

Recent initiatives in distance education

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Distance education has been in existence in India for at least 40 years and the medium has changed from pencil and paper correspondence courses to real-time Internet Courses. About one-fifth of the country's student community benefits from distance education programmes. The paper highlights two recent initiatives and also describes in brief, some of the key issues in the implementation of distance education programmes.

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ONE of the corollaries of the recent dissent and debate on the proposed caste-based reservation in institutions of higher learning is the need to develop an inclusive education policy that is sensitive to the social, cultural and economic features of our country which often deter many students from pursuing higher learning. It is also being suggested that the intake of students in premier institutions be increased; a skeptic proposal considering the paucity of teaching faculty and infrastructure typifying many of our institutions. In this context, it is worth examining one well-entrenched system of education, viz. Distance Education (DE), and the effective role that this system could play in providing quality education to a larger group of students and other learners.

DE was first introduced in India by private institutions that offered certificate and diploma courses. By 1960, many of the universities recognized the need and potential of DE, and launched graduate degree programmes. The primary objective of these programmes was to encourage school and college dropouts to pursue learning, and enhance their chances of obtaining a job. Hence, DE remained the mainstay of the non-formal system of learning and restricted itself to offering courses in arts and languages. However, as demand for service providers increased, universities adapted the existing programmes to include subjects with applied value such as teacher-training, but still shied away from basic sciences.

The reach of DE programmes can be most effectively assessed in the small towns and villages that constitute rural India. It is therefore no surprise that about one-fifth of the total student community benefits from distance education programmes. The Indira Gandhi National Open University, one of the largest in student enrolment, has only distance programmes with numerous local centres that offer supplementary contact classes¹. Despite the proven efficacy, there are many obstacles to reaching a

common understanding of what DE is and how it should be carried out; these include inconsistencies in definitions and implementations among and within fields, and a lack of solid empirical research on the topic. The most basic definition of DE is that it is an 'institution-based, formal education where the learning group is separated geographically, and where interactive telecommunication systems are used to connect learners, resources, and instructors'². Two recent initiatives are worth discussing in this context.

The National Programme on Technology Enhanced Learning (NPTEL)³ is a major initiative by the Indian Institutes of Technology (IITs) and the Indian Institute of Science (IISc), Bangalore, for creating web-based and video-based content in five major engineering branches at the undergraduate level for the benefit of engineering students and faculty in all Indian institutions. The impetus for NPTEL was the visit of the Directors of IITs in 1998 to the Carnegie Mellon University, which has successfully implemented a DE programme for Mexico. NPTEL, approved in the year 2001, is funded by the Ministry of Human Resource Development, Government of India. The overall purpose of NPTEL is to serve the needs of multiple users: for instance, to enable the teachers to enhance their teaching with content developed through careful, peer-reviewed and reasonably complete courses by the faculty of IITs and IISc, and to enable interested students to access the courses directly and learn at their own time and pace. The programme in its initial phase is restricted to the following disciplines: civil engineering, computer science and engineering, electrical engineering, electronics and communication engineering, mechanical engineering and the basic sciences, management and language courses that are needed to assimilate the technical content. The curricula for all these courses have been drawn from the model syllabi proposed by the All India Council of Technical Education, the syllabi of Anna University, Chennai; Visveswaraiah Technological University, Belgaum and the Jawaharlal Nehru Technological University. In the next phase it is proposed to extend this process to cover other engineering branches and provide a learning process in which localization

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of examples, emphasis on concepts, reasonably extensive question banks and enough design experience are all integrated to provide motivated students and teachers a rich learning repository and raise the overall level of education in the country.

The first phase of NPTEL is expected to be completed by June 2006, and the content for about 230 courses of the total of 600 has been developed involving more than 300 faculty members from IITs and IISc. In many instances, existing courses have been edited and encapsulated into video format. The nodal institutions have established video-recording infrastructure to provide broadcast-quality digital video of about 120 courses each of 40 hour duration. Some of the courses have been broadcast through a television channel exclusively set up for education by the Government of India, that has been appropriately named Ekalavya – the one who was probably the first DE learner that we know of. Approximately 125 web-based courses are being prepared for free distribution and this was expected to be in place by July 2006. The courses have been prepared under a modular (or lectures) format such that teachers in engineering institutions can choose their content. They will be encouraged to tailor the content according to their needs.

The second initiative under discussion is by the Tamil Nadu Agricultural University (TNAU)⁴, which has been offering DE since 1974. One of the earliest attempts of TNAU called 'Farm School', broadcast by the All India Radio, continues to be a popular programme for its clientele of farmers and small entrepreneurs.

Recognizing the potential of the Open and Distance Learning (ODL) mode of education, a Directorate of Open and Distance Learning was established by TNAU in 2005. This was in a sense the first step in the transformation of TNAU from a formal educational system to a dual and convergent mode that adopts appropriate policies and systems of ODL and ICT. Technical guidance and support is being provided to this initiative by the Commonwealth of Learning, Canada, especially in the areas of development of instructional material, conducting interactive sessions, etc. A consortium of four institutions, viz. TNAU, Kerala Agricultural University, International Crops Research Institute for Semi Arid Tropics (ICRISAT), Hyderabad and Maharashtra Fishery and Animal Sciences University, has been formed to implement the programme. Two target groups have been identified for the programme of which the first group covers farmers, local institutions and school dropouts, and the second comprises of entrepreneurs, field service providers and interest groups. Certificate courses will be offered in subjects that largely have an applied value such as sugarcane production, cultivation of coconut, cotton, mushroom production, nursery techniques, preservation of fruits and vegetables, and repair and maintenance of farm equipment and machinery. Postgraduate diploma and degree courses will equip students with expertise in management studies, bioinformatics, food bio-

technology, etc. Based on the nature of the course that is offered, 'Personal Contact Programme Centres' have been identified from among the research stations of TNAU. To further strengthen the programme, TNAU has entered into a collaboration with reputed international and national institutions. These institutions will support, facilitate and stimulate the development of course material, especially since the programme envisages active use of e-learning mode in future.

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Regardless of the medium, distance courses have common characteristics and, likewise, have similar problems and impediments. Of the many barriers that typify DE, curriculum development and course content are the most critical, not only to ensure that the quality of the programme is not compromised, but also to sustain student interest. DE programmes tend to be perceived as low quality and thereby fit only for dropouts or laggards. The 22 June 2006 statement of the Minister of Higher Education, Government of Tamil Nadu, illustrates this rather lucidly, when he proclaimed that M Phil and Ph D programmes will be removed from the purview of DE since they may be of low quality⁵.

Therefore, development of course content for DE programmes needs to move beyond adapting or modifying existing course material. In addition to the rigour in content, the curriculum development process needs to keep in consideration factors of course structure, presentation, flexibility and course pacing. Most importantly, the curriculum should create and enhance inter-activity, which is a multi-faceted process of interaction between the learner and other learners, the facilitator, the host institution and the content.

The course content itself cannot be ignored in any theoretical or practical consideration of distance education attrition⁶, since poorly designed course materials are the key contributors to student attrition rates. The availability of well-designed, effectively implemented and efficiently delivered on-courses is indeed a progressive step to meet the needs of a growing number of learners; more so in India, where educational infrastructure is rather limited. However, it is also to be realized that the pedagogical efficacy of web-based learning has not been fully investigated; and there is not enough empirical evidence to support its effectiveness. On the other hand, there are increasing examples on the distressing gap between the use of technology and sound pedagogical models in DE programmes of South Asia⁷. Because of such challenges, attention needs to be accorded to research initiatives that can identify pedagogical models and methods which are effective for DE programmes.

McGorry⁸ emphasizes that 'theory-driven empirical research is necessary so that the criteria for developing effective Internet-based programs are established'. Several

researchers have also highlighted the need for defining quality standards to ensure the academic integrity of e-learning programmes⁹, a challenging task given the nascent stage of web-based learning programmes. Finally, DE programmes require sustained effort and commitment from proponent institutions, as they are always at a risk of becoming a peripheral activity with little or no significance to the institution itself.

1. [http:// www.education.nic.in](http://www.education.nic.in)

2. Simonson, M. S., Smaldina, M. Albright and Zvacek, S., *Teaching and Learning at a Distance: Foundations of Distance Education*, Merrill/Prentice Hall, NJ, pp. 241 (from the web).

3. Based on an interview with M. S. Ananth, Director, IIT-Madras.

4. Based on inputs provided by C. Ramasamy, Vice-Chancellor, Tamil Nadu Agricultural University, Coimbatore.

5. *The Hindu*, 22 June 2006.

6. Bullen, M., Distance education and technology continuing studies, 1996; <http://www.cstudies.ubc.ca>

7. Khan, B. H., A framework for web-based learning. In *Web-based Training*, Educational Technology Publications, NJ, 2001, pp 75–98.

8. McGorry, S. Y., Measuring quality in online programs. *Internet Higher Edu.*, 2003, 6, 159–177.

9. MacDonald, C. J. and Thompson, T. L., Structure, content, delivery, service and outcomes: Quality e-learning in higher education. *Int. Rev. Res. Open and Distance Learn.*, 2005, 6, 1492.

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