E-Learning Revolution: Status of Educational Programs in India

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Abstract—As of now, the teaching-learning process in India is oriented towards class-room model. The generic approach is transforming into the flexible on line systems capable of imparting education in the manner that can never be thought of. With the advent of internet technologies in the past decade, it is bringing a turbulent change in the Indian education system. This paper provides a comprehensive insight to the current status of e-learning education in India. We have discussed three case examples and concluded that with the growth of the population interested in education, successful e-learning models can be developed and implemented by various universities across the country.

Index Terms—E-learning, online education, distance education.

I INTRODUCTION

E-Learning is a boomerang around the world. It has just evolved in India. Government and corporations see it as an essence of business strategy, and the students have gone mad for the courseware and the flexibility of the system.
With the introduction of internet technologies in 1995(India), the information can be readily communicated to any part of the country, overcoming the geographical limitations. This has led to better integration of systems employed in government organizations, corporations and other business institutes. The exchange of ideas, expertise and collaboration can take place almost anytime and anywhere.

E-Learning concepts, tools, models and methodologies can be readily deployed for interactive education, commercial and business purposes. It can be said that e-learning is **riding on the shoulders of the giant** (the Internet). This will enable us to achieve the objectives and to bring about the all-round development.

It is true that the population receiving education in the country is growing exponentially (Adapted *from the Report of MHRD, India, 2004-2005 at http://www.education.nic.in/stats/Pocket(As%20on%2017.0 4.2007)glance.pdf)*, and this is the major cause for exploring cost effective and qualitative alternatives. Therefore, an overview of the current state of e-learning programs and systems would be beneficial to many capitalists exploring the opportunities for a profitable venture.

This paper will provide a comprehensive overview of distance learning/ online educational programs in India with focus on—

➢ Some background on the Distance Education.
➢ The need of e-learning systems and environment.
➢ The current E-learning status.

II DEFINING DISTANCE EDUCATION

It can be defined as the method of self learning in which technologies can be used to impart education. Instructors and students are physically separated in space and possibly time (Teaster and Blieszner, 1999), and the communication can take place by electronic and other technology, as well as special organizational and administrative arrangements (Moore as cited in Oweye, 2003). It releases the student from the task of traveling to a fixed place, at a fixed time, to meet a fixed person, for training (Keegan, 1995).

III INDIAN EDUCATION SYSTEM

As per the latest report of MHRD, India Table I shows the growth of recognized educational institutions in India. It highlights that the number is increasing to cater to the increasing demand of education in the country.

Table I: Growth of Recognized Educational Institutions from 1950-51 to 2004-2005

(Numbers in thousands)

Years	Primary	Upper Primary	Colleges Sec./Sr. Sec/ Inter /Pre. Jr.	Colleges for General Education	Colleges for Professional Education (Engg., Tech., Arch., Medical & Education colleges)	Univ/Deemed Univ./ Instt. Of National Importance
1950-51	209.7	13.6	7.4	0.4	0.2	0.03
1960-61	330.4	49.7	17.3	1.0	0.9	0.05
1970-71	408.4	90.6	37.1	2.3	1.0	0.08
1980-81	494.5	118.6	51.6	3.4	**3.5	0.11
1990-91	560.9	151.5	79.8	4.9	0.9	0.18
2000-01*	638.7	206.3	126.0	7.9	2.2	0.25
2001-02*	664.0	219.6	133.5	8.7	2.4	0.27
2002-03*	651.4	245.3	137.2	9.2	2.6	0.30
2003-04*	712.2	262.3	146.0	9.4	2.8	0.30
2004-05*	767.5	274.7	152.0	10.4	3.2	0.41

*Provisional   **includes institutions for Post-Matric courses

In India, the education processes are primarily class room lectures, presentations and laboratory experiments. These are supplemented with audio-visual aids like the use of projectors, stereo systems and the projection of films. Students are required to listen to understand. They find it less comfortable to interact due to their perceptions of the atmosphere and the circumstances leading to the unsatisfied learning experience. However, this is not true in all cases. Many find it a better option to have face-to-face interaction during the learning process. This has an implication on the size of lectures and the tutor-student ratio.

Looking into such intricacies of the learning processes, many organizations like ICAI, ICSI, ICWAI, ICFAI and others have developed the successful distance learning course wares and modules to overcome the deficiencies present in the traditional educational model.

- Institute of Chartered Accountants of India (ICAI).
- Institute of Company Secretaries of India (ICSI).
- Institute of Cost and Works Accountants of India (ICWAI).
- Institute of Charted Financial Analysts of India (ICFAI).

These are the Institutes of repute imparting education towards professional streams like Accounting, Company Secretary, Cost Accounting Analysis, etc., in a self-learning modular approach. Students are required to study the modules dispatched to them periodically and can send the assignments by post for their evaluation. Students facing problems in the concepts and theories can attend the special problem solving classroom sessions held periodically on the regional headquarters all over the country. Also, they can register for the examinations according to their suitability in the prevailing slots.
These organizations have been successful in the operation of this modular distance-learning model since their inception. The success of these Institutes can be attributed to the fact that being a distance-education society, they provide the latest industry oriented curriculum and syllable, fair and robust evaluation systems and the management and administration by professionals of the same field. This has led to greater acceptance and recognition of their courses than other regular degree programs. (Comparison is with Bachelor and Masters Programs in Commerce, Basic Sciences, and Arts).

Also, there is the presence of universities like IGNOU (Indira Gandhi National Open University, New Delhi) which is imparting education in the same mode as discussed above for almost 22 years to almost every field—
Accounts, Science, Arts, Humanities, Management, Computer Education and the like.

In light of the above facts it can be said that the distance education used in conjunction with the traditional model are not new and can easily be integrated with the emerging technology.

IV   THE LIST OF INSTITUTIONS

Table II: Higher Education Institutions in India

Type of Institutions	Numbers
I- Universities	
1. Central Universities	18
2. State Universities	275
3. Institutions established under States Legislature Act	5
4. Institution Deemed to be University	96
5. Institutions of National Importance	13
6. Research Institutes	136
Total	**543**
II- Colleges	
1. General Education	10,377
2. Engg., Tech & Arch.	1,302
3. Medical (Allo/Ayur/Homeo/ Unani)	817
4. Teachers Training	1,082
5. Others(Law,/Mgt./ MCA/ IT/Agri etc.)	2,431
Total	**16,009**

As per the latest report of MHRD, India, Table II shows the status of Universities and colleges.

Indira Gandhi National Open University, under the Distance Education Council (DEC), is responsible for the promotion and coordination of the Open University and distance education system, and for the determination of its standards in India.

There are 13 state open universities, 120 dual mode universities, and 2 institutes across the nation which have been given the status of provisional recognition by the Distance Education Council of India (*Source www.dec.ac.in*).

As per the latest report of MHRD, India, Table III shows the number of students enrolled in various courses of different Universities.

Table III: Number of students enrolled

Courses	Total	SC	ST
			(in thousands)
Ph. D/D.Sc./D.Phill.	55.4	3.2	1.3
M.A.	469.3	75.9	23.1
M. Sc.	198.7	20.7	5.5
M.Com.	122.3	11.0	3.6
B.A./B.A. (Hons.)	3772.2	562.9	196.2
B.Sc./B.Sc. (Hons.)	1490.8	168.3	49.8
B.Con./B.Com. (Hons.)	1465.0	125.3	48.4
B.E./(B.Sc. Engg.) B.Arch.	696.6	59.3	21.5
Medicine, Dentistry, Nursing,Pharmacy,Ayur vedic and Unani etc.	256.7	29.6	9.5
B.Ed./B.T	155.2	20.0	9.1
Others	3095.1	184.6	66.2
Total	**11777.3**	**1261.0**	**434.2**

V ROLE OF E- LEARNING

"In well facilitated learning environments, through technology, students become excited about what they are learning and aware that they are members of a global community (Berge, 1998). It is the powerful tool for distance education which is marking its presence across school, universities and organizations. These are due to the inherent advantages of the technology. Some of these are—

- The number of students aspiring for education is becoming larger day by day, making it impossible to develop the traditional infrastructure (classrooms, physical libraries, hostels) to cater to the ever growing need. Developing online systems can help meet these growing demands.
- Due to the larger workforce requirement as guided by the industrial revolution, professionals are lured towards the attractive and soaring incentives to join the race, thus posing a threat to the education industry in terms of dearth of qualified, experienced and competent faculties, experts and the trained professionals. Developing online systems can help the industry by providing new development avenues to the professionals and sustaining their enthusiasm.
- Online Systems will also enable the efficient use of resources anytime and in any part of the country. Thus making the whole education system altogether flexible.
- Also, such systems will enrich the learning process which will enhance the entire learning experience.

VI CURRENT STATUS OF E-LEARNING IN INDIA

As the world's second most populous nation, India also has the distinction of having the world's largest illiterate population. Total literacy has been a goal of many governments. The various active organizations and the institutes in the country are —

VII CASE EXAMPLE 1
INDIAN INSTITUTE OF MANAGEMENT AHEMDABAD (IIMA)

In the contemporary business world, competition is rising, and there is the need of practicing managers, business heads and executives to upgrade their knowledge and skill set to address the new global business paradigms.

Looking to such needs, IIMA has created a new initiative that delivers cutting edge management education in real time through Virtual Learning Programmes. Without leaving their current jobs, executives can now avail the opportunity to enhance their capabilities and skill sets with the premier knowledge delivery expertise.

IIMA has tied up with NIIT Imperia to extend its reach to the working executives through Virtual Learning

Programmes delivered online. These programmes are carefully designed and structured to reflect the most relevant needs of industry. Each programme focuses on new developments and latest trends in managerial practices relevant to the current global practices. These specialized programmes ensure that the participants:

- Get an opportunity to have face to face interaction with the faculty.
- Develop capabilities and hone skills.
- Apply the learning to their organizations.
- Share their learning through the platform.
- Work on live project and report their findings.

An upgraded, specialized skill set and a sound academic and theoretical understanding of the concepts is what the participants can expect after completion of these programmes. Performance in the organization is enhanced and visibility increased, which leads to better future prospects for these candidates.

These management development programmes are aimed at the best of working professionals who are motivated and serious about self development and are prepared to put in time and effort.

The entire pedagogy is conceptualized by the faculty which is specially designed for delivering education over a technology based platform. NIIT brings to the collaboration the expertise of technology based distributed mass education along with its strength of reach across the country and its experience to create a unique student experience for geographically dispersed students.

Two types of programmes are offered: general management and sectoral or functional. The management development programmes (functional) offered in collaboration with NIIT Imperia are aimed at working professionals with 3-5 years of experience.
Currently, the following programmes are offered—

1. STRATEGIC HUMAN RESOURCE MANAGEMENT PROGRAM (SHRM)
2. COMMUNICATION AND PERSONAL EFFECTIVENESS (CAPE)
3. STRATEGIC BUSINESS COMUNICATION PROGRAM (SBCP)
4. ACCELERATD GENERAL MANAGEMENT PROGRAM (AGMP)

Program Delivery:

The programmes are delivered in real time through broadband based education platform. However, the sessions are spaced out to allow participants the opportunity to assimilate the learning and apply it within their organizations. Thus, learning is a rich interaction of activated minds that can test the theories and derive fresh, creative solutions to problems in real life. A two way video

interaction guided by the faculty adds high rigour to the programmes being offered.

Figure1: A Studio for delivering online lectures

IIMA plans to expand its footprint by rapidly scaling up more centers and studio facilities. The technology which has been developed in-house is being constantly upgraded in tandem with global technology advances.

Program delivery is currently happening through the studio at IIMA using the Synchronous Learning Software. Two more studios have been set up at Kolkata and Indore. Attempts are being made to come up with more studio facilities nationally for ease in conduction of classes when faculty is on the move.

VIII   CASE EXAMPLE 2
SYMBIOSIS CENTER FOR HEALTH CARE (SCHC)

SCHC has successfully implemented e-learning and is offering Post Graduate courses in MedicoLegal and Health Care management. Using e-learning, doctors, nurses and other medical related professionals from all over the globe are currently able to get their Post graduate degrees from the comfort of their own places. Rather than taking time away from their regular duties or work hours, they can continue with their education during non-working hours.

Symbiosis understood the need for doctors to be able to continue with their education and designed courses that would help them do so through the Internet. PGDHHM (Post Graduate Diploma in Hospital & Health Care Management) was designed to make the doctors more aware of adapting the management theory into the hospital system. The course focuses on managed healthcare and management issues like strategic management, risk management. It also enables existing hospital managers and health care professionals such as doctors and nurses to understand the concepts and techniques of management and develop skills in planning, operation and entrepreneurship for running hospitals and health care organizations.

PGDMLS (Post Graduate Diploma in MedicoLegal Systems) aims to prepare medical graduates, both doctors and nurses, for managing medico legal problems. It will also enable doctors and nurses to understand the concepts and techniques in medico legal systems. The course was designed carefully with the intention that they could be learned online.

The e-learning system was successfully implemented by ARK Tutor (Source *available at http://www.arktutor.com/*) –a pioneer in e-learning models in the educational sector. The Learning Management System (LMS) allows staff to administer the day-to-day activities. Student management, faculty management, course launching, extensive reports are all built into the system. Additional tools like message board, calendar and progress tracking make the e-learning experience practically paperless. Easy to follow help systems and online demos help the faculty, students and administration to overcome any initial inhibitions that they might have of learning online.

With the help of e-learning, SCHC is able to distribute courses and reach many more people than would have been possible in a traditional classroom.

IX   CASE EXAMPLE 3
AMRITA

Under the agreement, UC Berkely and UC San Diego, as well as Carnegie Mellon University, Cornell University, the State University of New York at Buffalo, and the case Western Reserve University will encourage engineering faculty to spend a quarter or semester of their sabbatical at AMRITA University in the southern Indian state of Tamil Nadu. AMRITA will extend use of its e-learning center, making it possible to be beamed over Edusat, a satellite launched by the Indian Space Research Organization to transmit educational programming to multiple educational institutions throughout India.

Three U.S. research centers are partners to the agreement: UC's Center for Information Technology Research in the Interest of Society (CITRIS), the California Institute for Telecommunications and Information Technology (Calit2), and Carnegie Mellon's CyLab.

The U.S. universities in this agreement are first-tier engineering schools that can help offset the imbalance in the quality of professors in India's fastest growing colleges and universities. With the help of American professors, these satellite courses will turn more students into top-level engineers, not just for India, but potentially for Ph.D. programs and businesses in the U.S. as well.

Composed of four relatively new campuses and established by the world renowned humanitarian organization Mata Amritanandamayi Math—it is developing world class undergraduate and graduate engineering courses to be delivered over Edusat. Other Indian partners in the project include the Government of India and the country's Department of Science and Technology.

Figure 2: An Interactive E-Learning Session with Dr. A.P.J.Abdul Kalaam (former President, India) at AMRITA

Visiting U.S. faculty will be encouraged to explore research collaboration with participating institutions in India. The U.S. universities have also agreed in principle to make teaching materials available on a non-exclusive basis for a new digital content library being created by AMRITA for future students.

X   CONCLUSION

Table II shows the good number of higher education institutes in India and these are growing very fast as dictated by Table 1. Also, the number of students enrolled in these conventional institutes is high and expected to increase in the future. With such increasing enrollment numbers, it would then be difficult to provide the infrastructure for education.

With all the challenges that India is facing in education and training, E-Learning provides many answers and needs to be addressed seriously by the planners, developers and the private industry players. In the knowledge economy, the chief competitive advantage of nations is not their physical assets, be it land, natural resources or even oil, but quality and skill of their people. If used effectively, e-learning can reach education to a large constituency that would otherwise not have access to it. In India, education is nothing short of economic liberation for millions.

As described above, the revolution of e- learning has begun and is at an infant stage and needs to be nurtured further. We have to work hard to develop robust and flexible modules to explore the opportunities to greater heights.

XI   SUGGESTIONS

Many sectors like Education, Banking, Medical, Agriculture or even the Entertainment Industry can use e-learning to lure students and offer introductory courses that can explain the varied opportunities that those fields offer.

THIS IS ONE REVOLUTION THIS COUNTRY BETTER WELL NOT IGNORE.

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