

BOOSTING IMPACT: WHY FOUNDATIONS SHOULD INVEST IN EDUCATION VENTURE FUNDS

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EXECUTIVE SUMMARY

Internet access, inexpensive devices, open content and mobile applications are changing learning on planet Earth. The two-decades-old learning revolution has been fully incorporated into the business sector, partially incorporated into consumer offerings, and is beginning to transform the elementary, secondary and postsecondary landscape.

Over the last three years there has been an explosion of investment and innovation in learning technology. Philanthropic investment helped create the supersaturated solution with new school networks and talent development schemes, but the education technology (EdTech) revolution is powered primarily by private investment.

The stage is set for the biggest impact investing opportunity in history. New tools and new learning models have demonstrated the potential to boost achievement levels in Organisation for Economic Co-operation and Development (OECD) countries and extend access to quality learning, particularly secondary education, for hundreds of millions of young people in developing economies. By the end of the decade—where politics and scaling investments allow—it will be possible to offer every young person on Earth a quality education.

The shift to digital, mobile, personalized learning is creating a worldwide market, but learning is a function of experiences and relationships. Local context influences expectations, safety and supports, as well as employment and higher education opportunities. As a result, government, philanthropy and private enterprise all have important roles to play to create quality learning opportunities for all. Governments can signal social goals, extend access to services and frame market opportunities. Foundations can promote equity and a long-term perspective. Private capital is best at producing and scaling innovation. Public-private partnerships, where each form of capital is used appropriately, can support step-function improvement in social benefit.



Given the limitations in non-profit organizations and the benefits of private enterprise, this paper argues for philanthropic investment in return-seeking vehicles, including for-profit companies and dedicated education venture funds.

While it has become easier to obtain seed funding over the last three years, impact-focused private companies often find it difficult to obtain venture funding (Series A and B) while proving out their solutions and go-to-market strategies.

Compared to limiting themselves to an agenda of non-profit investments, foundations can dramatically boost impact by:

- Investing a portion of the endowment in impact-oriented, dedicated education venture funds seeking market rate returns often called mission-related investments (MRIs);
- Investing a portion of annual distributions to accelerate the growth of individual companies through expenditure responsibility grants or program-related investments (PRIs) with clear charitable intent and potentially mitigated return expectations.

Investing in for-profit companies and, to a greater extent, venture funds may boost impact, but that impact may occur in a different way, place and time than a direct charitable donation.

Early indications and recent exits suggest that the handful of dedicated education venture funds will achieve market rate returns, making them an attractive way to put at least some of the 95 percent of a typical foundation's endowment that is invested in the market generally to work on the mission. If a foundation invested just five percent of its endowment in mission-related investments, it could double its intended impact.

Foundations are not well-suited to invest directly and should take advantage of professional management with education technology and investment experience.



HISTORIC OPPORTUNITY TO BOOST WORLDWIDE LEARNING

About three of seven billion people on planet Earth have some Internet access and are taking advantage of new learning and market opportunities. Entrepreneurs are taking advantage of digital networks—platforms, application and content ecosystems—to deliver healthcare, learning opportunities, agricultural productivity and access to markets.

The reduction in the cost of computing devices, increased access to broadband, and creation of new tools and school models suggests that (where politics allow) it will be possible to offer a cost effective education to every young person on the planet by the end of the decade. The expanded learning opportunity resulting from developments in EdTech ranks with biotech, clean tech and the spread of democracy as a world-shaping force.

The learning opportunity is driven by three critical digital shifts in education toward being:

- **Self-directed:** the shift from rigid age cohorts to individualized instruction that enables students to advance at their own speed in schools that blend online and onsite learning and where learning professionals work in teams;
- **Adaptive:** the shift from print textbooks and paper testing to digital tools enabling adaptive learning that is customized to the needs of the learners and provides instant performance feedback and motivational reward mechanisms; and
- **Networked:** the shift away from schools based solely on physical facilities and print products with centralized acquisition, distribution and production systems for learning products toward networks of teachers and learners in educational models that blend the best of online and face-to-face learning with decentralized acquisition of learning products.¹ Knowledge is no longer best stored in hardcover textbooks or file cabinets, but in the new filing system—the Cloud, a new paradigm where applications running on a network can be accessed by any device, anywhere in the world at negligible cost.²

Boosting achievement and completion rates in America and extending access to quality learning worldwide will take entrepreneurship, massive investment and updated government policies.



THE ROLE OF PRIVATE CAPITAL AND PROFIT-SEEKING ORGANIZATIONS

Government agencies can deliver public services with equity but often lack quality, efficiency and innovation. While government agencies suffer from political oscillations, non-profit organizations have the opportunity to sustain a mission over time. However, non-profits lack the ability to raise capital to produce and scale innovations. Compared to public and private sector organizations, foundations can take a long-term perspective and are particularly well-suited to promote equitable outcomes.

Private capital is particularly useful in producing and scaling innovative products and services. Venture capital firms seek high returns by making risky investments in start-up and early-stage companies. Private equity investments allow revenue-producing companies at or near break-even profitability to achieve scale and produce attractive returns. These investments in innovation and scaling bring new services to education institutions and students.³

The table below compares the relative benefits and limitations of public, non-profit and for-profit organization structures.

TABLE 1: The Role for Philanthropic and Private Capital

Dimension	Public Delivery	Non-Profit	For-Profit
Seed	Authorization and appropriation	Grants and donations	Angel and venture investors
Operating	Authorization and appropriation	Donations, service fees (occasional)	Sales and profits
Scaling	Authorization and appropriation	Grants, usually project-specific	Private equity, free cash flow
Advantages	Coverage and equity	Targeting vulnerable populations	Efficiency and scale
Limitations	Flexibility and responsiveness	Scale and sustainability	Unlikely to target unprofitable markets

In an efficient market, money flows to good ideas. The inefficiency of the U.S. K-12 education sector has hampered investment and innovation. Purchasing is done by about 15,000 districts and more than 100,000 schools, leading to diffused and protracted sales efforts. A web of interlocking employment agreements and local policies is compounded by 50 different complex education codes that deter interest from the private sector.⁴

Foundations have a hard time developing products and strategies that scale rapidly and become self-sustaining. And foundations have another key weakness: once the design of a program is locked into place, it becomes difficult for program officers to consider ideas that do not fit into the framework, no matter how powerful those new ideas might be. Venture capital firms, on the other hand, are finely-tuned mechanisms for detecting new ideas and new business models. Venture capital firms have the potential to serve as a kind of innovation radar for foundations.

Until the mobile inflection point of 2010, private investors largely avoided investment in new tools to serve the K-12 market. Now, more powerful application development platforms and the explosion of tablets and smartphones make it much easier to develop and deliver new applications directly to students and classroom teachers. The mobile revolution led to a dramatic increase in private investment in U.S. K-12 venture funding from negligible in 2008 (when [Learn Capital](#) was formed) to \$452 million in 2013.⁵

The market continues, though, to suffer from strange inefficiencies. Investors avoid certain vitally important sectors within education. For example, most venture capitalists will not consider an early-stage technology company that sells products to K-12 school districts. There are only five venture capital firms in the entire country that have demonstrated a liking for and understanding of early-stage businesses that sell to K-12 school districts. Larger companies do not face this prejudice. Once a company has scaled to \$15 million in revenue or more, there are hundreds of potential investors. In other words, once a company no longer needs capital urgently, there are many venture capitalists prepared to provide it. But when an innovative K-12 business desperately needs venture capital (Series A and B rounds) to survive and grow, the list of funders is short: Birchmere, Catamount/Owl Partners, Learn Capital, New Markets Venture Partners, and Rethink Education. These firms have raised funds that vary in size between \$28 million and \$82 million. That is a slender base of support for the start-ups targeting the urgent needs of the second-largest sector of the U.S. economy.



THE INNOVATION AGENDA

The U.S. education sector is similar to the automobile industry of the 1970s—batch-processing and manual labor. It is one of the only sectors that has not experienced significant productivity improvement as a result of information technology. Despite an increase in inflation-adjusted expenditures per student and a reduction in class sizes, achievement has flatlined for 40 years.⁶

The basic building blocks have not changed—individual students struggling with text or a difficult math problem and schools filled with teachers in 900 square foot classrooms with rows of about 25 students. The students are grouped by age rather than level of understanding. Often, students are missing key precursor skills and the current lessons are thus incomprehensible to them. There are students sitting in algebra who do not know how to multiply fractions or what happens when a number is multiplied by zero. Current assessment tools deliver too little information and deliver it too late to affect instruction. Productivity breakthroughs will reshape the basic building blocks and result in improvements in productivity in learning, staffing and facilities.

Computers will finally pay off when they become core rather than supplementary, when content is more adaptable to student learning needs and interests than current textbooks, when engaging content supports higher student-to-teacher ratios, and when online learning comfortably supports better facilities utilization.

The most important productivity breakthroughs will come in the form of learning tools for the language and mathematics skills critical to accessing college and careers, as academic success is heavily dependent both on making the third grade transition from “learning to read” to “reading to learn” and building the problem-solving skills to be successful in higher level math and post-secondary eligibility.⁷ Adaptive content has “game changing” potential in both areas.

Private capital is playing a particularly important role in eight categories:⁸

1. **Digital content**, particularly curriculum that adapts to individual learning needs, learning games, simulations and virtual environments.
2. **Online learning** where curriculum and instruction are provided online in both synchronous and asynchronous modes. An expanding category of online learning will be distributed workforce models in categories including speech therapy and other special needs; world languages, Advanced Placement and other college credit courses; and higher level math, science, engineering and technology (STEM) courses.

3. **Blended learning**, school development and improvement. Innovative school models that incorporate the best of online and onsite learning will expand as new school networks will be adopted by struggling schools. Private sector participants will operate schools and provide services to non-profit and public school operators.
4. **Learning platforms** that help customize pathways through digital content libraries based on assessment data collected in a comprehensive student profiles. Teachers will benefit from instructional and management tools, and students will appreciate social learning features.
5. **Learning apps**, particularly those that are focused on the mobile consumer. More than 100,000 of the million apps in the Apple Store are learning-focused.
6. **Aligned services** supporting student, teacher and school success. Closely coupled learning platforms will be online tutoring, professional development, data analysis, operational support and other school improvement services.
7. **Learning certification** and skills verification services, including low cost post-secondary options, as well as training in emerging job clusters.
8. **School operations** by for-profit companies. This trend is quietly emerging as a multi-billion-dollar subsector and follows successful introduction at the post-secondary level with a number of scaled participants operating online and onsite programs, including Apollo (University of Phoenix), DeVry, Grand Canyon, Strayer, Capella, and Corinthian. About 100 for-profit education management organizations like [Academica](#), [National Heritage Academies](#), [Mosaica](#), and [Leona](#) serve more than a half a million students and are collectively larger than non-profit charter management organizations, with over \$1 billion in combined revenue. For-profit private school networks like Meritas and American Education Group are acquiring individual schools and building substantial networks.

There is some public activity in these areas, but it is private investment that is pushing these frontiers as the sector shifts to digital personal learning. These areas represent new entry points and business models for private capital.



THE SCALE AGENDA

There are hundreds of innovative high performing schools across America, but the challenge is achieving quality at scale. Private investment and for-profit organizations can play an important role in creating next-generation tools and schools.

Compared to the non-profit and public sectors, private investment in for-profit ventures has significant advantages in achieving quality at scale. Public schools are organized for compliance and employee protection rather than performance and have little incentive for adopting successful models with fidelity. Non-profits have difficulty raising scaling capital and lack scaling incentives. In contrast, for-profit organizations have strong incentives for satisfying customers and achieving scale and are playing an important scaling role in regard to learning tools, schools and services.

Improving global access to higher education has been the most important contribution of private capital in the sector to date. Every emerging economy and many developing economies have a vibrant private higher education sector. Investments by private universities such as Laureate, Apollo, Strayer and many others have introduced cost effective brick-and- mortar and virtual post-secondary education around the world. Massively Open Online Courses (MOOC) exploded in 2012, making online courses by the world's best professors free and widely available. [Coursera](#) hosts 629 courses for 108 universities and serves 6.9 million learners.

The growing role of for-profit enterprise in education parallels the growth of the Internet, which has expanded access to learning opportunities worldwide. Blending online learning and face-to-face instruction has increased access to post-secondary learning, improved student performance, and reduced costs. Nearly two-thirds of undergraduate degree programs in the United States offer web-based courses with a growing number, especially of private, for-profit universities, that offer entire degrees online.

The ability to target attractive segments and expand to broader markets is a key advantage of for-profit enterprises. The shift from batch-print schooling to personalized, digital learning will be led primarily by private sector capital.

Compared to non-profit entrants, for-profit companies are more likely to develop engaging learning environments, and tools for data, management and communication. These tools will be introduced in public and private schools both domestically and internationally.

Private capital is already bringing quality to scale in school operations. There are about 100 for-profit charter school operators in the U.S., including 17 large companies, with more than 840 schools and serving nearly a half a million students. There are twice as many non-profit school managers operating more than 1,200 schools but serving few students, suggesting that (despite intense political opposition) it is easier to scale a for-profit organization.⁹

Private capital investment will also be important in developing aligned instructional services. It is difficult for U.S. schools to purchase aligned services for curriculum, assessment, tutoring, professional development, school improvement services and data management. In fact, the market is so fragmented that it requires an intricate engineering and correlation feat to piece together a school model and aligned instructional services that correspond to state standards and comply with local, state and federal guidelines.

The shift to personalized, digital learning goes against the grain of current providers. Many of the larger and better-established providers of educational products and services will be unable to make the transition to student-centered learning and will continue to use their political clout and market presence to reinforce the status quo. Dislodging the old tools and methods will require a combined effort by foundations, corporations, progressive education leaders, politicians, parents and voters. New technology businesses will be a crucial component of the transition; without great new technology, other stakeholders will have nothing to rally around, and their agenda will become more nebulous.

Most traditional public school districts in the United States will struggle to make this transition. Schools slow to act will lose enrollment; some will close and some will be replaced. The U.S. system has proven resilient—but the transition will not be smooth, and in many places it will not be rapid.



PHILANTHROPIC INVESTMENT IN RETURN-SEEKING VEHICLES

Education is one of the largest categories of activity and expenditure in the U.S. non-profit sector. However, most grantmaking in education tends to be oriented to support for existing education systems, institutions and practices instead of transformation focused on improved educational outcomes. Support for scholarships for students and expensive physical facilities still far outpaces investments in new learning platforms, applications and metrics.

Even in the largest and most progressive philanthropic organizations focused on education, there is very little, if any, for-profit investing related to education. Foundations are required to spend at least five percent of their asset base on programs related to their mission. The remaining 95 percent is typically invested in the market and rarely invested in anything related to the mission of the organization. The domain expertise that exists on the program side has little interaction with the investment professionals who oversee the 95 percent of the assets.

Impact investing, according to Monitor, “involves making investments that generate social and environmental value as well as financial return, and has the potential to complement philanthropy and government intervention as a potent force for addressing global challenges at scale.”¹⁰

A 2012 survey of program leaders, investment professionals and board members from leading educational foundations indicated that there was little to no for-profit investing that was strategic to their mission, little understanding by program leaders about the investment activities, and a false belief that there were barriers that prevented them from making strategic investments.¹¹

“Realizing that foundation endowments could be a driving force in impact investing, Tom Reis proposed mission-related investment to the leadership of W.K Kellogg Foundation.¹² Beginning in 2006, the foundation created a \$100 million program of Mission Driven Investments (MDIs)—a great first step, but a small percentage of the foundation’s \$8 billion endowment.

However, the situation began changing in 2012. A group of foundations formed Mission Investors Exchange to share best practices in Mission-Related Investments (MRIs) and return-seeking grants (Program-Related Investments, or PRIs). The [Lumina Foundation](#) invested in [New Markets Venture Partners](#).¹³

Mission Investors Exchange defines the two categories of mission investing:

- *Program-Related Investments (PRIs) are below-market rate investments that are made with a program objective and count against the five percent required payout.*
- *Mission-Related Investments (MRIs) are market-rate investments that support the mission of the foundation by generating a positive social or environmental impact. MRIs must meet applicable prudent investor standards and exist across asset classes in cash, fixed income, public equity, private equity and venture capital, and real estate.*

A \$12 million seed stage fund at NewSchools Venture Fund was supported by grants from Michael and Susan Dell Foundation, The Bill & Melinda Gates Foundation, Sobrato Foundation, Wasserman Foundation, Brook Byers, Laura DeBonis and Scott Nathan. The fund has supported about 55 seed stage investments with 10 follow-on investments.

In 2013, the Kellogg, Lumina, Nellie Mae and Prudential foundations invested in Rethink Education, an education venture fund. The Bill & Melinda Gates Foundation made a PRI in [Bloomboard](#) and grants to [LearnZillion](#). The Michael and Susan Dell Foundation made a PRI in [MasteryConnect](#).

INVESTING IN FUNDS. The next stage in the evolution of impact investing is for foundations to begin investing in funds from their main endowment management organizations and not just from small pools set aside for mission-oriented investing. There are several factors impeding this evolution. First, venture capital returns for the last 13 years have been mediocre. Second, endowments generally have a specific benchmark for allocations to venture capital specifically and private equity more generally. Many foundation endowments have now exceeded their benchmark allocations for venture capital. They have continued to put some money in, and until 2012 and 2013 less money has come back out. Overall industry returns are starting to move back to acceptable levels, but the prejudice against venture capital lingers.

Third, many foundation endowment managers, like most institutional money managers, want to focus only on established firms with stellar records, which, unfortunately, are usually closed to new investors. Sequoia Capital and Kleiner Perkins Caufield and Byers, which have kept their U.S. venture funds under \$600 million, each have many partners who are billionaires and do not need outside capital at all: they are gradually shedding existing limited partners and not accepting new ones. The only way for a new investor in venture funds to outperform is to find talented emerging managers.

Fourth, most institutional asset allocators believe that a commitment to social impact leads to weaker financial returns. The empirical evidence suggests otherwise. The five venture funds that regularly invest in early-stage K-12 education businesses have offered strong, industry-beating returns, and the results of their predecessor entities have also been strong. These funds tend to lose all of their money on a smaller percentage of their portfolio companies than the venture industry norm. Education-focused social impact venture funds take very little technology risk, and they are usually fairly accurate at sizing up product-market fit: to think seriously about social impact is to think clearly about the precise contours of the unsolved problems of actual people and institutions. Because social impact venture funds focus on unsolved social problems, they are much less likely than most venture funds are to follow the herd and invest in “me too” start-ups.

Bruce Gibney of the Founders Fund undoubtedly is correct in his assertion that herd behavior is responsible for the under-performance of venture capital since 2000.¹⁴ Within the education sector, the difference in the behavior of generalist tech venture firms and education-focused venture firms is clearest in the next-generation textbook sub-sector. Generalists have poured an astonishing amount of money into this sub-sector, including \$250 million into Chegg, \$93 million into Kno (reportedly all but \$15 million of it lost),¹⁵ and over \$500 million into just the top 10 textbook-related start-ups. In total, venture capitalists have backed four textbook rental companies and innumerable digital textbook distribution platforms. It is striking that not a single education-focused venture fund has invested in any of these textbook-related start-ups.

From the standpoint of an education-focused venture investor, there are far too many of these companies, with far too little differentiation between them; the amounts of capital poured into them have been absurdly large; and the ferocious competition from entrenched companies like Apple and Amazon ought to have been far more predictable. Perhaps more importantly, Birchmere, Catamount, Learn Capital, New Markets and Rethink Education all agree that if one is still using the word “textbook,” one is looking in the rear-view mirror and not thinking about the actual needs of actual students and teachers. Generalist venture funds cannot be trusted to solve educational problems, but they also cannot be trusted to make money in education. There is actually a strong alignment between social impact goals and financial returns. Ultimately both can be targeted with the same simple questions: does the world need this particular company? Does the company have a unique set of skills for solving a real social problem? For many of the companies given hundreds of millions by generalist venture capitalists, the answers to these questions are clearly, “No.” The main differentiator of Shoedazzle was an affiliation with Kim Kardashian. Next to the investors in Shoedazzle, which raised \$56 million, impact-oriented venture funds look extremely rational.

The largest single risk faced by education-focused venture funds is financial risk: there is a real danger that an education start-up will be unable to attract additional capital even if it has validated its business model and is growing. This risk can be ameliorated by funneling more money to venture capital firms that focus on education. Many portions of the venture industry are over-capitalized and need to shrink, but educational technology specialists will actually improve their returns if they receive more capital. Education-oriented venture capital funds are already financial winners, but serious commitments by foundation endowments will solidify their financial edge.



RISK TAKING AND A BROADER VIEW OF IMPACT

The shift to strategic philanthropy over the last 15 years has resulted in clear areas of focus, well-defined goals and metrics, intricate [change theories](#), detailed action plans and comprehensive evaluation. But at the same time, the increased focus on a strategic plan has made some foundations less capable of identifying and responding to a good idea that comes in over the transom—if it doesn't fit the plan, it doesn't get funded. Two of the goals of strategic philanthropy are to be more selective and create a portfolio of aligned grants that result in a big change in outcomes, but the narrowed focus can create more missed opportunities and, in some categories make it harder to launch innovative new programs.¹⁶

Compared to strategic philanthropy, venture capital is highly responsive. After picking categories, return-seeking venture investors typically sift through funding requests in search of the best ideas and teams. Much of philanthropy has chosen a “wise elder” strategy, while venture investing is a bet on the best of the market. The former has the benefits of creating an aligned portfolio, and the latter has the benefit of selecting a basket of high performers.

The attempt to be more strategic appears to be making some foundations less entrepreneurial. In many foundations, very smart people have very little authority. Proposed investments are bundled several times each year and presented to a board for approval. That limits the response time and latitude of what is often a talented and committed group of staffers. The market is moving faster, but foundations are moving slower. If it doesn't fit the plan and the proposal timeline, it doesn't get funded.

It also appears that some foundations are taking less risk when they should be taking more risk. Philanthropy has two advantages over public and private capital: it can take a long view, and it can take risk—the former being more visible than the latter. Some foundations are leaving early-stage investing and moving to the “growth capital” stage where much of the risk has already been extracted from a transaction. Again, this has real benefits; the non-profit world needs access to growth capital (both grants and debt), but there is a real sector cost when it comes at the expense of the start-up space and support for real innovation.

Foundation risk aversion also makes grantees unlikely to abandon a good idea for a better idea. In venture investing, however, a good team will iterate to the best possible niche even if it is very different than the original pitch. That happens less often in philanthropy. Even when grant recipients know they are suboptimizing, they often will stick with the grant program and agreement. A more entrepreneurial approach to philanthropy might include milestone funding and periodic evaluation of alternative approaches.

Focus and measurement are key to high impact, but for philanthropy to have a shaping (not just responding) influence, it needs to be more dynamic. Taking six months to build a three-year plan no longer makes sense. When innovation occurs in so many unexpected places, philanthropy needs to be more responsive. It is time for strategic philanthropy 2.0—a basket of more dynamic, risk-taking, entrepreneurial approaches to making a difference.

Foundations can improve responsiveness and impact by leaving a portion of their grantmaking for unanticipated opportunities and allocating a larger portion of their distributions to higher risk activities, including investing in return-seeking vehicles, directly and through funds.

BROADER BUT MORE DIFFUSE IMPACT. Non-profits have the advantage of targeting and meeting specific needs often for vulnerable or underserved populations. Return-seeking ventures may serve the same populations, though perhaps not initially. At first, it may be possible only for well-resourced individuals and organizations to adopt new technologies, but with scale and efficiency (two key advantages of private enterprise), new capabilities become less expensive and become accessible to broader populations. Take cell phone access as a desired outcome, for example. Philanthropy could have spent billions to boost access in low-income neighborhoods or just waited a few years for the market to solve the problem.

Compared to non-profits, private enterprises could realize greater impact because they:

- Have stronger incentives for growth and are better positioned to attract and reward talent;
- Are more likely to raise money from investors and gain more leverage (e.g., the 7.3x leverage experienced by NewSchools Seed Fund¹⁷);
- Operate efficiently and use lean strategies, and
- Are more likely to identify and exploit growth trends and market segments.

The challenge for impact investors is that the contribution path of return-seeking vehicles may be different in time, consumer segment and geography than desired—and almost certainly a different path than a direct grant-making strategy.

For-profit ventures exploit the most attractive market segments and avoid low margin, low growth categories. Impact investors can invest in a new venture—whether it be a drug or learning technology—and wait for services to trickle down to lower value segments or combine direct investment with market development strategies (direct support to producers or consumers, advocacy for better policies, or support for [pull mechanisms](#) including demand aggregation and prizes¹⁸). An aggressive impact investor may work both supply and demand, for example investing in an EdTech fund and supporting a smart demand initiative like [Digital Promise League of Innovative Schools](#).

Private enterprises often serve global markets. Particularly since the mobile inflection point of 2010, it is common for new applications to gain global viral adoption. In 2012, a philanthropy interested in behavior modification of low income students could have invested \$100,000 in a local non-profit or invested in the seed round of Class Dojo, a mobile app which within a matter of months was used by two million teachers worldwide—yielding less concentrated impact in target markets but several orders of magnitude greater impact than could have been produced through traditional grantmaking.

Investing in education venture funds, particularly those with impact criteria, has the potential for dramatic contribution but it is likely to occur on a less direct and more diffused path. This suggests that a mission related investment (from foundation endowments) in an education venture fund could be an important complement to a grant-making approach directly attacking problems and inequities of interest.



RECOMMENDATIONS FOR IMPACT INVESTORS

Impact investors—particularly high net worth individuals, family offices and foundations committed to education—have an essential role to play in advancing education entrepreneurship. The necessary innovation will not come solely from the non-profit or government sectors. Following are recommendations for how to address those challenges.

- Embrace entrepreneurship. New tools and models often reframe old debates and intractable problems. Impact investing may yield significant public benefit, though it may be different in time and place than grantmaking. Don't apply philanthropic guidelines to mission-related investments.
- For direct investment, hire experienced professionals and plan on a mix of failure (maybe a third will require significant follow on) and success with some significant follow-on investing (maybe a third will fail).
- Encourage links between program and investing staff. Create incentive systems that encourage collaboration.
- Support R&D, including basic research in learning sciences, support prizes and pull mechanisms to build smart demand, and support advocacy that promotes a vision of personalized learning for students and teachers.
- Invest in education venture funds with experienced managers and a commitment to impact. Support associations of innovators and investors.

To the last point, we recommend the following checklist (on the next page) for investing in education venture funds.

A CHECKLIST FOR FOUNDATIONS INVESTING IN IMPACT-ORIENTED VENTURE FUNDS

A few simple questions will allow foundation endowment managers to separate the sheep from the goats in a relatively swift and painless manner. We recommend that endowment managers ask the following questions:

- 1** Does the world need this particular venture fund? How are its capabilities or its focus unique?
- 2** Does this fund invest in companies that the world needs? One can make a simple bright-line distinction: how many of their companies have no direct competition? For many venture firms, the answer is one or two. If the answer is more than two, a venture firm is not traveling with the herd.
- 3** How much value does this venture fund add to its portfolio companies? One can make a bright-line distinction between those who have the ability to add value and those who do not. Have these investors ever come up with a plan for a new company? A new product?
- 4** Do their entrepreneurs like them?
- 5** What have their returns been? How many of their portfolio companies are successful? How many have been written off entirely?
- 6** How do they think about down-side protection?
- 7** How do they think about the social impact of their investments?



APPENDIX: IMPACT CRITERIA

[Rethink Education](#), a venture fund that invests in innovative technology for learning, developed the following impact investing criteria adapted from [Alive in the Swamp: Assessing Digital Innovations in Education](#), by Michael Fullan and Katelyn Donnelly. It consists of an investment rationale and a rubric for evaluating pedagogy, transformation potential, technology and the enterprise model.

PEDAGOGY

Clarity and quality of intended outcome. How are the educational outcomes defined? Do students, teachers and managers all understand their goals?

Pedagogical model. Does the product or service help personalize the learning experience? Does it foster collaboration between students, between teacher and learner, between members of different communities? Or is the pedagogical model rigid and hierarchical? Does the product or service have the potential to transform pedagogy rather than just improve it incrementally?

Assessment. Does the product or service offer continual feedback to the learner? Does it foster self-reflection and metacognition? Does the feedback mechanism create deeper user engagement?

TRANSFORMATION OF INSTITUTIONS AND COMMUNITIES

Engagement. How much time do users spend with the tool per week? How many visits do they pay, and how long is each visit? If applicable, what progress do they make? How well does the product or service retain users over time?

Value for money. Does the product or service offer cost savings and increased flexibility? What are its hidden costs? Does it improve outcomes dramatically? Does the product or service have an important function that deserves to be more than a feature of a larger, more comprehensive offering?

Implementation and support. Is the product or service designed to be useful within the actual educational environment? Does the company offer the features and services necessary to train users? Does the company have an adequate capacity to offer ongoing help and training?

TECHNOLOGY

Ease of use/quality of design. Is the technology easy to use, engaging and well-designed for all of its use cases?

Access. Is the product accessible online from multiple devices? Is it platform-agnostic?

Architecture. Does the product have an architecture that is secure, robust, scalable and easy to modify and improve? Is the code well-documented? Does the company use standards, open software and APIs where appropriate?

Comprehensiveness and integration. Does the product fit seamlessly into the technological systems and learning practices of the users? Does the product share data with other essential tools and services?

ENTERPRISE MODEL

Uniqueness. Are there other companies attempting to solve the same problem? If so, what differentiation does the company have? How hard would it be to replicate the company's offering? Can this differentiation be maintained over time? Does the world need this particular company?

Need for us as investors. Does the company need our capital or our expertise? Can we help them in ways that other investors cannot or will not? If not, our own investment dollars will not be impactful, regardless of how strong a social impact the company has.

Commitment to continuous improvement. Does the company use data to make continual improvements in its own services and operations? Does the company have a product and business architecture that facilitates continuous improvement?

Scale of impact. How many users does the service or product have? How fast is it growing? How efficient and scalable is the business model of the provider?

Governance. Is management mission-driven? Do they have a deep understanding of the customer's needs? Are the investors in the company also mission-driven? Are they rational and prudent? Do they understand the importance of sustained customer engagement and large genuine social impact? Do they have the ability to make hard decisions quickly? Are key employees incentivized with adequate equity? Is the company committed to hiring the most qualified employees, regardless of their race, ethnicity, gender, sexual orientation, age, national origin, disability or college alma mater?

RETHINK INVESTING RATIONALE

*We have been working as a team on our impact criteria since 2011, and the criteria grow out of our long experience as educators, philanthropists and investors in impact-oriented education businesses. We found Michael Fullan and Katelyn Donnelly's report, *Alive in the Swamp: Assessing Digital Innovations in Education*, enormously helpful. Most of their points were already part of our evolving rubric, but they helped refine our definitions and expand our set of questions. We have adopted their fundamental three categories, but we modified their subcategories and added a fourth fundamental category, the enterprise model, to capture the impact questions relevant to investing in and running entrepreneurial businesses in the education sector.*

We developed our framework because none of the existing social impact frameworks (IRIS, GiiRs, various flavors of ESG) were designed to assess innovative educational technology businesses, and GiiRs does not publish its criteria; we need to conduct assessments ourselves, not pay someone else for certifications. The IRIS Education Metrics work best for the assessment of schools and include such numbers as the ratio of students to toilets and classroom square feet per student. The IRIS Education Metrics are biased toward what can be quantified and do not focus on pedagogy, even when there is strong research about the efficacy of particular pedagogical techniques. Similarly, many aspects of the widely used ESG investing criteria are not relevant to our investing. None of the companies we look at have issues with hazardous waste or animal welfare. At the same time, there are many governance questions on which we believe we need a finer-grained approach or criteria more specific to an entrepreneurial technology business.

Our impact assessment framework reflects our fundamental values. First, we want to help the disadvantaged and vulnerable, both in the U.S. and around the globe. This includes both the poor and those who struggle with a cognitive blockage like autism. Fortunately, we find that this goal does not seem to involve any financial compromises. We have looked at many businesses that focused on wealthy students and never found any that met our investment criteria. We like businesses with recurring revenue streams and efficient, scalable, defensible models. The majority of those businesses serve institutions like school districts, colleges and sometimes corporations. These institution-oriented education businesses by their nature tend to skew toward serving the underprivileged: that is where the government funding is weighted, and that is where the largest numbers of learners are.

Second, we want to transform the way people learn. We believe that educational institutions, processes, and tools around the world are broken. Billions of people, poor and affluent, suffer and fail to achieve their potential because they are taught in the wrong way: our learning tools and institutions are hierarchical, rigid and unidirectional. Abundant research demonstrates that what works is the opposite approach: people learn best through personalized, collaborative, self-paced exploration linked to their own interests and passions. We invest in tools and services that help people reach their potential and demonstrate their skills.

Third, we want to respect the needs of all the stakeholders in our firm and in the firms we invest in. We want our companies to benefit customers, employees, investors, and the larger communities they inhabit. Unlike many venture capitalists, we do not lightly and patronizingly use the word disruption: we recognize that disruption typically has substantial human costs as well as benefits. We respect existing institutions and communities even as we help new ones come into being.

AUTHOR BIOGRAPHIES

Matt Greenfield is Managing Partner of Rethink Education, a venture capital partnership focused on educational technology. He serves as an advisor to University Ventures, the NewSchool Ventures Seed Fund, and the College Board. He previously helped start three technology businesses, including Rethink Autism, DB Software (acquired by Cadre Software and now part of CA), and Synernetics (acquired by 3Com), and worked as an associate at ABS Ventures. In addition to Synernetics, his successful investments include Engrade (acquired by McGraw Hill Education), Wireless Generation (acquired by News Corp.), Analog Analytics (acquired by Barclays), Atricure (NASDAQ:ATRC), and Wellfleet (merged with Synoptics to form Bay Networks and then acquired by Nortel).

Matt received his B.A., M.A., and Ph.D. in English from Yale University, where he won five academic prizes and fellowships from the Mellon and Whiting Foundations and served on the editorial board of the Yale Journal of Law and the Humanities. He taught at Bowdoin College, where he served on the committee overseeing admissions, and the City University of New York, where he served on a college curriculum committee, helped launch an interdisciplinary learning community program for first-year students, taught in the teacher preparation program, and taught graduate classes in literature to teachers from the New York City public schools. He helped design and launch Blackwell's Literature Compass online journal and the associated blog and co-edited the Shakespeare section, he co-edited *Edmund Spenser: Essays on Culture and Allegory*, and he has published in such journals as the *Paris Review*, *Raritan*, *Tikkun*, *PMLA*, *Shakespeare Quarterly*, and *English Literary Renaissance*.

Tom Vander Ark is author of *Getting Smart: How Digital Learning is Changing the World* and founder of Getting Smart, advocates for innovations that customize and motivate learning and extend access.

Tom is also a partner in Learn Capital, an education venture capital firm investing in EdTech startups. Previously he served as President of the X PRIZE Foundation and was the first Executive Director of Education for the Bill & Melinda Gates Foundation. Tom served as a public school superintendent in Washington State and has extensive private sector experience including serving as a senior executive for a national public retail chain.

A prolific writer and speaker, Tom has published thousands of articles. He writes a regular Education Week blog, Vander Ark on Innovation, and makes daily contributions to GettingSmart.com. He has written or contributed to six books and more than 20 white papers.

Tom is board chair of [Charter Board Partners](#), Treasurer for the International Association for K-12 Online Learning ([iNACOL](#)), and is a director Digital Learning Institute, Imagination Foundation, Strive for College, and Bloomboard.

Tom received the Distinguished Achievement Medal and graduated from the Colorado School of Mines. He received his M.B.A. in finance from the University of Denver. He continues his education online.

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