



cutting through complexity




Indian higher education

Shifting the paradigm

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Introduction

An aspect of the Indian education system that is causing a huge concern, is its inability to keep up with modern times and prepare youngsters for future requirements. Our educational institutions hardly seem to reflect and leverage on what is happening at peer institutions, leave alone the larger society. Over a period of time, this phenomenon (of not having an outside-in view) seems to have become acceptable in the Indian education system. Many of our leading institutions are at best islands of excellence. In effect, one of the largest education sector in the world, seems to be time warped in its format and content.

On the other hand, if you look at changes that have happened in modern India, and for that matter in many parts of the world, it is nothing short of spectacular. Especially the past few decades have seen a dramatic change in most aspects of society. Education, which should be

driving these changes, is not even recognising them. Many a times, when you are in a catch up mode, you can hardly deliver anything that can be original and path breaking. Therefore, for the larger prospect of India emerging as a giant economy and a modern plural state, education likely holds the key. It is in this dimension of education driving the change, not out of any comparative evaluation, that Indian education sector should be concerning itself with. Let us not forget that by 2030, a third of world's working-age population (aged between 15 and 59) is going to be from India.¹

What are some of the factors that can help address this important challenge? We looked at two factors; the role of technology and matching global standards. Both these need to be embraced keeping in mind the Indian requirements and challenges.

¹ Crisil Report: Skilling India – The billion people challenge, January 2010

Technology

Technology has been a game changer for the education sector. The university format of today has survived for over ten centuries, with hundreds of them still operational. (University of Oxford, perhaps the oldest in English speaking world, existed as early as 1096 and granted charter in 1248, functions uninterrupted)². Never have they possibly faced a threat like what the modern technology posed for them. Take for instance, the massive open online courses (MOOCs) that are redefining higher education globally, challenging the traditional model.

India should seize this opportunity to ride the technology wave since it offers many distinct advantages. Key amongst them are the need for reaching out to millions who are spread out across inaccessible rural hinterland, given the fact that the country has over 13 major native languages among 700 million learning age population (aged between 5 and 44) and speed at which this needs to be done (given the shift in age demographics).³

Reach, scale and speed

Technology has multiple points where it can impact and change the face of Indian education. The first among them is reach. 70 per cent of India is categorised as rural - primarily due to infrastructure.⁴ Digital infrastructure that works differently can be effectively deployed. This can be seen by the unprecedented penetration of mobile telephones. The physical requirements can be limited and can be non-linear in its capability to expand. If our education system transforms itself to be available in digital formats, and thereby lends itself to grow with digital infrastructure, reach may not be as insurmountable. Technology can be effective in addressing the large scale that is required for the Indian education sector. Be it the simultaneous access to millions of students or continuity in terms of engagement across formats, technology can be a big enabler for students.

It can also create 'super faculty' where a good teacher can reach out to thousands of students as against few tens in the traditional format. Also, as proved in the 'Tutor Vista' model, many teachers can work effectively in addressing the needs of the student community. Similarly, the scale for customised assessment of millions of students, maintaining student records, etc. can be possible with technology. Also, the speed at which these need to be executed is almost impossible

without technology. Today, from a central unit, it is possible to reach thousands of destinations across India (which otherwise would have taken months) through satellite-based classrooms. Another fundamental change has been the disintermediation of the value chain in education which is possible through technology. This disintermediation has helped a host of service providers to play an active role in education.

Faculty, curriculum, assessment and certification are some of the key elements technology could help address effectively:

Faculty

The issue of quantity and quality of faculty need to be addressed with immediacy. The commitment to the teaching profession seems to be waning as quality talent is usually attracted to corporate jobs which typically are better paymasters. For example, India's premier engineering institutes, IITs, suffer from around 41 per cent shortage in faculty. According to norms set by the Human Resource Development Ministry, IITs should ideally have a teacher-student ratio of 1:10, but they are struggling with a 1:17 ratio.⁵ Incentives such as better pay, research opportunities and technology-enabled infrastructure could turn the tide.

Curriculum, content and pedagogy

While content is often talked about, it should be looked at as a part of curriculum and not in isolation. Conversion of content, primarily into books, research articles and even classroom sessions have been mostly successful, and they have been done keeping in mind the fundamental shift required in this new format of learning. We need digital curriculum and not just digital content. Given India's size and diversity in terms of geography, culture and language, the issue of access could be addressed with digitisation. For example, adoption of flipped classroom concepts could revolutionise the way learning happens in the classrooms with flip teaching, the students study themselves initially, either using video lessons prepared by the teacher or third parties. Students collaborate on-line and apply the knowledge by solving problems and doing practical work in the classrooms. Teachers act as guides rather than someone who gives 'lectures' - that students receive passively.

² www.ox.ac.uk/about/organisation/

³ David Lam, University of Michigan (May 2013) 'Global demographic trends and their implications on employment', KPMG in India analysis 2014

⁴ Census 2011 population estimates of India

⁵ Premier tech institutes short of teaching staff: Mail Today, 25 July 2014

Assessment and certification

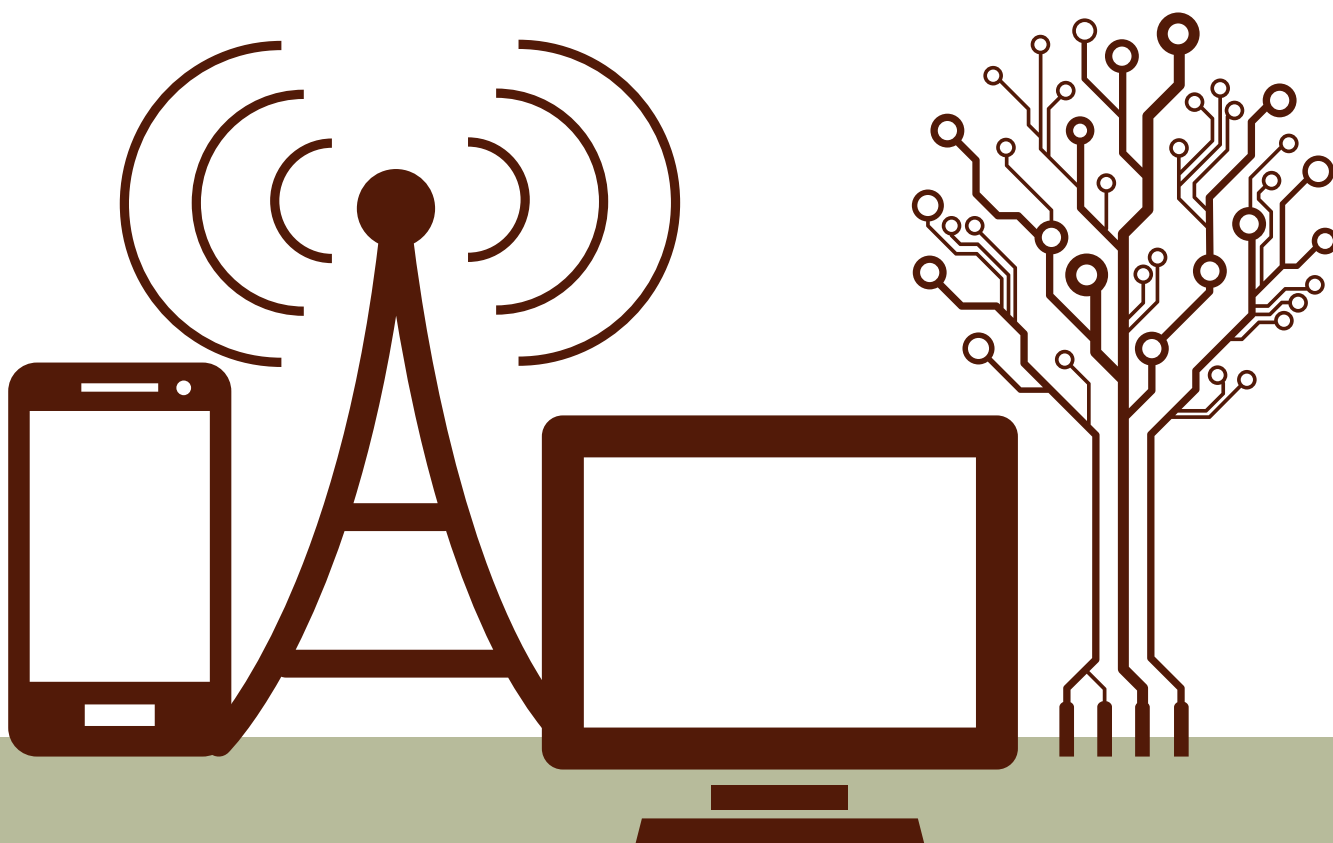
An integral part of education is the need for assessing learning outcomes which help determine the quality of education, and many a times this can be also a critical input to the next stage. It is a key part of any education system and often is seen as the fruit of all labour. There could be a significant change in this process due to the disintermediation. Technology can make it possible to have teachers and assessors as distinct entities, enabling them to scale up in what they are doing.

Today, in India, around 14 million students in higher education appear for approximately 200 million examinations at various levels, each year.⁶ With increase in the number of students pursuing higher education, enrolments are expected to grow at a CAGR of 8.5 per cent, according to the National Institute of Science Communication and Information Resources. As the number of students taking entrance examinations is growing substantially each year, conducting them at such a large scale is proving to be a challenge for the authorities. Hence, increasingly over the last few years, one has seen

the growing presence of test assessment companies in the education space who help conduct and manage the entrance examinations.

Here, technology plays a critical role as online assessment helps simplify the lengthy examination process and can be faster, more efficient, accurate and fair. Using technology to conduct examination also helps authorities to curb cheating and any sort of other malpractices. Automating the examination process can also result in reducing dependency on the university administration and staff which not only helps them cut costs but also lower manpower requirements. Online assessments can act as a boon for students who wish to appear for multiple entrance exams within a similar time period as it saves them the trouble of waiting or travelling to multiple locations. Increasingly the industry seems to be realising the dividends that continuous professional education can pay, thus not only creating but also expanding the market for life-long learning in India.

⁶ An Edge-ValueNotes Report on: Examinations and the Role of Technology- Emerging Directions, March 2010



Globalisation

The other big game changer would be globalisation and a global outlook to Indian education. This is a game changer because it is expected to improve the value of Indian education in the global arena.

Globalisation should not be about imposing irrational global standards on the home grown Indian education sector. It should look at adopting some of the globally leading practices and aligning to acceptable standards. This can help enhance the acceptability of the average Indian student from an average Indian university. This would mean, like in the case of technology, a smart way of looking at the global standards and applying it after suitable customisation without compromising on quality and acceptability.

In a demanding global environment where technology is blurring the lines between countries and cultures, globalisation in education can shape the future. Nations can no longer educate and skill its citizens for themselves; instead there is a need to create workforce which have global standards and can perform at global levels. India with a demographic peak has the manpower to cater to not only India but global needs as well but the lack of relevant skill sets and productivity has been resulted in the non-acceptability of migrating Indian population.

While some quality institutions have been set-up in the past decade, their number remains largely insufficient to cater to the rising number of students aspiring for quality education. It is here that collaboration between the Indian and British governments, and U.K.-based universities and institutions of higher learning can play a pivotal role in creating workforce that sets and follows global standards.

Why and how India and U.K. should partner

Creating research and innovation that meets global standards and can cater to globally shifting centers of demand is both challenging and exciting, and India and U.K. could collaborate to train this globally competitive workforce that could be much-sought after. The U.K.-India Education and Research Initiative (UKIERI) and the remarkable growth of joint research funding with the Indian government funding bodies and the U.K. Research Councils is a testimony to the growing partnership between the two nations.⁷

India's demographic advantage

India is expected to have the largest number of students enrolled in the higher education sector, in the world, and hence can be the source of intellectual wealth. U.K. universities can capitalise on the void in quality of higher education in India, thus providing it with an opportunity to market its education services and products in a nation which would have the maximum number of students enrolled in the tertiary education space. With the steady drop in number of students going to U.K. from India to study (the U.K. has seen a sharp drop of 25 per cent in the number of Indian students coming to study in its universities. Latest migration figures state that the number of Indian students dropped from 17,271 to 13,608 in one year at the end of December 2013)⁸ the U.K. will likely need to establish long-term relationships by engaging with India, in India.⁹

Collaborations between India and U.K. in higher education could impact the employment prospects of the workforce in the U.K. greatly as it could trained them in global standards and enable them to adapt in a global environment with shifting centers of demand for workforce towards the East, particularly India and China.

⁷ Understanding India: The future of higher education and opportunities for international cooperation; www.britishcouncil.org, 23 August 2014

⁸ The Office of National Statistics (ONS) 2014

⁹ Britain may review its visa policy affecting Indian students, deputy Prime Minister Nick Clegg says; The Times of India, 6 August, 2014

Gross Enrollment Ratio (GER) targets

Education, especially higher education is increasingly seen as the ladder to rise up the social order by the masses. This corresponds with the rise of the middle class and their increasing propensity to spend (India's economy grew robustly with an average GDP growth rate of 8 per cent)⁷ on quality education. The standard of education in India is far from satisfactory especially with the lack of schools, colleges and universities to address the growing demand. By 2020, India expects to have 40 to 45 million college-ready students. The country has also set an ambitious GER target of 30 per cent (presently it is at 19 per cent).¹⁰ However, the number of existing higher education institutions is likely inadequate to achieve this target. The presence of premier British institutions through collaborations with existing Indian

institutions/other Indian partners is expected to improve the student profile. U.K., with its rich resources and pedigree, can help India establish institutions of the same quality standards as their British counterparts.

Traditional ways to meet this demand may not be sufficient in the given time frame and goals the government has set itself. Hence, innovation will be important in understanding and addressing the huge demand for higher education.

When one talks of collaboration, there is a need to step beyond the obvious like number of students travelling from India to U.K. or U.K. to India, faculty exchange programmes or setting up branch campuses.

¹⁰ <http://www.tradingeconomics.com/india/gdp-growth-annual>

¹¹ The curriculum for young India; Hindustan Times, 2 December, 2013

Online varsities - an illustration of Indo-U.K. collaboration using technology

A possibility of leveraging technology in the higher education space between India and U.K. could be via an online varsity. Overcoming geographical diversity and the necessity for brick and mortar, access to world class curriculum, and maximum reach could be addressed in this manner.

While a lot of online courses from reputed British universities are available many of them do not offer degrees or credit. An online varsity with British curriculum and degree could help Indian students' access content that is at par globally; also, there is the flexibility of staying in India without having to spend on staying in U.K..

The Indian government and industry in turn could give recognition to the degrees provided by these online varsities, and also minimise regulations for their entry into India. Unfortunately, there is no recognition for this category of universities in India. In a short duration, with minimal infrastructure (typically for the last mile requirement), with an accepted curriculum and experienced faculty few million students could have institutions of higher learning accessible to them. The cost of operating this could be a fraction of building new universities in India. Also, the continuing education space, which is almost nonexistent in India, can be looked at as a big prospect.

Increasing connectivity

In the higher education space, while keeping in mind the aim to reach, scale and speed, use of technology could prove to be a game changer in the increasingly globalised environment. Digital learning technologies can become extremely important as blended learning is gaining popularity along with distance learning which is also growing at a robust speed.

The current digital curriculum in India are substandard and little effort or notice is being paid in developing in e-learning material. International collaboration which can highlight and combine leading practices is essential to raise the existing quality.

Internet connectivity and accessibility too is improving rapidly. Latest figures reveal India ranks third behind China and U.S. in terms of the number of people using internet, with over 200 million people having access to internet and it is expected to reach 500 million by 2018 which is a mere 17 per cent of the total population. This is much lower than China which has around 45 per cent and the U.S. which has around 81 per cent of the population using internet hence there is immense scope and market for growth.¹²

Faculty

Student enrolment in higher education courses has seen an 11 per cent increase, and the number of institutions has grown nine per cent in the past decade. Yet, the quality of these institutions has not improved at the same pace. This is due to lack of quality faculty. There is an acute shortage of faculty in central universities (40 per cent) as well as state universities (35 per cent). Faculty exchange and training programs with the U.K. could help Indian teachers gain insights into different teaching methods. Also, teachers are either untrained or scarcely trained in using technology generally and specifically to impart lessons.¹³

Accreditations

While various bodies — such as NAAC, AICTE and MCI in practice — maintain standards of higher education in India, a lot is left to be desired in the implementation of the accreditation process. In 2010, about 62 per cent of universities and 90 per cent of colleges in the country were rated average or below average (NAAC accreditation). India should encourage private institutions to collaborate with British accreditation bodies and empanel them to accredit Indian universities and colleges.¹⁴

Conclusion

There is a big need for investments for millions of students in India. Given the role of technology and the increasing internationalisation of higher education, the time is opportune for both India and the U.K. to complement each other; one with the kind of resources it has and the other with the young population that needs to be educated. U.K. is an important

Research and multi-disciplinary curriculum

Collaborations in field of research are an absolute necessity. The dismal number and quality of doctorate students India¹⁵ produces calls for a relook into the way research has been taken up in India. On the one hand while the centrally-funded universities have funds allocated for research, they are not optimally spent due to lack of quality proposals while state universities suffer from lack of funds. Collaboration with varsities in U.K. could help improve the quality of research done in the country.

Another possible area of collaboration of exchange where India can learn from U.K. varsities is its stress on multidisciplinary curriculum. While India lays excessive emphasis on engineering and management courses, the arts and social sciences are getting overlooked.

Vocational education and training

Only two per cent of India's total workforce has received some form of formal vocational education, and India aims to skill 500 million people by 2022. The U.K., with its successful vocational education and training system, could show India the way forward in this regard.¹⁶

The U.K. can help India on two fronts. Government-level collaboration on policies and regulations that govern or oversee skill development institutions and industry interactions could add credibility to the rising skill development sector in India. Increased focus through bodies such as the UKREI and UKCES (U.K. Commission for Employment and Skills) in the fields of accreditation, certification, training the trainers and content creation. At a different level, the Indian Government should facilitate Further Education (FE) colleges by providing easy access and permission (in terms of investment in India, faculty remuneration and tax procedure).

There is little wherewithal at present in Indian universities to teach either skills for employability or entrepreneurship. Increasing demand for courses from professionals and students to improve their skills sets, and thus diversify their prospects for employment and entrepreneurship has led to new markets in tertiary education and there also seems to be a push for a national skills qualification framework in India.

¹² <http://www.internetlivestats.com/internet-users/>

¹³ India lags in higher education enrollment, says report: Business Standard, 5 November 2012

¹⁴ Will Increased Spending Improve India's Higher Education Sector? Asian Scientist; 13 March, 2013

¹⁵ Engineering Education in IIT - Kakodkar Committee Report 2011

¹⁶ National Policy on Skill Development: Ministry of Labour, Government of India

partner in India's higher education growth story and there is need for enhanced engagement if it is to play a pivotal role in the big opportunity that India has to offer, which could potentially transform the international higher education landscape. The opportunity comes with a time stamp though. We need to act now.





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