

Entrepreneurship Development through open and distance learning – A Conceptual Approach

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ABSTRACT

The educational development of a society is determined when the deprived and poorer groups are able to participate in the information society. Information technology can be used as a tool to encourage two-way communication processes and has potential to enable citizen to overcome historical disabilities and achieve financial independence.

It is observed that in India the overall, labour-force to population ratio (in the age group 15 years and above) is at 56 per cent which is low when compared to nearly 64 per cent for the rest of the world. This paper attempts to present a conceptual framework where short term skill based courses for rural population, school dropouts and disadvantaged section can be taught in accordance with the local resources available and the forecasted skill requirement in the area. Once learned, the learner can practice and innovate individually. This will depend on the enterprise of the learner. The outreach of Open and Distance e-Learning (ODL) method by converting schools in to learning centres will be explored coupled with mobile learning (m-learning). This method will open up inaccessible areas.

Keywords: entrepreneurship, ODeL, m-learning, skill based courses

Introduction

The Food and Agricultural Organization noted on ICT and development that it can be used as a tool to encourage two-way communication processes and creating links between people and developing new opportunities for rural people to participate in the global society (Paisley and Richardson, 1998).

The last decade has seen exponential growth in information and communication technologies (ICTs) with computers, digital organizers, mobile phones, Internet, and wireless computing spreading all across the globe. These technologies have unleashed a “cultural revolution in the way individuals and organizations interact, in terms of time, cost and distance” (Munyua, 2000).

Arguably, the aims of distance education in developing countries are different from those of developed countries. In developed countries, it moves to widen participation and lifelong learning for non-traditional learners and is closely linked to the development of a strong knowledge economy. In contrast, developing countries' motives for distance learning are to provide basic and literacy education to large numbers of poor people (Zhang, 2005).

There has been initiatives taken in India and different parts of the world to develop entrepreneurship through computers ICT such Telecentres in Scandinavia, e-choupals in Madhya Pradesh, Gyandoot, Bhoomi, TARAhaat, and Jiva telecenters started by state governments and non profit institutions. ICT has been used to empower as well as to increase the range of services to the marginalised at reduced costs (Vijaybhaskar & Gayathri, 2003).

However, promotion of ICT enabled services leads to concerns resulting from the digital divide. On the one hand there is a fundamental question of whether the solution to the digital divide lies in increasing hardware access or on the other hand, by increasing services in some other area, such as education, which could change priorities, save money, and deliver better results. (C. P. Chandrasekhar, 2006).

The United Nations has identified a strong correlation between a country's information and communication technology diffusion index (ICTDI) and its income and level of human development as measured by the United Nations Development Programme's Human Development Index (HDI). The top rankings are dominated by industrial countries from North America, Western Europe, and the Asian Tigers, while many of the lower ranking countries are from Africa. India and its neighbours Nepal, Bhutan, Pakistan, and Bangladesh fall into this group. (United Nations Conference on Trade and Development, 2006)

Review of literature-

Psacharopoulos (2006) argues that the education projects funded by world bank did not work because the funding allocation was driven by solely economic motivations and therefore lacked focus. He reasons that the Bank had considerable inertia in understanding and fitting with the needs of different developing countries.

Perraton (2000) substantiates Psacharopoulos' view and explains that the World Bank's loans responded to the demands of the urban elite and funded their children's vocational and higher education. Funding one child's university education was the same as funding 60 children's primary school education.

During 1940s - 1960s, developing nations' governments and associated non-governmental agencies identified the need for educational infrastructures to address the widening gap between the educated and non-educated. Heavy investments in the televised primary schooling were done to reach the deprived populations. Kamau (2001)

In India technology and distance learning institutions, including the Indira Gandhi National Open University (IGNOU), the Indian Institute of Technology, the Birla Institute of Technology, and the School of Education Technology at Jadavpur University, have led the way in online degree courses and modules. However, these courses have become privilege of the elite, educated, and wealthy. They fail to consider the need of masses who require basic computer literacy and access to computers before they can begin to engage in higher online learning. Sharma, (2005)

Insufficient infrastructure and growing demand for secondary education led India, a secular democracy, to develop an alternative model, National Open School (NOS). The school offered non-formal, paper-based self-learning, distance schooling for learners of all ages. NOS did help in raising living standards by enabling people to gain employment in different government sectors. Sujatha, (2002)

E-learning may offer the opportunity to shift the distance learning paradigm from delivery of content towards learner-centred and discussion-led learning, continuing reliance on print material and broadcast technologies dominates in developing countries (Islam, Rahman & Rahman, 2006). The IT access gap is contributing to the widening digital divide between haves and haves not in developing countries.

Challenges in Distance Education-

Marshall & Ruohonen, (1998) mentions that the Working Conference on Capacity Building for IT in Education in Developing Countries (1998) identified the need to provide computers to enable students to first develop computer skills, and second to use computers to learn at a distance. Ojo & Awuah, (1998) in their study on Botswana reported that the goals of ICT should not be to create computer experts, but to give citizens basic computer skills and to enable them to use computers for learning. Kiangi, (1998) found out that the efforts of the Namibian government to offer computer education in schools since 1995 have resulted in only the most privileged private schools connected, with 0.5 percent to 2.6 percent of students enrolled in computer courses at any one level.

In South Asia, only 21% of the population uses the Internet (World Bank 2006). In India only 7% of the billion-plus population uses the Internet, accounting for a miniscule 4.7% of the world's Internet users. The potential impact of Internet usage suggests that the utilization of e-governance services will be influenced by access to and use of the Internet. Rural teledensity in India stands at a meager 2%, compared to 31% for urban areas. Harsimran Singh, (2006)

It is estimated that there are about 177 million households in 604 districts comprising 640,000 villages across India. The highly acclaimed Warana Wired Village Project covering 70 contiguous villages in Maharashtra cost \$600,000. The costs of covering over 600,000 villages can well be imagined. Financing affordable Internet access and ICT competence including investment and training to create, maintain, and expand computer networks is a huge challenge for India and many other developing countries in South Asia. (<http://data.worldbank.org/indicator>).

In 1960's China introduced nine-year compulsory schooling, and started building schools in rural and urban regions supported by televised learning. In spite of this, there are over 560 million adults, or 70 percent of the world's adult population, who cannot read or write - including the majority of females (66%) (Malik, Belawati & Baggaley 2005). Ma (2004) reported that distance education have great difficulty attracting qualified teachers. There is emphasis on "one-way broadcasting" medium, as it "costs much less," in rural regions that lack infrastructure. However, there are some poorer social groups in urban areas that have benefited from vocational and occupational learning opportunities (Zhang, 2005).

The use of combination of radio, print, audio, and video recordings for distance education could not overcome the infrastructural and digital divide challenges between rural-urban population. This divide can be overcome by the use of m-learning program initiated by the Open University of the Philippines. Print and mobile materials for simple and universally relevant health, literacy and numeracy education was provided.

However, the limited capacity of mobile devices, the cost of synchronous interactions, and the rural-urban divide may hinder further developments. Dela Peña-Bandalaria, (2007).

Furthermore, developing countries with large populations and a rural-urban divide have less than 1 percent of their populations accessing the Internet. Despite the availability of technologies in urban regions, rural and poor people continue to be deprived of investment, infrastructure, and skilled teachers. Mutonyi & Norton, (2007). Further, disparities are also prevalent between male and female students over the access of e-learning materials. (Belawati & Zuhairi, 2007)

Mackintosh (2005) also pointed out that the distance learning programs fall short of improving lifestyle of people as most of the times the courses are purchased offshore. These courses are not culturally grounded, have language barriers, and exhibit limited awareness of students' backgrounds and experiences in the field of study.

Belawati (2005) identifies this as the critical challenge for developing countries – to educate students and teachers to use computers and develop accessible infrastructures so that they may benefit from the interactivity offered by online learning.

Björn Wellenius (2003) argue that the telecenters (e-venture) may not be able to achieve commercial sustainability beyond initial public support in poor and rural localities. In fact, demand for financial sustainability may not even be appropriate given that “many places do not have enough people with money to spend on the needed services”. Roman & Colle, (2002) writes that many telecenters face the question of how they can generate income yet serve those in the community who cannot afford to pay for “public goods” kinds of services, such as access to health information.

Similarly in India, Munyua (2000) reported that e-Choupals should be technological sustainable which is fundamentally related to financial sustainability since the most visible cost usually comprises equipment and technical maintenance. Various projects are trying to adopt modular techniques to make these components of sustainability an integral part of their functioning. Delgadillo et al. (2002) adds that a sound business plan, stressing market knowledge, economical use of resources, and revenue generating capacity has been the hallmark of these e-ventures, which aim to tap the potential market of 600–700 million Indians living in rural areas by using information technology to provide them with much-needed connectivity.

Lewins and Stuart (1991) propose that educational provisions in developing countries were limited due to their governments' failures to recognize and address the issues of access, culture, and the gender gap that affected poorer population groups. Lewins (1991) describes this as the ‘educational planner’s paradox.’

Use of ICT and mobile services: Indian story-

Theli Phone (shoulder-bag phone) experiment was conducted by Self Employed Women’s Association (SEWA) to offset women’s lesser access to the Internet by using mobile services. This was done with the tie-ups between SEWA and cellular and; limited mobility service providers and the handset manufacturers. This enabled 5,000 members to buy mobile handsets as well as subscribe for mobile services. The main intent was to increase efficiency and business outputs of its members like salt farmers, artisans, vegetable producers, and midwives through effective communication. Similar model can be used for dissemination of entrepreneurship/skill related modules. Kiran Prasad (2009).

Kerala state government initiated an action plan to set up about 20 m-government services offered by eight departments identified for pilot level implementation; and to deliver services through mobile phones accessible to citizens in the field, in the street, at home or in other convenient locations on a 24/7 basis, rather than requiring users to visit government offices or log on to Internet portals to access services. Shambhu Ghatak, (2006)

The availability of new media including mobile communications, social networking sites, and the Internet led to the organization of the policies by the government for financial inclusion of large sections of the population through banking linkages that have led to mobile banking operations. This has led to an innovative movement for branchless banking in rural and remote areas. Abhishek Sinha, (2009).

The Akshaya project was an e-government initiative that has succeeded in encouraging people to use technology in a socially deterministic way to satisfy local needs. An evaluation of the Akshaya project found that it was successful in generating employment, promoting IT literacy, enhancing communication, and providing e-services. (www.akshaya.kerala.gov.in). The Akshaya project provides cheaper e-literacy courses to the people, ranging from easy (such as using Microsoft Office and desktop publishing) to difficult (such as diploma courses).

Common Service Centers were implemented in close collaboration with Mission 2007, a National Alliance of nearly 200 civil society and private sector organizations aiming to leverage ICTs for rural development and empowerment. E-governance initiatives in areas such as education, employment, environment, health,

provision of business services, providing market prices, e-trade opportunities, e-entertainment, e-banking, e-learning etc were launched. Kiran Prasad (2009).

The major hurdle in e-governance projects come in the form of use of dominant languages on the Internet especially majority of the citizens had their early education in the regional languages. It is estimated that only 10% of South Asians speak fluent English while the rest (more than 900 million Indians and about 1.2 billion South Asians altogether) speak other languages. This language barrier effectively puts computer use and Internet access out of reach for those who do not know English. Further, there is absence of culturally-relevant content. This challenge was overcome when India’s Department of Information Technology launched a web-based translation facility in October 2008 to help people translate from English to regional languages and also edit scanned or handwritten documents on tablet personal computers. This facility can be used to provide culturally relevant modules to target people who feel left out due to use of dominant language. Kenneth Keniston, (2004).

Use of ICT and Mobile technologies in open and distance education: New approach-

Till now, distance education was only seen as an effort from the side of the government to reach the population afar. Similar challenges are faced by distance education in India as the other developing countries.

From the chart 1, it is understood that the states with higher percentage of schools with computers also fare high on the human development index. Also, the states with low number of schools with computers also fair poorly in human development index.

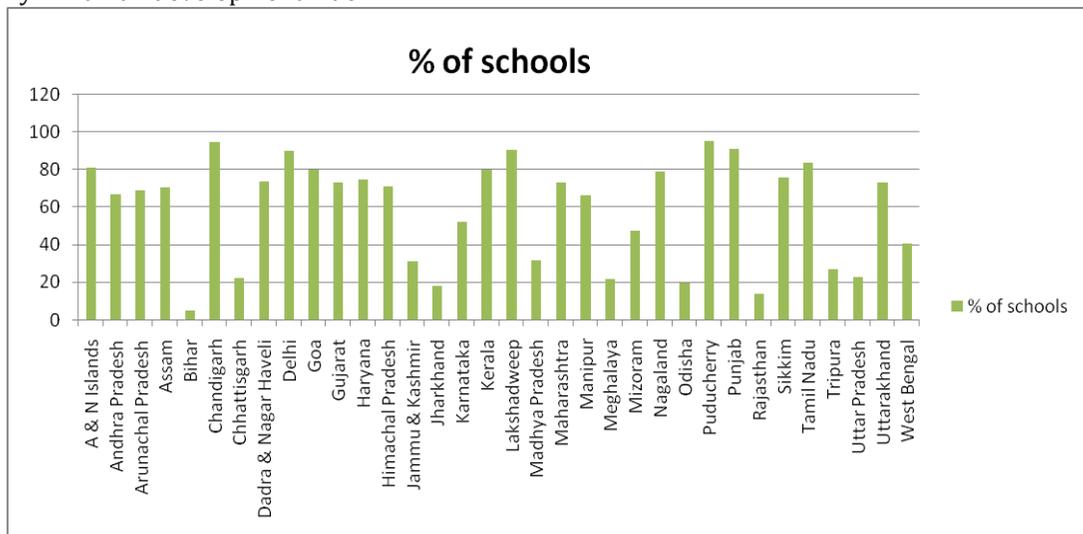


Chart 1: States with percentage of schools with computer (Data 2012-2013)

Source-<https://data.gov.in/search/site?query=computers>

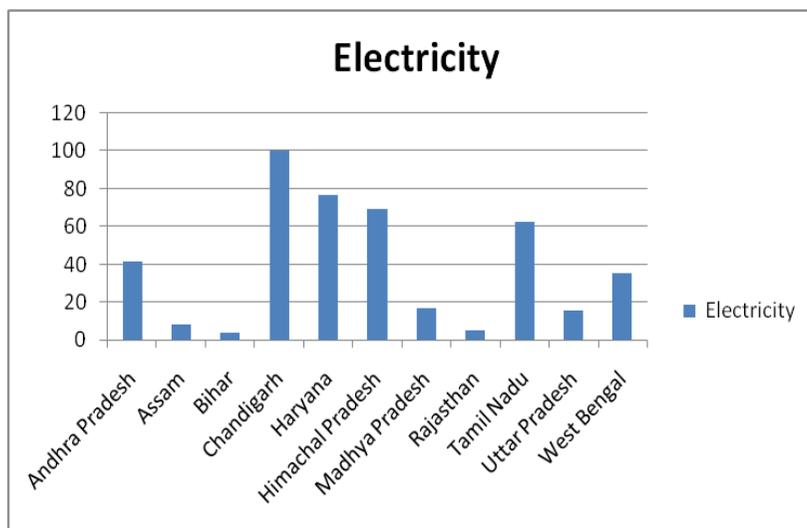


Chart 2: States with percentage of schools with electricity (data available on ministry site)

Chart 2 presents the available data for the electricity connection in the schools of different states. When this data is collated with the data presented at the table 1, it is observed that there are states like Chandigarh which has 100% electricity connection in schools, but have only 95% of schools with computer labs. Whereas, in Bihar and Rajasthan the percentage of schools with electricity is 5 and 15% respectively, but the schools with computer laboratory is only at 5% and 13% . This is dismally low.

The data for Teledensity (chart 3, 4 and 5) shows the penetration of teledensity (mobile phone) and internet penetration in different states of India. This data is essential when the propagation of distance learning is proposed through ICT.

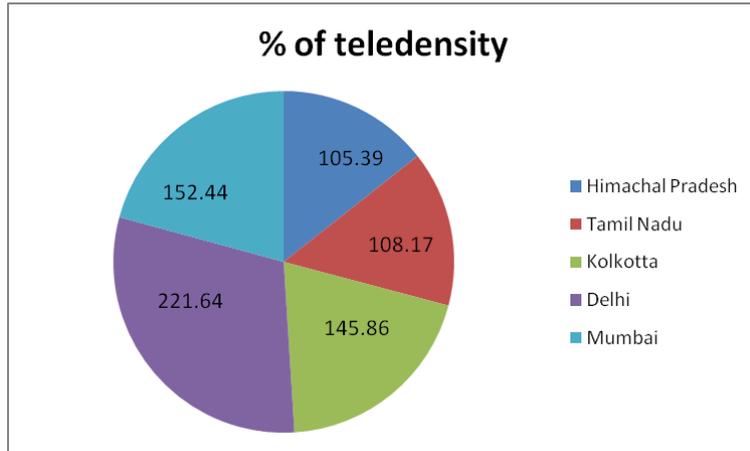


Chart 3: States with highest percentage of teledensity

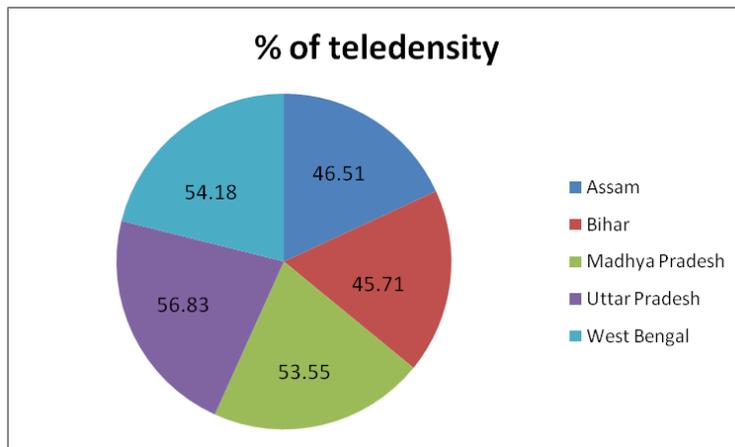


Chart 4: States with least percentage of teledensity

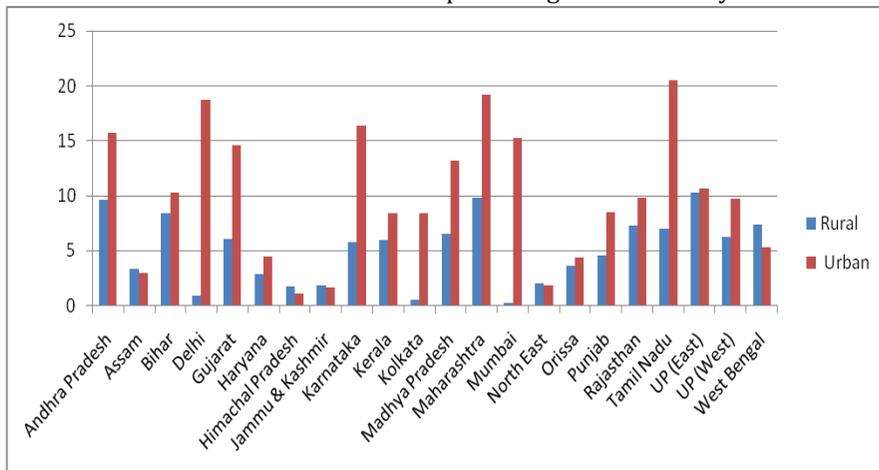


Chart 5: States with rural and urban internet connectivity (million subscribers) 2016 data

The states that showed lower teledensity, also had lower rural and urban internet connectivity. The rural connectivity is even far dismal than the urban connectivity. This data becomes important when distance learning through ICT is proposed for such states.

Therefore, e-learning in India paints a picture full of challenges, especially for the states with lower statistics. In such states new infrastructure would have to be created, staff would need to be recruited and trained to operate the hardware and, trained teachers would be required for transacting the skill based modules. Besides, there should be provision of internet. Such infrastructure would turn out to be a very costly and may not find success.

Nonetheless, these challenges can be overcome by a new approach where schools can become the centers for training and learning through e-distance education mode. Most of the schools have well developed computer labs that can be utilized for communicating distance learning modules.

Computer teachers of the identified schools can be trained (mostly are trained) to operate the hardware. Furthermore the teachers teaching in the schools can be trained to impart trainings. This method can overcome the basic problem of "one way communication". Further when the teachers would operate the computers it will reduce the major challenge of digital divide.

Computer oriented distance learning can be coupled with mobile learning (m-learning). This way the modules can be supplemented with learning material that can be transacted through mobiles. Skill based modules that focus on entrepreneurship can be disseminated through this method. Open and distance learning provides the flexibility to train people according to the requirement of the market. Schedule of the training can be modified according to the needs of the people. As schools already have established infrastructure, using their premises would reduce the cost of starting new e-learning centres.

The use of ICT and mobiles can be started as pilot study. The results can then be studied and then replicated in other districts as well.

Conclusion-

There are variety of strategies that have been successfully implemented and that have reached at least some of the poorer and deprived groups. Similarly, open and distance education in developing countries also aim for equitable and extended educational opportunities for the rural areas which lack in educational and technology infrastructures, trained teachers, social and cultural restrictions imposed on girls and women, and inappropriate policy and funding decisions that have all resulted in furthering the gap between the rich and poor, rural and urban, and between genders.

Significant challenges in developing countries were identified when attempting to make learning more accessible by using Internet technologies. The literature shows that while distance learning- e-learning and m-learning are advocated as easily accessible, for the rural poor, books, teachers, classrooms, money, and time, continue to be significant issues. There remain high percentages of people from lower social classes, females, and rural areas, who continue to be marginalized due to their lack of access to adequate learning resources and basic education.

The paper tries to understand the challenges that hamper the cause of distance learning. The paper also advocated the use of schools as learning centres. This way the government will save huge resources that will be required to create the new infrastructure, training teachers, hiring of staff and other expenditures. The two way communication that will happen within the centre will further remove the hindrance that monotony of one way communication that is usually the part of distance learning.

Specific skill based, locally required and economically efficient modules can be developed that can be transacted through these schools and can be supplemented by mobiles (m-learning). Such capacity building measures will not only empower people but will also help them in assimilating with the mainstream.

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