

LEADERSHIP IN ACTION

a briefing series for new england's educational leaders

I Want to Know More

A *Leadership in Action* Supplement

I Want to Know More is a selection of information and resources for education leaders, parents, and community members interested in knowing more about how today's students learn.

How Do Today's Students Learn?

Science has given us new discoveries about the brain and learning, while our best schools and teachers are showing us how to energize, engage, inspire, and prepare. We know so much more today about what works in education. We need to use these remarkable insights to strengthen our high schools, make teaching more effective, and prepare every student for success in life.

The Learning Brain: Intelligence Can Be Improved

Carol Dweck—a psychologist, researcher, and author of *Mindset: The New Psychology of Success*—has been studying learning and motivation for more than two decades. Her work is part of a growing body of groundbreaking research that is revealing a radically different view of the brain and human intelligence, while giving us new insights into how people actually learn.

Since the first IQ test was developed in the early twentieth century, Americans have generally believed that intelligence is entirely genetic and unchanging. Although this belief is largely inaccurate, it has nevertheless influenced the design of our schools for generations. Carol Dweck is trying to overturn our belief in fixed intelligence.

Dweck identified two “mindsets” that often determine how much and how quickly students learn: fixed mindset and growth mindset. Students who have a fixed mindset—the belief that they are either “smart” or “dumb” and there is no way to change it—tend to learn less and at slower rates, while also shying away from challenges (since poor performance might either confirm they can't learn or suggest that they are less intelligent than they believe). On the other hand, students with growth mindsets—the belief that they can learn more or become smarter if they work hard and persevere—tend to learn a lot more, learn it more quickly, and view challenges and failures as opportunities to grow and improve their skills. When a growth mindset guides teaching, students tend to be more motivated and enthusiastic about learning, and they often dramatically improve their academic performance in comparison to students in classrooms that promote a fixed mindset. Which mindset would you choose for your child?

Something to Think About

Did you know that some of the greatest minds in human history were considered poor or average students as children, including Leo Tolstoy, Mahatma Gandhi, Charles Darwin, and Albert Einstein? What if they had looked at their mediocre grades and given up? What would the world have lost? Well, it turns out that our brains never stop changing and adapting. An ever-growing body of research on learning has revealed that *our brains physically change* whenever we acquire new skills or knowledge. The more we learn, the better we become at learning. While there is still much to be discovered about human intelligence, it is clear that our brains remain dynamic, highly adaptable, and ever-changing throughout our lives. The lesson here: there is always more to learn!

Learning in the World—Not Just in the Classroom

The world is now so complex that first-hand experience has become one of the most powerful learning tools available to schools. In the 1990s, the outdoor leadership organization Outward Bound developed [Expeditionary Learning](#), an education model that promotes relevant, intensive, long-term projects called “expeditions.” The Expeditionary Learning initiative has since grown to encompass 165 schools in thirty states, including twenty-five schools in New England. Students in Expeditionary Learning schools don’t just learn in the classroom, they venture out into their communities to conduct scientific research on the natural world, pursue internships with local organizations and businesses, explore museums and natural habitats, develop solutions to local problems, interview experts, or present their work at public forums—and that’s just a small selection of the learning activities these students experience every day.

In [a recent national survey](#) of thousands of high school students, a majority reported that they were “bored” every day in school and that their boredom resulted from lessons they felt were uninteresting, insufficiently challenging, or irrelevant to their lives. In many cases, students choose to attend Expeditionary Learning schools to escape those very feelings—they want a more relevant, challenging, and interesting learning experiences.

Despite the hands-on, get-out-in-the-world approach to education, Expeditionary Learning schools have achieved remarkable success on standardized tests—in fact, these schools commonly [outperform other schools in their districts](#). When [Casco Bay High School](#) in Portland, Maine, for example, graduated its very first class of 52 students in 2010, the senior class’s SAT scores the previous year ranked the school among the top 10% in the state in terms of performance, while 100% of that first graduating class was accepted to college. Although Expeditionary Learning is a powerful educational model with a proven track record, countless schools across the country—not to mention the globe—are using in-depth project-based learning strategies to equip students with the relevant, real-world skills they will need to succeed in life.

Everything Matters: Educating the Whole Student

In previous decades, it was believed that teachers just needed to teach the most important subjects in the classroom and students would learn what they needed to learn. Well, times have changed.

We now know that everything matters. Students not only need challenging lessons, but they need highly skilled teachers and effective instruction every day, they need an emotionally and physically safe learning environment, they need to eat healthy food and exercise regularly, they need a course of study that meets their individual needs and engages their interests, and they need to have a say when it comes to how they learn. To cite just a few examples: Studies have linked a healthy, nutritious breakfast with better performance in school, revealing that students who eat poorly or skip breakfast tend to be more distracted in the classroom, exhibit more behavioral problems, and perform below their abilities. Other studies have shown the critical importance of “developmentally appropriate” learning (taking into consideration mental and emotional development when designing lessons and selecting teaching strategies), while still others have established a strong connection between a student’s academic performance and having a positive, supportive relationship with at least one adult in a school.

One of the many terms used to describe a more holistic approach to learning is “whole-child education.” Although the term is typically associated with the elementary grades, the core ideas behind whole-child education are just as relevant in high school.

The [Whole Child website](#) provides a variety of information and resources on the topic, while its five tenets provide a concise and useful definition of an education that considers the whole student:

- Each student enters school healthy and learns about and practices a healthy lifestyle.
- Each student learns in an intellectually challenging environment that is physically and emotionally safe for students and adults.
- Each student is actively engaged in learning and is connected to the school and broader community.
- Each student has access to personalized learning and is supported by qualified, caring adults.
- Each graduate is challenged academically and prepared for success in college or further study and for employment in a global environment.

The research conducted and collected by the [National School Climate Center](#) also provides a compelling argument for the critical importance of developing and maintaining positive school cultures—the characteristics of the learning environment and the interactions that occur among educators, students, parents, and community members. The connection between school climate and student performance is well documented, and schools looking to improve student engagement, achievement, and aspirations must attend to cultural factors and relationships. School climate has also been connected to greater civic engagement and cultural sensitivity, among other critical educational outcomes. Learning never occurs in isolation, and schools that have healthy, positive, and supportive cultures nearly always get better academic results.

Ethics and Civic Engagement: The Twin Pillars of a Healthy Society

We often use statistics such as test scores or graduation rates to determine the success of a school. While these figures are vitally important measures of performance, they never tell the whole story. Important questions such as “Are we teaching students to be ethical and active participants in our society and democracy?” are rarely asked—and yet the issue couldn’t be more important. What if our schools produced the most educated, highly skilled graduates in the world, but then they used that knowledge unethically? Or they didn’t make meaningful contributions to their communities or to important causes? Or they treated people from other cultures disrespectfully? Would we consider our education system to be a success?

As the recent global financial crisis showed, we not only need skilled, educated workers running our most important businesses and institutions, but we need adults who know how to use their knowledge and expertise in ways that will benefit society, not harm it. This example underscores the need to connect what we teach in high school to the questions, problems, and decisions students will actually encounter as adults.

One of the most powerful ways that today’s students learn is through active engagement in the world around them. Two educational approaches hold enormous potential for promoting greater civic literacy: *service learning* (students learning through community service and volunteerism) and *community-based learning* (students learning through direct engagement with local issues). Service learning allows teachers to create lessons that are integrated with authentic volunteer and community-service experiences; students not only learn about important causes, but they directly participate in efforts to address them.

Community-based educational programs often include elements of service learning and the intensive project-based approach used by Expeditionary Learning—they believe in empowering students through active, meaningful engagement with the world around them.

Check out these websites for more information on ethical literacy, service learning, and community-based learning:

[Learn and Serve America](#)

[National Service Learning Clearinghouse](#)

[National Service Learning Partnership](#)

[The Center for Information and Research on Civic Learning and Engagement](#)

[National Youth Leadership Council](#)

[Ethical Literacy Learning Community](#)

Want to Know More?

These readings from [Edutopia](#) provide excellent introductions to some the subjects discussed above:

[Neuroplasticity: Learning Physically Changes the Brain](#)

[Neuro Myths: Separating Fact and Fiction in Brain-Based Learning](#)

[Science Shows Making Lessons Relevant Really Matters](#)

[Why Teach with Project-Based Learning?](#)

[To Enable Learning, Put \(Emotional\) Safety First](#)

[Why Champion Social and Emotional Learning?](#)

Still Curious?

If you are interested in the foundational research behind many of the ideas discussed in the Leadership in Action series, we recommend our [Global Best Practices Research Summary](#), which is available on the [New England Secondary School Consortium website](#) or the engaging report [Changing the Odds for Student Success: What Matters Most](#) by McREL and the Stupski Foundation.

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is a new england secondary school consortium resource