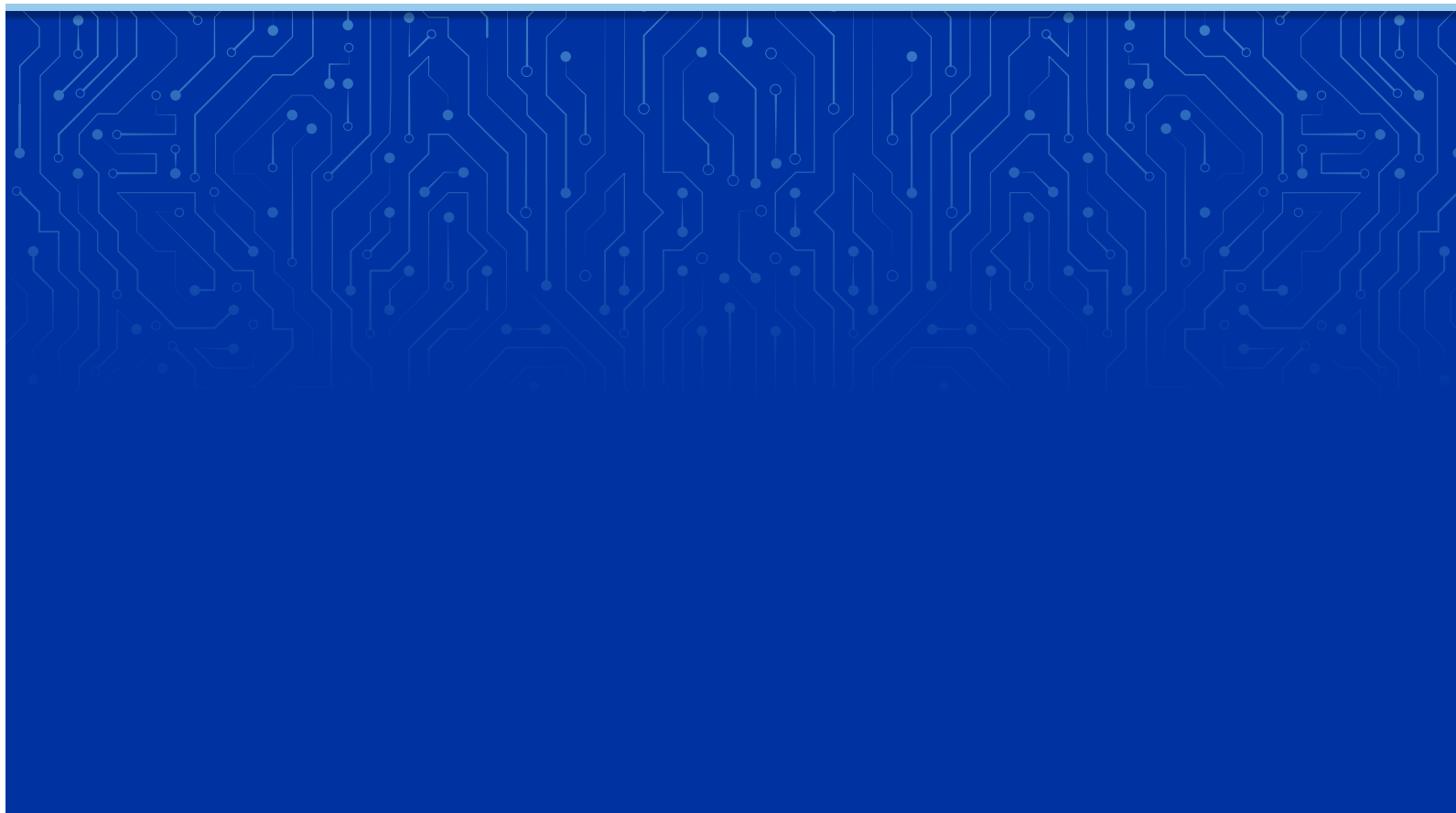


ENTREPRENEURSHIP & POLICY WORKING PAPER SERIES

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# Investment in Education Technology Across the Globe: Where Profit Meets Purpose

Maya Escueta and Sarah Holloway





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# Investment in Education Technology Across the Globe: Where Profit Meets Purpose

by Maya Escueta<sup>I</sup> and Sarah Holloway<sup>II</sup>

## Executive Summary

Increasing demand for educational technology (Ed Tech) products and services has coincided with rapid growth in the marketplace, sparking opportunity for both innovation and entrepreneurship. This paper seeks to advise ed tech entrepreneurs on what motivates investors to support certain products over others, the importance of balancing financial returns (profit) and educational outcomes (purpose), and best practices in planning and execution to help ensure success when taking their products to market.

## Background

Over the past decade, Ed Tech has increasingly become seen as a necessary innovation for solving challenges in the global education system. There is evidence that evolving demands in the labor market will require students to become more digitally literate.<sup>1</sup> In parallel, leveraging technology is increasingly viewed as a promising solution to basic global learning issues that remain unsolved.

As Ed Tech products help overcome these global education challenges, the market for Ed Tech products is growing exponentially. A recent report tracking investment in the Ed Tech market in over 122 countries found that 2017 saw the highest global investment levels ever, at \$9.56 billion.<sup>2</sup> This growing market represents an opportunity for both innovation and entrepreneurship.

Investors in the Ed Tech space span the full spectrum of funders, from philanthropic foundations to venture capitalists. These two extremes of the funding spectrum often have competing or at least divergent goals,

valuing social mission on the one side and return on investment (ROI) on the other. Interestingly, the two sides seem to converge when investing in Ed Tech—valuing both financial ROI and social returns. While this is a positive sign for Ed Tech and its growth, this presents aspiring Ed Tech entrepreneurs with a funding challenge: They must present products that *both* have potential to scale and at market-rates *and* have potential or proven impact on teaching and learning.

Given that the Ed Tech market is growing quickly and presents a vast yet unusual funding challenge, there is little systematic documentation of who these investors are and the factors that influence their investment decisions. Why do Ed Tech funders choose to invest in one company over another, and, armed with this knowledge, how can aspiring Ed Tech entrepreneurs increase their chances for investment?

## Methodology

To solve this gap in documentation of what motivates Ed Tech funders, we conducted semi-structured interviews with 20 individuals across 15 organizations that span the four main types of investors in the Ed Tech market (philanthropic foundations, venture capital, government investors, and idea incubators). We asked about their goals/investment thesis, selection criteria, and vision for emerging trends. In addition, we interviewed five entrepreneurs who were mentioned as exemplary in meeting some or most of the criteria mentioned by the investors and presented those conversations as Case Studies.

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## Findings

Ed Tech is a unique field where you find a diversity of companies—both nonprofit and for profit—and diversity of investors—nonprofit (foundations) for profit (venture capitalists) and government. We were somewhat surprised to find that that Ed Tech investors

across these categories have similar goals and criteria for selection when it comes to their investments—from access to education, to a focus on learning outcomes to improved education management.

<b>Goals for Investing in Ed Tech:</b>			
Investor goals and investment theses broadly overlapped and covered seven goals across three broad themes			
<b>Goal 1</b>	<b>Increase access to education</b>	Ensuring all children have access to a quality education—equity of access, diversity, and inclusion	<b>Learning Outcomes</b>
<b>Goal 2</b>	<b>Improve educational outcomes</b>	Integrating technology to help students learn more efficiently and effectively; improving outcomes in subject areas such as math and science; providing access to differentiated and/or personalized learning products—can include parents too	
<b>Goal 3</b>	<b>21st century career readiness</b>	Identifying products that bridge gaps in skills-based training, providing access to continual learning, building workforce skills, and improving future employability—includes workforce development, upskilling, computer science education, technology education, and digital literacy	
<b>Goal 4</b>	<b>Lift up vulnerable populations</b>	Entering markets where venture industry previously would not go (which also improves access for previously unreached populations)—focus on serving disadvantaged populations in terms of gender, age, and geography	
<b>Goal 5</b>	<b>Support teaching</b>	Building capacity of teachers and creating environments that support and enable differentiated learning—classroom and lesson plan management	<b>Process Outcomes</b>
<b>Goal 6</b>	<b>Improve systems</b>	Strengthening systems that deliver education such as fixing government processes and procurement and strengthening systems within schools by supporting operations—attendance, communications, tracking of data, etc.	
<b>Goal 7</b>	<b>Improve data collection</b>	Leveraging Ed Tech to generate better data on learning and other educational outcomes	<b>Evaluation</b>

Investors were also aligned in terms of how they selected investments and why they might choose one investment over another. These selection criteria were almost identical for all types of investors and focused on seven broad themes.

<b>Criteria for Investing in Specific Ed Tech Companies</b>	
<b>1.</b>	People and teams, local knowledge
<b>2.</b>	Customer discovery
<b>3.</b>	Research-based product development
<b>4.</b>	Sustainable business models
<b>5.</b>	Vision for impact
<b>6.</b>	Measurement, evaluation, and learning
<b>7.</b>	Scale

There are few sectors where you see this mix of investors whose goals and behaviors converge. Investors of all types seem to share the goal of investing in companies that show promise in terms of both fulfilling a social mission and ensuring ROI. While the size of the Ed Tech market is expanding and the potential for investment is growing at a fast pace, aspiring entrepreneurs are also entering the Ed Tech market in large numbers, making it more and more competitive to get funding. Entrepreneurs should evaluate their business model and product design processes to ensure the greatest likelihood both of receiving funding and contributing to the next innovative solutions to the biggest global challenges in education.

## Introduction to the Ed Tech Global Market

It is widely believed that the use of information and communication technology (ICT) will help move the largely industrial-age school system to one more reflective of the information age. Many proponents of educational technology (Ed Tech) argue that increasing technology's presence in classrooms and schools has the potential to provide unprecedented benefits, allowing for differentiated teaching and learning, enabling students to learn at their own pace, and increasing digital literacy to better prepare students for an increasingly global economy.

The demand for a skilled, digitally literate workforce is increasing at an unprecedented pace, requiring a complete revisioning of how the global education system educates young people. In 2016, a report from the International Commission on Financing Global Education Opportunity projected that by 2030, nearly two billion current jobs will disappear due to automation, and over 800 million youth will not have the basic secondary education skills needed to survive. The report highlights the role of technology and the financing of creative solutions to meet these evolving education challenges.<sup>3</sup> Because the latest educational software enables students to build digital skills and even overcome basic learning gaps by learning at their own pace,<sup>4</sup> many view technology as a silver bullet for addressing the most pressing constraints to learning.

As Ed Tech products become popular solutions to overcoming both long-standing and emerging challenges in education, the market for Ed Tech products is growing exponentially. A recent report estimates that the global Ed Tech industry is increasing at a rate of 17 percent annually and will be valued at \$252 billion by 2020.<sup>5</sup> In parallel, governments, schools, and families are increasingly investing in Ed Tech products.<sup>6</sup> In the U.S. alone, districts and schools spend between \$75 and \$250 per student annually on hardware and software, supporting a \$14 billion K–12 Ed Tech market.<sup>7</sup>

Increasing demand for Ed Tech products and services has coincided with rapid growth in the marketplace, sparking opportunity for both innovation and entrepreneurship. However, Ed Tech entrepreneurs face a funding challenge, particularly in the early stages of product inception. While investors pour money into funding more educational strategies and tools that leverage technology, aspiring Ed Tech developers and entrepreneurs are challenged with designing and implementing products with the greatest likelihood of reaching students, families, and schools and positively affecting teaching and learning. At the same time, they must figure out ways to sell and scale up products up in an increasingly competitive global market.

Presented with the tension between meeting social aims and maximizing profit,<sup>8</sup> Ed Tech entrepreneurs must pursue sustainable funding strategies and advertise their products in ways that will appeal to the changing demands of the market and of key investors. In other words, they must balance investors' desire for influencing social change while also ensuring return on investment.

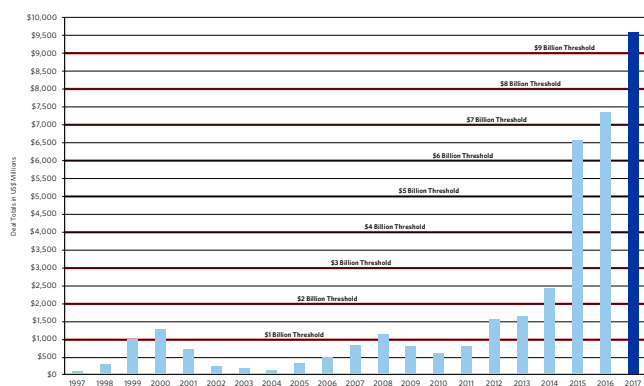
### Ed Tech Market Investment Context

The global education market spends some \$5 trillion annually,<sup>9</sup> yet until recently Ed Tech has only been a minor piece of education funding. That is shifting rapidly as digitization is beginning to transform education, both in higher education and in K–12. Investors are starting to notice that the Ed Tech market is one worth investing in. Many believe that just as technology has transformed markets such as the financial services industry, it also has the potential to transform education.<sup>10</sup> The market for Ed Tech has grown exponentially not just in the strongest economies, but also in

emerging and developing ones. The U.S. is considered to be a leader in Ed Tech, with 60 percent of all Ed Tech investment going to American companies,<sup>11</sup> and investment is growing steadily, with \$1.45 billion raised by U.S. Ed Tech companies in 2018 alone.<sup>12</sup> In China, where families spend more than one-third of their income on their children’s education, Ed Tech is one of the fastest growing sectors. According to Business Insider, the market for online English-tutoring products in China is expected to reach \$8 billion in 2019.<sup>13</sup> In Africa, Ed Tech products provide an opportunity to address issues of connectivity and education access. As a continent with the fastest growing mobile phone market in the world, getting content to learners is getting easier. Ed Tech funding has increased significantly in Africa, with the number of Ed Tech startups growing rapidly and investors taking notice.<sup>14</sup>

Global estimates echo the significant increases in Ed Tech investment we see in the U.S., China, and Africa. A recent report tracking investment in the learning technologies market<sup>15</sup> in over 122 countries found that 2017 saw the highest global investment levels, at \$9.56 billion, breaking the previous record set in 2016 of \$7.3 billion.<sup>16</sup> Total investments topped \$23 billion in learning technologies in the last three years alone and supported some 813 Ed Tech companies.<sup>17</sup>

**Figure 1. 1997-2017 Annual Totals for Global Private Investment in Learning Technology**



Source: Metaari Advanced Learning Technology Research “The 2017 Learning Technology Investment Patterns.”

This investment picture reflects a surge of innovation in new types of products, particularly entirely new technologies such as AI or educational robots, with clear investor preference for what is referred to as “next-generation Ed Tech companies” that are developing products that incorporate cognitive science, artificial

intelligence, mixed reality, and neuroscience. Examples include products from companies such as littleBits, Arduino, and Nvidia.

These estimates exclude investments in Ed Tech that facilitate administrative efficiency (such as learning management systems), and only include private investments. The Ed Tech investor landscape, however, not only includes private investments through venture capital and idea incubators, but also those made by government grants or philanthropies. Given that a large portion of these investors are missing from these estimates, it is likely that these figures underestimate the size of the market.

## Literature Review

Although the number of Ed Tech investments are continuing to grow, we know of little documentation to date on how and why Ed Tech investment decisions are made. The little information that does exist on Ed Tech markets seems to lack identification of the key drivers of investment decisions. Globally, there is no comprehensive information or credible source that entrepreneurs can look to for this information. For example, while the World Bank has documented the global Ed Tech market and chronicles the functions and responsibilities of national educational technology agencies, there is no equivalent source that provides information on how Ed Tech investments decisions are made by these agencies.<sup>18</sup>

In regions with known growth in Ed Tech markets, such as China, India, and Africa, some efforts are being made to chronicle information about the market, but this information is also not comprehensive. For example, a recent study in India documented the disconnect between Ed Tech investors and entrepreneurs in the country. While the study provides some information on the factors that investors look for in entrepreneurs, these primarily center around the company’s business model and team, and promise for ROI, with no guidance on how social mission—a return on learning outcomes—might be achieved.<sup>19</sup> Similarly, in China there is information available on Chinese and U.S. investors in the market including the types of companies receiving investment—primarily products addressing English language training, test prep and tutoring.<sup>20</sup> It is not articulated, however, why individual companies are



receiving investment dollars over others. Nevertheless, it is apparent that companies with significant scale or potential for scale are receiving large chunks of funding rather than earlier stage companies and startups.<sup>21</sup>

Africa also has a burgeoning market poised for growth. Many see Ed Tech in Africa as an opportunity to provide access to education for millions of children currently without accessible, formal education.<sup>22</sup> But while there is documented interest in Ed Tech in Africa, most of the information relayed is about the market potential. Articles cite a few companies as having reached a critical mass and mention the names of a few major VC firms investing in Africa, yet there is limited information on how decisions are being made in terms of types of companies that are receiving investment or what investors are looking for when investing in a certain company over another. That said, there are a number of articles that mention the need for local entrepreneurs, who understand the local context and barriers to execution such as a lack of connectivity or electricity,<sup>23</sup> to help solve the education divide.

In the U.S., there is some information on who the key investors are and which companies they fund, but again, the focus is on *who* and *what* is getting funded, and not *why*. EdSurge, an online Ed Tech news and research organization is one of the “go-to” resources for information on the Ed Tech market in the U.S. and has extensive information and insight on which investors are raising money and the size of various Ed Tech portfolios, including where the private investment dollars are going and what types of tech are being invested in.<sup>24</sup> While this is a comprehensive highlight of the marketplace, the information available centers around which companies are receiving money rather than why investments decisions are being made. This information does not help aspiring entrepreneurs understand why investors are choosing to give money to some Ed Tech companies over others, or who is *not* getting funded and why.

EdSurge has also provided brief advice to entrepreneurs raising funds to scale up Ed Tech innovations, but the information is collected only from a few investors anecdotally. While this guidance recognizes the tension between profit and social mission more directly than other reports focusing solely on profit, there is no comprehensive source that has tapped into the wide

range of Ed Tech investors in order to systematically document both profit and social mission factors that different types of investors seek.

Some academic work in the U.S. has begun to document this tension between profit and social mission through “blended capital” Ed Tech funding strategies that demonstrate a convergence of philanthropic giving and venture capital investments.<sup>25</sup> Venture Capital firms, which have typically focused on funding startups that target consumers and business and provide more promise of a ROI than schools do, have recently begun showing interest in solving social problems with their investments. Similarly, foundations, which were previously more mission-driven, have started becoming more open to investing in for-profit companies whose products or services serve a social need. This “blended capital” represents a set of emerging approaches in which Ed Tech companies are able to both meet philanthropic as well as profit-seeking aims.<sup>26</sup> Ed Tech entrepreneurs and companies are then faced with a funding challenge above and beyond that of a social program or a technology company alone: they must balance technological innovation and engineering with learning science that has a promise of return on investment, all while meeting the demands of an often fragmented public sector that remains skeptical about the promise of technology.

This trend in Ed Tech may be reflective of an emerging trend in education investments more broadly in the U.S., in which philanthropic foundations and venture capitalists are converging in their aims. Recently, a new form of education philanthropy has emerged, known as “strategic philanthropy,” in which philanthropic giving starts to look more like venture capital investment,<sup>27</sup> and is a departure from framing of education investment decisions in terms of merely the “public good.” In parallel, increasing scrutiny and calls for accountability have shifted the focus for education philanthropy away from merely showing outputs, and instead showing evidence of impacts. These new education philanthropists emphasize not only increasing resources for educational programs and policies, but accountability and results-based management.<sup>28</sup> Given this heightened call for accountability in investment decisions, there is increasingly more work documenting evidence of effectiveness in Ed Tech in the U.S.<sup>29</sup> and globally.<sup>30</sup>

One challenge that remains is the clear tension between what makes money and what drives impact. While it remains unclear how this tension plays out in Ed Tech investments specifically, it is reasonable to hypothesize that the “popular” educational technologies that provide a ROI and the technologies that show credible evidence of impact are often not the same. How both philanthropies and VCs navigate this tension when making investment decisions remains unclear.

Additionally, the extent to which “strategic philanthropy” and these “blended capital” funding strategies extend beyond the U.S. to the global Ed Tech market remains undocumented. How and why are donors investing in certain products over others? Do investors care first and foremost about efficacy, are they striving to meet social mission, or is profit potential the most important factor in Ed Tech investment decisions?

This lack of information may in fact be hindering innovation. The dearth of documentation on *how* and *why* Ed Tech investments get made leave aspiring entrepreneurs with little knowledge of how to design innovative technologies to best attract funding, or where to look for information on who is investing in what, where, and why. Identifying the right funders or mix of funders becomes a guessing game for all but the most seriously experienced entrepreneurs.

## Global Ed Tech Investors and Types

### Investors and Investments in the Global Ed Tech Market

To identify key investors in the Ed Tech market, we examined lists of the top innovative projects from around the globe highlighted by organizations such as the World Bank, Brookings Institution, and the Global Learning XPRIZE.<sup>31</sup> We examined the key funders of those innovations to understand what types of investors are supporting Ed Tech companies broadly. We observed that Ed Tech companies highlighted by the World Bank and others were receiving funding from government, philanthropic, and private capital in the form of both grants and investments. As a result, we have categorized key investors in the Ed Tech market into four categories:

- Category 1: Philanthropy and Corporate Philanthropy
- Category 2: Venture Capital and Social Venture Capital
- Category 3: Government and Government Intermediaries
- Category 4: Competitions

**Table 1. Ed Tech Investors Interviewed by Category**

There are few sectors other than perhaps public health and education where you see such a diverse mix of investor types. Ed Tech is unusual in that investees are both nonprofit and for-profit entities and investors span nonprofit (philanthropy), for-profit (venture capital), and government.			
Philanthropy and Corporate Philanthropy	Venture Capital (VC) and Social Venture Capital	Government and Government Intermediaries	Competitions
Bill & Melinda Gates Foundation	GSV Advisors	Global Partnership for Education (GPE) @ the World Bank	XPRIZE and Global Learning XPRIZE
Fundação Lemann	Learn Capital	International Finance Corporation (IFC) @ the World Bank	
Omidyar Network	NewSchools Venture Fund		
Siegel Family Endowment	Owl Ventures		
Google.org	ReThink Education		
LEGO Foundation	Village Capital		

One can get a sense of scale and of scope of Ed Tech across the globe by looking at the types of investors and, importantly, what they are investing in. It is interesting to see an industry that is supported by such a broad spectrum of funders, with investors funding a range of products across multiple geographies. In more evolved markets such as the U.S. and Europe, investors seem to focus on funding software and apps that support a range of educational goals such as differentiated learning, and school and district systems and administration. In less developed markets where Ed Tech is a decade or so behind, you see software and apps—bringing content to mobile phones and to low-resourced areas with limited internet and electricity—and you also see investments in hardware, devices, and other means of education content delivery. Notably, it seems that investors are agnostic in terms of whether they invest in software vs. hardware or other products. Instead, decisions seem to be made based on investment theses and goals and the means by which these can be achieved—and at scale.

Nevertheless, more information is needed on what Ed Tech investors' goals are and how they interact with selection criteria. How should the next generation of Ed Tech innovators and entrepreneurs think about product conception and design to optimize investment potential? With little understanding of what drives these investment decisions globally, there is a need to better understand how investors make decisions in order to provide entrepreneurs with the information they need, particularly in early stages of development.

Through this study, we aim to identify what the top Ed Tech investors and philanthropists are investing in globally and why. We ask what investors are using as selection criteria when funding Ed Tech innovations, how investors are reconciling the tension between profit and social mission, and what types of information and data Ed Tech entrepreneurs can gather and share to increase the likelihood of funding. We will also identify examples of Ed Tech entrepreneurs and firms who have secured substantial funding and designed products that are successful in the market. Through these case studies, we hope to provide their perceptions of key ingredients for success and practical actions they have taken that helped them succeed.

## Research Methods

We conducted 16 semi-structured interviews with 20 individuals across 15 organizations, which span the four investor types (6 from philanthropic foundations, 6 from venture capital, 2 government intermediaries, and 1 idea incubator) between March and August of 2018.

We asked investors questions along three broad themes:

1. What are your organization's goals for investment, your investment thesis?
2. What are your organization's selection criteria for investment?
3. What does your organization view as emerging trends in Ed Tech?

Answers to these questions uncovered a number of thematic areas that investors seem to value, which centered around a half dozen criteria for selection. To gain a sense of how Ed Tech entrepreneurs and companies were able to meet these criteria, we interviewed five representatives of flourishing Ed Tech companies to better understand the factors that made them successful in achieving certain milestones, including attracting investment. These five—which form our case studies—were recommended by the investors we interviewed.

We asked our case study interviewees about the specific criteria they were identified as exemplifying, which included descriptions of actions and strategies that helped them succeed. For example, we asked about how they were able to leverage support to achieve scale, reach previously unreachable populations, or design products to meet specific local needs of their customers. We also asked about what they did that helped secure funding.

Interviews were audio recorded and portions of each interview were transcribed for accuracy and to capture quotations. Data from the interviews were analyzed using iterative deductive and inductive theming and coding techniques,<sup>32</sup> in which we first categorized data according to questions in the protocol, and then identified themes within specific answers to questions. Iteratively more granular theming and coding was facilitated by Excel, and excerpts from transcripts that were to be included in this report or other publications were emailed to interviewees for optional review.

# Findings from Investor Interviews

## Summary

We asked investors three broad questions to understand which Ed Tech companies they chose to invest in and why. We first asked about their mission, goals, and investment thesis; followed by questions about their specific criteria for selecting investments. Finally, we asked investors what they thought were emerging trends in the Ed Tech sector. Investors' responses broadly overlapped, and implicitly centered around their criteria for selection.

## A: What are Ed Tech investors' investment theses?

Investment theses all centered around fulfilling social missions, which included articulating outcomes of interest or identifying aspects of the educational process where investors believed intervention would be most effective. These responses generally overlapped with their investment goals, which often also identified specific goals around teaching, learning, and educational outcomes, or larger goals related to systems change. The seven main goals mentioned by investors, and descriptions of specific examples under these investment theses, included:

Goals for Investing in Ed Tech: Investor goals and investment theses broadly overlapped and covered seven goals across three broad themes			
Goal 1	Increase access to education	Ensuring all children have <b>access</b> to a quality education—goals are <b>equity, diversity, and inclusion</b>	Learning Outcomes
Goal 2	Improve educational outcomes	Integrating technology into learning to <b>help students learn more efficiently and effectively</b> ; improving outcomes in subject areas such as <b>math and science</b> ; providing access to products that provide <b>differentiated and/or personalized learning</b>	
Goal 3	21st century career readiness	Identifying products that bridge gaps in <b>skills-based training</b> , providing access to continual learning, building <b>workforce skills</b> , and improving future employability—includes <b>workforce development, upskilling, computer science education, technology education, and digital literacy</b>	
Goal 4	Lift up vulnerable populations	Overcoming biases and <b>entering markets where venture industry previously would not go</b> (which improves access for previously unreached populations)— <b>serving disadvantaged populations</b> in terms of gender, age, and geography	
Goal 5	Support teaching	Building <b>capacity of teachers</b> and creating environments that support and enable differentiated learning, supporting classroom and lesson plan management	Process Outcomes
Goal 6	Improve systems	<b>Strengthening systems</b> that deliver education (such as fixing government processes and procurement), strengthening systems within schools by <b>supporting operations</b> (in attendance, communications, tracking of data, etc.)	
Goal 7	Improve data collection	Leveraging ed tech to <b>generate better data</b> on learning and other educational outcomes	Evaluation

**Key Point:** Ed Tech investors, both nonprofit and for-profit, have overlapping goals that include investing in ventures that both have the greatest opportunity for scale and market reach, and which also have the greatest potential to positively impact teaching and learning. There are very few markets<sup>33</sup> where you see a philanthropy, a corporation, government, and a venture capitalist aligned around an investment thesis.

### B: How do Ed Tech investors pick specific investments?

Investors shared a variety of selection criteria for investment decisions. These criteria fit into a few common themes, which demonstrate investors’ dual goal of achieving profit and social mission. While their goals tend to be similar, the weight of expected financial return may vary by type of investor. For example, for

philanthropic funders such as the Bill & Melinda Gates Foundation, Fundação Lemann, and the Siegel Family Endowment as well as the XPRIZE, achieving social goals is paramount. For investors such as ReThink Education, Learn Capital, GSV, and others, the promise of financial returns and, therefore, investing in scalable models is a focus. The investment criteria mentioned by our interviewees fit into seven themes:

Investment Criteria		What Makes it a Smart Investment
1	<b>Investing in people and teams, local knowledge</b>	Founders and leadership team are composed of <b>seasoned and authentic entrepreneur(s)</b> , with expertise across multiple sectors and <b>localized knowledge</b>
2	<b>Investing in customer discovery</b>	Team understands the <b>specific needs of the end user</b> (and bottlenecks to education access) via extensive customer discovery processes
3	<b>Investing in research-based product development</b>	Technology is well <b>researched</b> and developed with a <b>clear understanding of how children learn</b>
4	<b>Investing in a sustainable business model</b>	Business model is <b>smart, sustainable and executable</b> and does not rely solely on one or a handful of funders
5	<b>Investing in a vision for impact</b>	Company has a <b>credible impact thesis</b>
6	<b>Investing in measurement, evaluation, and learning</b>	Team has <b>evidence</b> that the product works and has iterated as needed
7	<b>Investing in scale</b>	Company has significant <b>potential for scale</b> , including the ability to <b>reach hard-to-reach populations</b> to narrow inequalities

### THEME 1: INVESTING IN PEOPLE AND TEAMS

#### What makes a promising team for investment?

When describing the qualities of a promising entrepreneur and team for investment, in addition to the ability to execute, investors often mentioned two characteristics:

1. Relevant team expertise across business, technology, and education
2. Authentic individual experience with localized knowledge

The mix of these characteristics demonstrate how investors value both the potential for scale, for maximizing profit and the potential for solving locally relevant educational challenges by utilizing customized innovation. Investor descriptions of each of these characteristics are below:

#### Relevant team expertise across business, technology, and education:

Investors discussed the complexity of solving education challenges globally. Leveraging technology to do so requires expertise across a number of areas, including education and learning science, technology, and business development and financial sustainability. Teams able to successfully leverage talent from across these areas often appeared more credible and competitive for funding and investment. Some investors recognize that in Ed Tech, there is a danger that entrepreneurs may undervalue expertise in education. This stands in contrast to other sectors, in which sector-specific expertise is unquestionably necessary. Denis Mizne, from Fundação Lemann, remarked, “in venture capital, before investing in a science start up, they make sure to bring in scientists. When they invest in a medical start up, they bring in doctors. But somehow in



K-12 education, investors don't feel the need to bring in experts as everyone thinks they have the expertise already. I mean, we all went to school, right?"

Nevertheless, it can be hypothesized that one of the reasons Ed Tech continues to grow is that the sector is attracting a broader set of players. Education and its challenges are ubiquitous, massive in scale and largely unsolved. This challenge is attracting entrepreneurs of all shapes and sizes. Deborah Quazzo from GSV Advisors noted that "the caliber of leader has changed. It used to be that people did not want to be in education. It was not sexy. That is changing and we are seeing talent pour in from all sectors—from educators to MBAs to Engineers."

### **Authentic individual experience with localized knowledge:**

One key aspect of such a team was the presence of an "authentic" entrepreneur. Many investors described the importance of teams that were led by someone who really understands the challenges of implementing quality education, specifically within a local context, either because he or she had been a teacher in the area or had grown up in the system or area that the technology is targeting. These authentic entrepreneurs usually had spent dedicated time trying to solve educational challenges in a specific context. Investors also value teams that made efforts to hire locally and recruit members that also understand the local context. Luis Pinto of Learn Capital told us that "while the product is obviously important, what is equally important is the team's technical ability and their ability to deliver. This includes a committed team, a team that is able to deal with challenges, a team that knows how to negotiate and build partnerships. And either that team has local experience or they need to hire locally. Without that local context, they are doomed to fail."

Investors value these entrepreneurs for a variety of reasons, including their ability to recognize the complexity of localized educational challenges, and their ability and dedication to designing viable solutions to long-standing challenges that others may not have been able to solve.

ReThink Education also spoke about being particularly receptive to personal experience: "We look for entrepreneurs who have a desire to solve a particular

problem as opposed to a desire to build a company, be a CEO, or make money," Matt Greenfield told us. "We are particularly receptive to personal experience. For example, if the CEO comes from the same background as the intended customer. In response, we also make an effort to overcome our own biases and to go where the rest of the venture industry might not—investing in racial, gender, and ethnically diverse entrepreneurs and geographies." Identifying these authentic entrepreneurs often equates to funding those that in other situations might not otherwise be attractive to investors.

Similarly, Village Capital spoke about giving opportunities to a diverse group of people who are often overlooked as a key goal for their portfolio as a means to "democratizing entrepreneurship." Marissa Lowman told us, "the organization as a whole is founded on the principle that venture capital is going to a very un-diverse group of people from the same places and with the same backgrounds. We are trying to democratize entrepreneurship and give access to capital to a much broader swath of people and for ideas that can really move the needle."

The combination of localized knowledge through an authentic entrepreneur and team expertise is one way investors are showing that they value investments that show promise of return both on profit and purpose.

## **THEME 2: Investing in Customer Discovery**

Beyond authentic entrepreneurs who understand the local context, many investors talked about the importance of both identifying a specific and locally relevant need and understanding the bottlenecks to serving that need by undergoing an effective customer discovery process. Investors defined ventures with localized knowledge as ventures that understand the end user and local need and context, and utilize a systematic processes for customer discovery.

### **What constitutes a successful customer discovery process?**

One key insight that many investors mentioned is that often Ed Tech entrepreneurs or companies will get excited about developing a product that may be an exciting new use of technology, but is not neces-

sarily solving a true educational challenge in the local context. Investors described what they believed was a successful customer discovery process: entrepreneurs systematically interacting with stakeholders and potential customers, including teachers, students, and governments—the end users of the technology—listening to what potential customers were communicating without preconceptions, and using that information to conceive and design technologies that aimed to solve these particular challenges or bottlenecks.

This process may include conducting surveys or qualitative interviews with a potential customer population, and trying to engage with a large enough and randomly selected sample that could give a representative perspective of the population. It may be iterative and involve multiple points of engagement with stakeholders/customers in order to design and update the technology to ensure it is appropriately addressing local needs. Entrepreneurs should remain nimble enough in the design and piloting stage to adapt to evolving needs.

NewSchools Venture Fund described the importance of the customer discovery process and engaging with key stakeholders before identifying which educational challenges to solve: “we look for entrepreneurs who are addressing what we are hearing from educators, thought leaders and others in the space that are ‘critical student needs,’” Tonika Clayton told us. “While we start with published research, we also aim to talk to those working on the ground including teachers. We make sure they represent diverse geographies, roles and perspectives. This provides us a blueprint for the four or five challenges we end up focusing on.” NewSchools Venture Fund is also now designing and conducting its own study to try to identify key areas to focus on over the next few years to help form its investment strategy.

ReThink Education has a similar view of the importance of a thorough customer discovery process. Matt Greenfield, Managing Partner, said, “we respect a good customer discovery process. For example, someone who goes out and talks to a lot of superintendents, provosts, or corporate learning officers and really listens—and without preconceptions.”

Meeting the demands of the market (return on investment) and demands of investors (positive social outcomes), while also identifying the locally relevant need, is the goal of the Ed Tech innovator.

### **THEME 3:** **Investing in Research-Based Product Development**

Investors also spoke about valuing Ed Tech entrepreneurs and companies that used learning research to develop and test their products.

#### **What is research-based product development?**

The concept of research-based product development can mean different things in different contexts. Some investors mentioned this in relation to their goals and the particular needs of the target population. For example, Luis Pinto from Learn Capital described an overarching goal of integrating technology into the learning process in a way that makes learning more efficient. A variety of different approaches, from personalized learning to artificial intelligence (AI) and machine learning, could achieve this goal.

Matt Greenfield from ReThink Education mentioned the importance of a reasonable theory of change that is testable, which involves integration of some understanding of learning science, and a way to monitor and test efficacy. “We want a plausible theory of change,” he said. “We don’t expect a randomized control trial demonstrating efficacy, but we want respect for the existing research on how people learn, and respect for how educational institutions work—which a lot of entrepreneurs don’t have.”

Other investors, such as LEGO Foundation, who focus on early childhood and Ed Tech, emphasized the use of developmental theories, such as constructivism, as a basis for developing tools and software that are likely to facilitate effective child development and learning.

### **THEME 4:** **Investing in a Sustainable Business Model**

While a defensible purpose and goal was a necessary condition for funding for many investors, it was not a sufficient condition on its own for most investors. Entrepreneurs also have to demonstrate they have a defensible business model with promise of both scale and commercial return. While this is, of course, commonplace for any for-profit investor, nonprofit investors also emphasized the need for a viable and sustainable model. Even philanthropies want to understand that there will one day be an “exit” when they no longer

have to support the company. While not all investors spoke about this directly, a few of them highlighted the importance of a sustainable, executable business model, either as a non-negotiable criterion, or one that needed to exist in tandem with others.

For example, large scale government funders such as the International Finance Corporation (IFC) at the World Bank highlighted that a proven track record is an important ingredient for funding. While not all investors have this criterion, IFC does not demonstrate prior success. “We look at track record,” IFC’s Juliana Guaqueta told us. “And we look at how fast the company has grown. We also look at the unit economics of that company including user acquisition cost, lifetime value of a user and, of course, profitability. For this reason, we never invest in early stage ventures. We like to see traction in the market as well as the company’s ability to attract other investors. Once we see this, we take a deep dive into the product and analyze what it has a chance to make it.”

In contrast to investors like IFC that have a focus on commercial return, other investors, such as Omidyar Network, mention the promise of a commercial return in tandem with other criteria such as an impact thesis, to emphasize that the business model may be one of several factors that might motivate investment. “We invest in ventures that have the promise of commercial returns but, at the same time, we also look at ventures that have a larger social impact thesis and even at ventures that are more traditional nonprofit. Our thesis is broad and not one tool applies to all investments,” Namita Dalmia told us.

## **THEME 5:** **Investing in a Vision for Impact**

### **What is an impact thesis?**

Many investors spoke about the importance of Ed Tech entrepreneurs and companies having an impact thesis, or clear outcomes that they are aiming to influence through the use of technology. Outcomes of interest varied, from quality of instruction and building foundational learning to improving teacher efficiency or developing labor force participation.

Investors, such as the Bill & Melinda Gates Foundation, XPRIZE, and Google.org, emphasized that technology in and of itself is not the answer to many problems, but that there are many challenges in education (such as closing the learning gap), which current education systems are unable to solve, and that technology has the potential to disrupt.

Some investors, such as the Bill & Melinda Gates Foundation and the Global Partnership for Education (GPE), are developing their goals for Ed Tech alongside established and broader educational goals outside of technological solutions. GPE, for example, focuses on country priorities and supporting diverse ecosystems, with a focus on marginalized populations. It is still exploring how technology can be leveraged to solve the learning crisis in these geographies. Its vision for impact is tied to the needs of each country, whether that is increasing access or improving quality.

Other organizations, such as the Bill & Melinda Gates Foundation, tie their vision for impact to particular aspects of learning that they see as critical in all areas where they work. Girin Beehary told us that “there are a couple of things that define our approach. One is a narrow focus on K–12 and, within that, a focus on foundational learning, literacy and numeracy. We focus here because a lack of early learning impedes further learning and impedes progress in secondary school. It not only makes it harder for kids to move on, but the school systems tend to leave them behind.”

Other investors aim to leverage technology to solve massive educational challenges that seem impossible to solve, but are fundamental to development. For example, the XPRIZE challenge was conceived to incentivize people to use technology to solve as-yet unsolved fundamental learning challenges such as access to education or literacy. Investors are interested not in characteristics of the technology itself, but rather in technology as a lever for addressing deeply entrenched and enduring educational challenges. “We are trying to prove a basic supposition that given the right to technology, children can learn on their own and without the aid of adults,” Matt Keller said. “And perhaps this is a way to solve what has been an unsolvable problem of 100 million children not having access to school and another 300 million going to school without ever having learned to read or write.”



## **THEME 6:** **Investing in Evaluation, Measurement, and Learning**

Once entrepreneurs develop products based on learning science research and develop a reasonable theory of change, they also need a process for testing whether the product is working and in context. Investors talked about the importance of having a process for evaluation that is in line with the product's theory of change.

For example, GSV Advisors talked about the advances many Ed Tech products have made in the ability to measure. The company mentioned firms such as DreamBox Learning and Lexia Learning as examples of those who were engaging in efficacy research and good data collection practices, including embedding assessment in the tools.

Data collection and measurement is also an important consideration for many investors, whether it is using data and measurement to understand how a technology works in context, or whether technology is itself a solution to obtaining better quality information. For example, the LEGO Foundation discussed the importance of data collection and measurement in capturing difficult to measure concepts. LEGO is interested in the challenges of fragile families in the U.S., and understanding these issues through carefully designed surveys. Other organizations, such as the Global Partnership for Education (GPE), see Ed Tech as a potential solution for improving data collection processes in hard-to-reach places.

Omidyar Network also talked about the importance of testing products in the classroom to work out implementation challenges. “Before we even ask about whether it affects learning, we ask whether it is positioned to work in the learning environment. A lot of products fall apart right there based on a lack of understanding of the classroom learning environment,” Eliza Erickson told us. “You could have the most perfect application, but if it does not take into account design features that ensure it will work within the infrastructure provided and for the teachers, then who really cares, right?” For Omidyar Network, evaluation and learning includes understanding the technology itself, the data that are generated by it, and how to use that information to see the technology's practical application in the classroom. While rigorous evidence of impact is good to have, the primary concern is feasibility of implementation in the classroom.

Investors such as Owl Ventures, ReThink Education, Omidyar Network, and Google.org also recognized that how much a theory is testable in practice can very much depend on the stage of development and the design of technology at hand. Recovering credible impact estimates is not always possible for every product. For example, very early stage development products may still be too unstable to test, or some products are rolled out in ways that make it difficult to identify a credible comparison group. Given these challenges, many investors described valuing a mindset and commitment to evaluation and learning, rather than the use of one particular type of evaluation for measuring impact. Owl Ventures described the importance of a commitment from a founder and leadership team to question how they are impacting learners by using feedback loops, for example. Owl Ventures believes this should be a “core to company ethos,” and it is a key aspect of what it looks for when deciding whether to invest in a company.

Investors also mentioned the importance of processes that involve collecting information on metrics appropriate for each stage of the development process. Tom Costin of Owl Ventures described how his company thought about these different stages of evaluation: “the way that we approach efficacy or learning outcomes is that the bar of rigor for measurement grows as the company becomes more mature. The earlier stage a company, the more qualitative it tends to be; the later stage, the more quantitative it needs to be,” he said. “In early stage we are also taking into account commitment from the founder and team, active feedback loops, and how they are thinking about measuring impact and how that is incorporated into further product development.”

## **THEME 7:** **Investing in Scale**

Once products are developed with local knowledge, respect for the end user, and previous research, and evaluation and learning are used to iterate on the design, investors also wanted to see evidence of their potential for scale and/or broad reach. Investors defined this criterion in two different ways. One concept of scale involved total number of customers accessed in a local context, while another concept referred to the number of countries where the product is available.

Many investors talked about the size of the educational challenge, and the need to find scalable solutions to reach those in need. For example, Deborah Quazzo from GSV Advisors talked about the challenge of scaling in both K–12 and higher education. She said that technologies that could overcome measurement challenges and embed assessment into the technology were able to make massive strides in evaluating students not just academically, but on other parameters such as engagement and health.

Salah-Eddine Kandri from IFC spoke about the importance of investing in products at scale that have reach across a global context. An important consideration is the capacity of models to enrich learning at school, which is challenging since selling directly to schools is difficult.

Some investors, such as Fundação Lemann, also recognize that the desire for scale is entangled with the scale of the problems and type of problems they are trying to solve. There is some tension in how investors believe scale can be achieved. On the one hand, some investors such as Fundação Lemann recognize that solutions must be backed by government in order to be scalable. Denis Mizne told us, “public education in most places is funded by government. So if the government is not funding it, it’s not going to happen. Or it will happen in a way that increases inequality, which for us is the opposite of what we are trying to achieve. We back products that today are used by 25 million students in Brazil. We have learned how to get to scale because we had no choice.”

Other investors are open to the possibility of achieving scale outside of government, since the government moves slowly and can become a bottleneck to scale.

While some investors, such as Owl Ventures and XPRIZE, look for evidence that a product has already worked at scale, other investors, such as Google.org, do not necessarily require scale to have already been achieved, but instead look for evidence that there exists a pathway to scale. Companies need to have a plan for scale that is defensible, and based on a reasonable set of assumptions.

Other investors, such as Omidyar Network, talked about the need to test a product’s potential scalability through real experimentation of prototypes in context.

They question the typical “pilot-replication-scale” model and propose a more organic approach to testing a product’s potential scalability that is not necessarily based on small scale credible impact studies. Eliza Erickson said, “I think there’s a body of evidence about what works for whom, when, where, and why, and in what context. There are wonderful pilots out there but they are done in a Petri dish—meaning with the best teachers and in the best physical environment. Of course that is going to succeed. But we need fewer pilots and more prototypes.” She said that those prototypes should be “built for millions of people, not several dozen. These prototypes should then be tested and with real scale in mind. It’s not all about research either but about getting entrepreneurs together to experiment and co-create.”

Many investors also talked about the concept of reach, the importance of leveraging technology to reach hard-to-reach or vulnerable populations. Given that many of them envision the role of Ed Tech as solving educational challenges that are yet unsolved, the target population for Ed Tech solutions was also of interest. For example, investors such as ReThink Education, Village Capital, and Google.org center their investment theses around helping to reach populations that are often left out of development efforts, and for ReThink Education, on identifying entrepreneurs that are themselves potentially disadvantaged.

Google.org mentioned focusing on disadvantaged populations with high technology adoption rates, but that have not yet been reached with quality education solutions: “One of the things that we have observed, and particularly in education, is that as technology continues to improve outcomes for those students who have access, it is also simultaneously widening the gap between those with access and those without. How can we now use technology to actually reach those without access in similar ways? We look for organizations who are thinking specifically about access and adoption in this context,” Brigitte Gosselink told us.

For Google.org, scale is not just about total numbers of potential users reached, particularly if you are reaching populations that already have access to educational content and technology and are easy contexts to work in and achieve scale. Instead, it is about reaching the

populations and contexts which may be the most challenging environments to work in and most in need. This includes organizations that are investigating what it means to be more mobile oriented, or those which are preparing resources that can be used completely or mostly off-line for a low connectivity environment, or who are building in local languages.

### *C: Ed Tech Entrepreneurship Emerging Trends*

We asked investors what they thought was missing in the Ed Tech market in order to better understand their vision of the future in terms of products and services. While a number of products already exist that utilize the below mentioned tools, investors believed these seven trends are destined for scale.

#### Emerging or Growing Trends:

1	AI and machine learning	Enables personalized learning, tracking of individual progress in virtual and augmented reality	<b>Technical Tools</b>
2	Personalized learning	Leverages technology to overcome learning constraints; gives ability to customize learning; facilitates user generated content and social and emotional learning; strengthens communication between student and teacher, etc.	<b>Process of Learning Tools</b>
3	Experiential and work-based learning	Provides for development of tools that support skill development, connect to workforce, and reflect labor market needs; work-based learning tools that include online internships; tools that upskill or reskill and support lifelong learning	
4	Learning outside the K-12 system	Moves from focus on K-12 and higher ed towards tools to address early learning as well as lifelong learning, upskilling, and issues around women and workforce	
5	Hyperlocal content	Allows for content that is locally, culturally relevant including in local language and tools that teach language acquisition and support ELLs	<b>Curriculum</b>
6	Assessment and outcome measurement	Creates tools that allow for data collection and analysis; tools that build evidence using existing data; tools for assessment of everything from systems to instruction to learning outcomes	<b>Evaluation</b>
7	Administrative and systemic tools	Creates tools that improve systems, distribution, and operations, supporting everything from data collection and attendance to the running of the school cafeteria and public safety programs	<b>Administrative Tools</b>

Many investors believe that AI and machine learning are going to be the next “big thing” in education. ReThink Education’s Matt Greenfield emphasizes this point by saying, “if you don’t have AI as a component of your strategy, you are asking to get left behind.” There is a sense that technology has the ability to revolutionize education in two ways: 1) help us understand how children learn and how individual learners learn, and 2) support that learning by customizing content.

There is also a sense that technology will bring content to masses of students where they are with platforms such as Khan Academy and virtual labs, and via virtual libraries, virtual reality (VR), and augmented reality (AR). “Imagine you are learning about Egypt and you can see the pyramids in the middle of the classroom,” Fundação Lemann’s Denis Mizne says. “Kids are going to be so excited about that. While VR is powerful and immersive, it is harder to implement in a classroom. But AR can be implemented simply by projecting out of the phone.”

In addition, investors emphasized an emerging need to create comprehensive products for certain populations. For example, leadership from the XPRIZE mentioned the need for locally and culturally relevant software in local languages. On a global level, Owl Ventures mentioned a growing need for products that teach English to both K–12 and adult learners.

Investors also highlighted a need to solve certain constraints to learning or to school administration. Two key challenges that were consistently highlighted by investors was the quality challenge and the challenge of distributing to broad geographies. Investors such as Omidyar Network and XPRIZE highlighted the potential for technology to reach populations who are most in need—populations who otherwise would not have access.

Investors also emphasized that more research is needed to improve products and/or achieve scale. There were many ways in which investors imagined research would play an important role in the future of Ed Tech product development. Investors such as GPE emphasized the need for more data, and investors such as Google.org emphasized the need for better established feedback loops to understand how well products are meeting customer needs. Investors such as Omidyar Network emphasized the need to better understand implementation with fidelity and how to achieve quality at scale. Investors such as NewSchools Venture Fund also recognized the inherent challenges in developing rigorous research due to incongruent time horizons, in which research cycles are much longer than the time it takes for new products and new technologies to become obsolete.

## Recommendations for Aspiring Ed Tech Entrepreneurs

Ed Tech companies are raising more money than ever before, but prospective entrepreneurs need guidance on whether and how to enter the market, and the best ways to secure investment for new Ed Tech innovations. While Ed Tech is a diverse and often disparate multitude of emerging technologies ranging from hardware to software, the companies that are securing investment have a few characteristics in common. Regardless of which investors they seek funding from, Ed Tech companies must

negotiate between a strong, sustainable business model, and a meaningful and feasible impact thesis. Technological innovation in the education space is meaningless if it fails to make headway in solving the long-standing educational challenges that remain unsolved. Unlike other sectors in which venture capitalists and foundations have diverging aims, Ed Tech is a space in which investors across both venture capital and philanthropy seem to share a common goal of backing innovations that can fulfill multiple criteria for selection along this dual mission of profit and purpose.

We have the following recommendations for aspiring entrepreneurs seeking funding innovations in educational technology:

1. Begin with an exploratory yet systematic customer discovery process that focuses on listening to potential end users to understand the true bottlenecks to education in the context in which you hope to work. Aim to talk to a large sample, and present yourself as a listener and not a seller at this stage.
2. Make sure you have conducted thorough market research and that you are not duplicating efforts but, instead, building on successful solutions where there are market gaps. Far too many investors have seen that pitch already! Make sure to do your homework.
3. Involve end users in the product development and evolution phases, and use collaborative design processes that develop innovations WITH end users and not merely FOR them.
4. Build teams that include members with expertise across multiple areas, including education, design, technology, and finance.
5. Leverage expertise in educational research to develop products that have respect for and knowledge of the work on how children learn.
6. Achieve clarity on your impact thesis and its meaning and feasibility in the context in which you plan to work.
7. Establish processes for evaluating success and updating product design and implementation based on learning from these processes.

8. Adapt to local challenges to achieve scale, including (a) finding ways to work outside of or in tandem with government systems, (b) using low-tech platforms to make platforms accessible in resource-poor settings, and (c) partnering with local providers for cost-sharing and reach.

Both investors and successful entrepreneurs highlighted the role of the end user in every stage of product development, from helping to identify the true needs within a given context and refining the product to marketing and spreading word about the technology to achieve scale. Aspiring entrepreneurs who show respect for the perspective of end users and can develop relationships with them even before developing a product may have a much better chance of success than entrepreneurs that start with a technology and look for a problem to solve with it.

Ed Tech is here to stay, but the success of the next generation of Ed Tech entrepreneurs depends on how well they can fulfill this dual mission of profit and purpose. For decades, the right to learn has been a global vision that remains unachievable in the face of what seems like an unsolvable learning crisis.

Ed Tech is moving more and more towards products and platforms that utilize technological tools to overcome real and urgent bottlenecks to learning across multiple contexts. This includes technologies that utilize AI and machine learning, can operate in low-tech environments, and can improve the quality of data and evaluation processes to develop products in local contexts with end users. Ed Tech is even beginning to expand beyond the traditional K–12 school context to leverage technology for early childhood development and increase workforce participation.

As technologies in and of themselves often become obsolete after only a few years, investors across both venture capital and philanthropy are increasingly recognizing that innovation in Ed Tech is not just about the latest technology or the best business model, but rather about how technology can be leveraged to increase access to and quality of learning. We look forward to seeing how the next, emerging entrepreneurs move beyond merely producing hyped and short-lived products, and instead leverage technology so that a vision as basic as the right to learn can become an achievable reality.

## Appendix A. Case Studies

In follow-up to our interviews with investors, we talked to five entrepreneurs that successfully demonstrate the key selection criteria that investors value when deciding whether to fund Ed Tech innovation. We wanted to understand how each company feels it achieved its goals, and what practical steps it took to

gain funding. While most of these cases meet many of the goals and investment criteria indicated by investors and donors, we have highlighted the top selection criteria for each—both in terms of investment thesis and what makes a smart investment—that stood out from our interviews.

### Entrepreneurs Interviewed for Case Studies and Criteria Exemplified

Company	Location	Alignment with Investor Investment Theses (Top 3)	Criteria Exemplified – What Makes the Company a Smart Investment (Top 3)
<b>AllHere</b>	<b>United States</b>	<ol style="list-style-type: none"> <li>1. Improve education outcomes</li> <li>2. Improve systems</li> <li>3. Improve data collection</li> </ol>	<ol style="list-style-type: none"> <li>1. People and teams, local knowledge</li> <li>2. Customer discovery</li> <li>3. Vision for impact</li> </ol>
<b>Nova Escola</b>	<b>Brazil</b>	<ol style="list-style-type: none"> <li>1. Improve education outcomes</li> <li>2. Support teaching</li> <li>3. Improve systems</li> </ol>	<ol style="list-style-type: none"> <li>1. Customer discovery</li> <li>2. Measurement, evaluation, and learning</li> <li>3. Scale</li> </ol>
<b>Eneza</b>	<b>Kenya</b>	<ol style="list-style-type: none"> <li>1. Increase access to education</li> <li>2. Improve educational outcomes</li> <li>3. Lift up vulnerable populations</li> </ol>	<ol style="list-style-type: none"> <li>1. People and teams, local knowledge</li> <li>2. Customer discovery</li> <li>3. Sustainable business model</li> </ol>
<b>Scratch</b>	<b>Global</b>	<ol style="list-style-type: none"> <li>1. Improve educational outcomes</li> <li>2. 21st century career readiness</li> <li>3. Support teachers</li> </ol>	<ol style="list-style-type: none"> <li>1. Research-based product development</li> <li>2. Measurement, evaluation, and learning</li> <li>3. Scale</li> </ol>
<b>Siyavula</b>	<b>South Africa</b>	<ol style="list-style-type: none"> <li>1. Increase access to education</li> <li>2. Improve educational outcomes</li> <li>3. Lift up vulnerable populations</li> </ol>	<ol style="list-style-type: none"> <li>1. People and teams, local knowledge</li> <li>2. Research-based product development</li> <li>3. Scale</li> </ol>



## CASE STUDY 1: AllHere (United States)

### AllHere – JoAnna Smith, Founder and CEO

AllHere is reducing absences among the 6.5 million + Pre-K–12 students missing 15 days of class each year. Part of Harvard Innovation Labs, AllHere is an attendance intervention management platform for K–12 schools and districts that helps administrators fight chronic absenteeism by providing (1) early identification of at-risk students through data, (2) a digital toolkit with intervention activities to address absenteeism at all levels, and (3) mobile access for student services, which allows school site staff to submit information and monitor progress of students identified as at-risk.

**Legal status:** For-profit

**Who invests:** Venture Capital and Social Venture Capital

AllHere, and its Founder and CEO, JoAnna Smith, were highlighted by Matt Greenfield from ReThink Education as a company that uses an impressive customer discovery process to identify important educational needs within a local context. Smith herself is what many investors would consider an *authentic* entrepreneur. She started her career as a teacher in sixth and eighth grade math, where she discovered the challenges of helping students who missed class. She also took coursework at Harvard that inspired her to use her classroom as a laboratory for conducting research on educational interventions.

AllHere used an exploratory and iterative customer discovery process to define its main goals and understand customer needs. This process revealed that the real bottleneck to solving chronic absenteeism was not lack of awareness about which students were at risk, but rather challenges in adherence to potential intervention models by school staff and administrators. AllHere’s discovery process entailed many open-ended conversations with potential users of the platform, such as school principals and administrators. Smith told us, the customer discovery “process is actually grounded in conversation . . . I had about 200 of those kinds of conversations with principals, teachers, and superintendents over the phone or over coffee.” She said, “listening and learning the language that your customer uses to talk about what their future state would look like and what their pain looks like is very important because that language is helpful in

terms of products and in terms of marketing.” These conversations helped her establish “a groundswell of very targeted people who could be customers and users” and involved two key components:

1. **Using publicly available data to identify a large sample of potential users:** AllHere used “smart lists” of schools with high rates of chronic absenteeism to draw a random sample and conduct cold outreach to schedule interviews. This allowed AllHere to build new connections, giving a representative picture of stakeholder perceptions about chronic absenteeism, and potentially viable solutions.
2. **Framing the conversation as “listening” with the intention to learn:** Smith focused these interviews on open-ended questions to understand the experience and perspective of her potential users, rather than trying to sell a product to them. This active listening process was helpful for two reasons: (1) it helped identify an important and overlooked bottleneck in solving chronic absenteeism, and (2) it established meaningful relationships with potential users early, which helped to build a potential customer base for whom the product is designed, and who are likely to support it through early stages and iterations.

Smith’s exploratory approach and systematic sampling strategies were key to the success of the AllHere platform.

## CASE STUDY 2: Nova Escola (Brazil)

### Nova Escola – Juliana Cavalcante, Product Manager

Nova Escola provides standards-aligned online content to teachers in Brazilian schools. Previously a printed magazine owned by a huge publisher that was acquired by Fundação Lemann in 2015, Nova Escola aims to be a portal of products and services to support change in education in Brazil. With 2 million monthly unique visitors to its website and 1.5 million followers in its social network, Nova Escola is a significant channel of education content.

**Legal status:** Nonprofit

**Who invests:** Foundations, Corporate Foundations

Nova Escola has achieved great scale within its own local context. Its open education platform provides the company with the ability to interact with teachers across Brazil; it has built a brand name as a product that teachers perceive as useful for their work. This positive teacher perception and brand recognition were very important for achieving scale.

Nova Escola successfully designed and improved its portal and the products it offers by building on previous research and using iterative feedback loops. For example, it developed 6,000 lesson plans aligned with local content, which it tested with teachers in six districts over the course of eight weeks. Juliana Cavalcante, a product manager at Nova Escola told us, “we tried to understand what were the pains of teachers,” because “teachers don’t have enough time to prepare a high-quality lesson, because they usually work in

more than one school, and more than 40 hours per week.” She said, “that’s when we started this process of prototyping and developing models and then testing those models with districts.” Nova Escola has multiple product feedback loops including online surveys, classroom observations and focus groups. Most importantly, they take what they learn to evolve and improve their platform.

Nova Escola also works closely with teachers to develop content. Recently, they selected 185 teachers who helped develop lesson plans in math.

Nova Escola’s brand recognition, use of its platform to systematically engage the end users in product evolution, and the ethos of collaborative development *WITH* rather than *FOR* the end users has been key in achieving scale and maintaining a successful user base.