

On Ramp to Opportunity



START



In recent years, education has seen a wave of new thinking about the skills that students need to be successful. Parents, educators, researchers and policymakers have all become skeptical of standardized tests as the sole barometer for student achievement. Indeed, under the new Every Student Succeeds Act (ESSA), states are now required to build into their accountability systems at least one additional measure of school quality and student performance, beyond traditional academic outcomes.

Even before ESSA's passage, there was growing interest in identifying and measuring critical “noncognitive” skills, such as grit, conscientiousness, goal orientation, and others.¹ Research shows that these skills are predictive not only of academic achievement but also future success in the labor market.² With schools and districts across the country increasingly focused on preparing students for college and careers, noncognitive skills have garnered particular attention. What skills, behaviors and attitudes do students need to reach and thrive in college? What skills, behaviors and attitudes do they need to be successful on the job? And which of these can be reliably taught by K-12 schools?

A growing body of evidence suggests that the answer lies, at least in part, in an important constellation of noncognitive skills known as *entrepreneurial mindset*. Both anecdotal and scientific evidence support the premise that entrepreneurs approach their work and life in a distinctive way. Entrepreneurial mindset is comprised of skills like initiative, adaptability, communication, critical thinking and problem solving—skills that help people overcome challenges, identify and make the most of opportunities, and succeed in a variety of settings.

This paper presents evidence about entrepreneurial mindset, to make two important and related points:

- Entrepreneurial thinking is an essential 21st century skill and a key contributor to academic and career success.
- Entrepreneurial mindset is a malleable characteristic that can be taught and learned.

In the pages that follow, we highlight past research showing the importance of these skills and how they can be instilled in young people. We also present recent findings from a case study of the NFTE (Network for Teaching Entrepreneurship), which offers insight into specific teaching methods and outcomes. The paper is meant to inform policymakers, funders, and school and community leaders about the promise of entrepreneurial mindset—and to illuminate strategies they might undertake to help more young people develop this critical suite of skills.



What Is Entrepreneurial Mindset?

Entrepreneurial mindset is, simply, the way an entrepreneur thinks and acts. At its core, entrepreneurial mindset is a set of characteristics, behaviors and skills that drive action. A person with entrepreneurial mindset recognizes an otherwise overlooked opportunity, develops the confidence to take a risk, communicates their ideas clearly, and is able to adjust to and learn from setbacks.

Over the past three years, NFTE has been developing a scale to measure entrepreneurial mindset in the students who participate in our programs. Our Entrepreneurial Mindset Index (EMI) measures eight core

domains that we have identified, through our own research and that of others, as critical to becoming entrepreneurial.

These domains are:

- **Future orientation**
- **Comfort with risk**
- **Opportunity recognition**
- **Initiative and self-reliance**
- **Communication and collaboration**
- **Creativity and innovation**
- **Critical thinking and problem solving**
- **Flexibility and adaptability**

The Essential 21st Century Skill

Entrepreneurial mindset confers lasting advantages to young people, including improved job prospects and earning potential, an increased likelihood of starting a business, and greater academic success.

Entrepreneurial mindset is valued by employers. The benefits of entrepreneurial mindset for employment and earnings cannot be overstated. Entrepreneurial skills are employment skills, especially in today's innovation economy. For example, one survey of more than 400 employers found that the most prized skills were not in the areas of writing or math, but rather "oral communication, teamwork/collaboration, professionalism/work ethic, and critical thinking/problem solving."³ More than 90 percent of employers identified these skills as "very important."

Entrepreneurial mindset boosts educational attainment and performance.

Research demonstrates that entrepreneurial skills help students engage and succeed in school. For example, a 2012 report by the National Research Council summarized an extensive body of literature suggesting that entrepreneurial skills such as creative problem solving and collaboration are important for academic success.⁴ A report by the D.C. Children and Youth Investment Corporation went even further, concluding that entrepreneurship education "improved academic performance, school attendance, and educational attainment."⁵

Entrepreneurial mindset is crucial for creating new businesses, which spur a wealth of opportunities. In 2013, for the first time since 1978, the number of new business startups in America was outpaced by business closures.⁶ This is worrisome, because new business formation triggers a wave of financial benefits, including job creation, tax revenue and market efficiency. Nurturing a new generation of entrepreneurs, who can start and run businesses of all sizes, is essential for economic growth and strength.

Longitudinal studies that follow youth to adulthood have shown that an early orientation toward achievement and innovation as well as strong social skills are important predictors of successfully starting and managing a business.⁷ Bill J. Bonnstetter, Chairman of Target Training International, conducted research on more than 17,000 working adults, including "serial" entrepreneurs, and concluded that, "in contrast to ephemeral notions that entrepreneurial success comes as a result of perfect timing meeting brilliant ideas in a cosmic moment of alignment, [my] research indicates [that] entrepreneurially successful people are successful for a reason—that many of them highly display certain personal skills." He further argued that the attributes of entrepreneurs, including goal orientation and interpersonal skills "are not inherent." Rather, he wrote, "They can be learned and developed, especially early in life, and further honed throughout an entrepreneur's career."⁸

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Can Entrepreneurial Mindset Be Taught?

Other research supports the notion that entrepreneurial mindset and its various component parts can be taught and learned. Numerous studies have found that noncognitive skills, in general, are malleable characteristics. As Kautz and colleagues concluded, these skills are not “set in stone at birth and determined solely by genes. They can be fostered. Cognitive and noncognitive skills change with age and with instruction.”⁹

In fact, many programs target noncognitive skills as a way to improve the life chances of children and young adults. For example, the Year Up program, which provides low-income youth with internships and training, has demonstrated that young people can learn noncognitive skills like time management, teamwork, problem solving, and conflict resolution, and that these attributes, in turn, positively impact their experiences in the labor market. Similarly, programs like Big Brothers Big Sisters have been shown to improve students’ attitudes and behavior.¹⁰

What may matter most about teaching these skills is when and *how* they are taught. Kautz and his team found that interventions to support cognitive development were more effective in a child’s early years, while those aimed at noncognitive skills had better traction when they were adolescents. Similar conclusions were drawn in the previously cited National Research Council report.

There are promising strategies to teach noncognitive skills directly, as well as opportunities to embed noncognitive learning and practice into other coursework. Research suggests that curricula should “both directly promote specific noncognitive dimensions and...develop them indirectly, by leveraging other kinds of skills.”¹¹ Innovative teaching methods—including offering experiential, hands-on activities, using real-world examples, and exposing students to mentors—appear to be particularly effective for teaching noncognitive skills.

There is growing evidence that entrepreneurship education, particularly at early ages, helps students develop specific entrepreneurial skills. One experimental study in the Netherlands, for example, found that an entrepreneurship program implemented in the middle grades (as young as 11 and 12 years old) increased students’ self-efficacy, achievement orientation, risk-taking propensity and problem-solving skills—all critical for successful entrepreneurs.¹² Another recent study in Portugal concluded that, “...it is possible to learn to be an entrepreneur...”¹³ NFTE’s own work, some of which is highlighted below, also demonstrates that entrepreneurial skills can be taught and learned by students from a range of backgrounds.



How Does NFTE Teach Entrepreneurial Mindset?

Making these essential skills a core part of K-12 education is a central focus for NFTE. Since our founding in 1987, NFTE has used an experiential learning model to teach entrepreneurial mindset. In this model, students discuss and design solutions to real-world problems, create and deliver presentations, practice pitching and marketing, and work directly with volunteer business leaders to hone their skills.

In 2014, the Institute for Education and Social Policy at NYU conducted a study to assess the implementation and outcomes of BizCamps—18 two-week summer programs that help at-risk youth develop their entrepreneurial mindset by teaching relevant skills and having students apply these skills to the creation of business plans.¹⁴

Findings from the study showed that BizCamp students learned key components of the entrepreneurial mindset—and that they believed those skills would support their success in school and beyond.¹⁵ Specifically, the study found that:

- Students reported improvements in their communication and problem-solving skills as a result of the program.
- 95 percent of students agreed or strongly agreed that the skills they learned in the program would help them in their life and in business.
- 90 percent indicated that the skills they learned and experiences in the summer program would help them in school.

Previous research has also demonstrated that NFTE's programs increase students' sense of "internal locus of control"—or the belief that one's own success or failure is a product of effort and work and not simply determined by outside forces. This finding was especially strong for students from immigrant backgrounds.¹⁶ Yearly surveys conducted in NFTE classrooms have also found that the program improves students' confidence in public speaking.¹⁷

Perhaps even more important, these experiences appear to position NFTE students for long-term success. A 2013 survey of NFTE alumni found that 99 percent of those over the age of 25 had earned a high school diploma, compared with 85 percent of the U.S. population as a whole. And while just 11 percent of Americans are self-employed entrepreneurs, approximately twice that percentage of NFTE alumni are business owners.¹⁸

Where Do We Go from Here?

Entrepreneurial mindset encompasses an array of essential 21st century skills. These skills help students succeed academically. They are highly valued by employers. They enable people to start and run new businesses, driving a vital economic engine. Furthermore, there is mounting evidence that these skills can be learned—and even transferred to meet new opportunities and challenges as the economy evolves.

Unfortunately, these skills are not currently being taught in our schools. A 2013 Gallup/Microsoft/Pearson study found that 59 percent of surveyed workers “agreed or strongly agreed that they developed most of the skills they use in their current job outside of school.”¹⁹ As the Economic Policy Institute has written, “...the fact that employers stress the value of noncognitive skills in the workplace speaks to both those skills’ overall impact and to the need to readjust our perceptions of such constructs as college-and-career readiness.”²⁰

The good news is that K-12 education is seeing a surge of interest in developing students’

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noncognitive skills—as one way to prepare students for college and a career. This work has intensified as states around the country redesign their education systems under ESSA. Indeed, given their importance, entrepreneurial skills should be included in the educational foundation for young people worldwide. In January, 2015, Larry Summers, former US Secretary of Treasury argued that schools, colleges and universities must change to “place a premium on... the tasks that machines cannot do: collaboration, creation and leading.” These skills lie at the heart of entrepreneurial mindset.²¹

To help more students, in the U.S. and around the globe, develop entrepreneurial mindset, policymakers, funders and education leaders should consider the following strategies:

- Incorporate entrepreneurship into mainstream education. A focus on entrepreneurial skills should not be unique to career and technical education or business education programs. Teaching these skills can and should be built into mainstream classrooms and curricula. There are currently a number of efforts in Europe, Asia and elsewhere to make entrepreneurship education mandatory for young people. It will be important to evaluate the implementation and impact of these initiatives, and apply lessons learned to the development of new entrepreneurship education efforts around the world.
- Redefine entrepreneurship as a fundamental part of the learning process. The evidence is clear: Entrepreneurial skills are valuable in many spheres. Entrepreneurship is not just about owning a business, but about developing a suite of practical skills that can help people set and achieve goals, overcome and learn from setbacks, and maximize opportunities, throughout their lives.
- Bring entrepreneurs into the classroom. One way to help students learn entrepreneurial skills is to expose them to experienced, successful entrepreneurs. Policymakers should support mentoring programs and innovative partnerships that bring entrepreneurs into the classroom.
- Build entrepreneurial skills into accountability systems. As policymakers rethink the skills that schools and systems will be held accountable for imparting, entrepreneurial mindset should be part of the conversation, with the understanding that specific

performance benchmarks should only be considered based on further research and evaluation of methods for teaching and measuring entrepreneurial mindset.

- Invest in relevant and rigorous research.²² More research is needed to crystalize the links between entrepreneurial mindset and other important outcomes—and to identify the most effective practices and tools for helping students develop entrepreneurial skills.

Our three decades of experience and the ongoing evolution of our methods and assessments is helping NFTE add to the field's understanding of entrepreneurial mindset. We are encouraged by the current momentum around identifying and measuring a wider range of skills that young people need to accomplish their goals. And we are confident that an increased focus on entrepreneurial mindset will help put more students on a path to success—for themselves and their communities.

Related Resources for Further Reading

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Endnotes

- 1 Lipnevitch and Roberts 2012; Farrington 2011.
- 2 Kautz et al. 2014.
- 3 Garcia, E. 2014.
- 4 Pellegrino, J. W., & Hilton, M. L. 2013.
- 5 Bronte-Tinkew, J., & Redd, Z. 2001. These findings are consistent with other research demonstrating the benefits of learning 21st century skills. For example, a major study by Gallup, Microsoft Partners in Learning, and the Pearson Foundation found that acquiring key 21st Century skills—defined in the study as collaboration, knowledge construction, problem solving and innovation, self-regulation, the use of technology for learning, and skilled communication—was associated with “greater student aspiration and engagement.”
- 6 Hathaway, I., & Litan, R. E. 2014.
- 7 See, for instance Dyer et al. 2008; Geldhof et al 2014; and Schoon & Duckworth 2012.
- 8 Bonnstetter, B. J. 2012.
- 9 Kautz et al. 2014.
- 10 Kautz et al. 2014.
- 11 Garcia, E. 2014.
- 12 Rosendahl, H. et al. 2012.
- 13 Rodrigues R. et al. 2012.
- 14 These programs and their evaluation were supported through the Citi Foundation’s Pathways to Progress Initiative.
- 15 Silander, et al. 2015.
- 16 Nakkula, M. et al. 2003.
- 17 NFTE 2015
- 18 NFTE 2013.
- 19 Levy, J., & Sidhu, P. 2013.
- 20 Garcia, E. 2014.
- 21 Summers, L. 2015.
- 22 See also Krueger, N. (2015).



About NFTE

NFTE (Network for Teaching Entrepreneurship) is an internationally recognized nonprofit that activates the entrepreneurial mindset in young people. Research shows that the entrepreneurial mindset—skills including innovation, self-reliance, comfort with risk, communication, and problem-solving—prepares young people for lifelong success. Equipped with the mindset, as well as with the business and academic skills that NFTE teaches, NFTE students are ready to thrive in the innovation economy no matter what path they choose. NFTE focuses its work on under-resourced communities, with programs in 19 locations in 9 countries.

To learn more, visit <http://www.nfte.com>, like NFTE on Facebook at <http://www.Facebook.com/NFTE>, or follow us on Twitter at @NFTE.

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