

Creating Value in the Education Sector

Why should private capital invest in education when online free education could spell doom for the current high fees charging education institutes? We believe the education sector is going through a major disruption, and private capital has a huge role to play to help in its transformation – only if we take a long term and a broader view. Education Sector will attract private capital, and professional management talent at a much higher rate in the coming decade to bring change and innovation through creative use of technology. Government regulations and bueracracy could hold up the pace of change and choke the returns. International education play holds promise to bring scale and viability to many of the new ventures and overcome the challenges posed by the current market structures. However, the returns will be uncertain in the short term. It is a long play.

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"In the long run, the best way to reduce inequalities with respect to labor as well as to increase the average productivity of the labor force and the overall growth of the economy is surely to invest in education……Over the long run, education and technology are the decisive determinants of the wage levels." *This means investing in technology, education and professional training, and allowing a broader segment access will help improve wage levels.* Further, "The main purpose of the health sector is not to provide other sectors with workers in good health. By the same token, the main purpose of the educational sector is not to prepare students to take up an occupation in some other sector of the economy. In all human societies, health and education have an intrinsic value: the ability to enjoy years of good health, like the ability to acquire knowledge and culture, is one of the fundamental purposes of civilization. We are free to imagine an ideal society in which all other tasks are almost totally automated and each individual has as much freedom to pursue the goods of education, culture, and health for the benefit of herself and others. Everyone would be by turns teacher or student, writer or reader, actor or spectator, doctor or patient…..a characteristic feature of modern growth is the considerable share of both output and employment devoted to education, culture, and medicine."[1]. *Professor Thomas Piketty at the Paris School of Economics raises an interesting point in his 600+ pages bestseller – though many of us will not necessarily agree. My blog below is partially inspired by Professor Piketty's point of view, but goes further to open a debate and argue why education sector will attract capital despite many headwinds.*

A Quick View on Education Sector and its ability to attract Capital:

Education is on its way to becoming a universal right; it is expected to be available everywhere, to everyone without any barriers, or discrimination. Education is seen as one of the viable options to become upwardly mobile for those who aspire to rise socially and economically within our societies. Also the demand for continuing professional studies as well as learning for pleasure is growing given the dynamic forces of global economy and changing demographics. Technology has allowed many new ventures to enter the market with innovative learning and business models, and is causing major disruptions in the education sector.

However, whether the business will be able to capture value from these disruptions depends on how we resolve several anomalies in the education sector. On one end, we have seen the rise of MOOCs (and Khan Academy like) everywhere, offering free education and on the other hand, the school fees are experiencing a high inflation. Similarly, in Pre-K12 segment, regulations and unionization is hurting the innovation, thus limiting the capital and talent flows. Further, the sector is under pressure as it continuously demands an ever-increasing investment budgets, but is unable to show better learning outcomes and return on capital. Finally, there is a growing unrest amongst the students debating whether paying for higher cost of education is worth it at all because of the uncertainty of returns given the automation and the unemployment trends.

Technology is one of the biggest drivers and it has forced the agenda for change and innovation in the education sector, directly and indirectly. Technology is a double-edged sword – on one end it makes many trained skills irrelevant as automation and globalization disrupt traditional industries causing unemployment and huge income inequalities. On the other hand, Technology is making it easy, affordable to keep pace with new skills and help labor to adapt to new markets through continuous and customized learning. Technology is expanding the supply and the demand side of the equation in the education sector, and private capital with its fast pace and ability to invest in technology could help education sector transform itself despite the challenges that it faces due to regulations and bureaucracy.

Every school has a mission statement which reads something like this "Herricks[2] School District, a community of learners, through educational programs, promotes intellectual curiosity and creative expression, values diversity, and measures success by one's personal development and contribution to society". Much of what needs to be delivered from our education programs has been expressed already – our frustration is perhaps in our inability to measure the results. We are not suggesting that the mission should be changed given the new disruptive trends. Technology is a means to an end - so our focus is how can we use the new technology and new business models to deliver this mission. For societies at large and for private capital in particular, this is an opportunity and a challenge.

Education Sector - The Market:

The total market size can be derived form the report by GSV Advisors (2012) - USA spend on education is nearly USD 1.4 Tr and whereas the global spend is estimated to be around USD 5.5 Tr . It is estimated that this spend to grow by about 5% in USA and 7% globally in the next three years[3].

Average household spend on education has been steadily increasing over past few decades (average annual spend is $ 11000 per kid(2011), K-12, USA, this being one amongst the highest spend in the world[4]). Going to get education means not only paying fees to an institution, but also pay for room and boarding, commute / travel, childcare (if pre-k12), student activity fees and text books.

The market segments in the education sector are listed below, and it is interesting to note that over 70% of the total spend goes towards the K-12 and Postsecondary segments(these also happen to be most regulated by the government), followed by spend in the For-Profit K-12/Post-secondary, Pre-K and Childcare, Corporate Learning and Global Language Learning segments – all of these are considered to be high growth areas because of globalization.[5]

Education Market Segments
K-12
Post-secondary
For-Profit K-12
For-Profit Postsecondary
International Students
Executive MBA
Corporate & Govt. Learning
K-12 eLearning
Higher Ed eLearning
Corporate eLearning
SIS, Finance Administrative Postsecondary LMS
Social Learning/ Communities
Pre-K and Child Care
Edu Gaming
Global Language Learning
Test Prep / Tutoring / Counseling
Instructional Materials Market (K-12)
Higher Education Instruction Materials

Knowledge Troops - Learning by Numbers(GSV report 2012)
United States
▸ 77 million students are enrolled in school, which represents 27% of total population
▸ 20 million are enrolled in postsecondary education
▸ 49 million are enrolled in public PreK-12
▸ 6 million are enrolled in private PreK-12
▸ Over 2 million enrolled in charter schools
▸ 7.2 million total teachers, with about 1.7 million in postsecondary
▸ 98,817 public schools and 17,916 total school districts
▸ 33,366 private schools
▸ 5,600 charter schools and 180 virtual charter schools
▸ 6.1 million students took at least one online course
Around the World
▸ 655 million students in primary school
▸ 781 million students in secondary school
▸ 608 million students in higher education
▸ 78 million teachers in the world
▸ 26% of the world's population is under the age of 15
▸ Top 5 languages in the world, total speakers:
1. Mandarin Chinese: 1.3 billion
2. English: 1.0 billion
3. Spanish: 500 million
4. Hindi: 490 million
5. Arabic: 255 million

On the demand side, it is clear education is a growth business with opportunities in the core as well as

many ancillary businesses that make up the eco system. On the supply side, technology is making it easier to deliver content, and manage the education globally, which will help attract new ventures, with new business models, and capital should flow very easily in the coming decades.

The industry is redefining the standards against which both the process of education and the learning outcome is measured. This is fundamental to support the growth in the flow of capital to this sector.

Measuring the outcome - Learning versus Education:

It is encouraging to see cool innovation around new technology, delivery formats and related analytics, but how all this connects to our learning and impacts our earning capabilities, or our well being will be an interesting area to explore. The debate whether online learning (MOOCs, low cost, free) will replace the physical schools(with high fees, or ineffective and limited reach) is helpful, but not enough. It will help if we shift the focus to a measurable outcome and the relevance to the purpose of education.

"Learning" is an outcome of the "education process". Benchmarking the process of education to deliver consistent quality of education is only an assurance that education is delivered- here many of the new technology based learning systems provide analytics and deliver relevant insights. But the real measure is measuring the outcome- learning, and its impact.

Learning has to be measured by mapping to the purpose for which education is sought. Each stakeholder needs to be able to measure the outcome in a globally accepted and standard manner so as to believe in the value we get out of the education sector. Measuring learning to a globally accepted industry skill standard makes it easy to trade on the skills, helps workforce to become mobile, and convert education dollars into a return in real terms. It will be harder to measure the learning outcome where the purpose of education is to seek simple happiness, or cultural immersion – perhaps we could explore the idea of measuring on similar lines as proposed for measuring social progress[6] or happiness[7].

We will be able to measure and even unlock the value in many of the assets (companies) that are currently operating in the education sector provided we are able to measure the deliverables and the outcome's impact for the society(and all the stakeholders). The return on capital is linked to the value a business creates for all of its stakeholders, the more we can measure the value, the easier it is to estimate the returns.

Who are the Stakeholders in the education sector?

And what do they want? Some of the stakeholders in the education sector are listed below

> *Government and Societies* want an educated population to ensure that the economy has the skills it requires to complete in the global markets, and also ensure its people are able to self govern(democracy's foundation is education), and achieve happiness. Further, Regulatory / compliance requirements by the government is fueling training demand for the corporates.
>
> *Students and Parents* (all age groups) want equal access to education that gives them return(measureable learning outcome) on their investment of time, effort and money

Content Creators like Core and applied Research Scientist and Philosophers want to contribute, perpetuate the knowledge and further validate by seeking its content to become mainstream

Content Publishers, *Distributors and Medium Owners* (channels – libraries, online, podcast etc) want to create value by making content universally accessible while governing and managing the access and IP. We expect e-publishers to innovate beyond simple digitization of textbooks-, *interactive audio-video, gamnification, live streaming, chats, social features* – all at a low cost, zero time to market, allowing anyone globally to publish, and subsequently track the usage through analytics. List of some innovators enclosed[8].

Educators, teachers are the catalyst to deliver content and educate and train. A Popular teacher can serve a global student community with both live streaming and saved content simultaneously.

Educational Institutions provide physical or virtual platforms.

Capital Providers and *Private enterprise* (businesses within education sector) provide valuable core and ancillary services that compete and complement the other stakeholders and are focused on growth and returns– financing to all the above stakeholders.

Changing landscape in Education Sector and the Return on Capital:

Of the total 64704 venture capital transactions done in USA between 1995-2011, only 628 transactions were in the education sector(barely 1%). Total Education Sector market cap of companies listed is around $60 Bn as compared to overall 17.5 Tr of the total public market cap in USA(2011)[9]. These numbers establish that the private sector is extremely a small player in the education sector. But that is about to change.

Though education has the potential to make a huge impact on the overall GDP of an economy, the output share of Education Sector in the GDP is relatively small in most countries (In USA, the share of education sector is closer to 9% of the overall GDP[10]). Government (and the bureaucracy) currently plays a huge role in funding, administering, managing, and regulating the education sector. It is estimated that over 75% of spend in education is within the government and the bureaucracy[11]. Unfortunately, given its large role, it is often cited to be the choke point and holding back on the needed changes, and innovations. Also there is a negative view towards for-profit sector by government and policy makers. This may have caused less enthusiasm from private capital and philanthropic organizations to participate aggressively in this sector. The private sector companies often point to a slow start because of their inability to crack through the regulations and the bureaucracy. This has shifted the focus of many private ventures to a much smaller segment that is least regulated within the education sector - it may be the cause of sub optimal scale and hyper activity in a few segments, and hurt the overall returns.

The funding dynamics are changing with philanthropic, and private capital starting to contribute though at this stage their role is still very miniscule as compared to the role that the government plays in education sector. However, as the public funding becomes scarce and comes under pressure, we expect private capital to fill the gaps by brining in new technology, professional management, and new business models. Further, given the public outcry on poor outcomes, and the involvement of philanthropic organizations (like Gates and Melinda Foundations), we are expecting the governments to bring change

and innovations by opening up to the private sector.

In the last couple years, we have seen more than 100 companies funded privately to launch new innovative products and services in this sector in USA, and the capital flows have grown at an aggregate level (see partial list of companies at the end of this document). Recently we have seen a wider coverage of the education segment by analysts – this is helping us put together the performance matrix and build the comparisons for capital returns/performance for various sub segments within this sector[12]. Various investment bankers (and private capital managers) further support this momentum by dedicating teams with the idea of increasing the capital flows and professional management to bring innovations in the education sector. Industry conferences have attracted leaders from diverse fields to participate and support private – public collaborations and to bring in policy changes and welcome innovations to the industry[13]. Private sector in high growth countries like India and China have taken lead in launching new ventures far more aggressively, and is allowing us to test and give scale to new technology and business models[14]. It is also exciting to note the potential to launch new ventures by cross pollinating ideas that have been nurtured in low cost countries (like China and India) and can now be introduced into advanced countries like USA.

There are fundamental forces that will shape how we want education to be delivered (*supply side* - the mode, the content, the skill training), and more importantly, what we want from education (*the demand side*- the outcome, the learning). The next two sections highlight the nuances in supply and demand of this sector.

The Demand Side and its impact on opportunities in education sector:

The changing nature of demand in education sector will create business opportunities. Besides the growing worldwide population, and the acceptance by governments that education as a universal right(increasing the global demand), here are a few additional aspects of the changing nature of demand in education sector:

> *Motivation and Purpose* – As we see changes in demographics, the motivations for learning can now be mapped across a wider spectrum – each reflects a sub segment, thus willingness to pay (or not) for education: (A) Education to earn a living (basic needs, certifications) (B) Education to seek self-actualization and happiness, and peace with oneself and the world and further improve our civilization and culture. The takeaway here is the market size is exponentially growing – and there is hope much of this growth will not require regulatory oversight and thus, frictionless.
>
> *Widening market* - it is no more just the kids who have to go to school to get education but it is everyone – adults through their lifetime will seek education. A variety of segments to serve, better mix of revenue, and seasonal cycles for better use of infrastructure, and resources(like teachers).
>
> *Delivery modes* - the education can be sought in multiple delivery models because of technology – we will see an increase in demand, as education is made possible globally beyond physical campus. Mobile, and self-serve will become one of the most sought after delivery model.
>
> *Corporate demand* – Job specific training perhaps is becoming a significant segment (last mile, finishing school provided by corporates to the newly hired undergraduates and graduates).

Regulatory Demand - Training requirements due to regulatory compliance demands additional investments by the corporates. Demand for compliance training is real for every industry, though extremely visible in health care, and financial services

Automation - In the information and IoT(internet of things) world, the skills that we have will be obsolete every few years. In the future, industries will reinvent themselves, and so the labor force has to continually reinvent their skills, and adapt, so they will seek education on an ongoing basis to improve their ability to compete and earn a living.

Globalization – As all economic activities turn global, so also the workforce will need to become global – whether it is the certifications, or global languages or mobility to different locations. Global languages learning(especially English) is one of the most lucrative, and highest growth market.

From demand perspective, will we see a business model where people will pay for education only if the outcome (ie learning) is real? How will we measure the outcome if the mode in which education is delivered is changing?

The Supply Side and its impact on opportunities in education sector:

We can think of supply side of education - the source, the content, the format, and the medium is changing. Given that the technology will drive most of the learning to online(virtual) mode, we strongly believe that combining the physical campus experience with the virtual world will be the future model. Some aspects that will help create new business opportunities are highlighted:

Digitization, interactive audio-video, gamnification, live streaming – the level to which the knowledge, content, the experience, and the skills can be digitized and delivered, monetized.

Authenticity, credibility and experience of education – combining the strengths of physical campus and online(virtual) education, measuring the learning to a standard, making the process authentic, credible, and experience a real one will take a new way to organizing the education process and measuring the outcome. Can customized and interactive virtual education be provided without compromising on *privacy rights*?

Customization and multidisciplinary and multisource - Can the content be customized, and delivered to individuals in the mode and format that suits each person's time, style of learning, and pace and yet, certify and measure the learning? Can the student and pick choose courses, combine these into a stream, from multiple sources and achieve learning goals, and be measured to a common standard? Certifications, licenses, branding, recognition to a standard are some of the issues we need resolve. "Knowledge as a Currency" is a new concept worth thinking about[15].

Mobile – There are more mobile devices globally, and these are always accessible – it is a given that education can be delivered in mobile format but can we do this at a *low* bandwidth?

Socialization – Peer-to-peer education process is a very effective method to impart training and learning, how can we leverage technology to create a more effective social learning?

Self-serve - can education be delivered in a self-serve mode, and can be learnt without any help, and can the learning be measured, and benchmarked?

From a supply perspective, the single biggest problem in education sector is its slow pace of change given the bureaucracy and regulations. How will the eco system open up for new players to come in this sector and create value? Secondly, given the momentum towards making free online content, and lowering cost of content creation, and delivery across the globe, how does this impact the viability, and return on investments? Where is the money in education, when everything is likely to be free?

Conclusion

Education sector will attract private capital globally in the coming decades; however, the current market structure will create uncertainties in the short run.

Even with the constraints of working in a heavily regulated environment in the short term, the early entrants from private sector will get an opportunity to test their technology and business models. MOOCs that provide free education today will figure a revenue model once it establishes its platform and the brand. In our opinion, the model of the future will be combination of online(virtual) and physical education as a viable platform. The hope is to get huge returns as the network effects takes off in the education sector – this is partially dependent on regulations and bureaucracy opening up to innovations and changes. A long-term view will give our markets enough time to shape many of the forces on demand and supply side and help establish scale.

We are particularly excited with the trends in international education, where technology and business models can be tested out in a country that has lower risk, and lower entry cost, and after it is tested successfully, we bring it to a global release and scale up substantially. China and India hold some promise in this area. International education will also help in establishing global standards, and defining performance metrics. Measuring the outcomes delivered by this sector using globally accepted standards will further help unlock value of the asset.

We have an opportunity to give shape to those standards besides delivering learning through education and making this world a better place. Going back to Professor Thomas Piketty, we hope to help in preparing us to live in an ideal society.

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About the Author:



Acky Kamdar is a General Partner at Solmark, a firm that focuses on partnering with entrepreneurs to build companies that can succeed globally, and achieve a differentiated leadership position. Solmark has launched its first Entrepreneurs Equity Fund (EEF), which is funded fully by the founding team. Solmark is considering investing into education sector. Acky is been in the technology business since 1985, and has helped build global businesses ground up. Most recently, Acky was at Headstrong(1999-2014), which is now Genpact's Capital Market practice. Acky was instrumental in launching and building Headstrong's capital market practice, and managed engagements with global clients in USA, Europe and Asia. Acky is based in New York City. Acky can be contacted at acky.kamdar@solmark.com, twitter @ackykamdar , personal blog at www.ackykamdar.com and linked-in at www.linkedin.com/pub/acky-kamdar/1/1ab/1aa/

Education Sector - List of Companies, Associations:

2tor
2U (TWOU)
Academia.edu

Achieve3000
AfterCollege
Agilix
Airy Labs
Alltuition / EduLender
American Public Education (APEI)
Apangea
Apex Learning
Apollo Education Group (APOL)
Aristotle Circle
Avenues World Holdings

Avenues: The World School
Baltimore County Public Schools
BetterLesson
Blackboard (Private)
BookRenter
Boundless Learning Inc.
Bridgepoint Education (BPI)
Bright Horizons Family Solutions (BFAM)
BrightPath (BPE-TSX)
Busuu
C2 Education
Calvert Education Services
Camelot Education
Campus Explorer

CampusBookRentals.com
CampusLive
Capella Education (CPLA)
Capital Schools
Career Education (CECO)
Catapult Learning
Chegg
China Distance Education Holdings (DL)
ClassConnect
ClassDojo
Codecademy
Cognotion

CollegeDegrees.com, LLC

CompassLearning

ConnectEdu
Copia
Copley Retention Systems
CorpU
Crisis Prevention Institute
Curriculum Associates
Desire2Learn
Desmos
DeVry Education Group (DV)

DimensionU
Docufide (Parchment)
DreamBox Learning
Dulwich International College Group
Echo360
EDEX
Edmentum
Edmodo
Educate Online
Education Elements
Education Industry Association
Educational Services of America
EduCo International Group
Educreations

Eduvant
Eduventures
Eleven Learning
Ellucian (Private)
Encore Career Institute
ePals
Everspring

EverTrue
ExecOnline
Fidelis College
Fidelis Education
Fingerprint Digital, Inc.
Flat World Knowledge
Formative Learning

Fullbridge
Fusion Academy
Galvanize
General Assembly
Global Schools Foundation
Goalbook
GoingOn

GP Strategies (GPX)
Grand Canyon Education (LOPE)
Grockit
Heather Podesta + Partners
HotChalk
Houghton Mifflin Harcourt (HMHC)

Inigral

Inkling
Instructure
InternMatch
iProf
iStoryTime
Iversity
K12
Kaltura
KidZui

Kiwi Crate
Knewton
Kno

Knowledge Delivery Systems
Kohlberg Kravis Roberts & Co.
Late Night Labs
Learning Care Group
LearnVest
LIbreDigital
Lincoln Educational Services (LINC)
LiveMocha
Lore / Coursekit
LoudCloud Systems
Lumos Labs (Luminosity)
Magic Sofwtare MagicBox Education Technology
MasteryConnect
McGraw-Hill Education (Private)
Memrise
Meritas
Middletown City Public Schools
Mindshapes

MindSnacks
Modo Labs
Moodlerooms
Motion Math
MyEdu
Naiku
National Alliance for Public Charter Schools
National American University Holdings (NAUH)
Nobel Learning Communities
Noodle Education
Nord Anglia Education (NORD)
Northcentral University
Nunook Interactive
Omnicademy, LLC

Open English
Open English (FoxyP2)
OpenStudy
Orbis Education
Pansophic Learning

Parchment
Partnership of Readiness for College & Careers

Pearson (PSON-LSE)
peerTransfer Education Corp.
Phoenix Children's Academy
Piazza
PlattForm
PlaySay, Inc.
Pluralsight
Pluto Games
Providence Equity

Proximity Learning
Quad Learning
Quipper

R3 Education
Relias Learning
Remind101
Rethink Books
Rosetta Stone (RST)
RRKidz, Inc.
rSmart
Salmon River Capital
School Improvement Network
School of One
School of Rock

School Specialty (SCOO)
ShowMe
Sightlines
Skillshare
Smarterer
Smartling
SmarTots

Sophia Learning
Specialized Education Services
Stickery
StraighterLine
Stratford School
Strayer Education (STRA)
Synergis Education

Tarena International (TEDU)
TeacherMatch
Teachscape
TenMarks Education
TES Global
The Infilaw System
The Parthenon Group

Think Through Math
Treehouse
TripLingo
Tutorcloud
Tutorspree

Udemy

Unigo
Universal Technical Institute (UTI)
University Ventures
Vector Learning
Verbling
Vocado
Voxy
Weld North (Private)
Whiteboard Advisors
YourNextLeap.com

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