

# Contents

<b>Acknowledgments</b>	<b>v</b>
<b>About the Author</b>	<b>ix</b>
<b>Introduction: To Create Is Human</b>	<b>1</b>
1. <b>The Wrong Bet: Why Common Curriculum and Standards Won't Help</b>	<b>23</b>
2. <b>The Changed World: The Need for Entrepreneurs</b>	<b>49</b>
3. <b>What Makes an Entrepreneur: The Entrepreneurial Spirit</b>	<b>75</b>
4. <b>Achievement Gap vs. Entrepreneurship Gap: The Myth of Education Giants</b>	<b>99</b>
5. <b>China vs. the United States: How the Best Education Stifles the Entrepreneurial Spirit</b>	<b>119</b>
6. <b>From Accident to Design: A Paradigm Shift</b>	<b>143</b>
7. <b>Freedom to Learn: Student Autonomy and Leadership</b>	<b>165</b>
8. <b>Product-Oriented Learning: Works That Matter</b>	<b>189</b>
9. <b>The Globe Is Our Campus: Global Entrepreneurs and Enterprises</b>	<b>213</b>
10. <b>Create a World Class Education: Principles and Indicators</b>	<b>235</b>
<b>Index</b>	<b>259</b>



# Introduction

## To Create Is Human

**T**his book started with a story I read in *Young World Rising: How Youth, Technology, and Entrepreneurship Are Changing the World From the Bottom Up*, a book about young entrepreneurs in developing countries, authored by Rob Salkowitz (Salkowitz, 2010). The book begins with the story of Suhas Gopinath, the Indian teenage entrepreneur who started his company developing websites for businesses in the United States at the age of 14 (Salkowitz, 2010). Born in 1986, Gopinath began his career as a freelance Web developer when he was 13, using skills he learned while minding the local cyber café in Bangalore. When he decided to found his own company, Globals Inc., he had to register it in California because Indian laws did not permit him to do so. A decade later, Globals Inc. is a multimillion-dollar global company with operations in a dozen countries. Gopinath has been recognized as the world's youngest CEO, with awards from various organizations including the World Economic Forum, the European Parliament, and the International Association for Human Values.

The story got me thinking. At a time when even college graduates are having a hard time finding a desirable job, or any job at all, how could Suhas Gopinath, a teenager from a family without a business tradition in one of the poorest countries on earth, create a job he apparently loves for himself and many others? Why don't the college graduates in developed countries who supposedly have better education and more resources than Gopinath create jobs for themselves?

### THE NEED FOR ENTREPRENEURSHIP

Youth unemployment has become an urgent challenge facing the global society. In 2011, nearly 75 million youth aged

15 to 24 were unemployed worldwide. The majority of the world's youth (87%) living in developing countries "are often underemployed and working in the informal economy under poor conditions," according to the 2012 *The World Youth Report* of the United Nations (United Nations, 2011). But the situation is not much better in the developed countries. In the 34 member countries of the Organisation for Economic Co-operation and Development (OECD), which include the world's wealthiest and most developed countries, "22.3 million young people—were inactive in the fourth quarter of 2010, neither in jobs nor in education or training" (United Nations, 2011).

Entrepreneurs like Gopinath are what the world wants to solve the unemployment problem. Numerous international organizations have produced reports about the importance of entrepreneurship and issued calls for countries to develop entrepreneurship (Schoof, 2006; World Economic Forum, 2011). The World Economic Forum, for example, has identified entrepreneurship education as the core of its Global Education Initiative (World Economic Forum, 2009, 2011) because "[I]nnovation and entrepreneurship provide a way forward for solving the global challenges of the 21st century, building sustainable development, creating jobs, generating renewed economic growth and advancing human welfare" (World Economic Forum, 2009, p. 7). "Entrepreneurs are recognized as important drivers of economic and social progress, and rapidly growing entrepreneurial enterprises are viewed as important sources of innovation, employment and productivity growth," says another report of the World Economic Forum (World Economic Forum, 2012).

To raise awareness of the importance of entrepreneurship and celebrate entrepreneurs, U.K. Prime Minister Gordon Brown and Carl Schramm, the president and CEO of the Ewing Marion Kauffman Foundation, kicked off the annual Global Entrepreneurship Week (GEW) initiative in 2008. Since then GEW has become "the world's largest celebration of the innovators and job creators who launch startups that bring ideas to life, drive economic growth and expand human welfare" with

115 countries participating (Global Entrepreneurship Week, 2012). In his 2009 Presidential Proclamation of the GEW in the United States, President Barack Obama spoke highly of entrepreneurs: “Throughout our history, American entrepreneurs have been an effective force for innovation at home and around the world. . . . Entrepreneurs are the engine of job creation in America, generating millions of good jobs” (Obama, 2009). The European Roundtable on Entrepreneurship Education wrote in a report:

Europe is facing challenges in terms of competitiveness as well as economic and sustainable growth. . . . Europe must invest in developing entrepreneurial and innovative skills to build sustainable economic development, create jobs, generate renewed economic growth and advance human welfare. (European Roundtable on Entrepreneurship Education, 2010)

## THE REDEFINITION OF ENTREPRENEURSHIP

While Gopinath may epitomize traditional entrepreneurship, that is, the ability to start a business and make a profit, the meaning of entrepreneurship has expanded significantly in its current use. The World Economic Forum defines entrepreneurship as

a process that results in creativity, innovation and growth. Innovative entrepreneurs come in all shapes and forms; its benefits are not limited to startups, innovative ventures and new jobs. Entrepreneurship refers to an individual’s ability to turn ideas into action and is therefore a key competence for all, helping young people to be more creative and self-confident in whatever they undertake. (World Economic Forum, 2009, p. 9)

Entrepreneurs are no longer only those who start a business and try to maximize profits. There are social entrepreneurs

who recognize a social problem and apply entrepreneurial principles to achieve social change (Martin & Osberg, 2007). There are intrapreneurs who bring significant innovative changes from within an organization (Swearingen, 2008). There are also policy entrepreneurs, whose enterprise is to bring innovative improvement in policy from within public and government institutions (Harris & Kinney, 2004).

With the expanded definition, entrepreneurs are believed to have more power to solve the complex problems facing human beings and bring prosperity to humanity than governments and international organizations, according to Philip Auerswald, senior fellow in Entrepreneurship of the Kauffman Foundation and associate professor at George Mason University. In his 2012 book *The Coming Prosperity: How Entrepreneurs Are Transforming the Global Economy*, Auerswald argues that “the vast majority of alleged threats to humanity are, in fact, dwarfed by the magnitude of opportunities that exist in the twenty-first century” (Auerswald, 2012b, location 133–136). These opportunities will be harnessed by entrepreneurs, more so than governments, to transform the human society:

if anything is more naïve than an unquestioning belief in the transformative power of entrepreneurs, it is an unquestioning belief in the power of national governments, international organizations, and multinational corporations to address complex twenty-first century challenges. In many parts of the world where change is most urgently needed, governments are as likely to be a part of the problem as a part of the solution. In such environments, all institutions structured to work through national governments face serious handicaps. The relevance, much less effectiveness, of the UN and the World Bank—the two institutions most clearly tasked in the post–World War II order with addressing global challenges—is less assured today than that of entrepreneurs. (Auerswald, 2012b, location 136–139)

## THE MISSING LINK

The world needs entrepreneurs and great entrepreneurs like Henry Ford, Thomas Edison, Steve Jobs, Richard Bronson, and Mark Zuckerberg, who are admired, envied, celebrated, and in great demand. But how come we don't have more of them?

The missing link is “an entrepreneurial mindset—a critical mix of success-oriented attitudes of initiative, intelligent risk-taking, collaboration, and opportunity recognition,” says a report by the Aspen Institute Youth Entrepreneurship Strategy Group (Aspen Youth Entrepreneurship Strategy Group, 2008). It is hard to imagine someone without an entrepreneurial mindset to engage in entrepreneurship activities. Moreover, the entrepreneurship mindset as defined by the Aspen Institute is also needed for working in existing businesses and organizations. It is a frustrating and sad irony that with so many unemployed in the world, business leaders are complaining that they cannot find qualified workers (Auerswald, 2012b; Zhao, 2009). “The number of workers with adequate skills has decreased,” says the Manpower Group, a global consulting firm with offices in over 80 countries (Manpower Group, 2012).

Why is the “entrepreneurial mindset” missing in our society in general and among our youth in particular?

Our schools don't teach entrepreneurship seems to be a logical answer. It is generally true that “entrepreneurship” has not been part of the formal curriculum in the majority of schools around the world. Even in the United States, a country that has been typically or stereotypically viewed as the land of entrepreneurship, “there is no system in place that offers Entrepreneurship Education as an option for all students” (Aspen Youth Entrepreneurship Strategy Group, 2008, p. 19). As a result, “youth Entrepreneurship Education programs are in place in some communities, but most American youths have little or no access to such training,” writes the Aspen Institute Youth Entrepreneurship Strategy Group in its 2008 *Policy Maker's Action Guide* for youth entrepreneurship education

(Aspen Youth Entrepreneurship Strategy Group, 2008). According to a *Survey of Entrepreneurship Education Initiatives* conducted by the Science and Technology Policy Institute, although 18 states in the United States have taken legislative actions to support entrepreneurship education in K–12 schools, some simply require the inclusion of the entrepreneurship concept. “None of these programs has been rigorously evaluated, so beyond the establishment of a program or concept, the impact of these initiatives remains unclear” (Peña, Transue, & Riggieri, 2010, p. 9).

### IT’S NOT ABOUT TEACHING ENTREPRENEURSHIP

Thus a seemingly natural step is to teach entrepreneurship formally in schools by making entrepreneurship education part of the curriculum. “The first and most important step would involve state and school district adoption of a formal Entrepreneurship Education curriculum,” followed by teacher professional development, community partnerships, and effective and accurate evaluation (Aspen Youth Entrepreneurship Strategy Group, 2008, p. 19). Governments are then called to develop and adopt standards for entrepreneurship education and provide funds to support teacher development so they can teach entrepreneurship to students. “Including Entrepreneurship Education in formal statewide education standards is the first and most important reform that can occur at the state level,” recommends the Aspen Institute (Aspen Youth Entrepreneurship Strategy Group, 2008, p. 22). The Science and Technology Policy Institute suggests the U.S. federal government should “assume the role of setting program standards and curricula guidelines for entrepreneurship education” and “creating a national system for accreditation and certification” (Peña et al., 2010, pp. 24–25).

This seemingly natural action to produce more entrepreneurs is unlikely to work. Gopinath apparently did not take an entrepreneurship education course in his school before

starting his business. He was not even a good student, according to his mother and the traditional educational criteria. He failed his exams and had to miss classes often in order to run his business. Apparently, it was not his school learning that made him successful in business. It was not his homework and exams that gave him the ability to create value for society and job opportunities for many people globally. Steve Jobs did not take an entrepreneurship course before he started Apple, nor did Bill Gates before starting Microsoft. What's perhaps in common across these entrepreneurs is that they succeeded *despite of*, not because of, their school experiences. Some poorly implemented, standardized, required entrepreneurship education course could have damaged their entrepreneurial activities.

Furthermore "there are no definitive studies that clearly and unequivocally demonstrate the impact and benefits of entrepreneurial education" (Peña et al., 2010, p. 15). In fact, making entrepreneurship education a part of the formal curriculum may do more harm than good. The curriculum standards, guidelines, assessment, and evaluation that will likely be put in place for a formal course or program are antithetical to the entrepreneurial mindset.

The real problem is that our "educational system continues to push students through career services offices around the country toward the same pathways followed by their parents, rather than encouraging students to map out new pathways that correspond to current realities," writes Auerswald (2012a). "Our education system is designed to turn out 'good employees,' not 'good entrepreneurs,'" Tom of Dayton, Ohio, wrote to Steve Strauss, a *USA Today* columnist who specializes in small business and entrepreneurship (Strauss, 2006). Strauss agreed, adding: "We have an education system that was created around the time of the Industrial Revolution when we needed to turn rural kids into urban employees capable of working in assembly line, mass-market factories. As a result, we ended up with a school system focused on rote memorization and measurable, predictable results" (Strauss, 2006).



Entrepreneurs, in the broad sense, are not only a select few. Everyone needs to be entrepreneurial in the 21st century. Entrepreneurs today are the “black-collar workers,” a term coined by Auerswald with inspiration from Steve Jobs’ black turtleneck (Auerswald, 2012b). A teacher who does not believe we need all to be entrepreneurs asked me the same question that Auerswald answers:

From where we sit now, it seems improbable that an entire economy could be built of such workers. Where are the drones in this picture? Where are the undifferentiated masses of the unfulfilled? Try asking yourself this question instead: from the standpoint of a 15th-century peasant, how likely is the reality of the present day? . . . Just as former farmers were compelled to convert themselves into blue-collar workers to realize their potential in the economy of the 20th century, so will former factory workers (and retooling economic drones of all types) convert themselves into black-collar workers to realize their potential in the economy of the 21st century. (Auerswald, 2012a)

“Entrepreneurship refers to an individual’s ability to turn ideas into action and is therefore a key competence for all, helping young people to be more creative and self-confident in whatever they undertake” (World Economic Forum, 2011, p. 5). The entrepreneurial skills and mindset are similar to the new survival skills in the 21st century discussed in *The Global Achievement Gap: Why Even Our Best Schools Don’t Teach the New Survival Skills Our Children Need—And What We Can Do About It*, by Tony Wagner, co-director of the Change Leadership Group at Harvard Graduate School of Education. The new survival skills—effective communication, curiosity, and critical-thinking skills—“are no longer skills that only the elites in a society must muster; they are essential survival skills for all of us” (Wagner, 2008, p. xxiii). But even our best schools don’t teach these skills.

What can and should we do then? What can we learn from Gopinath and his fellow entrepreneurs? Are the Gopinaths born or made? Are they simply great happy accidents, lovely exceptions, or can we find a way to produce more?

## TO ENTERPRISE IS HUMAN

### *The Loss of Entrepreneurship and Creativity*

To borrow Duke University engineering professor and prolific author Henry Petroski's notion that "to engineer is human," I suggest to enterprise is human and to create is human. "While educators are currently wrestling with the problem of introducing technology into conventional academic curricula, thus better preparing today's students for life in a world increasingly technological," writes Petroski in his book *To Engineer Is Human: The Role of Failure in Successful Design*, "I believe, and I argue in this essay, that ideas of engineering are in fact in our bones and part of our human nature and experience" (Petroski, 1992, p. vii).

Entrepreneurship is fundamentally about the desire to solve problems creatively. The foundation of entrepreneurship—creativity, curiosity, imagination, risk taking, and collaboration—is, just like the ideas of engineering, "in our bones and part of our human nature and experience." Human beings are born with the desire and potential to create and innovate, to dream and imagine, and to challenge and improve the status quo. We are also born with propensity to be social, to communicate, and to collaborate. For thousands of years, bees have kept the same design of their dwellings, the honeycomb, but the design of human buildings has been changing constantly. "It is the human tastes, resources, and ambitions that do not stay constant" (Petroski, 1992, p. 2). And sometimes, we just like to change things.

The potential can be suppressed or amplified by our experiences. Some experiences enhance our creativity, while others suppress it. Some experiences encourage risk taking, while