

Fueling Entrepreneurs in Education: Opportunities and Resources

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When Fred Smith created Federal Express in 1971, few thought it was possible to ship a package overnight—and without paying a fortune. More importantly, few would have believed that the sluggish United States Postal Service (USPS) would be one of the organizations capable of providing that service. Smith had a vision for an express delivery service that would operate differently than the current postal system, and would also light a competitive fire under the USPS. Most everyone thought what he wanted to do was impossible—even the professor who gave him a C on the paper he wrote outlining the concept as an undergraduate at Yale University (the professor allegedly noted, “the concept is interesting and well formed, but in order to earn better than a C, the idea must be feasible”). Federal Express went on to become a successful shipping company that changed customer expectations by demonstrating that overnight delivery was possible. And the Postal Service responded by introducing similar services much more quickly than they would have otherwise.

Fred Smith is a quintessential entrepreneur: he had a vision for a new approach to solving a problem and created a new organization to carry out that vision. In doing so, he redefined our sense of what is possible, and changed the dynamics of an entire industry. This paper will focus on education entrepreneurs who share many characteristics with Smith—a grand vision, a new approach, a new organization—but who do so in the hope of catalyzing massive improvement in the outcomes of K-12 public education. Based on more than 15 years of experience with these education entrepreneurs, we will share our perspective on the role, potential for impact and unique needs of education entrepreneurs.

There is some debate today about the relevance of entrepreneurs in public education. Some wonder whether entrepreneurs can (or should) create anything more than marginal change in the public school system, whether today’s education entrepreneurs are any different than past

innovators, and whether they deserve any more attention than other change agents in the system. These are questions worthy of debate, but these debates are not the focus of this paper. Here, we will define education entrepreneurs as visionary thinkers who create new for-profit or nonprofit organizations from scratch that redefine our sense of what is possible. These organizations stand separate and independent from existing institutions like public school districts and teacher colleges; as such, they and the entrepreneurs who create them have the potential to spark more rapid, dramatic change than might otherwise be possible. We do recognize that sustainable transformation of public education will require the work of other important change agents—including “intrapreneurs,” who create new entrepreneurial approaches *within* a system. However, this paper will focus exclusively on education entrepreneurs because of the enormous potential they have to catalyze systemic change—and because of the unique nature of the resources and support they need to be successful in this work.

Education entrepreneurs—particularly those who seek to have a sustainable and large-scale impact on underserved students and on the system itself—hold a great deal of promise for helping transform our urban public school systems into high-performing organizations. Whether they are creating new charter school systems, developing performance-based preparation programs for teachers and leaders, or designing data assessment tools for educators, education entrepreneurs are worthy of our consideration because they are motivated by a novel vision for how public education could be a different and better system—especially for underserved students and communities—and they are creating new organizations to carry out that vision. Their modus operandi is “co-opetition”—a combination of competition and cooperation in which entrepreneurs create both external pressure for change (competition) while also serving as additional capacity for school systems and, in the best cases, models of effective alternative

approaches (cooperation). If they receive the appropriate resources, education entrepreneurs may very well lead the public education system toward vastly improved outcomes.

WHAT IS AN EDUCATION ENTREPRENEUR?

“The reasonable man adapts himself to the world; the unreasonable one persists in trying to adapt the world to himself. Therefore, all progress depends on the unreasonable man.”
George Bernard Shaw¹

Historically, much of the scholarship on entrepreneurs blurs the distinction between innovators and entrepreneurs, who share many characteristics. For the purposes of this paper, we will define education entrepreneurs quite narrowly as a rare breed of innovator whose characteristics and activities may lead to the transformation—not merely the slight improvement—of the public education system. This definition is grounded in author Kim Smith’s experience as an entrepreneur and funder in the nonprofit and for-profit sectors for the past 15 years. Peeling back the layers of this definition, it is important to understand 1) the qualities that define entrepreneurs in general, 2) those that distinguish social entrepreneurs, and 3) those that make social entrepreneurs such a potentially powerful force within public education today.

Entrepreneurs

In general, it is important to understand that entrepreneurs have a vision for a better way of doing things, thinking beyond the constraints of current rules and resources. Perhaps more importantly, they have the passion and sense of urgency that literally compels them to take the risks necessary to realize that vision. Stubbornly optimistic, entrepreneurs believe they can make a difference, in spite of the odds. And they don’t stop at just thinking these innovative

thoughts—entrepreneurs then create new organizations to make the changes they want to see in the world. And by doing so, they inspire others to follow.

Visionary thinkers. Entrepreneurs’ most unique characteristic is that they are able to think beyond the current rules and resources to see a different way of working. One of the classic entrepreneurship textbooks, “New Business Ventures and the Entrepreneur,” points out that while most leaders plan around the resources that are currently available, entrepreneurs are driven by their perception of opportunity, irrespective of resources.² As such, in the words of successful Silicon Valley venture capitalist John Doerr, “entrepreneurs do *more* than anyone thinks possible with *less* than anyone thinks possible.” Some liken this to the Zen concept of “beginner’s mind,” in which the mind is unconstrained by the restrictions and inertia of the status quo. What is important about this characteristic is that it leads entrepreneurs to pursue grand visions and creative paths. Where many would ask “*Can* this be done?” entrepreneurs are hard-wired to ask instead “*How* can this be done?” As a consequence, entrepreneurs have the power to fundamentally redefine our sense of what is possible.

Start new organizations. Good entrepreneurs are both *mavericks* and *institution-builders*, as technology entrepreneur and former President of the California state board of education Reed Hastings has noted. For entrepreneurs, innovative ideas simply aren’t enough: their sense of urgency and drive to achieve leads them to take action by creating new organizations that will make their vision a reality. Although “intrapreneurs”—who have a vision for changing an organization from the inside—can also be incredibly important change agents, they are different from entrepreneurs, and each is important in different phases of the change we hope to see in public education. Both are visionary and tenacious, but the single greatest distinction between them seems to be their tolerance for risk and for frustration. Intrapreneurs

tend to have a lower risk profile, but a higher tolerance for the frustration that systemic inertia may cause, as they work to create change in spite of the forces of the status quo that surround them. By contrast, entrepreneurs have a higher tolerance for risk and lower tolerance for this sort of frustration, which compels them to strike out on their own. They are willing to trade off the security of a traditional full-time job in order to get the freedom they need to achieve their goals.

Believe they can change the way things are done. Psychologist Martin Seligman has found that certain people have developed “learned optimism,” in which they believe successes are the result of their own hard work, while seeing setbacks as external and temporary hurdles they need to overcome.³ This trait often goes hand in hand with an “internal locus of control,” or belief that one can control his or her own fate (rather than feeling as though a victim of circumstance). Taken together, learned optimism and this internal locus of control lead entrepreneurs to frame problems in terms of external obstacles that must be overcome, while at the same time framing success around the achievements brought about by the efforts of their team and organization. This creates a unique belief—which others may see as arrogance—that with enough hard work, what they aspire to will become reality. Most of us let doubt or fear of the worst case keep us from taking risks, but entrepreneurs are encouraged enough by prospective gains to tolerate the risk of potential failure. This is a crucial differentiator between entrepreneurs and other innovators: entrepreneurs take an enormous risk by creating a new organization from, quite literally, nothing. This also requires entrepreneurs to be passionate salespeople. They know that their success depends on “selling” their vision to others—employees, investors and other partners. Though many cast this as a crass talent, salesmanship is a vastly underrated skill, requiring deep understanding of an audience’s needs and motivations,

and the ability to translate one's vision in a way that resonates with others and inspires them to support it.

Social Entrepreneurs

Within the realm of entrepreneurship, the social entrepreneur has particular potential for transforming public education. The social entrepreneur's vision is not merely to create something new in the pursuit of fame or fortune, but rather to do so in the quest to make the world a better place. These entrepreneurs may create social purpose ventures through either a for-profit or nonprofit structure, but it is clear to them and to others around them that having a positive impact on some social problem is a top priority.⁴ One of the leading thinkers on social entrepreneurs, Professor Greg Dees of Duke University's Fuqua School of Business, defines them as follows:

- Adopting a mission to create and sustain social value (not just private value);
- Recognizing and relentlessly pursuing new opportunities to serve that mission;
- Engaging in a process of continuous innovation, adaptation, and learning;
- Acting boldly without being limited by resources currently in hand; and
- Exhibiting heightened accountability to the constituencies served and for the outcomes created.⁵

Many of these characteristics are fairly self-explanatory, and some of them are included in our general definition of "entrepreneur" above. However, the first and last of these traits are especially relevant to the education entrepreneurs this paper focuses on. We believe those with the greatest potential for impact today are those who are focused on making a significant difference on outcomes of the K-12 system *as a whole*, particularly for those students and communities who are currently underserved. This differentiates, for example, the parent or

teacher who creates a single charter school from one who creates a system of charter schools. In the former case, the targeted impact is a limited set of students, while in the latter, hundreds or even thousands of students may be affected—enough to demonstrate success *at scale* and gather lessons that may be applied to the system as a whole. This is not to say that those who create a single charter school or a small after-school tutoring program aren't making a difference for individual students and families, but rather that their impact is less likely to be felt at the system level. Though some may call these small-scale efforts “entrepreneurial,” they do not fit within the definition of “education entrepreneur” that this paper will consider.

Because their impact is measured by the creation of social value for others (often referred to as “social return on investment,” or SROI), social entrepreneurs in education are highly focused on outcomes among their target population. Although education entrepreneurs create new organizations that sit “outside” the public education system, they are still accountable to it: they must deliver improved outcomes in order to maintain the district as a customer, for example, or to attract students to a charter school or principal candidates to a new preparation program. As such, they must maintain a customer-focused orientation and constant attention to outcomes in order to compete for attention, funds and sales with existing providers. Because these social entrepreneurs are focused on results rather than “the way things are always done,” they often import relevant approaches and skills from other sectors. This “hybrid” mentality allows them to be creative about pulling together people and ideas from other industries in the service of the results they're seeking. In this way, they often find themselves working closely with other “hybrid” leaders in the public education system, whose experience and skills come from across multiple sectors.

Social Entrepreneurs in Education

Within education, social entrepreneurs create many different types of organizations that seek to have a positive impact on the broader system. Some do this by creating a new supply of public schools and school systems. For example, in California, a number of nonprofit charter management organizations have cropped up to address the diverse needs of these under-served urban communities. Green Dot Public Schools, Partnerships to Uplift Communities, the Alliance for College-Ready Public Schools and the Inner City Education Foundation are among the groups targeting the Los Angeles area, while Envision Schools and Leadership Public Schools target Northern California and Aspire Public Schools has operations across several geographies statewide. Each of these organizations is targeting a different community by creating their own centrally-managed network of new small public charter schools, accountable for results but flexible in approach.

The new organizations that other education entrepreneurs are creating may help enhance the capacity of the existing public school system itself. This may include those developing alternative preparation or support programs for teachers and leaders—such as New Leaders for New Schools (which recruits and trains a cadre of nontraditional leaders for work as principals in high-need areas), Teachscape (which provides technology-assisted professional development), Western Governor’s University (which offers online teacher preparation)—or products/services that help make teachers and leaders more effective and efficient, such as Carnegie Learning (whose instructional materials and software provide targeted resources for algebra instruction) or Wireless Generation (whose software for handheld computing devices helps teachers conduct and analyze observational assessments of students’ early reading and math skills).

The power of entrepreneurs in education is not only as developers of alternative sources of teachers, leaders, schools and tools, but also as change agents whose efforts spur change in the larger system. As Harvard Business School Professor Clay Christensen has found, “an organization cannot disrupt itself.” In other words, organizations charged with serving a current customer base are simply incapable of creating massive system-wide change. In his studies of technology and retail businesses, Christensen found that even the most innovative of businesses improved steadily only up to a point. In every industry, over and over again, he found that “sustaining innovation” could only take change so far. It was “disruptive technologies”—often cheaper, of lower initial quality, and targeting a segment of the market that wasn’t being satisfied by the existing players—that would move industries forward by quantum leaps.⁶ The vastly different approach these “disruptive” players take can shift the dynamics of the market in a way that “sustaining” organizations simply cannot do.

In other words, once an organization develops processes, rules and values around its main business, the people within it cannot focus on disruptive change without losing focus on the core work and upsetting current customers. Thus, incentives and pressures are aligned for large complex systems not to disrupt themselves. This explains why, despite the best intentions of everyone involved, major change of public education has been virtually impossible to achieve at scale. Educators and policymakers are attempting to achieve extraordinarily complex, increasingly demanding outcomes for a larger population by working through a bureaucracy and existing rules designed more than a century ago—and find they can only get so far using this approach.

At this critical point in public education, entrepreneurs have three crucial roles.

1. *As Change Agents:* As Bill Drayton, founder of social entrepreneur network Ashoka, has put it, “When do systems begin to change? When entrepreneurs decide it’s time.”⁷

Entrepreneurs can demonstrate what is possible when resources are used differently, and point the way toward how policy and practice might be changed in light of what they accomplish. As such, their work has a direct impact, as well as a “catalytic impact” that reverberates throughout the system. For example, Teach For America has directly affected the lives of more than a million students and of the 12,000 corps members it has trained to serve as teachers in high-need schools—but, perhaps more important, its success has also re-shaped broader policy conversations around the recruitment and preparation of teachers for urban and rural settings.

2. *As Venues for New Skill Sets and Mindsets:* The organizations that entrepreneurs create are often the kind of meritocratic cultures that draw and retain smart, ambitious, achievement-oriented employees who might not otherwise be involved in public education, due to bureaucratic licensure hurdles or preference for culture that is more nimble or merit-based. These people may prefer working for a smaller, more results-driven organization where they can watch their own work make a significant difference, and are willing to trade in the security of step-and-ladder, seniority-based progression for this opportunity to prove their merit. “Public education is often so rules-bound that you can’t draw oxygen, but I never had to worry about making payroll,” says Larry Rosenstock, a former urban public school principal turned entrepreneur and founder of High Tech High Learning, a nonprofit charter school management organization based in San Diego, California that has helped to start more than 10 technology-focused charter schools. “Here, I have all the agility in the world—or, to put it another way, I have nobody to blame but myself if I don’t succeed.”⁸

3. *As Developers of Learning Laboratories Where Experimentation and Ongoing Learning Are Encouraged:* As problem-solvers, entrepreneurs are constant learners, regularly reviewing progress and correcting course. Since this ongoing learning process is exactly what we are asking our public education system to embrace in an era of increased accountability, entrepreneurial ventures can help demonstrate how this new dynamic might work in a school system. This role is particularly salient for those who are creating national or regional systems of charter schools; in addition to adding more schools to the current landscape, the entrepreneurs behind these organizations are learning important lessons about designing aligned systems of schools as they create them from scratch with coherence and choice in mind. For example, Green Dot Public Schools, a charter management organization in Los Angeles, designed its own employment agreement with its unionized teachers. These innovative new contracts are one-year contracts that can be modified as needs change; in 2005, they were in place in each of Green Dot's five schools, covering nearly 100 teachers.

WHAT CREATES OPPORTUNITY FOR EDUCATION ENTREPRENEURS?

“The individual entrepreneur is a person who perceives opportunity, finds the pursuit of opportunity desirable in the context of his or her life situation, and believes that success is possible.”
Howard H. Stevenson and William A. Sahlman⁹

Entrepreneurs can be important change agents for large, complex systems that need dramatic change. But what specifically opens the door for entrepreneurs to make this difference? In general, the key word is change—something changes, either suddenly or slowly over time, requiring new approaches to problem-solving. Expectations placed on the system may change dramatically, so that existing approaches are no longer appropriate. The availability of resources may shift, expanding the pool of available capital or requiring creativity to manage with less

money. The very structure of the market itself may be intentionally shifted by policymakers, leaving room for entrepreneurs to address needs in new ways. New forms of knowledge, including technology, may also emerge through research and development or through serendipitous discovery, creating opportunity for entrepreneurs who can harness its power and use it as a tool for change.

In most cases, of course, many of these things are happening simultaneously, creating a swirling eddy of both challenges and opportunities for entrepreneurs. Here, we attempt to parse them out so that we can better understand what resources education entrepreneurs need to be successful in these endeavors.

Change in Expectations

The current system of K-12 public schooling was created in a social and economic context that was entirely different from our current one. Compulsory public education arose in the early 1900s as a way of ensuring that the massive influx of immigrants would be good American citizens and productive workers in the country's emerging industrial economy. At the most basic level, the national population was about 75 million people in 1900, about a third of who were children of school age.¹⁰ Due to segregation by class and by race, only some of these school-aged children were expected to attend school. Even among those that did, only about 10 percent of teenagers enrolled in high school, 6 percent graduated from high school and 2 percent enrolled in college.¹¹ The economy was driven by agriculture and industry, which offered the opportunity for a variety of skill levels to earn a living wage, many without a formal education required.

On every front, this picture has changed dramatically. The national population has tripled to nearly 300 million, and there are about 54 million children in elementary and

secondary school, 48 million of whom are in public schools.¹² There is also a great deal of diversity among these students in terms of class, race, language and learning needs, and schools are expected to address these individual needs. Prompted by the triumphs of the civil rights movement, we also expect more of our public schools today: it is no longer sufficient for a small percentage of children to go to school, nor for only students of certain races and high income levels to be prepared for success in college. It's now a common belief that all students *can* learn, and that they *must* do so in order to succeed in the new economic context in which they find themselves. Our nation's post-industrial economy—and the increasingly global economy—is now driven by knowledge and information, and so nearly every job requires not only foundational skills like literacy and mathematics, but also higher-order skills like symbolic reasoning, analysis and complex communication.

In other words, the public's expectations of the current system have ballooned, such that universal public education is now expected to serve all children equally, and to a much higher standard. It is widely understood that this simply isn't being accomplished. In 1983, *A Nation at Risk* warned of the "rising tide of mediocrity" in our nation's public schools, and inspired the business community and other groups to get involved in improving public education.

With the increased urgency for change that came with this report and others, the door of opportunity for entrepreneurs was opened. This is due in part to the urgency voiced by the public, which has increasingly demanded that the system provide all students with a high-quality education. Many expect that nearly all high school students should graduate ready to attend college, for example, which would be more than triple the current rate of 30 percent.¹³ But it's not likely that we have—or should have—the political will to triple spending in order to triple effectiveness, notes Kevin Hall, a former entrepreneur who is now at The Broad Foundation.

“The delivery system simply has to change to be more productive,” says Hall. “Entrepreneurs can either access new resources or put resources together in different ways to get to different outcomes.”¹⁴ In other words, this enormous challenge has created significant opportunities for entrepreneurs to find more efficient, effective ways of ensuring that all students receive a high-quality public education.

Change in Market Structure

Because public education is a public-sector institution, charged with serving the public good, it follows that public policy is the most common tool for changing its structure. Whether at the federal, state or local level, public policy shifts can create entrepreneurial opportunity by requiring the people within a system to think differently, and also by creating new “turf” to which nobody has yet laid claim. In this way, policy shifts may open doors for entrepreneurs, for whom thinking differently and creating new organizations to address new opportunities comes naturally. One of the most significant policy shifts over the last several decades has been the movement toward standards and accountability. As the level of expectations for public schools has increased, so have the mechanisms for specifying what students should know and be able to do (in the form of state standards), measuring whether they reach those standards (assessment), and more recently, imposing sanctions on schools and school systems that fail to improve student outcomes (accountability).

Accountability policies have introduced a number of opportunities—some might say “pain points”—that entrepreneurs can help address. For example, the No Child Left Behind Act has created opportunities for entrepreneurs to provide supplemental education services for students whose schools have not achieved Adequate Yearly Progress for three years in a row. At the state level, policies that mandate turnarounds of chronically failing schools have created a

need for additional capacity to manage these schools. Some charter school organizations, including the Knowledge Is Power Program (KIPP), are stepping into this gap. In Louisiana, Senator Mary Landrieu has worked with Jim Meza, the Dean of Education at the University of New Orleans, to create a new Education Venture Fund to support organizations seeking to turn around the city's underperforming schools. And in Philadelphia, state-level accountability has led to a change in the structure of the entire school system to support a portfolio of entrepreneurs. The state took over the district in 2001, and its School Reform Commission has contracted with a variety of entrepreneurial education providers to manage 45 of the city's lowest-performing schools, including for-profit education management organizations like Edison Schools and Victory Schools, as well as local universities, community-based organizations and nonprofit charter management organizations like Mastery Charter Schools.

Because the standards and accountability movements have begun to define the desired learning outcomes and allowed policymakers to free up the means for getting there, policymakers have created opportunities for entrepreneurs to develop new, more effective approaches to schooling. This is also what has made charter school legislation such a powerful opportunity for entrepreneurs in the 15 years since Minnesota passed the first state charter law. These laws allow for new public schools to be created and supported with public dollars but managed in a different way than districts might otherwise. By specifying the expected school performance in the school's "charter," these policies encourage entrepreneurship by allowing charter school operators to use their own approach to achieve those goals.

These policies have spawned an entire sub-industry of nearly 3500 charter schools in 40 states and the District of Columbia, serving nearly 1 million students.¹⁵ The first wave of charter schools consisted largely of individual charter schools, many of which sought to advance a

particular pedagogical innovation, school culture or other innovative idea. Over the last five years or so, they have been joined by an increasing number of entrepreneurs who seek to start and build large-scale systems of multiple charter schools. These include both nonprofits and for-profits, tightly managed organizations and looser affiliations of schools, large national networks and smaller regional systems.

Policies that specify outcomes but allow different approaches have also enabled entrepreneurs to create alternative programs for teacher certification and school leader licensure. One of the best-known examples of entrepreneurial innovation in this area is Teach For America, founded in 1989 by Wendy Kopp to recruit and prepare bright college graduates for two years of teaching in high-need classrooms. Because alternative credentialing regulations allowed for different approaches to preparation, Teach For America was able to develop innovative processes to prepare teachers—including stringent criteria for candidate selection and training curriculum targeted at teachers who will serve in low-income areas. There are also a variety of local programs, often developed through partnerships between entrepreneurs and universities, such as the Mississippi Teacher Corps and the Boston Teacher Residency, as well as programs like New Leaders for New Schools that focus on preparing urban principals. More recently, charter school systems like High Tech High and KIPP, have begun developing their own residency-based models to increase the supply of well-prepared, certified teachers.

Taken together, public policies such as the ones described above have pushed public education in a new direction, allowing entrepreneurs to innovate by clarifying the desired outcomes and freeing up the process. Although most of our public education systems were designed to focus on *inputs* (dollars, hours, students served) and management processes evolved accordingly, the emphasis of these recent policies is now on *results* (skills achieved, content

mastered, college attainment). This shift creates enormous opportunities for entrepreneurs to help provide the tools, practices and people needed to make this change on a large scale.

Change in Availability of Resources

As discussed in the previous section, public policy can create new opportunities for entrepreneurs by changing the structure of the market. However, policy also creates opportunity when it affects resources—which usually means an increase or decrease in the dollars available and who can access them. Recent examples include federal startup grants that encourage the development of new charter schools and the funds allocated for paying supplemental education service providers to tutor students whose schools are not making adequate yearly progress under the No Child Left Behind Act.

Other forces can also constrain or expand the resources available in public education, thus creating opportunity for entrepreneurs. In the late 1990s, there was a substantial increase in the dollars invested via “venture capital,” in which private investment firms pool monies in support of early-stage companies in exchange for a stake in their anticipated future success. With the hopes of capitalizing on new technology businesses, the amount of money invested by venture capitalists in all entrepreneurial ventures increased from \$2.8 billion in 1990 to more than \$100 billion in 2000.¹⁶ Though much of this capital was invested in general technology infrastructure and Internet-based businesses, a great deal of new capital was available to education entrepreneurs, to the tune of \$2.9 billion in 2000 (including investments in K-12, higher education, and corporate training).¹⁷ These dollars mostly flowed to entrepreneurs addressing online education, such as K12 and Apex Learning, and for-profit education management organizations such as LearnNow and Victory Schools. Since 2000, however, the

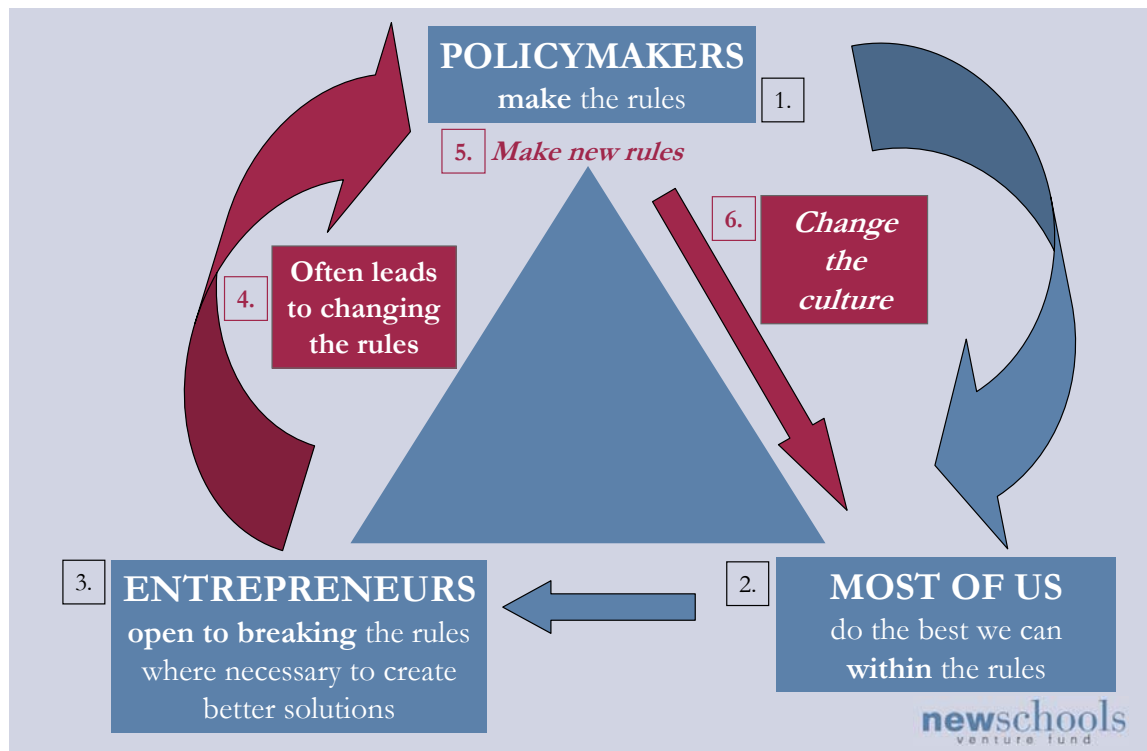
venture capital market has cooled in general and in education specifically, limiting the amount of private funding available to education entrepreneurs creating for-profit companies.

The spigots of philanthropic capital also open and close off opportunities. Newer education foundations such as The Broad Foundation, the Pisces Foundation, and the Walton Family Foundation have shown a willingness to invest in new entrepreneurial organizations in education, and The Bill & Melinda Gates Foundation has created a substantial market for entrepreneurial activity around transforming high schools, investing more than \$2 billion in that area since 2000. This funding has encouraged entrepreneurs to create new charter schools, develop new district schools, and help break down large existing high schools into new small schools.

Sometimes, of course, entrepreneurs push the structure of the market and its corresponding resources in new directions, rather than wait for policymakers or others to make room for them. One of the best examples is the work of New American Schools (NAS), founded in 1992 by former Xerox CEO David Kearns to encourage the development of new whole-school reform models designed to create coherence at the site level. With more than \$140 million in funding from the private sector and specific desired outcomes laid out, NAS seeded dozens of diverse new school models, including Modern Red Schoolhouse, Expeditionary Learning/Outward Bound, and America's Choice. Leveraged by the establishment of Comprehensive School Reform legislation that earmarked more than \$300 million per year to such programs, the effort helped show the importance of site-level coherence in school design. As such, New American Schools is a good example of the entrepreneurial change process: private experiments on organizing and using resources differently lead to public recognition and support, and a shift in the way things are done with public funds (see Figure 1). Ideally, public

policy would include repetitions of this cycle, with new entrepreneurial experiments and lessons continuing to inform policy over time.

Figure 1: How Entrepreneurs Catalyze System-Wide Change



New Knowledge Emerges

New knowledge creates opportunity for all kinds of change in education. Sometimes this new knowledge is generated from *within* the field of education, such as when entrepreneurs discover or apply a new (or underutilized) approach to teaching that they find to be effective, and create a new organization based on that approach. The founders of the Knowledge Is Power Program (KIPP), Dave Levin and Mike Feinberg, were heavily influenced as Teach For America corps members by fellow teacher Harriet Ball. “We adopted her use of chants and rhymes, her ways of relating to kids, and her views of discipline and community accountability,” Levin has

said.¹⁸ The two were also motivated by the success of Los Angeles teacher Rafe Esquith, who espoused an extended school day, hard work and college for all students. Today, KIPP's model emphasizes many of the attributes that Ball and Esquith had found successful, but it took the entrepreneurs' actions to turn these insights into a whole new approach to schooling.

But new knowledge can also come from *outside* the field of education, such as innovations in technology. Entrepreneurs have been quicker to take up the challenge of applying technology to the public education sector, for many of the same reasons that it falls to entrepreneurs to bring other disruptive innovations to bear on the status quo. Private companies have been quick to embrace technology as a way of making their products and services better, faster and cheaper. Unlike businesses, however, public school systems have traditionally had little incentive to rapidly improve the efficiency or effectiveness of their work. Instead, like most other public service organizations, they have prioritized stability over change. This may have shielded public schools from faddish reforms, but it has also manifested itself as systemic inertia that slows down any potential improvements. Further, the pace of technology change has been swift, with computing power doubling every 18 months.¹⁹ As such, technology has caused not only reluctance, but also skepticism about its sustainability, among educators; thus, it falls to entrepreneurs to harness the potential of technology for use in public education.

In any sector, technology isn't magic: it's simply a tool for doing things *differently*—and, when it works well, for doing things *better*. In public education, “better” can mean improved outcomes for students, or increased productivity for students, teachers or school leaders, in which they do the same (or more) work in less time. To improve outcomes for all students, public education will likely need to make use of technology in both of these ways, just as the medical

and financial services fields have done: as a way to leverage the work that's already being done and to achieve dramatically better results without massive infusions of people or capital.

Technology should enable teachers and leaders to use their time more efficiently, allowing them to minimize administrative tasks, maximize time spent with students, and tailor instruction and support to the specific needs of students. In order to understand the ways in which technology has created opportunities for education entrepreneurs, then, it is useful to consider the basic cycle of teaching and learning that happens in all schools and school systems: assessment of student learning, interpretation of that data, planning for future action, and instruction—as well as management of this entire process.

Assessment. Schools and school systems have always assessed student learning through a variety of measures, ranging from homework to pop quizzes to final projects and presentations. As the standards and accountability movements have taken hold, assessment has become more formalized and standardized across classrooms, schools, systems and states. Regular, mandatory state assessments linked to standards are one of the most common forms this takes, and in many ways, technology has played a substantial role in this development: since the 1970s, the now-ubiquitous Scan-Tron “bubble” test format has enabled states, schools and teachers to assess student learning in a standardized, cost-effective way and helped make this important information available to educators, researchers, policymakers and the public. State tests are important measures but are generally administered annually, so interim assessments have begun to take hold in many public school systems as a way to gauge student progress during the year and help inform instruction. Here, technology has helped lighten the burden of administering and scoring these frequent tests. Targeting literacy in the early grades, for-profit startup Wireless Generation has developed software that runs on handheld devices to allow teachers to quickly

record the results of observational assessments they conduct among students. This technology is faster and easier for teachers to use than the traditional paper-and-pencil format; more importantly, once the assessment information is uploaded into a computer, the software creates easy-to-use reports for teachers that analyze results and help teachers target their instruction accordingly. The company's software is currently being used by approximately 75,000 teachers in more than 40 states. Another for-profit company, Edusoft, has developed scanning technology that allows teachers to scan multiple-choice tests on plain paper and upload results into a database for immediate analysis. Its technology is used by more than 400 school districts, and the successful company was acquired by Houghton-Mifflin, one of the major education publishers, in 2003. It is worth noting that one area for additional opportunity—using technology to create assessments that are more sophisticated than multiple-choice, for measuring more complex skills like critical thinking and analysis—has not yet been adequately addressed by entrepreneurs.

Interpretation. With the increasing frequency and use of standardized assessments, there has been a corresponding need for ways to make sense of all this new data. Entrepreneurs have stepped forward to use technology to fill this gap. For example, The Grow Network (now owned by major education publisher McGraw-Hill) created a technology-enabled approach to managing and using assessment data. The Grow Network pioneered user-friendly reports on students' standardized test performance that teachers and parents can use for ongoing instruction. Through its Web site, Grow also provides access to recommended instructional activities based on student needs identified by test results. Major school districts, including Chicago Public Schools and the New York City Department of Education, use Grow's reporting software.

Planning. One of the ways that technology can be used in public education is by helping to streamline the way educators plan their activities. Some entrepreneurs are tackling this at the school level, in terms of providing tools for planning instruction. One of the organizations in this market is Edgenuity, a for-profit startup that has developed an instructional management system which links academic standards with curriculum, student performance data and other information. Now in use by a handful of districts, Edgenuity's software allows teachers and principals to track the scope and sequence of their curriculum in a dynamic and accessible manner via the Internet, rather than in bulky, hard-to-access binders. Another component of planning involves linking student performance data to changes in professional development. Here, one entrepreneurial organization that has gained traction is Teachscape, a for-profit provider that offers online professional development using the video case method. This allows teachers to learn how to modify instruction based on student progress, and enables them to see how instructional strategies actually look in real classrooms—without needing to travel to other schools or districts.

Instruction. Despite advances in technology, the basic structure of teaching and learning itself has stayed relatively consistent: in most places, teachers instruct groups of students face-to-face, using technology only as a tool to supplement their instruction. However, the pervasiveness of personal computers and Internet access in schools—driven in large part by eRate, a federal program that has allocated more than \$10 billion toward Internet infrastructure in K-12 schools and libraries since 1996—has enabled some entrepreneurs to capitalize on technology. In the 1990s, former math teacher Bill Hadley became an entrepreneur, combining his insights into effective algebra instruction with 20 years of cognitive science research from Carnegie Mellon University to create Carnegie Learning. The for-profit company developed an

algebra program that integrates print and computer-based curriculum, using adaptive assessments to pinpoint student mastery and learning challenges so that teachers can focus on the students who need the most help. Carnegie Learning’s program is now being used by more than 275,000 students in districts across the country, including a recently announced multi-million dollar contract with the Los Angeles Unified School District to roll its program out to 25,000 middle and high school students.

Although entrepreneurs have begun to make inroads into bringing technology to bear on the teaching and learning cycle, there are a number of opportunities that remain unexploited. One major area is the integration of these products and services: because there is no soup-to-nuts solution that cuts across assessment, interpretation, planning, instruction and management (including human resources and finance), districts must cobble together various technology products into something resembling a comprehensive approach. Further, technology has the potential to transform not only teaching and learning, but also the management of school systems. Although many agree that the job of district leaders is among the most difficult, there have been few attempts to use technology to make their job easier. As such, entrepreneurs who develop technology that ties together data about student performance, finance and human resources—creating a coherent picture of the district’s operations—could help district management teams do their job more effectively and thereby have a major, high-leverage impact on the operation of public school systems.

WHAT RESOURCES DO EDUCATION ENTREPRENEURS NEED TO TAKE ADVANTAGE OF THESE OPPORTUNITIES?

“The entrepreneur shifts economic resources out of an area of lower and into an area of higher productivity and greater yield.”

J.B. Say, French economist who is said to have coined the term “entrepreneur”²⁰

An entrepreneur's pursuit starts with identifying an opportunity. But this opportunity must be matched with resources in order to be transformed into impact. In the private sector, venture capitalists help jump-start this process for entrepreneurs. There is a sophisticated market of investors that differentiate themselves by industry and stage; some may provide money to very early-stage private companies developing wireless technology, for example, while others may prefer to invest in more mature companies developing pharmaceuticals and medical devices. Because they can observe trends across the many entrepreneurial ventures they have supported, they bring great value to the entrepreneurs they support. These venture capitalists provide not only funding, but also broad strategic guidance and tactical help with building a team and board; valuable connections to partners, suppliers, customers and funders; and help with identifying challenges of growth and scale that the entrepreneur might not otherwise see coming.

Taken together, these resources can be categorized into three groups, each of which will be discussed in detail below: 1) financial capital, 2) human capital, and 3) intellectual capital. Just like any other entrepreneur, an education entrepreneur must rely on a variety of different people and organizations for help in obtaining the money, people and ideas they need to turn their vision into a successful reality. And as technology venture capitalist and NewSchools co-founder John Doerr likes to remind us, "education entrepreneurs need this kind of support even more than other entrepreneurs, because the work they do is so incredibly difficult and important."²¹

Financial Capital

Unlike traditional leaders, who focus on allocating the resources already in hand, entrepreneurs start with the opportunity for change and *then* marshal the necessary resources. The most obvious of these resource needs is money. Though all education entrepreneurs need

financing to get started (startup capital) and to support growth (growth capital), the capital market for for-profit organizations is markedly different from the one that nonprofit organizations can access (see Figure 2). Further, once an entrepreneurial organization reaches its more mature stages, it needs money to it going (sustaining capital), which often means revenue from the sale of a product or service—although, as we will explain below, this can be a problematic area for both for-profit and nonprofit organizations within public education.

Figure 2. Types of Financial Support Needed

				<i>Startup</i>	<i>Growth</i>	<i>Sustaining</i>
<i>Corporate Structure</i>	For-profit	Equity investments from venture capital firms or “angel” investors	Equity investments from later-stage venture capital firms	Revenue from sales of product or service		
	Nonprofit	Grants from individual donors, foundations and public sources	Grants from foundations and public sources Program-related investments (loans from foundations)	Continued fundraising for grants Revenue from sales of product or service		

Startup Capital. Education entrepreneurs creating for-profit enterprises traditionally raise their initial capital from high net-worth individuals (“angel investors”) or venture capital firms. These investors make equity investments in the new organization, putting up cash in exchange for an ownership stake. These investors expect that their investment will yield a financial return down the road, when the company is acquired or sells shares on the public

market. In spite of the enormous size of this market—with nearly \$500 billion spent each year in K-12 public education, according to the National Center for Education Statistics²²—the challenges of operating a business in the public education sector means that only a few committed venture capital firms will invest in entrepreneurs in this space. In 2004, just over \$50 million was privately invested in preK-12 businesses, according to market research firm Eduventures²³—a tiny fraction of the sector’s overall size. Even those education entrepreneurs who do secure venture capital funding find that there is little patience among investors for the kind of slow growth required to create a high-quality product or service and develop trust among the customer base. In search of profits, these investors often prioritize short-term growth in revenues rather than building a sustainable company for the long term. This can be at odds with entrepreneurs’ understanding of what nonprofit scholar Jed Emerson has called the “blended value proposition”—that taking into account social impact, in addition to profits, will lead to better financial returns over time.²⁴ Over the long term in public education, investing in high-quality organizations with strong results is likely to yield higher revenues and potentially significant profits because the sector is large, relatively recession-proof, and in need of significant amounts of innovation.

On the nonprofit side, education entrepreneurs generally raise their startup capital from individual donors, venture philanthropy firms like NewSchools, and foundations. Only a few foundations are comfortable with taking a risk on entrepreneurial organizations doing things differently and with the intent of creating scale. Those that do tend to be younger foundations, such as The Broad Foundation and The Bill & Melinda Gates Foundation, which make multi-million dollar grants over the course of several years to some of the nonprofit organizations they support. Until these new foundations arrived, traditional education grantmakers tended to

provide these early grants only in small increments that covered a short period of time, forcing the entrepreneur to spend a great deal of time and energy on fundraising from multiple donors during a time of critical organization-building. “I spent most of my time trying to raise funds,” recalls Teach For America founder Wendy Kopp of her organization’s first year, in which \$2.5 million was needed to recruit and train the first corps of teachers. “Every week we would shudder at the dwindling sums in Teach For America’s bank account and double our resolve to make dozens more calls and schedule more meetings. Every week we would secure the necessary money just in the nick of time.”²⁵ Nonprofit funders are often risk-averse, fearful of the stigma of failure that often accompanies large initiatives like the \$1 billion Annenberg Challenge, a public-private partnership sponsored by the Annenberg Foundation whose mediocre results were widely characterized by the press as a waste of time and money.²⁶ On the flip side, foundation leaders are rarely ousted for failure to have an impact. Because of this pressure from the public and their own trustees, foundation program officers find it far easier to say “yes” to a host of small grants than to go out on a limb with a few big bets. Further, few philanthropic organizations provide venture-building support—the kind of hands-on guidance that an entrepreneur needs when starting or growing their new organization.

Growth Capital. Finding capital to start a business is challenging, but fundraising for growth can be even more complex for education entrepreneurs. The news is better for for-profit companies who have a good track record: venture capital firms such as Quad Ventures are willing to invest in growth for later-stage education organizations that have shown positive initial results, and even venture capital firms who don’t focus on education are willing to entertain the notion if they see a successful business emerging.

For nonprofits, the fundraising picture for growth is more daunting. In some ways, growing nonprofit organizations are more appealing to foundations because they are perceived as less risky. However, for the same reasons mentioned in the startup section, nonprofit entrepreneurs struggle to raise the kind of large, multi-year grants necessary to support growth. In order to have a real impact on the public education system in a district, state or region, education entrepreneurs need to reach a sufficient scale in terms of operations and staff, and that costs money. What's more, the philanthropic sector has unintentionally adopted a perverse incentive for nonprofit education entrepreneurs: the better the organization is doing, the more likely a nonprofit donor is to drop their support, once they perceive that they have "done their part" or are "no longer needed," leaving other funders to take over in this more mature phase. This means that few donors are willing to help sustain an organization over time, translating into few funds available for growth among mature nonprofits—though Gap founder Don Fisher's ongoing support of KIPP and Teach For America, amounting to about \$43 million between the two, is a notable exception to this general rule.²⁷

Moreover, because bigger dollar amounts are needed to fund scale than are needed in the startup stage, it is especially difficult to raise such funds the way they are traditionally given by foundations. According to federal regulations, program officers need only spend 5 percent of the foundation's total assets each year. The other 95 percent of a foundation's assets are generally not used to support programs; this money is referred to as a foundation's "endowment" and is usually invested in stocks or bonds to provide income for continued support of the foundation. Nonprofit entrepreneurs may need to tap into these endowments in order to gain access to the sizable funds they need for scale and sustainability.

One way to do this is with “program-related investments,” which are loans that come from endowment funds but are expected to earn below-market rates in return for supporting social impact and programmatic priorities.²⁸ For example, several foundations have made program-related investments in charter school facilities funds that will help charter school entrepreneurs secure facilities for their schools; the Walton Family Foundation made a \$10 million investment in the Educational Facilities Loan & Guaranty Fund managed by community development firm Local Initiatives Support Corporation, and the Annie E. Casey Foundation made a \$1 million investment in the Indianapolis Charter Schools Facilities Fund. Nationwide, foundations hold nearly \$500 billion in their endowments, but use just over \$200 million of that for charitable loans or program-related investments, according to the Foundation Center—less than one-twentieth of one percent.²⁹ Given the importance of philanthropic capital to nonprofit entrepreneurs in this space, and the scale of the problem, it appears that the only way for education entrepreneurs to grow in a sustainable way is for foundations to strategically increase the dollars they put to work.

Sustaining Capital. As Figure 2 shows, the two ways entrepreneurial organizations bring in capital to sustain their business are through fundraising and through revenues. Once their new organization is up and running, many education entrepreneurs—including all for-profits and an increasing number of nonprofits—bring in financial resources through earned income from the sale of products or services into school systems. On the nonprofit side, bringing in revenue is often problematic from the get-go: although there has been an increasing acceptance of income-generating nonprofit organizations, education entrepreneurs often find their model or theory of change prevents this from happening. For example, the allocation of money in public school districts is usually very rigid and predetermined, with little flexible funding available for

spending on promising new programs. As a result, although some education entrepreneurs who have created nonprofit organization find that they can support their organization's ongoing operations through public funding—such as the per-pupil funding that charter management organizations receive—most must do so through ongoing fundraising from individuals and foundations.

Meanwhile, for-profit education ventures generally sustain their businesses not through ongoing fundraising but through revenues. This comes with its own set of challenges, as public education is a heavily relationship-based market and delicate territory for any new entrant. The market is incredibly fragmented, including 50 states, more than 14,000 districts and nearly 100,000 schools—each of which has its own constraints, preferences and decision-making processes. Entrepreneurs must compete against the oligopoly of large education publishers, who have substantial teams of salespeople, big bank accounts and enormous influence with education decision-makers. The relationships that these publishers have with district officials have often been in place for decades, often preventing educators from serious consideration of other providers of products and services.

These forces have made it incredibly difficult for entrepreneurs to sell their products and services into public education. In order for education entrepreneurs to succeed in public education, there needs to be a more rational, manageable sales cycle that includes avenues for sales and distribution that allow entrepreneurs to get around the current publisher oligopolies. Customers within schools and districts also need help to become more informed decision-makers who understand their own needs and the range of available solutions. As they attempt to make this major transition into outcomes-driven systems, those inside the system are struggling to define what they need *today*, and rarely have the time or insight to lift their heads and look

forward to what they'll need tomorrow. In addition, small entrepreneurial organizations need assistance with navigating government relations: larger companies have a team of people who can comb through new federal regulations for rules and grants that may give their business an edge, but smaller organizations can rarely afford this kind of capacity.

Human Capital

Business author Jim Collins, who has studied companies that consistently outperform their competition, found that those who went from “good” to “great” did so by getting “the right people on the bus, the right people in the right seats, and the wrong people off the bus.”³⁰ Indeed, finding and keeping the right people is the paramount challenge that education entrepreneurs—and indeed, the entire public education sector—faces today. For an entrepreneur, the support of talented people is needed both within the new organization itself and on the board of directors.

Because their resources are often limited, all startup organizations struggle to recruit the senior executives they need to start and manage the business. But entrepreneurs in education face two additional challenges that other sectors do not, according to Amy Verneti, founder of the Verneti Group, which has done executive searches in both the technology and education sectors. Because the existence of entrepreneurs in education is still a relatively new phenomenon, there are very few people experienced in starting and running an entrepreneurial education organization. And as for experienced management talent in education more broadly, Verneti notes, school districts and education publishers are not known for “incubating” great management talent in the way that businesses like General Electric, Procter & Gamble or Microsoft often do in the private sector. “More focus on repairing our public school system should lead to a better incubation environment for executive talent within our school system,”

she adds. There is also a need for more executive search firms like Verneti's, with expertise and contacts in the field of entrepreneurs addressing K-12 education; the few firms who currently address senior-level searches within education tend to focus on higher education, and of those, most are not familiar with the unique needs of entrepreneurial organizations.

Although the specific mix of skills an entrepreneur needs to hire depends greatly on the type of organization being built, any new venture that is seeking social impact in public education will need what NewSchools refers to as a “hybrid team,” with skills from across the education, business, nonprofit and public sectors. This is because public education shares common characteristics and challenges with all these sectors: it has as much operational and financial complexity as any business, the mission-driven character of a nonprofit, the content and social complexity inherent in education, and of course the need to be accountable to a diverse public. Education entrepreneurs need to surround themselves with skills and expertise from across these fields. For example, when lifelong educator Don Shalvey set out to create and manage Aspire Public Schools as a new system of charter schools, he had a vision for a system that could influence education throughout the state of California. But he needed help developing the systems and structures such an ambitious new organization would need to succeed. So to help him get the new venture off the ground, he brought on Gloria Lee as chief operating officer; she had a hybrid background as a former business consultant at McKinsey & Company, manager of a UCLA program that trained and coached school principals and teachers, and a dual degree in both education and business from Stanford University. Also, because Shalvey would be focused on leading the system of schools and selling his vision to funders, prospective employees, parents and policymakers, he hired Elise Darwish—an experienced educator who had been a

teacher and instructional coordinator—to ensure that the day-to-day instructional needs of schools were met.

In addition to accumulating experience across these sectors, there are several programs that help prepare people for this “hybrid” work. Mike Kirst at Stanford University was a pioneer in offering the first dual-degree graduate program in business and education in the late 1970s. Other universities have followed suit, including Harvard University and Columbia University. The Broad Center for the Management of School Systems—created by The Broad Foundation in Los Angeles—has several programs that prepare mid-career professionals and senior-level executives for roles in school districts. The Broad Residency is a two-year residency program that develops managers, primarily for work in urban public school systems, while the Broad Superintendents Academy prepares executives to lead these systems.³¹ These sources aren’t enough to meet the demands of the increasing number of entrepreneurial organizations in education, though: the two Broad programs prepare about 45 people per year, many of whom go straight into school districts, and a large percentage of those who receive “dual degrees” in business and education from Harvard and Stanford end up at consulting firms, investment banks or foundations. This leaves a small number available for hire by the education entrepreneurs who need them. More such preparation programs for “hybrid” leaders need to be developed, including more whose preparation is geared toward the demands of entrepreneurial organizations, not just districts.

In addition to a great team, a strong board of directors is also crucial to an entrepreneurial organization’s success throughout its lifecycle. Legally, a board of directors is charged with overseeing an organization to ensure that laws are followed and funds are put to appropriate use. For entrepreneurial organizations, however, a board’s importance reaches far beyond this basic

governance role. In the startup phase, the entrepreneur needs a great deal of strategic guidance and tactical assistance from the board just to get the organization off the ground. In this formative time, for-profit organizations generally have a hands-on, “venture-building” board made up of its early-stage backers, who help with hiring, connecting the organization to potential customers and new hires, and shaping the initial business plan. Unfortunately, nonprofit entrepreneurs often start by creating either a “friends and family” board or one focused purely on fundraising, when they really need a “working board” with expertise in starting a new venture—much like that of a for-profit startup. As the nonprofit organization grows to maturity, entrepreneurs often need help with ongoing fundraising and thus may need to add board-level connections to other donors. A few programs do exist to help link qualified board members with entrepreneurial education organizations—such as boardnetUSA, which is focused on the entire nonprofit sector, not just education—but for the most part this matching takes place in an inefficient, ad hoc fashion, through existing board members, investors, and other contacts.

Intellectual Capital

Less tangible than human or financial capital—although very closely tied to both—intellectual capital is just as crucial a fuel for entrepreneurial success. Intellectual capital may be thought of as the ideas, practices and policies that feed entrepreneurs’ ongoing understanding of where opportunities lie, what lessons can be learned from the work that is already happening, and what changes need to take place in order to maximize success. Contributors of intellectual capital may include investors and funders who can add value beyond just money to entrepreneurs by contributing experience and insight toward helping entrepreneurs build their organization and prepare for the next wave of challenges they will face. Other sources of intellectual capital may include consulting firms, evaluators, think tanks and policymakers.

As entrepreneurs grow their organizations to scale, many have found outside consulting firms useful sources of capacity and expertise. Some of the traditional management consulting firms—including McKinsey & Company, the Parthenon Group, and The Bridgespan Group, which is a nonprofit spin-off from Bain & Company—have begun to provide these services to education entrepreneurs. For example, drawing on work it has done with nonprofit organizations in other fields, The Bridgespan Group has helped several education entrepreneurs (including Aspire Public Schools, The Big Picture Company and Envision Schools, all of whom are creating systems of public charter schools) articulate their theory of change, which in turn has helped to inform their growth strategies. However, it is worth noting that much of the recent influx of consulting talent into this field has been underwritten by a single source—the Bill & Melinda Gates Foundation—and so it remains to be seen whether these firms will stay and develop a broader base of expertise in K-12 public education.

Entrepreneurs also need outside evaluation firms to help assess their efforts in order to both establish credible evidence in support of their new approaches and help gather further details on what is (or isn't) working and why. The Center for Research on Education Outcomes at Stanford University's Hoover Institution, Mathematica Policy Research, Manpower Development Research Corporation and American Institutes for Research are among the evaluators who are currently doing such work, but there is room for additional players—especially those who can help translate entrepreneurs' lessons into improved practice and policy. On the policy front specifically, there are many think tanks focused on education, but few who take an outcomes-driven approach to helping drive public policy. What's needed is a cycle of policy inquiry that relies less on ideology and takes advantage of the lessons learned—positive and negative—by education entrepreneurs' experiments. The recent creation of Education

Sector, a new think tank focused exclusively on public education, is an encouraging step toward more policy informed by entrepreneurs in the sector.

Research is also a major component of intellectual capital that can fuel entrepreneurial activity. The U.S. Department of Education’s research arm, the Institute on Education Sciences has an annual budget of about \$500 million and is funding some basic research with that, but more research on how to improve teaching and learning would enable entrepreneurs to leverage that knowledge by coming up with new ways to put research into practice. Some of the research that is most directly relevant to entrepreneurs’ forward-thinking efforts today is coming from university centers like the Center on Reinventing Public Education at the University of Washington and the Center on Urban School Improvement at the University of Chicago. There is, however, a need for problem-based research that is not ideologically driven but instead brings cross-disciplinary researchers and practitioners to the table to understand together what approaches are working, what’s not, and what is needed. Contrast, for example, the \$500 million appropriated for education research under the Institute on Education Sciences in 2004 with the \$28 billion allotted to the National Institutes for Health in that same period.

Research must also be converted to action through development. As Chris Whittle, founder of education management organization Edison Schools, notes in his recent book, *Crash Course: Imagining a Better Future for Public Education*, “As important as it is, research is generally examination, illumination, discussion. Development is all about solutions—execution, integration, workability.” Whittle goes on to highlight the importance of research and development in the private sector, noting that major corporations spend 2 to 10 percent of their revenues in this area.³² Here, one model that may prove instructive is In-Q-Tel, a private nonprofit organization established by the Central Intelligence Agency in 1999. Like a venture

capital firm, In-Q-Tel makes strategic investments in promising security technology startups and also “incubates” new organizations and products that have been identified through research as critical technologies to national security and intelligence. In-Q-Tel is unusual in that its purpose is a public good but its capital comes from public source, and it has the “the agility—lacking within traditional government contracting approaches—to help the [intelligence community] benefit from the rapid pace of change in information technology and other emerging technology fields.”³³

As mentioned earlier, those within public education systems are unlikely to have the incentive or time to track future needs and next-wave solutions. Similarly, traditional education researchers are generally not focused on development or practical execution, with a few notable exceptions like Robert Slavin, who helped create the Success For All school model as part of his work at Johns Hopkins University, and Henry Levin, who created the Accelerated Schools model based on his research at Stanford University. As such, new research and development centers—seeded with the necessary funding, likely from public and philanthropic sources given the social purpose of this research and development work, and staffed with cross-disciplinary professionals from research and practice—are one promising way to ensure that these new tools and approaches are developed.

Some of the intellectual capital work, though, falls squarely on the shoulders of entrepreneurs themselves. Entrepreneurial organizations are often so focused on their day-to-day work that they neglect this activity unintentionally, and few funders systematically encourage them to capture, manage or share what they learn (though the Annie E. Casey Foundation is a notable exception, with its “knowledge management” grants that encourage entrepreneurs to document and disseminate promising practices). Entrepreneurs should be conscientious about

connecting their work with the strong sources of intellectual capital named above—including philanthropists, evaluation firms, researchers, think tanks and policymakers—but also with other entrepreneurs. It is important for entrepreneurs to share common challenges and lessons learned, so that they may avoid “reinventing the wheel” and instead learn from each other’s successes and mistakes as they build brand new organizations. And because they are often seeking similar goals in public education, they would be well-served by strategizing together about how to leverage each other’s work toward that end.

To this end, some foundations convene grantees on a regional or national basis so that they may engage in this type of discussion. NewSchools Venture Fund has created several venues for this sort of collaboration, including Communities of Practice (for like-minded organizations to discuss common challenges, and share tools and lessons learned), the NewSchools Summit (connecting entrepreneurs and other “hybrid” leaders across the public, private and nonprofit sectors), and the new Gathering of Education Entrepreneurs (bringing a small group of entrepreneurial leaders in education together annually, in partnership with the Aspen Institute). However, most entrepreneurs lack the time, money or venue to do this sort of intentional reflection, collaboration and collective learning, and could use support from funders and others in making sure this important intellectual work happens. These kinds of efforts are *de rigueur* in other fields where entrepreneurs flourish, such as in the technology business: former employees of large companies like Microsoft swap resumes and ideas online, graduates of top-tier business schools host social events and conferences to facilitate networking, and venture capital firms convene the management teams of their portfolio organizations regularly.

Entrepreneurs must also be conscious of the need to translate their work into system-level improvements; this may involve a whole host of tactics, from strategic communication to

informing policymakers. It may even include creating or spinning off new organizations. One example of this is that of Teach For America, an entrepreneurial nonprofit that has prepared and placed college graduates into high-need classrooms for the last 15 years: a few years back, the organization helped one of its former “corps members” create a new nonprofit, The New Teacher Project, which is applying some of the lessons that Teach For America learned from operating across many school districts to bear on public school systems’ human resources departments. Similarly, Los Angeles charter management organization Green Dot Public Schools helped create a separate entity, the Small Schools Alliance, to foster support and demand for small schools within the broader Los Angeles community. In both cases, the new organizations complement the mission of the original entrepreneurial organization and increase the number of voices supporting that mission in the field, but also allow the entrepreneur to maintain their focus.

CONCLUSION

“Pattern change needs two things: a new idea and a social entrepreneur who conceives, develops and champions it over many years. Only through constant, iterative testing and improvement can a good idea become a realistic idea, then a demonstrated success, and finally...the accepted way society works. The faster the world changes, the greater the need for social adaptation—and therefore for social entrepreneurs.”

Bill Drayton of Ashoka³⁴

In the summer of 2005, a group of entrepreneurial leaders in education convened in Aspen, Colorado, to consider the question of what public education should look like in 2030 and what role education entrepreneurs should play in that transformation. This convening purposefully included leaders from across the public, private and nonprofit sectors, and also cut across the traditional silos of practice, research, policy, and philanthropy.

In those conversations, it became apparent that there are two slightly different perspectives on why education entrepreneurs matter. The first rationale is the one cited earlier as the “disruptive technologies” approach advanced by business professor Clayton Christensen. This view holds that public education system must change so profoundly that only the disruptive force of entrepreneurs—who think beyond the current constraints and resources—can get us there. In this view, entrepreneurs are crucial change agents at this particular moment in time, necessary to propel us from the current, static system—one created for the needs of the industrial age—to new model that is geared toward the needs of the knowledge age. This view is open to criticism by those who believe this change could be better accomplished by a more coordinated, linear, policy-based approach.

The alternative—and perhaps more compelling—view on entrepreneurs’ importance in public education links them to a much larger, more far-reaching change: a major global transformation away from slow, incremental progress and toward fast-paced, dynamic change. The industrial age was slow-moving and concerned with stability and steadiness, with industries based on extracting or manipulating natural resources. Once organizations were created, they could continue operating for very long periods of time with little significant change; public education is no exception, having been designed to ensure stability for students and avoid risk. However, in the knowledge age, change is the new constant. This new paradigm might be referred to as “dynamic equilibrium,” in which “the fastest learner wins”—whether individuals, companies or countries. Technology, medicine, and other fields are now based on constantly evolving cycles of improved knowledge. Public education in the United States has been incredibly slow to respond to these changes in the world, and so because education entrepreneurs bring this dynamic equilibrium to the system, according to this view, they will be a permanent

necessity rather than merely an agent of transitional change. In other words, they *are* the change we wish to see in the sector.

This is a radical idea, and one that many within public education may not agree with. But it is worth exploring in more depth six key principles implicit in this view, and what that might mean for how we support education entrepreneurs as a result:

Six Principles of an Entrepreneurial School System

1. *Responsive.* In a dynamic, ever-changing world, public school systems should be responsive to the changes in the needs of students, families and communities. This may mean embracing *creative destruction*—where schools are not permanent, but rather opened and closed based on how well they are serving market needs—so that the supply of schools maps to demand. This also means that standards should evolve in a way that maps to the skills and content knowledge needed to be successful in the knowledge economy and society.
2. *Customer-oriented.* Public education has many “customers,” including parents, communities that provide funding, and businesses that employ schools’ graduates. In order to meet the needs of those customers, *students* must be the focus of public school systems’ efforts—not *adults* or *institutions*. As such, there must be a diverse supply of schools that address the unique learning needs of students, and instruction should be customized within those schools. Parents must be given a choice of the type of education their child receives, and they and their communities must be more actively engaged in decision-making about the structure of public education.
3. *No monopolies or oligopolies.* Monopolies and oligopolies are fundamentally closed, unresponsive systems that aggregate power and maintain it even while customer needs

are not being met. Such inflexible practices should not be tolerated in public education, whether among school districts, teacher preparation programs or publishers.

4. *Performance-driven.* With improved results for customers—primarily students—as the target, public school systems must target efficiency (less time and money for the same results) but also effectiveness (better results). There must be clear goals, alignment of resources toward those goals, and constant assessment and adjustment of those goals and resources based on progress.
5. *Constant learning.* In a dynamic environment, the work of public education is never “finished.” As soon as one level of performance is achieved, the next target becomes clear, with constant improvement the permanent goal. These cycles of ongoing learning apply to instruction, as well as to the management of schools and school systems.
6. *Culture of meritocracy.* When results are the priority, those who find a way to achieve those results are rewarded for their efforts. In other words, the “fastest learner wins”—whether an individual or a team—and others use that success to inform their own practice.

Implications of These Principles

This dynamic system requires a work force that is prepared for—and excited about—taking on the incredibly important, complex work of making sure that public education successfully makes the transition to this constantly evolving environment. This requires transforming teacher and leader preparation and certification/licensure so that it is driven by desired outcomes and not by forces defending the status quo within higher education.

Recruitment, training and support of the education labor force would need to be realigned with these principles in mind. Entrepreneurs like Teach For America, the New Teacher Project, and

New Leaders for New Schools are already making inroads on this front on a smaller scale, but a more *fundamental redesign of our human capital systems* is necessary to truly embrace these principles.

Today, we are asking public schools to prepare more children than ever before and to a higher standard than ever before. As such, educators need *better tools*—money, technology, content and assessments—than they have today. Financial capital from philanthropic and public sources should be adequate for the task at hand, and organized in such a way that they enable the kind of system described above. It may be that a “weighted student formula”—in which funds follow students and are allocated based on need—can address equity, adequacy, responsiveness, transparency, and meritocratic work cultures at the same time. In order to create a truly responsive and dynamic system, technology must also be used to a greater extent than it is today—because it is only through technology that practitioners will have timely access to the detailed information they need to make informed decisions about instruction and management. And to ensure that public school systems are responsive to the needs of students and communities in the knowledge age, content and standards must be rigorous enough to prepare students to succeed in this environment.

Finally, education is a very complex, highly skilled art. To enable educators to be successful in a dynamic environment, we must develop *new practices that support increased productivity and responsiveness*. This includes a critical need for more research and development on both effective instructional and management approaches. We know so much more than we did 50 years ago about fundamental areas like reading instruction, but there is much to be learned about how to manage school systems in this new, adaptive environment. One critical factor is transparency of timely, useful information about student and school progress,

which enables educators to make better financial, human, and instructional decisions, allows parents and community leaders to make decisions informed by quality, and helps set the stage for entrepreneurs to create new approaches and organizations based on need. It is also important for useful, effective human resources, finance and instructional technology platforms to be developed in an integrated way that allows them to communicate and work across the traditional departmental silos.

In a public education system governed by the principles of dynamic equilibrium, entrepreneurs may be important vehicles for getting there *and* permanent participants in this new state of affairs. By imagining how education can be improved, thinking beyond the current rules and resources, creating new organizations to carry out that vision and inspiring others to follow, education entrepreneurs may be important agents of ongoing change in a the performance-driven public school system toward which we are moving together.

¹ “Maxims for Revolutionists” in *Man and Superman* (Cambridge, Mass: The University Press, 1903).

² Howard Stevenson et al. *New Business Ventures and the Entrepreneur*, 5th edition (Boston: Irwin McGraw-Hill, 1999).

³ Martin Seligman, *Learned Optimism: How to Change Your Mind and Your Life* (New York: Knopf 1991).

⁴ It is our belief that the corporate status an entrepreneurial venture needs should be dictated by the business model and/or how receptive their target market may be to that status. Organizational models that require a large up-front investment—such as technology tools—may need to be for-profit in order to attract engineering employees and startup capital. Other business models—such as charter school management organizations—might pursue either a for-profit or nonprofit approach, based on the founders’ preference and the likely response of the communities in which they plan to operate. As the “owner” of public education, communities must be vigilant that the products and services delivered to students are of high quality. This vigilance should be applied equally to nonprofit and for-profit ventures.

⁵ Greg Dees, 1998, “What Is Social Entrepreneurship?” (Durham, North Carolina: The Fuqua School of Business at Duke University, 1998). Available online at http://www.fuqua.duke.edu/centers/case/documents/dees_SE.pdf.

⁶ Clayton Christensen., *The Innovator’s Dilemma* (Cambridge, Mass: Harvard Business School Press, 1997).

⁷ Keith Hammonds, “A Lever Long Enough to Move the World,” *Fast Company*, January, 2005.

⁸ Interview with Larry Rosenstock, August 11, 2005.

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- ⁹ Howard H. Stevenson and William A. Sahlman. *Entrepreneurship: A Process, Not a Person*, working paper 87-069 (Cambridge, Mass: Harvard Business School, 1987).
- ¹⁰ U.S. Census Bureau, *National Estimates by Age, Sex, Race: 1900 -1979*. Available online at <http://www.census.gov/popest/archives/pre-1980/PE-11.html>
- ¹¹ "Public Education in the United States," Microsoft Encarta Online Encyclopedia (2005). <http://encarta.msn.com>
- ¹² *Digest of Education Statistics 2004* (Washington, D.C: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education, 2005). <http://nces.ed.gov/programs/digest/d04/index.asp>
- ¹³ Jay Greene and Marcus Winters. *Public High School Graduation and College-Readiness Rates: 1991–2002*, (New York: Manhattan Institute, February 2005).
- ¹⁴ Interview with Kevin Hall, August 10, 2005.
- ¹⁵ Center for Education Reform
- ¹⁶ PricewaterhouseCoopers / Thomson Venture Economics / National Venture Capital Association MoneyTree Survey
- ¹⁷ Eduventures, Inc. 2001. *The Education Quarterly Investment Report, Year-end Report 2000: Venture Capitalists Seek Reality, Revenues and Rational Business Models*.
- ¹⁸ Stig Leschly, "KIPP National, 1999: Designing a School Network" from Harvard Business School Publishing, 2003.
- ¹⁹ This is known as "Moore's Law," and was first posited by Gordon Moore, co-founder of semiconductor technology firm Intel, in 1965. For more on Moore's Law, see <http://www.intel.com/technology/mooreslaw/index.htm>.
- ²⁰ As cited in Drucker, Peter F. 1985. *Innovation and Entrepreneurship*. Harper Business, New York, p. 21.
- ²¹ Interview with John Doerr, July 14, 2005.
- ²² *Digest of Education Statistics 2004*. National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. <http://nces.ed.gov/programs/digest/d04/index.asp>
- ²³ Eric Bassett, Catherine Burdt, and J. Mark Jackson. *The Education Investor: 2004 Year-End Review and Outlook* (Boston: Eduventures, March 2005).
- ²⁴ For more on the concept of "blended value," see <http://www.blendedvalue.org/>
- ²⁵ Wendy Kopp, *One Day, All Children: The Unlikely Triumph of Teach For America and What I Learned Along the Way* (New York: Public Affairs, 2001).
- ²⁶ For more on the pitfalls of major philanthropic investments in education, including a deeper look at the Annenberg Challenge, see: Christine Campbell, James Harvey and Michael DeArmond, *Philanthropic Due Diligence: Exploratory Case Studies to Improve Investments in Urban Schools* (Seattle: Center on Reinventing Public Education, August 2002). Also available online at http://www.crpe.org/pubs/pdf/duediligence_report.pdf.
- ²⁷ From our observations of philanthropy, it appears that foundation interest follows an "s" curve: few foundations will fund early-stage organizations who have not yet proven their concept, many will support organizations with a

solid track record that are seeking to expand on a limited scale, and few will invest in long-term large-scale expansion.

²⁸ For a broader discussion on how foundations can put more of their money to work toward their mission – including the creative use of endowment funds—see Jed Emerson, “Where Money Meets Mission: Breaking Down the Firewall Between Foundation Investments and Programming,” *Stanford Social Innovation Review* (Summer 2003).

²⁹ *The PRI Directory* (New York: The Foundation Center, 2003).

³⁰ Jim Collins, *Good to Great: Why Some Companies Make the Leap ... and Others Don't* (New York: HarperBusiness, 2001).

³¹ For more on these programs, see www.broadcenter.org.

³² Chris Whittle, *Crash Course: Imagining a Better Future for Public Education* (New York: Riverhead Books: 2005).

³³ For more about the In-Q-Tel model, see <http://www.in-q-tel.com/about/index.htm>.

³⁴ As quoted in Bill Shore, *The Cathedral Within: Transforming Your Life by Giving Something Back* (New York: Random House, 1999).