

---

## *Editorial*

---

### **Distance Education for Better Health Care**

Health is an important component of socio-economic development. The current focus on the inputs to a better health has shifted from participation to empowerment(1). This shift has been necessitated from an integrated conceptual framework that encompasses the study of determinants, mechanisms and attributes which have a bearing on health.

Empowerment implies a shift from traditional top-down model to a new bottom-up approach. This enables the community and its health care providers to make appropriate choices out of many alternatives available. Empowerment can take many forms-the essential feature of which is education and capacity building (2). Inherent in this is the active mediation of a teacher. However, that may not always be possible in the developing world due to various constraints.

The conventional educational systems are too rigid to accommodate the learning needs of a variety of learners. Vast geographic area, multitude of population, socio-economic differences and lack of adequately trained manpower further compound the problem. The focus has therefore shifted to open learning-meaning thereby an educational system which is free from traditional constraints. Distance education (DE) is a representative example of such open learning.

There has been an upsurge in distance learning systems in all areas of the world(3). They are influenced by local

needs and environment and therefore vary in structure and content. Despite these differences, they have the following common features: (i) Provide educational opportunities to people unable to join formal system-ranging from post-literacy to post-graduate stage; (ii) Based on well founded schools of thought; (iii) Innovative teaching learning processes; (iv) Take learner needs into considerations; (v) Use most effective medium or multi-media approach; (vi) Use two-way communication; and (vii) More economical and have wider reach than conventional educational systems.

### **Philosophy**

It is important to mention here some assumptions that are made in the theory and practice of DE. This will help us understand the concept better.

DE is a coherent and distinct field of educational endeavor; it embraces programmes at a distance at technical, college and university levels in both public and private sectors. It is more than a teaching method or mode. It is a complete system of education with its own laws of didactical structure and its own quasi-industrial administrative procedures. DE has problems of quantity, quality and status. Good practice in DE seeks to provide solutions to these inherent problems. DE is a needed component of most educational systems - in that sense, it is a felt need (4).

Defining DE is a difficult job. A number of definitions have been given by various schools of thought (5), depending on the aspect under question. It is not intended to go into all those details. Keegan (6) has attempted an eclectic approach and on this

basis, the following can be recognized as essential attributes of DE: (i) Quasi-permanent separation of teacher and learner (that distinguishes it from conventional face to face teaching); (iii) Provision for two-way communication so that student may benefit or even initiate a dialogue (that distinguishes it from other uses of technology in education); (iv) Use of technical media-print, audio video or computer to unite teachers and learners; and (v) Quasi-permanent absence of a learning group so that people are taught as individuals and not in groups (that distinguishes it from other learner centered programmes).

These five interdependent elements are the backbone of any distance learning system. In addition, there are two socio-cultural determinants which are necessary pre-conditions and also consequences of DE. These are: (i) Presence of more industrialized features than conventional education (*e.g.*, mass production of learning materials, conveyor-belt system of production, *etc.*), and (ii) Privatization of institutional learning as well as institutionalization of private learning.

DE has established itself as a distinct academic discipline. However, it has not come up with brand new theories which can be authoritatively called DE theories *per se*. It has adopted the already accepted theories of teaching and learning (7). Skinner's behavior control model, Ausubel's advance organizer model, Egan's structural communication model, Bruner's discovery learning model, Carl Roger's facilitation model and Holmberg's theory of didactic conversation are some of the examples of such theories extensively relied upon by DE.

### Process

A considerable damage has occurred to

the cause of DE by inappropriate use of what can be called correspondence education. Correspondence education has been commercially exploited in our country, especially for imparting B. Ed degrees. It is to be very explicitly made clear that DE and correspondence education are not interchangeable terms. Correspondence education implies use of only postal medium for imparting traditional courses and curricula with the conventional restraints. DE on the other hand is much more than that. No doubt that DE also uses postal communication as *one of the* means, but it adopts a multi-media approach. It has two-way communication as one of the inbuilt features so that even the learner can initiate an academic dialogue (8). The real difference however, lies in the fact that DE imparts non-conventional courses to meet the needs of the learner (9). It also stresses the practical and attitudinal aspects.

The emphasis in DE is to initiate and maintain an academic dialogue. Self instructional materials (SIM)(10) form the initiating point of this dialogue-these serve as surrogate teachers to compensate for absence of a live teacher. Assignments and distance teaching further maintain this interaction. Depending on the situation, audio, video, computers, contact programmes, peer interactions, *etc.* are other tools, used singly or in combination to augment the process. The distance learner is not a loner-he has a wide range of academic, social and emotional support to sustain his motivation (11) (*Fig. 1*).

There has been a concern about feasibility of learning psychomotor and effective skills using distance mode. These doubts may be valid; however, the vast experience gained in this area through operation of Indira Gandhi National Open University (IGNOU), New Delhi and University Sains Malaysia, Penang, indicates that it is possi-

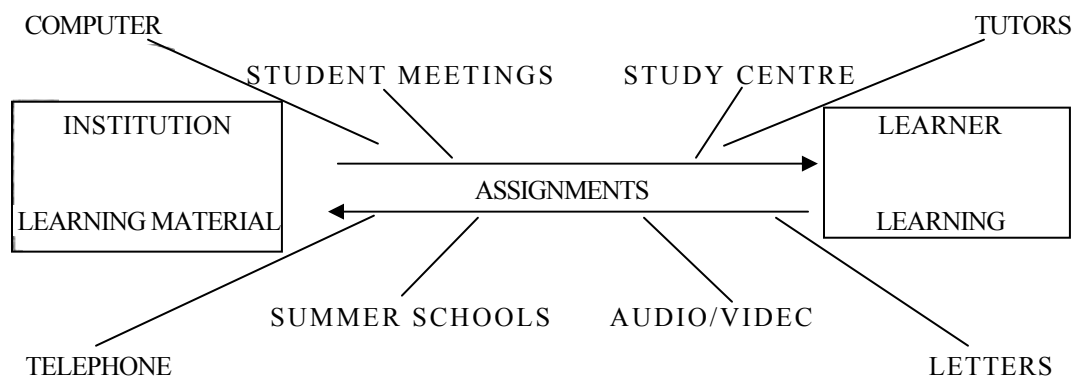


Fig. 1 Pictorial depiction of the possible interactions in distance education.

ble (12). There is already a good experience of conducting B.Sc (Nursing) and Diploma in Nutrition and Health Education programmes by distance mode. A Diploma in Mother and Child Health has also been initiated. Another programme on Geriatrics is in the offing. In addition to these health related courses, library science, water conservation, mass communication, computer science, *etc.* are areas involving a great deal of psychomotor skills which are being taught by distance education. Allama Iqbal open University of Pakistan has been more innovative in designing of courses—live-stock management, utilization of bank loans, repair of electrical appliances, health, child care, *etc.* are some of the examples<sup>^</sup>). Erstwhile Soviet Union could wipe out illiteracy within, a very short time by using DE(14). There is no doubt that such courses help to raise literacy level, promote income generation and thereby have a bearing on health.

In a more formalized set up, DE has been used for teacher training which has a major bearing on output of medical education system. There are examples of using DE for regular on-campus medical students in the teaching of pharmacology (15), introducing undergraduates to principles of general practice(16), continuing medical

education(17,18), clinical epidemiology(19) and community health nursing(20). We have used it for imparting family life education using SIM and the initial results have been encouraging (21). In another Indian study (22), DE was found to be useful and cost effective to train physicians in hospital administration.

### Potential

DE has been introduced to respond to growing educational needs which are not easily met by conventional modes. These include training of teachers, provision of opportunities for adult literacy, acceleration of manpower development, bringing expert knowledge and rare experiences in classrooms, updating skills and knowledge, initiating national campaigns on health and population and to have cost effective programmes for a large number of students.

The current emphasis on Information and Education for Health (IEH) can be met to a great extent by adopting unconventional technologies like DE. The following areas can be identified where DE can be put to use in relation to health care: (i) Continuing education of health professionals; (ii) Skill upgradation; (iii) Dissemination of

newer skills and technologies for child survival; (iv) Information about national programmes related to child health; (v) Family life education; and (vi) Training of teachers in Pediatrics and other specialities.

Continuing education of health professionals is a major area where DE can be applied cost effectively. In Tanzania, modules covering diarrheal diseases, respiratory infections, environmental sanitation, *etc.*(23) have been developed and are being successfully used. The recently introduced Diploma in Mother and Child Health by IGNOU is another good example of skill upgradation of physicians. These examples serve to dispel the notion that DE can not be used for education of health professionals.

Another distinct advantage of DE is its ability to inculcate self learning in the learners. In this era of information explosion, this attitude is a definite asset and will prevent obsolescence amongst health professionals. In the absence of any statutory requirement to undertake continuing education, this becomes even more important.

**Tejinder Singh,  
M.V. Natu,**

*Christian Medical College,  
Ludhiana 141 008.*

## REFERENCES

1. Garcia RR. Community health and development. *Promotion Education* 1994; 1: 5-9.
2. WHO. Co-ordinated Health and Human Resource Development. *World Health Organization Technical Report Series*, Geneva, 1990; P 801.
3. Madan VD. Distance education systems for national development. *Indian J Open Learning* 1993; 3: 33-40.
4. Moore MG. Towards a theory of independent teaching and learning. *J Higher Educ* 1973; 44: 661-679.
5. Singh T. Distance learning-feasibility of medical education. *Indian J Training Devp* 1994; 24: 29-32.
6. Keegan DJ. *The Foundations of Distance Education*, 1st edn. London, Croom Helm, 1986; pp 1-50.
7. German Foundation for Distance Education. *Handbook for Distance Education Materials*, 1st edn. Bonn, German Foundation for Distance Education, 1989; P 12.
8. Briggs LJ, Hamilton NR. Meaningful learning and feedback variables. *Rev Educ Res* 1964; 34: 545-548.
9. Holmberg B. *Status and Trends of Distance Education*, 1st edn. Kogan Page, London, 1981.
10. Marland PW, Store RE. Instructional strategies for improved learning from distance teaching materials. *Distance Educ* 1982; 3: 89-90.
11. Caron C. Student support at crossroads. *In: Eds. Learning at a Distance: A World Perspective*. Daniel JS, Stroud MA. Edmonton, Athabasca Univ, 1982; pp 145-148.
12. Misra BL. The case of Indira Gandhi National Open University, I *Higher Educ* 1988; 13: 1-16.
13. Koul BN. Research in Distance Education. Block 4/ES 315, 1st edn. New Delhi, Indira Gandhi National Open University, 1992; pp 12-15.
14. Kuzenestov V. Correspondence education in the Soviet Union. //; Mackenzie N. Ed. *Open Learning*, 1st edn. Paris, UNESCO, 1975.
15. Natu MV, Singh T, Zachariah A. Application of distance mode for regular teaching of on-campus students. *Indian J Open Learning* 1993; 2: pp 7-10.
16. Kamien M, Me Adam D, Grant J. Distance learning in a local setting for introducing general practice to under-graduate students. *Med Teacher* 1991; 13: 353-361.

17. Singh T. Pedagogic effectiveness of a self instructional material in medicine. *Indian J Open Learning* 1994; 3: 34-35.
  18. Engel CE, Browne E, Nyarango P. Problem based learning in distance education-exploration in continuing medical education. *Med Educ* 1992; 26: 389-401.
  19. Heller R. Distance learning of clinical epidemiology and biostatistics. *Annals Comm Oriented Educ* 1994; 7: 349-354.
  20. De Jonge J, Me Dougall L. Inter-University collaboration in development of a distance education course in community health nursing. *J Nurs Educ* 1989; 28: 325-327.
  21. Singh T, Natsu MV, Agarwal A, Kumar J, Thomas AG. Self instructional material for imparting family life education. *J Family Welfare* (In press).
  22. Verghese S, Pulimood BM, Senguttavan M. Innovative distance education programme for hospital managers. *Indian J Open Learning* 1993; 2:1-6.
  23. Pemba S, Sidney N. Continuing education-the experience of Tanzania. *Health Action* 1993; 8: 6-7.
-