consulting services as well as publishes books and resources for school-based study groups. Through their products, such as Developmental Designs, they focus on helping teachers and other school stakeholders impact their students.

[PERTS](#) is an applied research center at Standard University that works with “leading experts on academic motivation to raise student achievement on a large scale.” They work with teachers as well as schools to help design and implement programs that change the way students approach their education. Currently, they have created a beta program, MindsetKit.com, geared to providing more resources to educators.

[Khan Academy](#) is a nonprofit whose focus is providing “a free, world-class education for anyone, anywhere.” They offer practice exercise and instructional videos that empower learners at their own pace. One of the fundamental thoughts of Khan Academy is “you can learn anything” which stems from the research surrounding growth mindsets.

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<sup>19</sup> Source: [http://joboaler.com/pub/14\\_Boaler\\_FORUM\\_55\\_1\\_web.pdf](http://joboaler.com/pub/14_Boaler_FORUM_55_1_web.pdf)

<sup>20</sup> See a [video](#) with testimonials of Brainology



# APPENDIX

**I: Resources**

**II: Infographics on Mindsets**

**III: LIAS blog post and interview with Eduardo Briceño, CEO of Mindset Works**

**IV: About...**

## Appendix I: Resources

### Videos

With Dweck:

1. TED Talk - [The power of believing that you can improve](#)
2. TEDEd - [Growth Mindsets and Motivation](#)
3. Young Minds 2013 – [Teaching a growth mindset](#)
4. With Greg Walton of Stanford University [talking about having a growth mindset](#)

Others about Mindsets:

5. [Animation About Growth Mindset](#)
6. Khan Academy's [Growth Mindset Video](#)
7. Overview of Mindset by Greater Good Science Center [Video](#)
8. SciShow's [Your Brain is Plastic](#)
9. How the Seahawks practice the Growth Mindset [Video](#)
10. Angela Lee Duckworth's TED Talk – [The key to success? Grit](#)
11. Eduardo Briceño's Tedx Talk – [mindset and success](#)
12. Carissa Romero's presentation at How Kids Learn IV conference – [Growth Mindsets](#)

Additional Readings on Mindset and Related-Topics:

1. List of Readings: <https://p3.perts.net/resources#readings> <https://p3.perts.net/about#results>
2. Dweck's [Mindset: The New Psychology of Success](#)
3. Dweck and colleagues: [Growth Mindset and Educational Games](#)
4. Hewlett Foundation's Whitepaper on [Academic Mindsets](#)
5. UCHICAGOCCSR's [The Role of Noncognitive Factors in Shaping School Performance](#)
6. Tough's [How Children Succeed: Grit, Curiosity, and the Hidden Power of Character](#)
7. GettingSmart.com on [Innovation Mindset](#)
8. Nisbett's [Intelligence and How to Get it: Why Schools and Cultures Count](#)
9. Impact of Non-cognitive skills: [http://educationendowmentfoundation.org.uk/uploads/pdf/Non-cognitive\\_skills\\_literature\\_review.pdf](http://educationendowmentfoundation.org.uk/uploads/pdf/Non-cognitive_skills_literature_review.pdf)

Resource Lists for Additional Information and Tools:

1. <http://www.mindsetworks.com/free-resources/>
2. <http://www.growthmindsetmaths.com/>
3. <https://engagetheirminds.wordpress.com/2014/02/04/more-growth-mindset-resources/>
4. <http://www.mindsetkit.org/> (beta resource site by PERTS)
5. <http://www.watertowncsd.org/webpages/jschafer/files/mindsets%20%20day%20lp-3.pdf>
6. <http://survey.perts.net/>
7. [http://www.megsonline.nt/lee\\_meg1.pdf](http://www.megsonline.nt/lee_meg1.pdf)
8. <http://www.originsonline.org/educator-help#all>
9. <http://larryferlazzo.edublogs.org/2012/10/13/the-best-resources-on-helping-our-students-develop-a-growth-mindset/>
10. <http://teacher.scholastic.com/products/mindset-works/>
11. <https://www.teachingchannel.org/deeper-learning-playlist-growth-mindset>
12. [http://whatkidscando.org/resources/spec\\_growthmindset.html](http://whatkidscando.org/resources/spec_growthmindset.html)

## Appendix II: Infographics on Mindsets

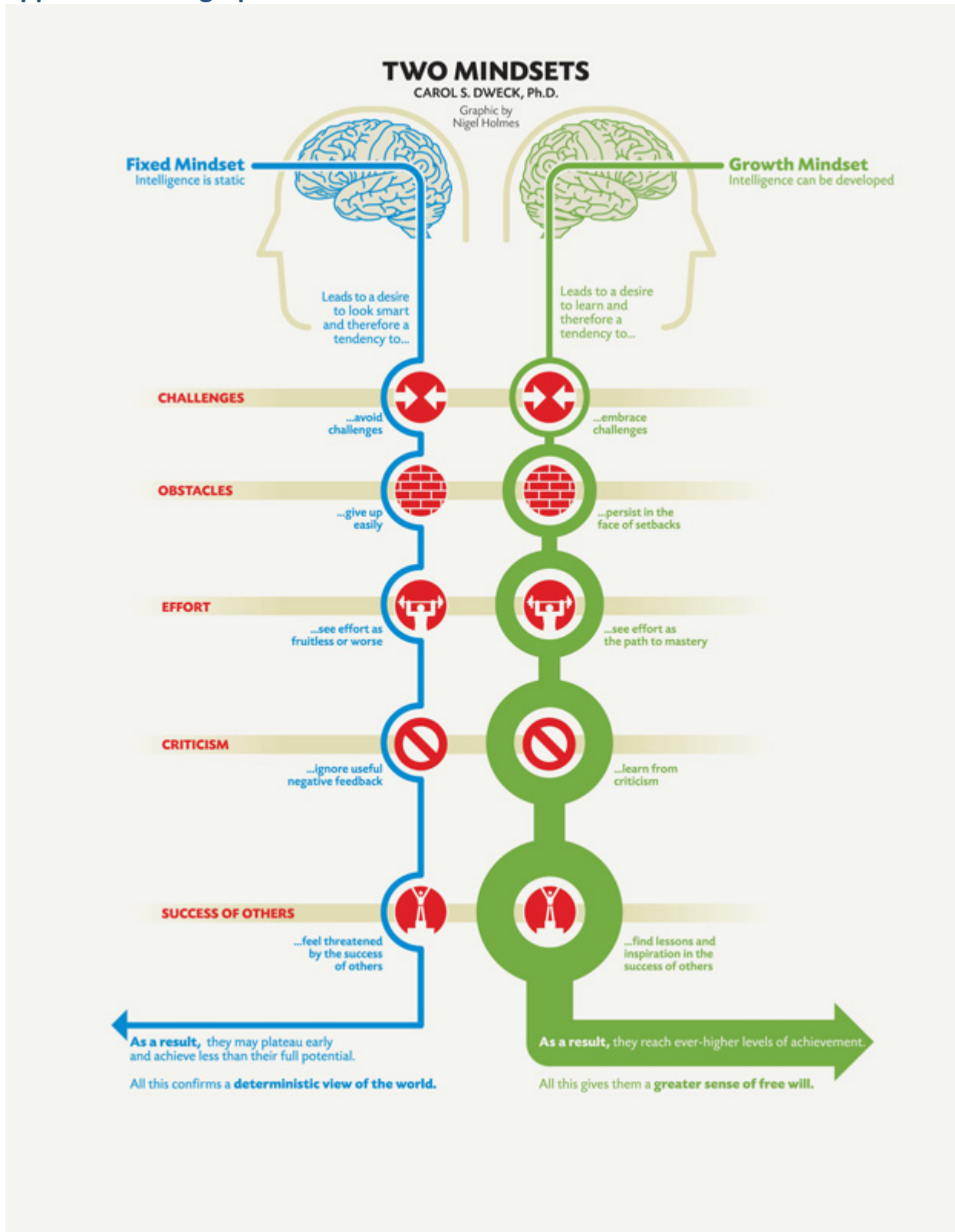


Image Taken From: [http://alumni.stanford.edu/content/magazine/artfiles/dweck\\_2007\\_2.pdf](http://alumni.stanford.edu/content/magazine/artfiles/dweck_2007_2.pdf)

# The Educator and the Growth Mindset

by Jackie Gerstein, Ed.D.

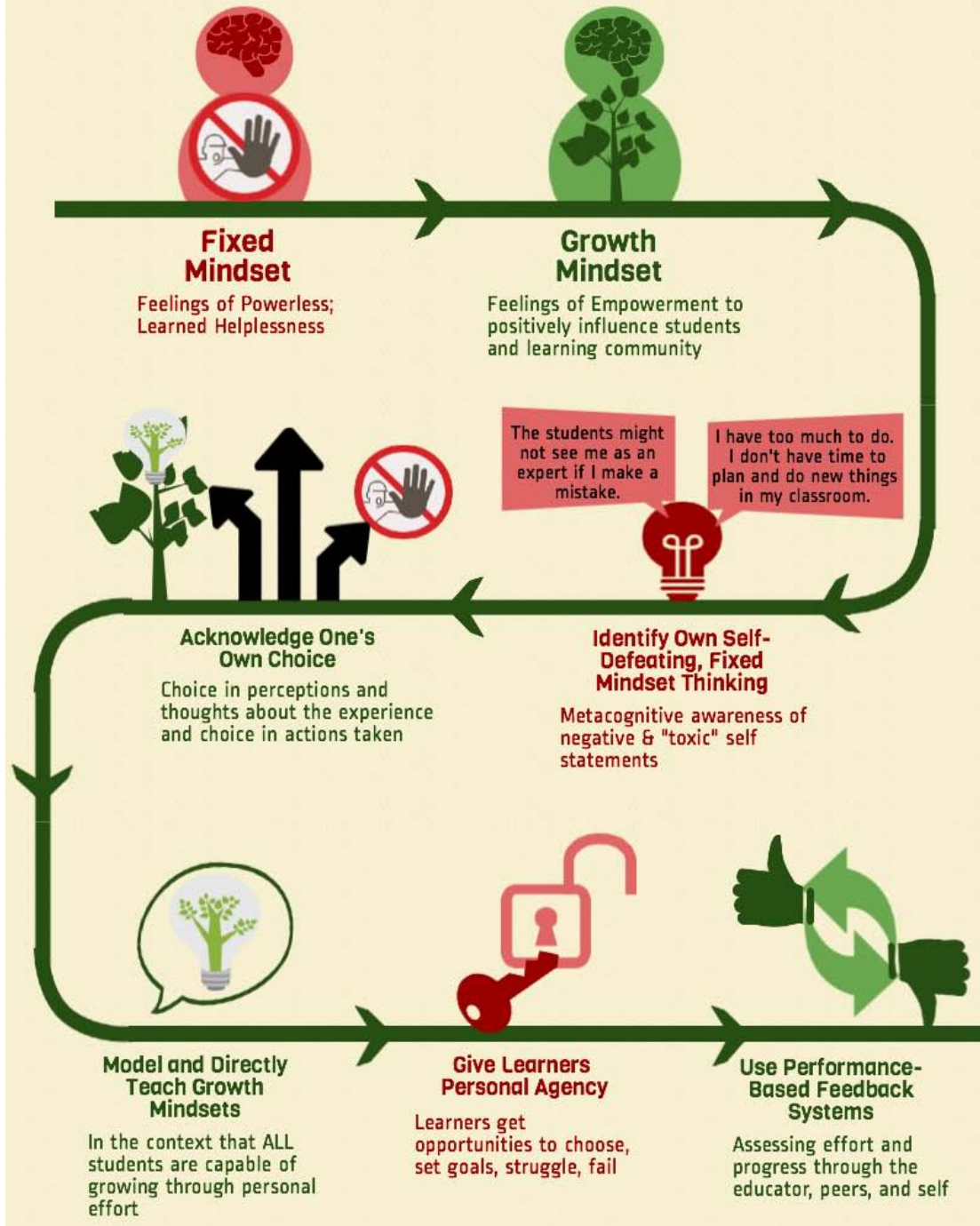


Image Taken From: <http://www.educatorstechnology.com/2014/07/interesting-visual-teacher-with-growth.html>

# TEACHING WITH STUDENT DATA towards a GROWTH MINDSET

**Blame the rain**

- Dismisses data
- Treats as specific to situation, based on variables outside control

*'If that student was not there it would have been better...'  
'Because there were unusual events today...'*

**STUDENT DATA**

**Seek consistency**

- Focus on what you can control.
- Actively look for repetition in student data.

**Over optimistic**

- Dismisses complexity of the problem
- Lacks urgency
- Minimizes issue

*'Next time it will be fine...'  
'Next class I will do what I had planned...'*

**STUDENT DATA**

**Reconsider**

- Review priorities
- Give it a try

**I admit, I can't**

- Interprets data as personal
- Considers as own fault
- Nothing can be done about it

*'I am not able to do it, I don't know why...'  
'I am kind of overwhelmed right now...'  
'I know it was not good, it was kind of everything...'*

**STUDENT DATA**

**Move step by step**

- Select issues to tackle
- Focus on change in student learning
- Build on strengths

**I already know what's good**

- Dismisses the issue
- Interprets data as personal

*'I don't know what you are talking about, overall it was good...'  
'I am trying to do something different from what you are suggesting...'  
'You don't know my class dynamics, that was a special case...'*

**STUDENT DATA**

**Keep an open mind**

- Consider different angles
- Bring your perspective to the mix
- Review

Image Taken From: <http://silvanameneghini.com/2014/07/14/teaching-with-student-data-a-growth-mindset/> (enlarge to see fine print or go to link)

	<b>FIXED MINDSET THINKING</b>	<b>GROWTH MINDSET THINKING *</b>
ACHIEVEMENT...	means proving you're smart.	means that you're learning and stretching.
BEING SMART...	means that you're making no mistakes.	means that you're confronting a challenge and making progress.
A SETBACK OR MISTAKE...	leads to loss of confidence.	indicates an area for growth.
FAILURE...	leads to humiliation.	means that you're not yet fulfilling potential.
EFFORT...	shouldn't be required if you're smart and takes away excuses for failure.	is the path to mastery that makes you smarter. You get out what you put in.
SUCCESS...	is defined as being the best and is based on talent.	is defined as working hard to become your best and is based on motivation.
A BAD GRADE...	means it's time to give up.	means it's time to work harder.
FEEDBACK...	is threatening, as it provides good or bad news about precious traits.	is welcomed, as it provides useful direction toward areas to work on.
THE NEED TO ASK FOR HELP...	indicates a weakness or deficiency which should not be admitted.	is a useful strategy for growth.
STEREOTYPE THREAT...	is high due to fears of confirming negative stereotype.	is low; a stereotype is simply someone else's inaccurate view of their abilities.
TALENTED PEERS...	become grounds for feeling threatened and jealous.	are a source of inspiration.

Image Taken From: <http://www.laurelschool.org/>

# Changing Our Mindset

Carol Dweck, world-renowned Stanford University psychologist, talks about the power of our mindset or our beliefs (especially around challenge). We can either have a Fixed Mindset where we let failure (or even success) define who we are, or a Growth Mindset where we see setbacks as opportunities to grow and improve ourselves. Just like how we learned how to walk... there are many stumbles along the way, but to reach our potential and live the life we desire, it takes practice and perseverance. We always have a choice about which view we adopt for ourselves... and it's never too late to change. What's your view?

*It's up to you!*



## FIXED MINDSET

Belief that my intelligence, personality and character are carved in stone; my potential is determined at birth



## GROWTH MINDSET

Belief that my intelligence, personality and character can be developed! A person's true potential is unknown (and unknowable).

	FIXED MINDSET	GROWTH MINDSET
<b>DESIRE</b>	Look smart in every situation and prove myself over and over again. Never fail!!	Stretch myself, take risks and learn. Bring on the challenges!
<b>EVALUATION OF SITUATIONS</b>	Will I succeed or fail? Will I look smart or dumb?	Will this allow me to grow? Will this help me overcome some of my challenges?
<b>DEALING WITH SETBACKS</b>	"I'm a failure" (identity) "I'm an idiot"	"I failed" (action) "I'll try harder next time"
<b>CHALLENGES</b>	Avoid challenges, get defensive or give up easily.	Embrace challenges, persist in the face of setbacks.
<b>EFFORT</b>	Why bother? It's not going to change anything.	Growth and learning require effort.
<b>CRITICISM</b>	Ignore constructive criticism.	Learn from criticism. How can I improve?
<b>SUCCESS OF OTHERS</b>	Feel threatened by the success of others. If you succeed, then I fail.	Finds lessons & inspiration in other people's success.
<b>RESULT...</b>	Plateau early, achieve less than my full potential.	Reach ever-higher levels of achievement.

Image Taken From: <https://twitter.com/MrsASwenson/status/403365443059982338/photo/1>

## Appendix III: LIAS blog post and interview with Eduardo Briceño, CEO of Mindset Works<sup>21</sup>



By Sam Piha

There has been a great deal of buzz about growth mindsets and its impact on young people's learning and development. Below we offer an interview with Eduardo Briceño.

Eduardo is the CEO of [Mindset Works](#), which he co-founded with Carol Dweck, Lisa Blackwell and others, to help schools cultivate student ownership of their own learning. With his fellow mindseters, Eduardo helps schools build learner capacity and success through practices that instill growth mindset beliefs and foundational learning skills in students, teachers and the broader community.

We invited Eduardo to speak at our recent [How Kids Learn IV](#) conference in San Francisco but he was unable to attend. We featured a [video](#) of Eduardo describing growth mindsets and we highly encourage our readers to watch it. Eduardo agreed to participate in an interview in lieu of his attending the conference. His responses are shown below. (Note: Mindset researcher, Carissa Romero at Stanford University, did present at the How Kids Learn IV conference, and a video of her presentation will be featured in an upcoming blog.)



The Power of Belief TedX Talk<sup>22</sup>

**Q: There is a lot of buzz about the influence of a growth mindset. For those who are new to this concept, can you briefly describe what is meant by “growth mindset”?**

**A:** Yes, growth mindset awareness and practice is multiplying, which is very exciting. Even the U.S. President and First Lady have [incorporated growth mindset language](#) into their speeches!

Discovered by Stanford Professor Carol Dweck, Ph.D., a growth mindset is the understanding that personal qualities are malleable and that we can develop our abilities. People who understand that they

<sup>21</sup> Source: <http://blog.learninginafterschool.org/2015/01/growth-mindsets-interview-with-mindset.html>

<sup>22</sup> Source: <https://www.youtube.com/watch?v=pN34FNbOKXc&feature=youtu.be>



can grow their intelligence (which is our ability to acquire and apply knowledge and skills) and other abilities, behave in learning-oriented ways. They challenge themselves to learn what they don't already know, they seek feedback, they reflect, they view effort as something we can all benefit from rather than as a sign of weakness, they value and learn from mistakes, and they persevere in the face of setbacks. As a result, they achieve higher rates of growth and success.

**Q: What is opposite of a “growth mindset”?**

**A:** The opposite of a growth mindset is a fixed mindset, which is seeing personal qualities as fixed. For example, when people categorize others as “math people”, or “athletic”, or “artistic”, in fixed ways, rather than as competencies they have developed over time, or when they see other people as incapable of developing certain abilities, they're exhibiting a fixed mindset. People who are in a fixed mindset tend to want to stay within their comfort zone, they become defensive when they receive feedback, they view effort as a sign of weakness and inability, they see mistakes as evidence of being incapable, and they disengage when things get hard. As a result, they don't grow as much as people with a growth mindset and they achieve lower levels of success.

The great news, is that anybody can develop and strengthen their growth mindsets!

**Q: There is research that suggest that a growth mindset is a good predictor of improved learning. Can you speak to this research?**

**A:** Yes, there's a lot of research that show that people with a growth mindset learn and improve more, and as a result they reach higher levels of ability and success. There is a deep and growing body of research on this, in domains as varied as K-12 education, higher education, the workplace, sports, health, and relationships. Several of these studies can be accessed from [Carol Dweck, Ph.D.'s Stanford profile page](#). Another great literature review that summarizes this body of research in K-12 education is: [Teaching Adolescents to Become Learners \(Farrington et. al.\)](#).

**Q: How are mindsets developed?**

**A:** Mindsets are beliefs. They're developed like any other beliefs: from our observations of the world, ourselves, and people around us. When other people believe that abilities are fixed, they tend to say and do things that reflect those beliefs and that lead us and others to view abilities as fixed. For example, if we hear other people talking about who is smart, or attributing our success to being smart, it conveys that intelligence is fixed, which is a fixed mindset. When our bosses don't believe people can improve and as a result don't give and receive constructive feedback, it leads us to believe that people can't improve. When we see IQ as something that is fixed, rather than as what it was intended for (to measure cognitive abilities at any point in time), it leads us to foster a fixed mindset.

We can cultivate growth mindsets by learning that intelligence and abilities are malleable. We can learn the scientific background behind the plasticity of the brain, or how experts develop their high levels of expertise, and how we can do the same. We can undertake learning oriented behaviors and measure our progress over time. And we can support one another in our growth journeys. This is a lifelong undertaking. If you want to learn more about other strategies, you can start your journey by subscribing to our [growth mindset newsletter](#), or reading the article [Mindsets and Student Agency](#) or [Carol Dweck's book Mindset](#), or taking the [Mindset Works EducatorKit](#) growth mindset teacher training course, or doing the [Brainology®](#) curriculum with your students.

**Q: Does it take a long time to help kids develop a growth mindset?**

**A:** Research shows quick effects from growth mindset interventions, but developing a growth mindset, and more broadly becoming a better and better learner, is a lifelong journey. If we reflect throughout

our lives about our habits and what's working and not, we will always continue to improve, to strengthen our mindsets, and to become more effective learners. The schools that we serve at Mindset Works put a lot of effort to building and deepening growth mindset cultures, which is not a quick fix, is a way of being and aligning as a community.

**Q: What can leaders in out-of-school time do to promote a growth mindset in their youth programs?**

**A:** Lots! As mentioned above, they can teach the scientific background behind the plasticity of the brain, or how experts develop their high levels of expertise, and how we can do the same. They can speak with students in growth mindset language, teach them how to give and receive growth-oriented feedback and other learning strategies, and help them self-assess their progress and strategies over time.

**Q: Are there resources that are available to learn more about the practical application of this research? Where would you send interested out-of-school workers to find these resources?**

**A:** Certainly! Our whole Mindset Works website is devoted to that. You can find [free-resources](#) including our [growth mindset newsletter](#), and you can register for our [Mindset Works EducatorKit](#) teacher training course or [Brainology®](#) curriculum. Check out [Carol Dweck's book Mindset](#). Happy learning!

## Appendix IV: About...

### Temescal Associates and the Authors

Temescal Associates is a private consulting firm and will serve as the primary consultant for this project. Temescal is dedicated to building the capacity of leaders and organizations in education and youth development who are serious about improving the lives of young people. We serve our clients by offering gifted and highly experienced consultants who excel at eliciting the internal knowledge and wisdom of those they work with while introducing new knowledge and strategies that can transform the day-to-day practices that lead to improved youth outcomes.

**Rozel Cruz** is Project and Office Management Consultant at Temescal Associates. She has a long history in working with non-profits. She joined Temescal Associates in 2010 and currently serves as a consultant focusing on Project and Office Management.

**Sam Piha** is the Founder and Co-Director of Temescal Associates. Sam began his career in 1974 as an afterschool worker, an experience that led to 10 years of classroom teaching, and later work as a child and family counselor and school social worker. Between 1989 and 2001, Sam developed and managed school-based youth programs at the regional and national levels. When California began its unprecedented expansion of state-funded afterschool programs, Sam help shape the growing afterschool movement in California. He chaired and served on several key state committees and joined with others to build a state-wide system of support for new programs, align state afterschool policies with youth development principles, and successfully support the launch of the state's After School Safety and Education for Teens, a large state-wide high school afterschool initiative.

Sam has served as editor and contributing author of several important practice guides and journal articles on afterschool programming. Sam holds a Masters Degree in Social Welfare, and is a Licensed Clinical Social Worker.

**Samantha Walters** is Research Consultant at Temescal Associates. While getting her B.A. in Sociology from the University of Arizona, Samantha started working as a Social Media Strategist for a nonprofit organization. This experience led her to create her own Social Media Consulting firm and pursue a Master's degree in Social Entrepreneurship and Change from Pepperdine University.

### About the Expanded Learning 360/365 Project: Skills for Success in School, Work, and Life

*Expanded Learning: 360/365* is a collaborative project of the California School-Age Consortium (CaSAC), the Partnership for Children and Youth (PCY), ASAPconnect, and Temescal Associates/Learning in Afterschool & Summer (LIAS).

This project is based on two strongly held beliefs:

1. In order for children to grow into healthy and productive citizens, they must learn and practice a wide variety of inter-related skills - social-emotional, character as well as academic – hence the term “360”, and
2. Children learn in a variety of settings and year-round. This includes formal settings, such as school, and informal settings, such as afterschool, extracurricular, and summer youth programs - hence the reference to “365”.

This project is dedicated to promoting the development of critical skills beyond academics that research has identified as essential to young people’s success in school, work, and life.

### **Background**

In the last decade, research on learning and the brain, and the impact of social-emotional and character skills, has expanded our understanding of learning. Currently, we are witnessing a significant pivot from a narrow focus on academic performance measured by standardized reading and math test scores to a broader perspective of young people’s development that includes and promotes social-emotional and character skills. This shift is reflected by the new Common Core State Standards, the CORE Waiver’s focus on social-emotional accountability, and Expanded Learning Quality Standards being developed in many states.

### **How Expanded Learning 360/365 Will Support Learning**

In order to see this change successfully executed, Expanded Learning 360/365 will help policymakers, district and school leaders and expanded learning providers better identify and integrate social-emotional and character skills into their work with young people. We will accomplish this by:

- Clearly defining the role that expanded learning plays in social-emotional and character skill development,
- Promoting that school and expanded learning leaders work together to integrate teaching strategies around these skills across the school day and into expanded learning time,
- Working with policymakers and district leaders to integrate these ideas into the policies that guide and govern schools and expanded learning programs, and
- Identifying and developing trainings and curriculum for school and expanded learning staff that include best practices for supporting these skills in their young people.

Toward these ends, Expanded Learning 360/365 will partner with researchers and practitioners to provide advice on the development of policy and educational materials, the use of effective curricula, and training content and approaches for schools and expanded learning programs.

### **How to Access Resources from the Expanded Learning 360/365 Project**

The resources and tools developed through this project will be available on our website: [www.expandedlearning360-365.com](http://www.expandedlearning360-365.com). Please note that this website is currently under construction. Please check back in the near future.