

E-Learning in India

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INTRODUCTION

Education is an essential tool for the economical and social development of a nation. Proper development of human resources is crucial to that. To make everyone able to receive education, there are different forms of educational programmes and provisions. In India, adult education, open and distance education, Operation Blackboard, sarva siksha abhiyan, and so forth have been put in place to achieve universalisation of education. The literacy rate has shown an increase from 36.17% in the 1970s, 52.19% in 1991, to 65.38% in 2001. An increase in the strength of educational institutions is also evident from the fact that while there were over 20 universities and 500 colleges in 1947, now India has 311 universities (including 19 central universities, 206 state universities, 86 deemed-to-be universities, 13 institutes of national significance, and five institutions established through the State Legislature Act; Dhir, 2004). The Indian higher education system is said to be the second largest after U.S. in the world, based on the expansion of institutions, student enrollment, and faculty. But to this rosy picture, the other dark side of the coin is that in spite of having this large educational infrastructure, higher education is accessible only to 6% to 7% of 18- to 23-year-olds, as found out by a World Bank report (2001) and Kumar (2004). Dongaonkar (2004) reported that there are other developing countries that have a higher percentage of educational coverage, for example, Indonesia (11%), Brazil (12%), Mexico (14%), and Thailand (19%). The government of India (2002) has laid the emergent need of providing educational opportunities, for more than 3.2 million children (six to 14 years) and 100 million adults (13 to 35 years) need school education.

INFORMATION AND COMMUNICATION TECHNOLOGIES

The emergence of and advances in information and communication technologies are playing a very important role in the national economic and social development. In the Indian context, adoption of ICT in education becomes more prominent, keeping in view the fact that out of a billion, nearly 700 million people belong to rural areas where creating a basic formal infrastructure for education is difficult. The ICTs in education brings portability, flexibility, and learner centricity. The past few decades have witnessed a low penetration of ICT equipment like computers, fixed and cellular telephones, and Internet-access devices, primarily due to their high costs, liberal policies of the government of India, the development of indigenous technologies like Simputer (simple computer) and corDECT (a cost-effective technology for Wireless Local Loop (WLL) telephony and Internet access), the telephone, and the increased density of the Internet in India. According to the annual report (Government of India), the country is witnessing rapid growth through the reforms envisaged in the telecom sector and pursued through National Telecom Policy 1994 and 1999. As of March 31, 2004, the total number of phones in India was 70.6 million (growth of over 40%), raising the telephone density from 5.11% in March 2003 to 7.02% in March 2004. Growing popularity of people toward mobile phones and greater involvement of the private sector (from 20.96% on March 31, 2003, to 39.27% on March 31, 2004) are main factors behind this incremental growth. Of the total phones, nearly 34% are cellular mobile phones, and if we add WLL phones, the ratio increases to 44%. The annual report also points out an ambitious space communi-

cation programme having eight operating Indian National Satellite (INSAT) networks at 48E, 55E, 74E, 83E, 93.5E, and 111.5E orbital locations that are having fixed and mobile communications.

E-LEARNING PROJECTS IN THE EDUCATIONAL AND GOVERNMENT SECTORS

The conducive environment as provided by the government toward the development of an effective and vast network of telecommunications, extending the reach of Internet and Web technologies to the different parts of the country and increasing the demand for education among masses, led to the emergence of an e-learning mode of instruction during the '90s. The lead was taken by NIIT (National Institute of Information Technology; <http://niit.com>), Aptech (<http://aptech.com>), and some of the premier educational institutes like the Indian Institutes of Technology at Delhi, Mumbai, and other places. The constitution of the National Taskforce on Information Technology and Software Development in May 1998 by the prime minister of India was a milestone to this cause. This task force had the objective to formulate a long-term national IT policy for the country, and a vision to see India emerging as an IT software superpower. One of the recommendations of this task force was to help India to achieve 100% IT literacy at the senior secondary level in five years and at the secondary level in 10 years in association with IT human-resources-development companies (<http://www.nasscom.org>). As a result of such initiatives, various universities and organizations launched e-learning programmes. Details on some of the e-learning projects are given in the subsequent section.

VIRTUAL-CAMPUS INITIATIVE OF IGNOU

(<http://www.ignou.ac.in/virtualcampus/index.htm>)

The School of Computer and Information Sciences of the Indira Gandhi National Open University (IGNOU) offers computer programmes targeted at the attainment of various levels of proficiency and

educational qualifications. Starting with the diploma in computers in office management (DCO) in 1990 (this programme is not offered now), the university introduced three more programmes in 1995: the certificate in computing (CIC), bachelor of computer applications (BCA), and postgraduate diploma in computer applications (PGDCA). Out of these, CIC and BCA are still continuing, whereas PGDCA was abolished after 1996. Then, a master in computer applications (MCA) programme was launched, which is very popular. There have been (in 1998) two more programmes (not offered now): the certificate in network-oriented computing (CNOC) and certificate in Web-site-design management (CWD). In the year 1999, when IGNOU acquired Internet capabilities, it launched two prestigious programmes with Internet-centric approaches, that is, the BIT (bachelor of information technology) and ADIT (advanced diploma in information technology), in collaboration with the Edexcel Foundation of the United Kingdom and the Ministry of Information Technology of the government of India, respectively. In these programmes, the learning resources and counseling is delivered through the Internet.

RESETTLEMENT AND REHABILITATION ONLINE

(<http://www.rronline.org>)

The postgraduate certificate programme in participatory management of displacement, resettlement, and rehabilitation is a proactive initiative of the World Bank and Indira Gandhi National Open University. The programme has been designed with the aim to help resettlement and rehabilitation officers, field staff, desk staff, and technical experts (civil, mechanical, and electrical engineers, architects, agriculture experts, other services providers) in developing skills in participatory methods of managing the concerns and issues of displacement, and working for satisfactory resettlement and rehabilitation of those displaced by development projects. The delivery mechanism consists of various multimedia components like audio and video, Internet-usage broadcasts, teleconferencing, and so forth. The Internet is used for the purpose of computer-marked assignments and participation in discussion forums (PDF). There is also a provision for e-counseling

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