2016 Massachusetts Edtech

WORKFORCE REPORT

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Executive Summary

The *2016 Massachusetts Edtech Workforce Report* is the result of the first Phase of an analysis of the impact of educational technology on the Massachusetts economy. The report provides new, preliminary, foundation data on the number of companies and employees working in the educational technology and publishing ("Edtech") sector in Massachusetts. The planned Phase 2 of the project is designed to increase the accuracy of this report, and to provide a depth of understanding of trends in the industry.

The report analyzes the Commonwealth's unique ecosystem for Edtech, and situates the findings within the broader landscape of the U.S. Edtech marketplace. This report lays the groundwork for accurately measuring and analyzing the size, strengths, and unique ecosystem of the Edtech workforce in Massachusetts on an ongoing basis.

The Edtech industry is a component of the total education industry. The education industry in Massachusetts consists of 200,000 employees directly or indirectly connected to the delivery of education services. This number does not include all of the employees involved in corporate training.

In Massachusetts, there are:

- 125,000 staff working in 1,854 public preK-12 schools, including 71,000 teachers serving 954,773 students (Digest 2016, table 213.20, 208.40, 216.70, p. 168 ff.);

- 20,000 staff working in 800 private preK-12 schools, including 14,060 teachers serving 130,940 students (Digest 2016, table 205.80, p. 129);

- 30,567 staff FTE's working in 125 degree granting higher education institutions, including 17,173 faculty FTE's serving 514,008 students

The Edtech industry can be thought of as the content and tools creation part of the education industry.

The Edtech industry is a product of the intersection of the educational publishing industry, the software and digital products industry, and the R&D backbone from the universities and research institutions.

The Edtech industry provides the tools and content that propels the move from print to digital. Product segments include:

1. Digital (or eLearning) educational curriculum and content;

2. Digital assessment and adaptive feedback components;

3. Enhanced methods of data collection;

4. Professional development, online courses and materials, and tutoring; and

5. The technology infrastructure to deliver these products.

The main findings of the report are:

- **There are over 430 Edtech companies in Massachusetts (see Appendix A).**

- **20,000 to 25,000 employees are working in Edtech in Massachusetts.**

Company size breaks down as follows:

Type	# of Companies
Pre-Revenue Start Up Company (<5 employees)	225
Mid Size Company (5 to 49 employees)	128
Established (>49 employees)	58
Unidentified (10% of Pre-Revenue Start Ups)	22
Total	**~430**

Executive Summary

We created a survey instrument and asked the identified companies to provide data via Survey Monkey. In addition, we conducted telephone interviews of human resource directors in the established companies. Of the directors that responded to the survey or phone interviews[1]:

- **61% reported an increase in the hiring of Edtech employees compared to three years ago.**

- **90% projected that they will need to increase their hiring of Edtech employees in the coming three years.**

Qualitative findings indicated a broad range of comments about opportunities and challenges in the state. Several common themes emerged related to the need for more capital and "more recognition in the community for the value of our work."

A number of executives commented on the excitement specific to Massachusetts: the large educated and skilled labor force and the exceptional number of possibilities for partnerships between industry, research institutions, and universities.

Being surrounded by companies with a common passion and mission for education is conducive to forming content partnerships.

–HR Executive

Great talent pool and great cost of living.

–HR Executive

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[1] The phone and online surveys received a response rate of 12%.

Executive Summary | Recommendations for Phase 2

The preliminary research constitutes Phase 1 of an ongoing project to document the Edtech contributions to the Massachusetts economy. The research gathered from Phase 1 provides an indication of a significant number of companies and employees actively involved in the Edtech sector in the state. There is a robust infrastructure provided by numerous institutes and research projects at major universities that support this dynamic sector. Phase 2 is designed to provide a deeper and more accurate understanding of the contributions of the Edtech industry to the Massachusetts economy.

Moving forward there is a need for a more precise and fine-tuned set of strategies, informed data gathering activities, and industry involvement to provide a solid basis for ongoing measurements and projections. Phase 1 provides the industry with rough estimates on the number of companies and employees working in the Edtech sector in the state, but it also uncovered some limitations and challenges that arose during these preliminary measurements.

It is clear that as we engage in next steps greater industry involvement is needed in gathering baseline data and more carefully defining the industry. This will result in a more complete and comprehensive picture of the Edtech world in Massachusetts and provide a structure for solid and reliable projections and planning activities as we move forward in supporting this vital industry.

We propose assembling an Advisory Board from within the industry to provide us with input about what categories within the industry they feel are important to measure, help us refine our definitions and tools, and assist in more representative participation from the industry. Direct input from the Advisory Board during the planning and implementation activities of Phase 2 will greatly improve the usefulness of our findings and provide strategies for an ongoing measurement and analysis of the industry in the years to come.

Phase 2 needs to address three fundamental issues uncovered during our initial work in order to provide an accurate picture of the Edtech sector.

1) Improve Accuracy by Expanding Participation

The preliminary numbers gathered in Phase 1 provide guidance, particularly with the triangulation from the LinkedIn database, but it is critical to expand direct participation in the survey as well as in the telephone interviews in order to further substantiate the number of companies and Edtech employees working in Massachusetts.

Structured interviews need to be conducted with a much larger number of human resource directors from the approximately 58 companies with 50 or more employees in order to tease out more carefully defined data on the number of people working directly and peripherally in the Edtech sector within the state. Bringing together executives from these larger companies into the process of participating in this important work will also increase their involvement in other support activities going forward. This research will benefit greatly from the embedded involvement of industry leaders via the Advisory Board and in other capacities.

2) Define Boundary Conditions with Insight from Industry Leaders

The initial work conveyed in this report used the definition of an Edtech employee as:

"…[A]nyone in a company or non-profit organization that has direct involvement in creating, developing, researching, or managing technological processes or resources that were connected to the improvement of formal or informal learning or educational activities."

But numerous challenges came up as we spoke with industry leaders about how to determine who is and is not an Edtech employee and what is considered an Edtech company.

- Are companies such as McAfee or Symantec, that may not be considered Edtech but have significant sales in the education market counted in the survey in some way?

- How should the strong university and research institution base be included in our count? These organizations provide a large source of personnel, idea generation, and foundation and venture support that has had a substantial impact on the sector for decades.

- How do we make distinctions between global companies such as Google or Microsoft that operate in Massachusetts and have a presence in the Edtech market, but whose presence is peripheral to their primary focus?

- And, how do we count the thousands of contract workers, consultants, students, and part-time employees who make up a significant and growing proportion of this industry?

3) Gather Information on Trends and Market Segmentation

Structured telephone interviews in the first report provided some sense of the dynamic growth expected in the industry, but more extensive interviews are required in order to establish firm projections and establish market tendencies.

- How has the workforce changed over the past three years, and what are the hiring projections for the next three years?

- What types of products are being produced?

- The education market is divided into K-12, higher education, and training. How are these markets addressed by the Massachusetts Edtech industry?

- Finally, what can be done to support the rich diversity of the Edtech industry? How can the environment support non-profits, early stage, VC-backed, growth, social enterprise, and strategics?

Massachusetts has been a leader in innovations in education for centuries from John Harvard to Horace Mann. Educational publishing in Massachusetts dates to the 19th Century with the establishment of Houghton Mifflin. In the 1970's and 1980's research in educational technologies in the Universities and Institutes in Massachusetts prepared the way for the print to digital transition that is fundamentally altering the educational landscape. This project documents the impact that the Edtech industry is having on the Commonwealth's economy.

1979

Fertile Ground:
Massachusetts R&D Ecosystem

At the end of the 1970's Massachusetts was in a perfect place to exploit the personal computer revolution:

1. Technology and project mgmt. expertise from the mini-computer industry;
2. A vibrant investment community freed from ERISA restrictions;
3. A rich publishing industry;
4. World-class universities;
5. Government-funded R&D companies that spawned the Internet.
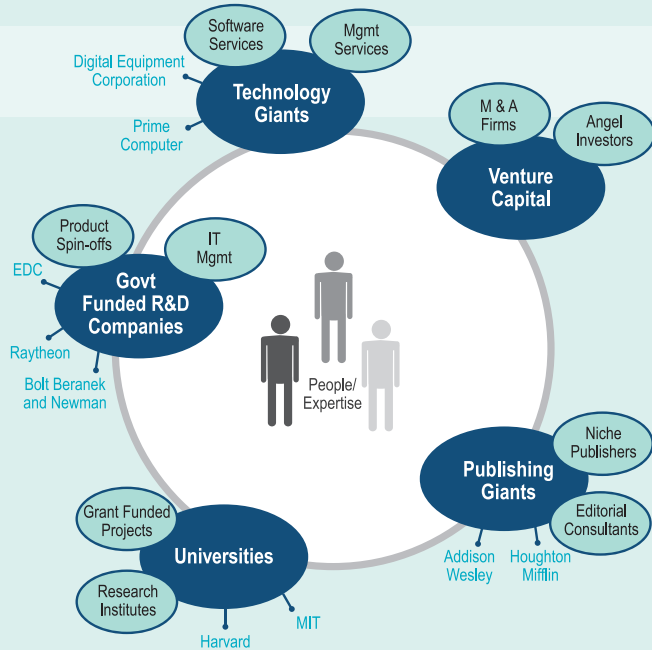
2015-2016

The Edtech Market Explosion

… by 2016, K-12, higher education, and training markets had grown substantially. The market itself becomes now a driver of an Edtech industry that is demonstrating accelerating growth and resilient development.
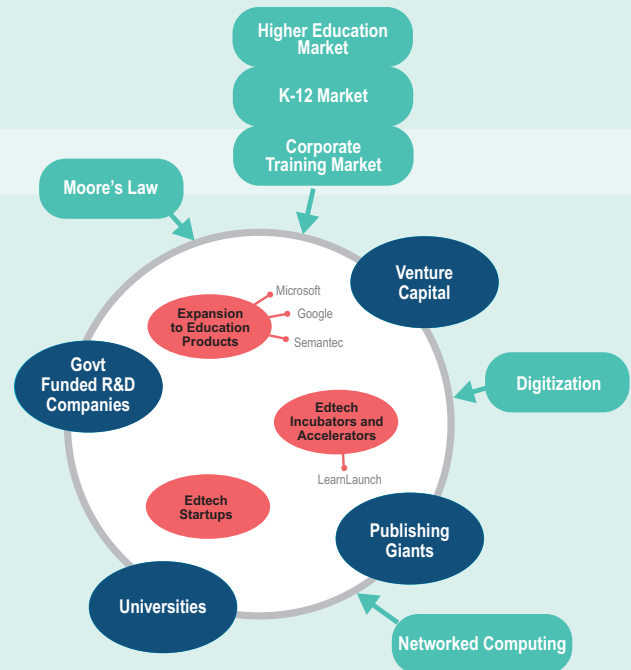
Introduction

Planning for the 2016 Massachusetts Edtech Workforce Report began in March of 2015 with initial meetings and the development of a survey instrument in the spring and early summer of that year. Data collection took place from July to October of 2015, and final results were tabulated at the end of October 2015. The findings from the survey provide baseline information for LearnLaunch and others in the industry to support the growth of this dynamic and vital sector of the Massachusetts economy.

Goals of Survey

The primary goal of the Massachusetts Edtech Survey is to determine the current size of the Edtech industry workforce in Massachusetts and analyze the industry's future potential. LearnLaunch is collecting baseline data on the existing landscape of the Edtech industry in Massachusetts. This provides the foundation for company and education leaders to develop a vision and create a plan for the support and growth of this dynamic and important sector of the Massachusetts economy.

In addition to collecting workforce data, a secondary goal of the survey includes analyzing the makeup of this sector to gain a better understanding of the size of the different categories of companies involved in Edtech, and the type of products they are producing. The Edtech industry has emerged within Massachusetts as a product of the rich publishing history in tandem with the embedded research community. We want to better understand the growth over the previous three years, as well as projections for growth in the coming three-year time frame. An additional goal is to gain an understanding of what these companies see as the strengths and weaknesses of the Edtech environment in the Commonwealth of Massachusetts.

Methodology

Carefully defining the sector was essential to our approach, and parsing out employees at companies that had larger missions beyond Edtech was important to ensure the accuracy of our data. For our purposes we defined an Edtech employee as anyone in a company or non-profit organization that has direct involvement in creating, developing, researching, or managing technological processes or resources that were connected to the improvement of formal or informal learning or educational activities.

CS4Ed worked in consultation with LearnLaunch to compile a list of current Edtech companies operating in Massachusetts. We developed a survey instrument to collect data from smaller companies and startups in the state. This was implemented in Survey Monkey. In addition, we conducted structured telephone interviews with human resource directors at large Massachusetts Edtech companies.

The survey was designed to capture the following:

- Number of companies in the Edtech industry

- Number of employees in the Edtech sector currently working in Massachusetts

- Number of employees in the Edtech sector three years ago in Massachusetts

- Projected number of employees in the Edtech sector in Massachusetts for 2018.

- Qualitative data on industry views about any weaknesses in the environment that could inhibit growth in the Edtech sector in Massachusetts.

In addition, qualitative data was collected about the history and mission of each company, the product price ranges, and the average salaries of Massachusetts employees working in Edtech.

Introduction

The LinkedIn database was used extensively to identify companies and human resource directors and gauge company size to triangulate our survey findings. Specifically, an advanced LinkedIn Boolean search was conducted that combined each company name and location with a search for the number of employees within a 100-mile radius of the company location. This provided us with rough ballpark data to then corroborate with our survey findings for those companies that completed the survey. After confirming that LinkedIn numbers could give us an approximation we were then able to extrapolate employee numbers for companies that did not answer the survey by using our LinkedIn numbers.

Moore's Law, networked computing infrastructure, and digitization have created an environment that has spawned growth in every aspect of the economy, and Edtech is no exception. Although the education market has lagged behind somewhat, the development and use of technology in other markets provides instructive models for the development and growth of Edtech.

1. The technology has to be truly ready for massive use - robust, habitable, connected and integrated;
2. The market has to be truly ready to adopt - have a clear, actionable need that the technology satisfies;
3. Success requires that that the Geoffrey Moore Gap has been crossed and that we are not only selling to early adopters;
4. Growth depends on value to both buyers and users - it will only save money or time if people will use it; and
5. Value depends on both payback and usability - productivity gains for buyers and users.

The substantial growth of the Edtech market across the U.S. in terms of increased spending and greater investor interest, seems to indicate that these barriers have been addressed. Educational technology is now widespread in K-12 and postsecondary institutions and has invaded all aspects of teaching and learning from BYOD (Bring Your Own Device) to personalized learning environments (PLE) and Learning Management Systems (LMS) and platforms. Companies that provide employee training and other learning programs for industry, as well as consumer-side learning technologies have also seen significant growth including frontrunner **Lynda.com**, an online learning platform that received an investment of 186MM this year and was later acquired by LinkedIn for 1.5B (Etherington 2015).

The U.S. pre-K-12 institutional market for education software and digital content and resources was estimated to be over $8B in 2013. This represents an increase of 5.1% from the previous year's estimate and
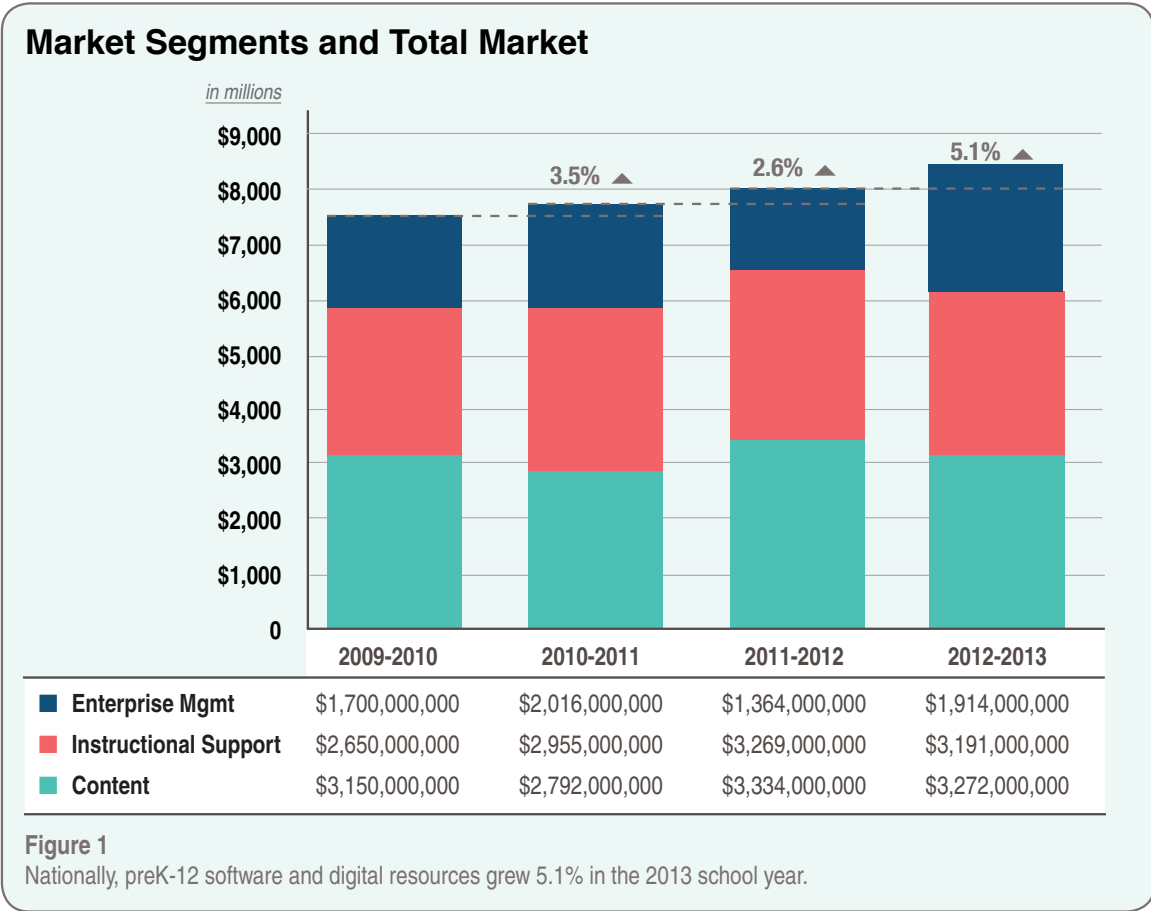
11.7% over the span of the last four years (see Figure 1, Richards & Stebbins 2014). In the higher education sector, spending on IT (hardware and software) is expected to reach $6.6B in 2015, and investor interest in educational technology companies is continuing to rise with $1.36B raised in 2014 (Winters & McNally 2014).

In the K-12 sector the implementation of the Common Core State Standards (CCSS) in math and English Language Arts has impacted the market for educational technology including content, assessment, professional development, and related platforms and instructional improvement data systems. Personalized learning, a focus on STEM Education, and implementation and assessment of the CCSS are all driving educator and policymaker interest in educational technology solutions. As digital technology demonstrates its value both in educational effectiveness and cost efficiencies the future appears promising, though support and the adoption of new products varies greatly by state.

A key driver for K-12 and higher education has been the rapid adoption of mobile devices such as smartphones, tablets, and to a lesser degree laptops and netbooks. Tablets are now in 85% of K-12 school districts, with 25% of districts reporting extensive implementation (Goldberg et al. 2013). As of 2012, more people in the United States access the Internet from a smartphone or tablet than from a desktop or laptop computer, and in 2015 64% of adults owned smartphones (Smith 2015). This increase in the availability of mobile devices is now having a ripple effect in the education technology marketplace, including increased use of digital content (open and for a fee), more data-driven adaptive personalized learning, and a significant movement toward the disruption of the print textbook market.

Open Educational Resources (OER) are catching on more rapidly in higher education than in the K-12 space, but within the next three years OER use in K-12 promises to climb in response to the use of

Background

Market Segments and Total Market

in millions

	2009-2010	2010-2011	2011-2012	2012-2013
■ **Enterprise Mgmt**	$1,700,000,000	$2,016,000,000	$1,364,000,000	$1,914,000,000
■ **Instructional Support**	$2,650,000,000	$2,955,000,000	$3,269,000,000	$3,191,000,000
■ **Content**	$3,150,000,000	$2,792,000,000	$3,334,000,000	$3,272,000,000

Figure 1
Nationally, preK-12 software and digital resources grew 5.1% in the 2013 school year.

common standards that make sharing resources between states easier. The Horizon Report for 2014 estimates that significant OER adoption is probably three years down the road for many schools (Johnson et al. 2014).

Personal Learning Environments (PLE) and the use of data analytics in schools are also accelerating. PLEs depend on enabling technologies, especially advanced data systems, content repositories, adaptive content, and Digital Teaching Platforms that make the learning environment portable, networked, and individualized. PLEs frequently are integrated into Learning Management Systems (LMS), which are themselves becoming widespread in educational institutions. In 2011, it was estimated that 75% of all districts had implemented some form of LMS, and projected sales for 2013 were $375 million (Simba 2013). Currently 99% of colleges and universities

have an LMS in place and one in five institutions are looking to replace their LMS with a next generation system in the coming three years (ECAR 2014).

Changing models of education including flipped, blended, and online learning as well as considerable government money focused on STEM (Science, Technology, Engineering and Math), 21st century skills, and Obama's push for $60B in funding for broader access to community colleges, all provide promising avenues for new educational technology solutions. Lastly, the growth and expansion more generally of cloud-based services, storage, resources, a flourishing ecosystem of third-party developers supplying applications for mobile platforms, and the more sophisticated use of Big Data and data analytics all provide support and ease the way for expanded adoption of many types of innovative educational technologies.
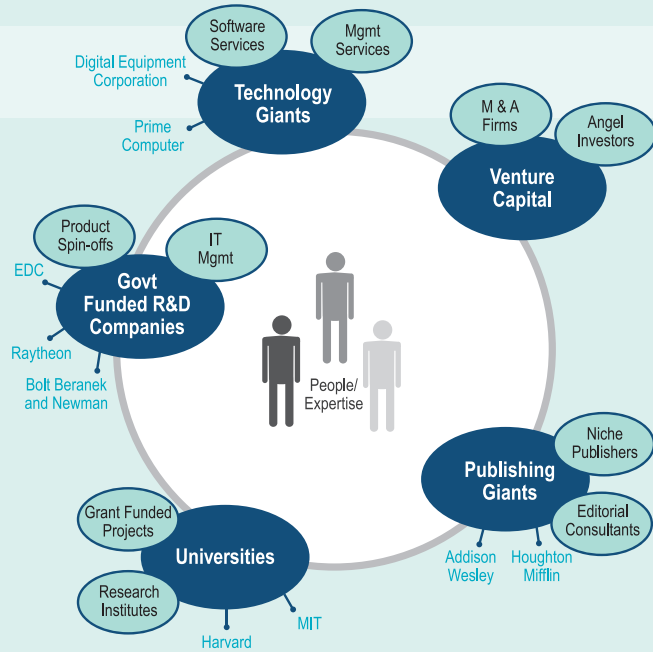
Background

In addition to K-12 and Higher Education, corporate training and consumer facing educational technologies are gaining momentum. Companies such as **Udacity** are partnering with corporations to provide competency based training programs. The Clay Christensen Institute as well as GSV advisors predict a steady uptick in competency based and certificate programs to help employees gain new skills in order to compete effectively in a global marketplace (GSV Advisors 2012; Christensen Institute 2015). What GSV calls the "Lifelong Learning" market was valued in 2012 at 75B and climbing, with direct learning expenditures per employee last year valued at $1,208 (Association for Talent Development (ATD) 2014). Gamification and a surge in the development of educational apps are also providing new pedagogies to bolster corporate training programs.

1979

Fertile Ground:
Massachusetts R&D Ecosystem

At the end of the 1970's Massachusetts was in a perfect place to exploit the personal computer revolution:

1. Technology and project mgmt. expertise from the mini-computer industry;

2. A vibrant investment community freed from ERISA restrictions;

3. A rich publishing industry;

4. World-class universities;

5. Government-funded R&D companies that spawned the Internet.

Software Services
Mgmt Services
Digital Equipment Corporation
Technology Giants
Prime Computer
M & A Firms
Angel Investors
Venture Capital
Product Spin-offs
IT Mgmt
EDC
Govt Funded R&D Companies
Raytheon
Bolt Beranek and Newman
People/ Expertise
Niche Publishers
Publishing Giants
Editorial Consultants
Grant Funded Projects
Universities
Addison Wesley
Houghton Mifflin
Research Institutes
Harvard
MIT

Massachusetts provides a solid base for Edtech innovation. It is the leader in R&D across multiple metrics, it has one of the most educated workforces per capita, and it is the top recipient of federal R&D funding.

Massachusetts is a leader in 8 of the 11 sectors used to define the innovation economy and has the highest overall concentration of innovation economy employees. … Massachusetts spent the second most among the Leading Technology States on R&D, and this has proved successful for the Commonwealth. Massachusetts ranks second behind California in start-ups initiated from universities, hospitals, research institutions, and technology investment firms.
(The Innovation Institute at the Massachusetts Technology Collaborative 2016).

The roots of education run deep in Massachusetts with the Boston area serving as home to America's oldest school and college: Boston Latin and Harvard University respectively. Today there are 53 institutions of higher education in the greater Boston area alone and 125 degree granting higher education institutions in the state, in addition to the University of Massachusetts system. Massachusetts ranks first in the country for the greatest concentration of top ranked private colleges including Harvard, MIT, Amherst, Wellesley, Tufts, Boston University, and Boston College.
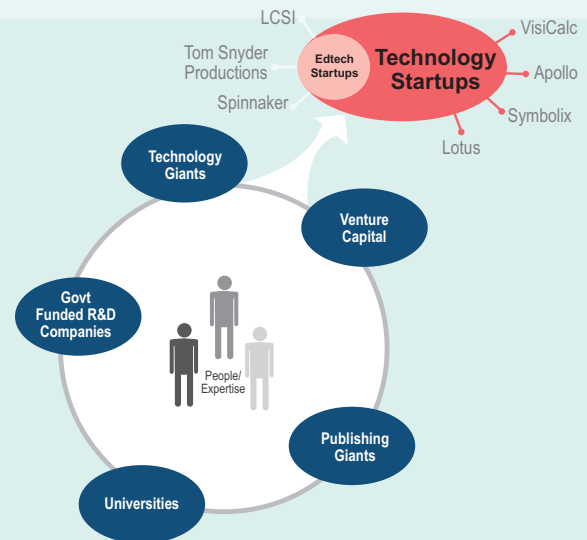
1980's & 1990's

Higher Education Market

K-12 Market

Corporate Training Market

The Birth of the Edtech Industry

The environment created by these five participants led to the birth of technology startups, including those in Edtech. But the market for products in education and training was small. There was a gap between the market and the potential that drove the startups.

LCSI

Tom Snyder Productions

Spinnaker

Edtech Startups

Technology Startups

VisiCalc

Apollo

Symbolix

Lotus

Technology Giants

Venture Capital

Govt Funded R&D Companies

People/ Expertise

Publishing Giants

Universities

In the K-12 sector, Massachusetts students have continually placed first or tied for first place nationwide in the National Assessment of Educational Progress (NAEP) known as the "Nation's Report Card," and in 2015 the state ranked first in overall school quality (NAEP 2015). The Harvard Innovation Lab; MIT Media Lab, Game Lab and Education Arcade; Massachusetts Digital Games Institute, and Harvard's Graduate School of Education Technology, Innovation, Education program partner with industry to support innovative developments in educational technology. The public schools in the state serve as ideal pilot sites due in part to their being ranked as one of only 14 states that have extensive and up-to-date state education technology plans (EdCentral. org 2014). A new report by the Massachusetts Technology Leadership Council counted more than 20 university incubators and accelerators in the state (MASSTLC 2015).

The roots of educational publishing also run deep. Historically, many of the largest publishing houses have used Massachusetts as their home base, and though this base was disrupted in the past few decades with some publishers temporarily shifting employees out of the area due to mergers and acquisitions, the major education publishers currently maintain a large and now once again growing presence in Boston, with the strong intellectual capital providing them with valued partnerships and opportunities.

- **Houghton Mifflin Harcourt (HMH)**, was built by two relatively recent mergers: Riverdeep acquired Houghton Mifflin in 2006 and also acquired the bulk of the education and trade business of Harcourt from Reed Elsevier in 2007. Their global headquarters are currently in Boston and their products are used by 50 million students in all 50 states and 150 countries. Revenue in 2013 for HMH totaled 1.38 billion with 38% market share

in the K-12 space. Recently HMH partnered with startup **Knewton** to further their digital footprint and has been active on the acquisition of new digital partners including Scholastic (HMH Media Kit 2013).

▪ **McGraw Hill**, also one of the largest educational publishers in the world opened its 100+ person R&D lab in Boston's Innovation District in 2013 where it is continuing to expand its push into educational software and digital publishing. McGraw Hill has now tapped Stephen Laster, the Harvard Business School's former CIO to lead the Boston office. Laster has indicated that he will be looking to work closely with the expanding Edtech startups in the Boston area.

▪ **Pearson**, is the largest educational publisher in the world with annual sales in 2015 of over £4.5B. Pearson maintains a significant presence in the Boston area. Like its counterparts, Pearson has

recently created an accelerator that is helping the company contract with start-ups to assist with and innovate their Edtech offerings.
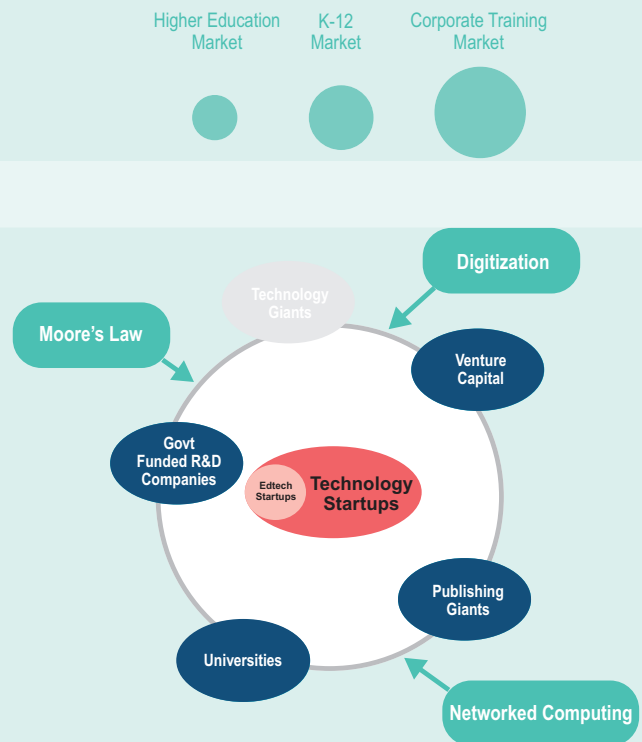
▪ **Cengage**, another global education company, recently moved its corporate headquarters from the New York City area to Boston's Innovation District as well. More than 500 positions are now permanently located in Boston while Cengage continues to run offices in 20 countries and many locations throughout the U.S. Cengage specifically chose the Boston area for its headquarters in order to take advantage of the strong startup culture and significant network of colleges and universities in the area (Cengage Learning, 2014).

Other large players with a significant Massachusetts presence are **Blackboard**, **EBSCO**, **Victory Productions**, and relative newcomers **Rosetta Stone/Lexia** and **Curriculum Associates**. In addition to the Innovation District in Boston, the

2000-2010

Higher Education Market | K-12 Market | Corporate Training Market

The Digital Transition

Digitization, Moore's Law, and Networked Computing swept across all industries between 2000 and 2010. This transformed the publishing industry, universities, government funded R&D companies, and the investment community. While the technology giants no longer operated out of Massachusetts, their legacy of people, expertise, and investment savvy continues to fuel startups. The education and training markets were maturing and …

Digitization

Technology Giants

Moore's Law

Venture Capital

Govt Funded R&D Companies

Edtech Startups | Technology Startups

Publishing Giants

Universities

Networked Computing

Kendall Square neighborhood that borders MIT is also home to technology giants focusing on the area of educational technology and related ventures including Google (800 employees), **Microsoft's NERD Center** (800 employees), and **Amazon** (>350 employees) including some from its acquisition of **TenMarks** (Woodward 2015).

Many of the larger more traditional companies are anxious to tap into the early stage startup culture in the Commonwealth and in Boston's Innovation District and the Cambridge Innovation Center in Kendall Square. Hundreds of small companies now make their home in the area. Established companies as well as smaller ones are also establishing strong partnerships with nearby colleges and universities such as **Panorama Education**, which recently launched an open-source survey tool in partnership with the Harvard Graduate School of Education. Other companies provide services such as **AllClasses**, a search engine for the more than 1,000 classes offered in Boston and the 30,000 classes offered online. Some startups emerge directly from institutions such as the Harvard Medical School where **QStream** is used to train sales forces on new products and **edX**, online courses from Harvard, MIT and other world-class institutions.
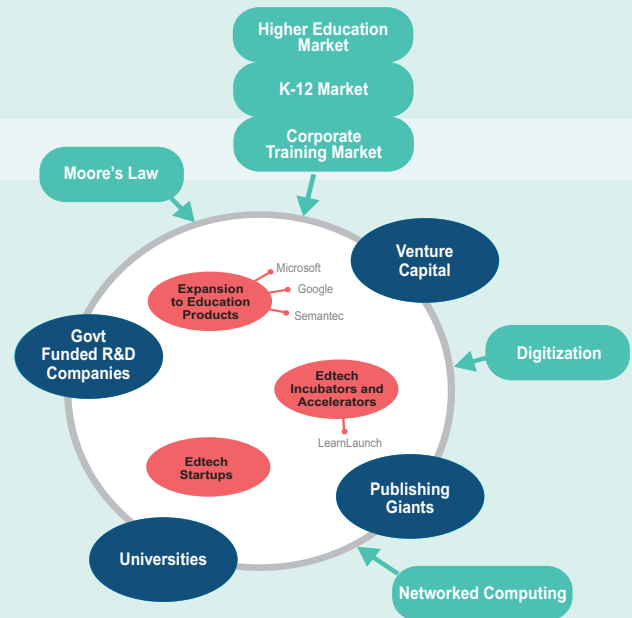
2015-2016

The Edtech Market Explosion

… by 2015, K-12, higher education, and training markets had grown substantially. The market itself becomes now a driver of an Edtech industry that is demonstrating accelerating growth and resilient development.

The following sections report on data from our research on known Massachusetts Edtech companies verified by the LinkedIn database as well as the results from our phone and online survey.

Total Edtech Companies and Employees

A list of extant EdTech companies was compiled from a variety of source including association and industry databases and supplemented with data from LinkedIn. Human resource directors from larger and mid-size companies were interviewed when possible and the remaining data was collected through the use of an online survey sent to all Massachusetts Edtech companies and by using LinkedIn.

The survey produced a response rate of 12%. Survey responses were then corroborated with LinkedIn data to confirm that LinkedIn was able to generate an approximate estimate of employee numbers. We then used LinkedIn to retrieve employee numbers for the remaining companies we had identified as having employees in Massachusetts.

The survey and secondary research captured the following:

- There are 411 Edtech companies in Massachusetts. This number is a conservative estimate based on available data. We assumed there was an undercount and added 10% of the pre-revenue startups, to arrive at an estimate of 430 Edtech companies in the state.

- These companies currently have between 20,000 and 25,000 employees working in Edtech positions.

The surveys, completed by 12% of Edtech company executives indicated that:

- 61% of companies reported an increase in the hiring of Edtech employees compared to three years ago.

- 90% of companies project that they will need to increase their hiring of Edtech employees in 2018.

Findings: The Edtech Workforce in Massachusetts

Types of Edtech Companies

Identified EdTech companies with employees in Massachusetts were grouped based on number of employees into three tiers:

Type	# of Companies
Pre-Revenue Start Up Company (<5 employees)	225
Mid Size Company (5 to 49 employees)	128
Established (>49 employees)	58
Unidentified (10% of Pre-Revenue Start Ups)	22
Total	**~430**

Qualitative Findings on the Edtech Work Environment in Massachusetts

In our phone and online surveys we asked company executives to tell us about the factors in the Edtech work environment that could positively or negatively influence their company's growth. On the positive side the ecosystem is providing abundant capital and a high-quality workforce. The K-12 and higher education markets are finally making the shift from print to digital and appear vibrant. Challenges remain, however, and the education market is strapped financially, and reluctant to accept change.

Below are some representative comments:

OPPORTUNITIES
Capital
- Access to capital/investment capital/federal monies/foundation support (variations on this were mentioned by almost a dozen respondents)
- Increased investment, particularly in companies that sell to universities.

Workforce Expertise
- Great talent pool (mentioned by 3)/great cost of living

- Being surrounded by companies with a common passion and mission for education is conducive to forming content partnerships.
- Building a company with a blend of business entrepreneurs and educators.

Expanding Market
- There is a positive number of teachers going into Edtech and looking for opportunities, which will ultimately benefit our company's growth and positive outcomes. (mentioned by 2)
- Customer awareness and bulk product purchases will grow.
- Greater visibility at schools for the purpose of distribution partners.

Massachusetts Environment
- Innovative programs like the MassTech Collaborative's reimbursement for interns.
- More recognition in the community of the value of our work

Technology
- Advances in technology, particularly machine learning, could have enormous impact.

CHALLENGES
Market Conditions
- Cost of content keeps going up, and the threat to security and privacy can be a factor for us.
- Schools are in different places with implementation and sophistication.
- Schools' unwillingness to pay for Edtech products and services.

Massachusetts Environment
- Higher taxes and the requirement to make my freelancers into part-time employees could influence us negatively.

Technology
- Technology is constantly changing. It is expensive to keep up with.
- I hire many contractors per year, just very few employees.

A Vision for the Future

The Commonwealth of Massachusetts is a leader in learning and technology. With its rich and unique ecosystem containing world famous research institutions, universities, educational publishers, and innovation districts in Boston and Cambridge the state is leading the way for innovative solutions to educational challenges in K-12, Higher Education, and corporate professional development and training.

Large educational publishing companies have already voted with their feet: Houghton Mifflin Harcourt, Pearson, and McGraw Hill all have large established bases in the Greater Boston Area. Google, Microsoft, and Amazon have also jumped on board in the Edtech sector in Boston and they are part of an ecosystem of roughly 400 other Edtech companies, many of them supported by or connected to the dozens of research institutes, colleges, universities, and associations that work in this sector.

Massachusetts excels in education, publishing, technology, and innovation: it has become a natural home for a thriving Edtech industry. The strengths unique to the state provide synergy for an innovation economy that is driving economic growth in jobs and providing more efficient and effective learner-centered solutions for schools and industry.

While this report provides an initial perspective on the education technology workforce in Massachusetts, it is critical to extend the analysis to further substantiate the number of companies working in Massachusetts, as well as direct reporting of the employee numbers. This involves increasing the participation in the online survey as well as extending the structured telephone interviews and creating an advisory board of industry executives to help in planning for a more precise measurement and definition of the industry.

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Appendix A: List of Companies with Employees in Massachusetts |

30 Hands Learning

360Kid

3Play Media

7 Generation Games

Aabius

ABOVE Solutions

Abroad101

Academic Room

AcademicMerit

Accelerated College Experiences

AcceptU

Acentech, Inc.

Acronis

Admitster

AidCalc

Aldebaran Robotics

Allclasses

Amazon

Amplify

Applyful

Arukay

Apprendis

Apps Kids Love, LLC

AspirEDU

ASSISTments

Astaro Internet Security

Atentiv

Aternity

Authess

Aveniros

Avenue100

AVG Technologies USA, Inc.

Avid Education

Axiom Learning

Axis Communications Inc.

Bab'l Books

Bald Wisdom

Balefire Labs

Bare Tree Media

Best Bilingual Solutions

BetterLesson

Blackboard

BLOXX Inc

Blue Socket

Bodimojo

BoomWriter

Boston Search Group

Boundless

Bradford Networks

Brightchinese.com

Brightloop

buddy sySTEM

Build-It-Yourself

buildPathways

Bus Radio

Cambium Learning Technologies

Cambridge Computer

Cammpus

Campuslively

CampusTap

Canson Inc.

Capital Network

Carbonite Inc.

CareAcademy

CareerDots

CareerVillage

Carney Sandoe & Associates

CAST

Cengage

Center for Education Leadership and

Technology

Center of Math

Certica Solutions

Chalk Talk International

Chalkup

Chapter

Circle Twelve Inc.

ClassHook

Classy

CloudLock

ClubGecko

Cognii

College Snaps

CollegeWeekLive

Columbia Mfg. Inc.

Concord Consortium

ConnectEdu

Constant Contact

Consulting Services for Education

Correct Class

CourseAdvisor

Cram Fighter

CRC Press

Cue Think

Curious Learning

Curriculum Associates

Davis Publications

Desire2Learn

DoInk

Double Masters

Dream Beamer

Dynamic Education Solutions

E Ink Corporation

EBSCO Publishing

Eckel Noise Control Technologies

EDC

EDCO (Instructional Tech)

EdFolio

EdTech Times

EdTechTeacher

edtrips

eduCanon

Education First

Education Modified

Educational Collaborators

Educational Rap

Educators For Social Responsibility

Edudemic

edumetrics

Eduporium

Edutainment

Eduventures

Edvisors

edX

Electrokite

Electronic Specialists, Inc.

Ellevation

Emperical

Empow Studios

Empowerment Through Education

Encyclopedia of Life

English Advantage

English Central

EnglishHelper

Enterasys

Epiguem

EPS Literacy & Intervention

esped.com, Inc.

Ethical Science Education Coalition

evertrue

Everyday Speech

EvoText

Exeter Group

Exinda

Experian QAS

Exploros

EzLOMS

FableVision

Facing History and Ourselves

FEV Tutor

Firecracker

First

First Advantage Educational Assessments

Flashnotes

Flink Learning

Fluidity Software

Focus EduVation, Inc

Fulbridge Education

FurtherLearning

Futures HealthCore, The

Games for Language

GatherEducation

GEN2 ROBOTICS, LLC

General Assembly

Genius.box

Giant Otter Technologies

Gibson Hasbrouck & Associates

Glogster EDU

Google

Gradeable

Green Door Labs

Greenlocke Technology

Hablando Con Julis

Hinds and Associates

History in Motion

Houghton Mifflin Harcourt

HourlyNerd

HP

Hstry

i4Class

Ingram

Integrated Technology Group (ITG)

Intellify Learning

InterLACE

Invite Education

Isabella Products

it's learning inc

iWorksheet

JamHub

Jenzabar

JogNog

JoVE

Jumpido

JumpOffCampus

K12 Interactive

Kaspersky Lab

Kaymbu

Keep Me Certified

KidSmart

Kinems

Knode

KnowAtom

Kronos Incorporated

LearnBolt

Learning Games Network

Learning Unlimited

LearningTouch

LearnObject

Lesley University

Appendix A: List of Companies with Employees in Massachusetts |

Lexia Learning

Lifeables

Lifeguard Games

Lista International Corp.

ListenCurrent

LitPick

Little Worlds Interactive

Looking Forward Lab

LTG Exam Prep

Luxanova

Macmillan

Maestro Learning or Flink Learning?

Marhaba Project

MassCUE

MatScience21

McGraw

Media Modifications Ltd.

Mediasite by Sonic Foundry

Medical Exchange

MentorLink

Metacog

MetaMoo

Microsoft

Mimio

MindEdge

MiniPCR

MIT Press Journals

MobileEd

Modit

ModuForm

Monkey in the Middle Apps

Museum of Science

Muzzy Lane, Inc.

MyEdGPS

National Evaluation Systems

NativeBrain

Nature Publishing Group - Scitable by Nature Education

Ness USA, Inc

Newbridge Educational Publishing

NI-O Toys

Ninebrain

Novell, Inc.

Novus Laurus

Nuance Communications

NuVu Studio

Nxtfour

Onboard Academics

One Hen Inc

Outlearn

Outside the Classroom

Owen Software Inc

Panorama

PaperBots, LLC

Parent Cortical Mass

Patheer

PB n' Games

PCG Education

Pearson

peerTransfer

PennFoster

Persistence Plus

Persuasive Games

Philips Health Care

PieceWise

Pinnacle Learning

PIP Learning Technologies

Playrific

Plaza Familia

Plexx

Pragya Systems

PrepForward

Prime Student Loan Corp

Private School Innovator

proctorcam

ProGo Learning, Inc

Project Lever

Propagate Vocabulary

purple suitcase

QStream

QuadWrangle

Quick Key

Quill (Empirical)

Real Asset Management

Recovend

Rediker Software, Inc.

REEL Entrepreneurs/ REEL College Ventures

Renaissance Network

Responsive Classroom

Ribas Associates and Publications

RM Education

Robotix

Rosetta Stone

RoundShip

Scholastic

School Fuel

School Twist

School Yourself

SchoolCnxt

ScreenRetriever

ScriptEd

Searchsoft

Secure-It Inc.

Sensational Student

Shorelight Education

SilverPlatter Information, Inc.

SimpleTuition

SimplexGrinnell

Simply Teach Tech

SingaLingo

Singing Torah

SitterCycle

Six Red Marbles

Skill Guru

SmartEDU, Inc.

smarterer

Social Context Model

Socrative

Software MacKiev

Software Secure

SolidWorks Corp

Solution Grove

Sophos

South End Technology Center @ Tent City

Speech4Good

Spire

SputnikBot

SRG Technology, LLC

Stages Publishing

Staples Advantage

StartUp Institute

STEM Beginnings

Story + Structure

Storyboard That

Streambino

Studyn.us

StudyPoint

SumEqual

Symantec Corporation

Symbolic Studio

Synaptic Global Learning LLC

Teachers Connect

TeachPoint

Technology for Autism Now

Teen Life Media

TeenFreeway

TenMarks Education

TERC

Terrapin Software

Testive

TestTubeGames

Texthelp Systems Inc.

The Achievement Network

The Answer Pad

The Dwelling

The Guru Circle

The Tap Lab

The Teaching Genome

The Time Tribe

The VHS Collaborative

The Virtual High School

Thermo Fisher Scientific

ThinK-12 Learning, LLC

TinkerStories

TNTP

Tott Labs

Tuatara

Tufts Center for Engineering Education Outreach

Twyxter

Typeracer

uConnect

uMinca

Union of Concerned Scientists

Unnivers

Upromise Schools

Upward Mobility

UTours

Vertical Learning Labs

Victory Productions

Virtual Classrooms

VitalSource

Vocab Network

Voiceit

Weiner Family Studios

WGBH

WIDE World

Willow Education

WizCom Technologies

WizIQ

WonderBuilders

X2 Development Corp.

Xlibrio

Xollage

Xtralis, Inc.

Yaya Play LLC

yearup

Yolink (TigerLogic Corporation)

You Can Do The Rubik's Cube!

Zeeen

ZNAKA.com

Zogics First Aid Kits, Gym Wipes & Hand Sanitizers

ZOLL Medical Corporation

LearnLaunch

Edtech Workforce Survey

LearnLaunch is working with Consulting Services for Education (CS4ED) to conduct a survey of the Edtech workforce in Massachusetts in order to evolve a vision for future growth and a strategy for promoting legislation to support the Edtech industry.

This survey will take 10 minutes and information provided will remain anonymous. We will include your company name as a participant in the study if you provide permission below.

LearnLaunch is a Boston-based organization dedicated to connecting, supporting, and growing greater Boston's Edtech ecosystem to drive innovation and transform learning. CS4Ed works with publishers, technology companies, educational non-profits and higher education institutions as they negotiate the rapidly changing education landscape.

For questions about this survey please contact the survey team at: employmentsurvey@learnlaunch.com.

* 1. Company Name & Main Location

Company Name

Location (City, State)

* 2. Who is completing this survey? (We will only use this information to contact you if we have a follow-up question.)

First Name

Last Name

Title / Role

Phone No.

Email

Appendix B: Survey Form

* 3. What market does your company serve?

☐ Early Learning

☐ K-12

☐ Higher Ed

☐ Continuing Education / Corporate Training

☐ Other

(for "Other" - please specify)

[ ]

* 4. What does your company do?

[ ]

* 5. When was your company established (month / year)?

[ ]

6. What category best describes your company?

○ Early Stage / Pre-Revenue Startup

○ Early Revenue Startup

○ High Growth Company

○ Established Company

○ Social Enterprise

○ Non-Profit

○ Other

(for "Other" - please specify)

[ ]

7. What is the range in price for your products or services? (Please make a best-guess estimate.)

[ ]

Appendix B: Survey Form

* 8. How many employees in total does your company have worldwide?

[   ]

* 9. How many locations does your company have in Massachusetts?

○ One location only

○ 2 to 4 locations

○ 5 to 9 locations

○ Other

(for "Other" - please specify)

[   ]

* 10. How many Edtech employees (including those who work on digital publishing) does your company have working in Massachusetts?

[   ]

* 11. Compared to three (3) years ago, does your company currently have more, less, or the same number of Edtech employees working in Massachusetts?

○ Less than the number three years ago

○ Same number as was three years ago

○ More than the number three years ago

* 12. How many Edtech job openings in Massachusetts do you have today? How many did you have three years ago? How many do you expect 2-3 years from now?

Number of job openings today?   [   ]

Number of job openings three years ago?   [   ]

Number of job openings expected 2-3 years from now?   [   ]

Appendix B: Survey Form

* 13. Estimate how many employees your company has in the following types of positions: (Please enter "none" or "0" for any category where there are no employees of that type)

Executive Management

Middle Management

Sales, Marketing, and Customer Service

Research and Product Development

Instructional Designer / Curriculum Developer

Instructor / Teacher / Trainer

Executive Assistant / Office Administrator / etc.

Financial Management / Controller / Bookkeeper

Other(s) - please specify title(s) and number of employees in each

14. What are the factors in the Edtech work environment that could positively or negatively influence your company's growth?

Appendix B: Survey Form

15. Please tell us anything else you would like us to know that might be relevant to our understanding your company and your employee workforce.

* 16. Do we have permission to include your company's name as a participant in this study?

◯ YES

◯ NO

Done

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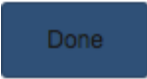
About the Authors

John Richards, Ph.D., is Founder and President of Consulting Services for Education, Inc. (CS4Ed), and Adjunct Faculty at the Harvard Graduate School of Education where he teaches Entrepreneurship in the Education Marketplace. John was President of the JASON Foundation, GM of Turner Learning, the educational arm of Turner Broadcasting, and GM of the Educational Technologies Division of Bolt Beranek and Newman that launched the award winning Co-NECT school design. John's projects have won him numerous awards including two Golden Lamps and several CODIEs, as well as several EMMY nominations. He is the author/editor of four books; over 90 articles, book chapters, and research reports; and has been responsible for the publication of over 1,000 educational products. With Chris Dede, he co-edited *Digital Teaching Platforms* for Teachers College Press.

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