IMPACT OF COMPUTER BASED ONLINE ENTREPRENEURSHIP DISTANCE EDUCATION IN INDIA

Bhagwan SHREE RAM Ph. D.
Department of Management Studies (Research)
Anna University of Technology, Coimbatore
Principal, AAIST, Sriperumbudur, 602105, A. U. Chennai, Tamil Nadu, INDIA

M. SELVARAJ Ph. D.
Professor, Department of Management Studies
Anna University of Technology, Coimbatore
Sona Institute of Management Studies, Salem 636005, Tamil Nadu, INDIA

ABSTRACT

The success of Indian enterprises and professionals in the computer and information technology (CIT) domain during the twenty year has been spectacular. Entrepreneurs, bureaucrats and technocrats are now advancing views about how India can ride CIT bandwagon and leapfrog into a knowledge-based economy in the area of entrepreneurship distance education on-line. Isolated instances of remotely located villagers sending and receiving email messages, effective application of mobile communications and surfing the Internet are being promoted as examples of how the nation can achieve this transformation, while vanquishing socio-economic challenges such as illiteracy, high growth of population, poverty, and the digital divide along the way. Likewise, even while a small fraction of the urban population in India has access to computers and the Internet, e-governance is being projected as the way of the future. There is no dearth of fascinating stories about CIT enabled changes, yet there is little discussion about whether such changes are effective and sustainable in the absence of the basic infrastructure that is accessible to the citizens of more advanced economies. When used appropriately, different CITs are said to help expand access to entrepreneurship distance education, strengthen the relevance of education to the increasingly digital workplace, and raise technical and managerial educational quality by, among others, helping make teaching and learning into an engaging, active process connected to real life. This research paper investigates on the impact of computer based online entrepreneurship distance education in India.

Keywords: Entrepreneurship distance education, Computer & information technology.

INTRODUCTION

Online instruction using the computer and information technology (CIT) is a growing practice at institutions of higher education in India. Faculty who transition from class room courses to online instruction need support from their state governments and universities like Indira Gandhi National Open University (IGNOU), New Delhi, India.
This research paper deals with the understanding and identifying the impact of computer based online entrepreneurship distance education in India. Jafari, McGee & Carmean, 2006; have explained in the research paper that infusing distance education technology resources, such as an CIT, may assist faculty with managing management and entrepreneurship development oriented courses and organizing content to engage technical students, motivated entrepreneurs and decrease planning time, thus supporting the instructional process. Despite the benefits of incorporating educational management systems, many faculty members do not adopt modern technology as a teaching tool.

The growth of online entrepreneurship distance education in India is being fuelled by the urgent need to reduce the entrepreneurship distance education gap between developing and developed nations. According to the United Nations Educational, Scientific and Cultural Organization (UNESCO), only about seven percent in Asia attend some form of college education. This compares with 58 percent in industrialized countries as a whole, and 81 percent in the United States. Developing countries like India see investing in online entrepreneurship distance education programmes as a way to educate more people economically. In China, where only one out of 20 young people receives higher online entrepreneurship distance education, the distance learning is helping the education system move from elite to mass education because conventional universities cannot meet the demand of entrepreneurs. On-line CIT based distance education is better suited to adult learners in India and there are now many organizations opening virtual universities to cater for them. The element of flexible timing for learning appeals to adults who are employed and who realize the value of life-long learning in a changing work environment.

The statistics research shows that seventy nine percent of India’s population lives in villages without the basic infrastructure that can sustain a knowledge economy. While over sixty percent of the population is considered to be literate, it is important to note that the relevant definition of literacy that supports this statistic is being able to read and write simple words in any national language, acquired with or without formal schooling. Yet, the central and state governments in India are investing millions of dollars in promoting CIT-based initiatives and the IT industry as vehicles of social and economic transformation with the help of entrepreneurship distance education.

**BACKGROUND**

Entrepreneurship distance education directly affects the India’s economy through the quality of the workforce available to employers, the pace of innovation, the productive capability of the economy, the demographics of the consumer market, and the relative standing of India globally. The quality of entrepreneurship distance education online determines the life opportunities available to individuals located at remote places and their ability to exercise their knowledge for the liberty and the pursuit of happiness through their empowerment with economy.

The quality of entrepreneurship distance education influences the economy, cultural and social fabric of India. It has been claimed that entrepreneurship distance education using CITs have the potential to impact the livelihood strategies of small and medium scale enterprises and entrepreneurs in the following areas:
- Natural capital Formation-opportunities for accessing national government policies
- Financial capital Formation-communication with lending organizations, e.g., for micro-credit
- Human capital-increased knowledge of new skills through distance learning and processes required for certification
- Social capital Development-cultivating contacts beyond the immediate community
- Physical capital Formation-lobbying for the provision of basic infrastructure

PURPOSE OF THE STUDY

The purpose of this research paper is to investigate the motivation factors and analyze demographics among faculty members at the same educational institution to understand what motivates faculty members to adopt an CITs as part of face-to-face delivery of educational materials and when deciding to teach online courses. Based on previous studies of Lawler & King, 2003 and Hood, 2002 the motivation factors that influence faculty will fluctuate depending on the demographics of the participants.

This research work aims to open a debate regarding the impact of IT on a developing country like India. We argue that India should aggressively pursue traditional manufacturing and agriculture-based industries to build a robust industrial economy that can be made more efficient and productive with IT. In turn, policy makers should moderate their obsession with CIT and IT-related ventures as a panacea to solve socio-economic problems by effective implementation of Entrepreneurship Education online. IT-related projects must definitely be pursued, but the private sector must bear the risks and capture the returns related to these online ‘Entrepreneurship Distance Education’ projects, much like it does in any other sector of the economy.

We argue that state and central governments actions cannot be disproportionately skewed towards a single sector of industry when its benefits to the common man are still not well understood, and when the role of IT within the broader framework of national development has not yet been adequately articulated. Not everyone will agree with this viewpoint - but then, neither does this research work pursue such a consensus. The message in the Indian context is straightforward- progress into a knowledge economy will not come without substantial, widespread development of India’s human potential. The issues of online entrepreneurship education investigated into by this research paper is the increasing trends of changes and demands for and are they due to the impact of globalization. Therefore, a detailed study was implemented, which aims to observe the impact of liberalization towards the demand for national and international business growth and online entrepreneurship distance education, as well as the entrepreneurial skills in India.

This study was conducted among a sample of 342 engineering, management and professional graduates data were obtained from questionnaires, which were then analyzed using statistics method.
The findings show that there is an increasing demand for online entrepreneurship distance education and entrepreneurial skills, which indicates that liberalization has impacted towards the increasing demands of online entrepreneurship distance education and entrepreneurial skills among new generation graduates.

**LITERATURE REVIEW**

India is moving towards becoming a fully developed nation by 2020. In the era of liberalization, the terms such as knowledge human resources, knowledge society, and knowledge oriented economy provides a new understanding to the field of modern knowledge. The above terms are said to have given a new paradigm to knowledge, especially the higher technical education institution as explained by Moravec (2008). An uncertain world economy have impacted through lower job opportunities for entrepreneurs and technically qualified people. The problem of unemployment among qualified graduates is no longer underestimated, but it presents a challenge to the higher education institutions as cited by Hoe Chee Hee (2006). Several investigations (Minniti, M. & Lévesque, M., 2008 and Landstrom, 2008) have shown that online entrepreneurship has been identified as a potential catalyst for expanding economic growth and to maintain competitiveness in facing the challenges of globalization and liberalization in India.

The involvement of technical graduates in the field of entrepreneurship is supported by the government as an alternative to reduce the unemployment rate in India. This effort can be implemented through online entrepreneurship distance education, skill training and lifelong learning.

According to Kuratko & Hodgetts, (2004) and Hisrich, Peters & Shepherd (2005) one of the approaches in developing human capital is through education and entrepreneurship training. So, this study aims to observe the impact of liberalization and globalization on the trends in demand for business and online entrepreneurship distance education. It also aims to identify differences in demand according to fields or programs of higher technical education and trends of the importance in entrepreneurship skills before liberalization and after liberalization. Distance learners are independent, self-directed, autonomous, internally motivated, and collaborative in some cases (Diaz & Bontenbal, 2001).

They typically are 22-50 years of age, unable to enroll in traditional undergraduate programs due to other responsibilities, and often a lifelong learner.

In addition, they have a job, could have childcare responsibilities, commute more than 10 miles to campus, and have computer experience (Dutton et al., 2002).

Instructional system of computer and information technology (CIT) based on online entrepreneurship distance education are independent, self-directed, autonomous, internally motivated, and collaborative in some cases as cited by Diaz & Bontenbal, (2001).

Entrepreneurs are normally of 25 to 50 years of age in India and they are unable to enrol in a traditional undergraduate program due to other personal priorities, responsibilities, and often a lifelong learner.
GENERIC SKILLS WITH ENTREPRENEURIAL SKILLS

Generic skills are among the elements identified is critical in working world which is global in nature, especially with rapidly changing technology like computer based online entrepreneurship distance education and entrepreneurial skills development among new generation graduates and entrepreneurs. Generic skills include communication skills, critical thinking and problem-solving skills, teamwork skills, learning and information management systems, entrepreneurial skills, soft skills, ethics and professional management skills. Entrepreneurial skills involve the ability to explore and develop risk awareness, creativity and innovation in business and employment related activities. This is supported by Fried, V.H. (2003) who states that the mind and creativity to be the most important assets in the knowledge economy. Developments of generic skills among students are focused on teaching and learning, curriculum, co-curriculum and in the vicinity of the campus and residential college students as explained by Verger, A. (2009) in his research findings. That’s why entrepreneurs of modern age must assess the generic skills that meet and fulfill the requirements of the job market and the daily life more challenging. With the intention of reaching a level of adequate training needs to be provided for educators as pointed out by Covington, et. al. (2005). An array of innovations exist that may support instruction; however, determining the appropriate technology is the responsibility of each instructional system of computer and information technology (CIT).

INDIA AS A KNOWLEDGE ECONOMY

The economic value of Computer and Information Technology (CIT) depends greatly on the levels of economic progress of a nation. CIT has the potential to make existing processes more effective and efficient, but cannot substitute for the lack of a basic infrastructure. What is good for a developing country is not necessarily optimal for a developing country like India when those basic elements of infrastructure that support a successful economy such as Entrepreneurship distance educational opportunities, Healthcare, Electricity, Drinking water, and Capital formation are still in short supply. The impact of CIT is best understood when the fundamental differences between the innovations and ventures of managerial, technological, industrial and knowledge-based economies are recognized. Industrial growth yields from investments in large-scale infrastructure like railways, roadways, electrical power grids, and dams. The ventures of an industrial economy typically employ large numbers of workers with minimal training, education, and skills. These ventures have the potential to uplift large sections of the population.

In contrast, innovation in the knowledge economy in India usually engenders highly specialized knowledge-intensive products, and the large-scale capture, movement, and usage of information using sophisticated network infrastructure like computers, cable, optic-fibre, and routers.

The industrial economy made agriculture more efficient and productive in India. The productivity of industrial labour skyrocketed with the use of industrial and biological innovations including tractors, wind energy conversion systems, fertilizers, drip irrigation systems and pesticides.
It is not surprising; therefore, that the greatest source of real productivity, growth, and efficiency attributed to the information economy derives in the long run not from the information economy itself, but from its effects on the industrial economy.

For example, the intelligent use of CIT can help online entrepreneurship distance education, product distribution channels and manufacturing plants to work more efficiently. Historically, sustained industrial innovation in developed economies has created great wealth and improved living standards across societal divides in India. This progress has set them up in an ideal position to exploit online entrepreneurship distance education and create knowledge as they transform into knowledge-based economies. One aspect of this transition is that, increasingly, labour-intensive manufacturing and low-end service jobs are being outsourced to countries with lower labour costs. India has captured much of the lucrative and growing manufacturing market, ensuring millions of jobs for its citizens. India and other developing countries would benefit much from aggressively pursuing such manufacturing facilities that have potential to serve markets, particularly in view of its high levels of unemployment.

**CIT AND CENTRAL AND STATE GOVERNMENT INVESTMENT IN INDIA**

The development of CIT in India has, focused on developing and delivering CIT services to support the more advanced economies of the world. Even if the most optimistic projections of the CIT related job creation including jobs associated with IT outsourcing, call centres, and design centres in the next decade come true, this industry will employ at the most a couple of million people. In a nation with over 1.21 billion people, this level of employment can make but a minor dent in the employment statistics. To establish online entrepreneurship distance education in India, many have ignored the fact that numerous English-trained and highly educated members of the workforce are being relegated to tasks that are generally manned by workers with much more modest levels of online entrepreneurship education in the advanced economies. Due to intense competition, prices for some of these services have fallen so dramatically that many online entrepreneurship distance education centres are already struggling to survive.

Also, it is very likely that other developing nations with even cheaper labour and growing English-speaking populations will compete with India in this area in the near future. On-line entrepreneurship distance education, unlike manufacturing plants, can be shifted easily from one country to another. Further, the CIT industry holds limited potential for wealth to trickle down to the poorer sections of society.

Unlike a steel plant or a power plant, IT engenders few opportunities for the unqualified. Any transfer of wealth from the CIT sector would be achieved through the heavy hand of central and state governments, which represents, at best, a dubious economic proposition.

In fact, one consequence of the CIT revolution in India, at least in the short term, will likely be the establishment of a digital divide, where the rich and educated are empowered and enriched by CIT, and the poor are oblivious to its impact. Before embracing CIT as the engine of online entrepreneurship distance education growth, Indian social planners need to take a hard look at those investments that are likely to yield the greatest returns at a societal level.
The actions of the government in the recent past have tilted in favor of the CIT sector.

For instance, taxes levied on software in the state of Karnataka and Tamil Nadu was removed hastily within a week in response to pressure from powerful IT companies. Many workplace inspection procedures have been suspended for CIT companies, whereas traditional firms are subjected to myriad regulations, many of which have not been seriously reevaluated for relevance and effectiveness in decades. The government needs a more balanced policy-one that ensures that the core industrial sector is not ignored in the rush toward CIT.

ONLINE ENTREPRENEURSHIP EDUCATION AND CIT

India’s population constitutes one of her greatest assets. People are assets only when they can meaningfully participate in the cycle of value creation and consumption, either by exercising buying power, or creating products and services of value to others, or by creating and harnessing knowledge. The government can help transform this situation by building two pillars that have supported the growth of every successful economy, i.e., a reliable infrastructure core, and widespread access to online entrepreneurship distance education and training. We have touched on the interface between CIT and infrastructure earlier - let us now discuss the IT-education interface.

Distance learning and e-learning systems are already being touted in some quarters as solutions to India’s education challenges. Apart from the initial excitement and novelty value that it will doubtless generate, there is little reason to believe that a CIT based learning environment will advance the cause of Indian education in any substantial way. Problems that are enmeshed in the social and economic fabric of our society need to be primarily addressed with solutions that are of a social and economic nature.

There are also economic reasons why distance learning and e-learning have a high probability of failure. Creating the infrastructure and content to support effective e-learning will be very expensive. Many startups and universities in India are still struggling to effectively deliver content and achieve learning objectives in the virtual setting.

This problem will be compounded in the Indian environment due to diverse languages and the lack of underlying infrastructure. Further, the ability to surf the Internet alone does not imply a readiness to learn using the virtual medium-the new medium in itself does little to address fundamental issues related to the lack of incentives and motivation. Presenting CIT technology as the solution to India’s online entrepreneurship distance education challenges is troublesome in two ways.

First, it diverts our attention from issues that should really be on the front-burner. Once our attention and resources are diverted, building back the momentum in the correct direction is a monumental task.

Second, by building castles in the air that will soon be blown away by the winds of reality, it does a serious disservice to the more limited, but yet substantial and real benefits of CIT technology.
CONCLUDING THOUGHTS

The growth of the CIT sector in India symbolizes the potential of Indian industry to perform at world-class standards. Led by some visionaries and supported by thousands of employees and entrepreneurs, the CIT sector embodies much of what can go right when the spirit of human resources is given free rein. CIT can change how the society communicates, collaborates, lives, works, and plays through effective implementation of online entrepreneurship distance education. However, CIT offers little value to the large fraction of the population that is more concerned with day-to-day survival. It is not surprising, therefore, that while India is considered a software superpower, in terms of Internet penetration. The success of CIT at the corporate level in India cannot be translated into a panacea that will solve India’s myriad economic challenges. To be truly beneficial, the rain of CIT must fall at the right place, in the right quantity, at the right time, and for right purpose.

METHODOLOGY

The population of this study is administrators from public and private institutions of higher education in India which include managers, technocrats and entrepreneurs of small and medium industries of Chennai, Tamil Nadu, India.

Table: 1
Demand for Education Fields/Programs Demand for Online Entrepreneurship Distance Education Between March 2010 and March 2012 in Chennai

<table>
<thead>
<tr>
<th>Demand for online entrepreneurship</th>
<th>Sample Number</th>
<th>March 2010 Mean</th>
<th>March 2010 S.D.</th>
<th>March 2010 Mean</th>
<th>March 2010 S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocational Education</td>
<td>342</td>
<td>5.15</td>
<td>1.135</td>
<td>5.947</td>
<td>1.127</td>
</tr>
<tr>
<td>Technical Education</td>
<td>342</td>
<td>5.02</td>
<td>1.197</td>
<td>6.201</td>
<td>1.093</td>
</tr>
<tr>
<td>Computers and ICT Education</td>
<td>342</td>
<td>4.83</td>
<td>1.346</td>
<td>6.582</td>
<td>0.988</td>
</tr>
<tr>
<td>Business &amp; Entrepreneurship Education</td>
<td>342</td>
<td>4.79</td>
<td>1.350</td>
<td>6.821</td>
<td>0.824</td>
</tr>
<tr>
<td>Education in Professional Fields</td>
<td>342</td>
<td>6.03</td>
<td>1.075</td>
<td>7.024</td>
<td>0.672</td>
</tr>
<tr>
<td>Teaching Education</td>
<td>342</td>
<td>5.91</td>
<td>1.096</td>
<td>6.438</td>
<td>0.993</td>
</tr>
<tr>
<td>Social Sciences Education</td>
<td>342</td>
<td>4.27</td>
<td>1.403</td>
<td>5.767</td>
<td>1.203</td>
</tr>
<tr>
<td>Agro-tech education</td>
<td>342</td>
<td>5.24</td>
<td>1.126</td>
<td>6.012</td>
<td>1.105</td>
</tr>
<tr>
<td>Trades Education</td>
<td>342</td>
<td>4.84</td>
<td>1.348</td>
<td>5.606</td>
<td>1.302</td>
</tr>
</tbody>
</table>
The numbers of population identified are 1210 from a total of 66 private institutions. A total number of 342 samples were randomly selected for this study. Questionnaires were distributed to 582 respondents using postal service, and some were distributed personally by the research team members. Survey method was applied to conduct this study, whereby trend in demand for online entrepreneurship distance education based on CIT programs were surveyed between March 2010 and March 2012. The survey was conducted based on the perception of entrepreneurs in the industrial and services institutions. Well structured questionnaires were used as instrument to obtain data.

The items in the questionnaire were self developed by the experts and professors using document analysis technique. The Cronbach Alpha value obtained is 0.866, which is high. The difference in the mean score obtained will give an indication of how liberalization has affected online entrepreneurship distance education and entrepreneurship skill in the institutions.

Besides that, based on research on online entrepreneurship distance education, it is found that online entrepreneurship distance education can foster an entrepreneurial culture.

Implementation of online entrepreneurship distance education in India is growing either at institutional or at university level which aims to establish a commercial and industrial community.

The entrepreneurship distance education includes formal and informal education obtained in the college, schools, tertiary level and after engaging in entrepreneurial and business. Provision of infrastructure and adequate financial resources, qualified academic staff, research and innovation and lifelong learning is central to the implementation of this type of non formal educational system in India.

In addition, awareness of the importance of online entrepreneurship distance education in academic and co-curriculum activities is increasing whereby a variety of entrepreneurial training programs are conducted in institutions of technical education. This is shown through the offering of core academic courses, elective courses, entrepreneurial programs, diploma, and bachelor and post graduate diploma of Entrepreneurship.

This is a national phenomenon showing an increasing number of universities in India those are offering entrepreneurial courses.

There are also several universities that have a special support structure that serves as a center of excellence for small scale enterprises and businesses, which provide services to students and SME entrepreneurs.

Table: 2 shows the trend of instilling generic skills in March 2010 and March 2012. The study shows that the trend of instilling generic skills increased in two year.

This indicates that generic skills, also known as soft skills are given more importance by technical educational institutions.
The study found that the elements of generic skills which showed biggest difference in the mean score are entrepreneurial skills. Entrepreneurial skills showed a substantial increase in the mean score March 2010 at 4.65 to 6.33 in March 2012. This indicates entrepreneurial skills is emphasized in the present and is needed among entrepreneurs to ensure they are more competitive and competent in the global environment. Therefore, the application of generic skills should be implemented comprehensively in Indian universities with the participation of all parties connected with students. With the generic skills, graduates will be more prepared and confident and wise to search for job opportunities.

The findings of this study have implications on the implementation of entrepreneurship distance education in India. So, the online entrepreneurship distance education can be implemented continuously in order to inculcate interest in entrepreneurship as a career choice and develop graduates to be more competitive and creative.
CONCLUSION

Liberalization could not be suppressed, but globalization has to be faced. Globalization has resulted in the needs to reform online entrepreneurship distance education for the production of quality human capital. Human capital is the key national asset to ensure that India can compete and survive in the era of liberalization.

The implementation of generic skills is in line with the second thrust of the Indian National Mission, where India needs to produce human capital with first class mentality in order to face challenges in the knowledge based economy and the innovation field. This is in line with the National Higher Education Strategic, in an effort to transform higher education to produce human capital with first class mentality, online entrepreneurship distance education and entrepreneurial skills afford to develop human capital to achieve Vision 2020 and challenges of globalization. Online Entrepreneurship Education and entrepreneurial skills can raise awareness and open the students’ minds towards entrepreneurship as a career choice. Entrepreneurship can encourage people in the economic, social, cultural change, integration of society and increase social mobility.

The increase in the number of graduates in the field of entrepreneurship are expected to assist India in fulfilling the main thrusts outlined in the National Mission for achieving greater success in order to:

- Building Civilization and Raise Country’s Economy Therefore and
- Engaging in entrepreneurial activities and to co-operate with successful entrepreneurs to support entrepreneurship acculturation among graduates.

Prior to designing the online entrepreneurship distance education course, educators should consider what online teaching material content requires. Educators may want to participate in various online entrepreneurship distance educational course design workshop and complete self-assessments computer and information technology (CIT) tools to determine whether their teaching styles are compatible with online methods.

LIMITATIONS

Limitations of the investigation include the following:

- The nature of the study of CIT based online entrepreneurship distance educational is a link between interactivity and the process of community-building. We support this view but recognize this may bias our analysis.
- The context of the technical students - the group of online students comprised members of staff involved in lecturing and learning support within Further Education and Technical Education. This was an articulate and well-qualified group which may not be representative of all online learners.
BIODATA and CONTACT ADDRESSES of the AUTHORS


He is a Principal and professor of Electrical Engineering in AAIST Engineering College, Anna University Chennai, Tamil Nadu, India. He had reviewed technical paper for the WSEAS Journal and African Journal of Agricultural Research. He has published more than 50 technical research papers in his credit. His principal research interests and experience include HRM, Entrepreneurship studies, distributed power generation, renewable energy conversion, analysis, design of electrical machines, variable-speed drives, power electronics and Entrepreneurship in renewable sources of energy systems.

BHAGWAN SHREE RAM Ph. D.
Department of Management Studies (Research)
Anna University of Technology, Coimbatore
Principal, AAIST, Sriperumbudur, 602105, A. U. Chennai, Tamil Nadu, INDIA
Mobile: +919884223981
Email: bhagwan62@yahoo.com

Prof. Dr. Muthusamy SELVARAJ holds a B. Tech. Textile Engineering (1983), MBA (1990) and Ph.D. (2008) degrees and having more than 27 years of teaching and research experiences. He is a professor of MBA department, Sona College of Technology, affiliated to Anna University of Technology Coimbatore, Tamil Nadu, India. He has published more than 50 technical research papers in his credit. His principal research interests and experiences include Human Resources Management and Entrepreneurship development in industrial and renewable sources of energy conversion systems. He is supervising 6 Ph. D. research scholars in the area of higher studies in Tamil Nadu, India.

M. SELVARAJ Ph. D.
Professor, Department of Management Studies
Anna University of Technology, Coimbatore
Sona Institute of Management Studies, Salem 636005, Tamil Nadu, INDIA
Mobile: +919994595292
Email: drselvarajmuthusamy@gmail.com

REFERENCE


