ONLINE LEARNING RESOURCES FOR SKILL DEVELOPMENT IN INDIA: THE EMERGING OPPORTUNITIES

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Abstract : Various studies have established a link between skilled manpower and economic development. Availability of quality higher and technical education is essential for building human capital, a necessary ingredient of rapid economic growth. Since the dawn of planning in India, there is a manifold increase in the number of institutions providing higher education. Still, there exists a wide gap between the demand and supply of institutions providing higher and technical education. To make education accessible and affordable for all, the Government has initiated many programmes and has been providing subsidies. In spite of the government's efforts, around 30% of the Indian population is still illiterate. Online learning resources which provide flexibility of time and a range of subjects and courses that can be learned without enrolling oneself in a brick and mortar institution can provide a viable solution to bridge the demand-supply gap of institutions of higher education. Globally, institutions providing a wide spectrum of online courses are increasing but there are issues regarding availability, cost and quality of these courses as well as the employability of those who opt for these courses. This paper attempts to examine these issues and suggest ways to make online learning a useful medium of acquiring higher and technical education for skill development in India.

Key words: Online Learning, Education, Economic Growth, Technical, Subsidies

JEL Classification: 03, 04, 038, I22, I23, I24, I28

INTRODUCTION

India has emerged as a resource pool of highly skilled manpower. The number of higher educational institutions – colleges and universities have increased manifold from 578 and 28 in 1951 to 25951 and 504 respectively by 2009-10 (Gupta, Gupta, 2011). These institutions provide education in all streams – arts, commerce science and technology. According to Indian council for Research on International Economic Relations (ICRIER, 2006), India is home to world's largest pool of scientific and technical human resources producing 400,000 engineers every year while the United States of America produces only 60,000.

In spite of these impressive statistics, there exists a demand-supply gap in case of institutions providing higher education. According to Ministry of Human Resource Development (MHRD) report (2009-10), around 12.4% students opt for higher education in the country. If we have to increase the number of students going for higher education from 12.4% to 30%, India would need around 40,000 colleges and about 800 to 1000 universities in the next ten years. This would lead to a huge financial burden on the government and post liberalisation, the government is not in a mood to shoulder this responsibility. The emphasis is on privatisation of higher education which makes it unaffordable for the masses. Online educational resources can fill this demand-supply gap by providing a bouquet of courses to aspirants of

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higher education at a fraction of cost and with significant amount of flexibility with respect to time and choice of interdisciplinary courses. However, there are various issues related to these online courses such as quality, availability, accessibility and employability.

The first Massive Open Online Course (MOOC) was started in 2008 by George Siemens, Stephen Downes and David Cormier and was called Connectivism and Connective Knowledge 2008 (CCK08). Subsequently, many MOOCs were run across the world. In 2011, Sebastian Thrun and Peter Norvig at Stanford started an online course on artificial intelligence inviting everybody to join the course. The response was so good that in 2012 Thrun and Peter Norvig created a company Udacity, which offered various online courses. In 2012, Daphne Koller and Andrew Ng, both Stanford colleagues involved in the Stanford MOOCs, started Coursera. In May, Harvard and MIT joined together to create the edX platform. This paper delves into the advent, scope and issues related to online learning resources of higher education in India. The paper is divided into four sections; the first examines the demand and supply gap of learning resources in higher education, the second, provides information on the institutions providing online learning resources of higher education; the third, deals with the cost, content, outreach, constraints, quality and employability of online courses and in the fourth section an attempt is made to suggest policy measures to make online learning accessible and a supplementary resource of higher education in India.

2. HIGHER EDUCATION IN INDIA – THE DEMAND-SUPPLY GAP

According to the population projections based on the Census Survey 2001, nearly 144 million out of 1.23 billion of India's population will be between the age group 18 to 23 years in 2011 aspiring for Higher Education. According to ICRIER (2006), in 1950 India had 263,000 students enrolled in 750 colleges, which were affiliated with 30 universities. The gross enrolment rate (GER) for the age groups 18-23 years in higher education in India is only 20%, compared with 26% in China and 36% in Brazil. GER for male population is 21.6 and for females it is 18.9. By 2020, the Indian government aims to achieve 30% GER, which would mean providing 40 million seats in university, an increase of 14 million in six years. By 2005, the numbers had grown dramatically to 11 million students in 17,000 colleges affiliated with 230 universities. Another 10 million students were enrolled in 6,500 vocational institutions. Despite this phenomenal growth, India would have to nearly quadruple existing college seats and more than quadruple the number of professors to achieve the 20% GER by 2014. Another measure of India's demand for higher learning is the number of Indian students studying abroad. By November 2009, India had more students studying in the United States—more than 100,000 than did any other foreign country.

The responsibility of financing higher education is shared by the central government and the state governments. Around 80% of the public higher education is sourced from the State Governments and about 20% from the Centre (FICCI 2011). The total public expenditure on higher education is around 1.25% of GDP (UGC, 2012) certainly insufficient by any standards. The household expenditure on higher education shows that the share of tuition and other fees have increased to about 53%, which is largely due to increase in the share of private institutions. With a large segment of the population (around 30%) living below poverty line (BPL) enrolling children for higher education is beyond the reach of the poor.

3. ONLINE LEARNING RESOURCES

Online learning resources can be of great use for those who aspire for higher education but cannot enrol themselves in institutions of higher learning due to financial and time constraints. MOOCs (Massive Open Online Courses) are the latest addition to the lexicon of higher education. They represent a new generation of online education, freely accessible on the internet and geared towards very large number of students. The best known MOOCs are Coursera, CCK08, PLENK2010, Class 2 go, OpenLearning, Udacity, Open Courseware Consortium and DS106, which had multiple facilitators. Top global universities have joined MOOC platforms or have started their own MOOC programmes.

Figure: Online sources of Learning

Source: http://blogs.curtin.edu.au/odvce/2013/02/curtin-university-moocs-thinking-content-platform-partnerships/

4. THE OUTREACH AND COST OF ONLINE LEARNING RESOURCES

Over 10 million students globally have enrolled in thousands of such courses offered by just the top 3-4 providers of MOOCs. Coursera has over 8.5 million students and offers 700 courses from 110 globally recognized partners. Udemy has over three million students and offers more than 16,000 courses. edX has over 1.3 million students from 195 countries. Udacity has 1.6 million students in 12 full courses and 26 free course ware. These numbers have been achieved just over the past three years (2011-14). BITS Pilani has already offered courses using Coursera to their own students. IIT Bombay and BITS Pilani have started offering courses since July 2014 using the edX platform. While IIT Bombay has offered three courses to anybody wanting to attend, BITS Pilani will offer them to its own students. IIT Bombay's courses have already attracted 35,000 students worldwide.

3.2 OPPORTUNITIES

Out of a total of 767 million working age population, near half (333 million) are below 30, while about 16% (125 million) are above 50. We have a very young population evenly split in terms of gender. There is vast scope for developing full modules of online courses. MOOCs and Small Online Private Courses (SPOCs) can provide flexible learning facilities to the young learners at a fraction of cost than the traditional methods.

3.1 CHALLENGES

Online education in India, which is very crucial for the Indian population, is heavily dependent on reliable high-speed Internet coverage. As a pre-requisite to expansion of on-line education services, it is essential that various parts of the country be connected with high speed Internet. As more and more cities in India are coming within the ambit of high speed cyber-network, the concept of e-education, especially at higher levels should be viewed seriously. Most Indian Universities make little use of the Internet in improving administrative efficiency. Broadband subscribers are just 0.61 million as compared to the target of three million set for December 2005.

There is shortage of high calibre faculty to teach in higher education institutions and to teach online courses. According to MHRD Report (2011), there is shortage of 3.8 lakhs teachers in the higher education which comes to over 50%. It is likely to grow to 13 Lakhs in the next eight to ten years which is really deplorable. Demand for good quality faculty increases the wage rate putting pressure on government's finances.

Other challenges are – developing revenue models to make the concept self-sustaining; delivering valuable signifiers of completion such as credentials, badges or acceptance into accredited programs; providing an experience and perceived value that leads to higher course completion rates (at present less

than 10% of registered students actually complete the course); and authenticating students in a manner to satisfy accrediting institutions or hiring companies that the student identity is actually known.

4. SUGGESTIVE POLICY MEASURES

E-learning, however, as additional support to existing courses, is already highly successful in the West. India's education policy has largely missed out on taking good quality, market based e-learning courses and Internet café/schools with programme structures that are relevant to the Indian context need to be set up urgently. Proactive policy measures can give a boost to online learning resources which are listed as follows:

◆ Accelerate provision of high speed internet connectivity pan India at affordable rates to make online courses accessible.

◆ Encourage setting up of internet cafés by providing incentives such as cheaper loans and infrastructural facilities.

◆ Setting up Libraries equipped with computers that support high speed internet connectivity. To bridge the digital divide we need all night net libraries or late night accessibility at least, at a monthly charge.

◆ Such internet cafes could be provided under private or co-operative licences in residential areas including slums.

◆ Personnel trained in computers and e-learning tools could man these edu-cafes and help students make better use of the facilities.

◆ The cost of e-learning, while market driven, could perhaps be subsidized through need based scholarships schemes.

◆ Universities and colleges can have linkages with MOOCs such as Coursera, edX, Udacity etc. to provide online courses in addition to regular courses.

◆ To popularise online learning, there is a need to introduce regulatory framework to avoid cheating by hoax companies who lure students with false promises.

◆ High quality faculty is the crux of online courses. Attractive remuneration and other incentives should be provided to make online teaching a financially attractive option.

◆ Certification by a recognised body can make online learning courses valuable and can reduce the dropout rate making learners serious about these courses.

◆ Certification of online courses would also increase employability.

◆ The reputed universities in India should come forward to start MOOCs in coming years to solve 100% literacy program.

CONCLUSION

Online learning resources or MOOCs are a recent phenomenon in the field of higher education and is fast catching up world-wide. In India, where a significant proportion of population is deprived of higher educational facilities due to either poverty or due to locational reasons (there is no college or university at a short distance), provision of online learning facilities can make higher education accessible and for the development of specific skills required to handle modern day jobs in various sectors of the economy. Unfortunately, there is no comprehensive plan in the Government policy to meet the challenge of increasing demand for skilled manpower required by various sectors of the economy. The success of online open courses depends on quality, affordability, scalability, inclusion and employability (FICCI, 2011).

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