

5.2 Convocation Address at the 81st Convocation of Nagpur University

-1994-

Abstract

'Educational invasion from the skies' is the main theme of this address. Use of satellite for offering educational programmes for transmission both on TV and network communication has begun. According to Alvin Toffler three revolutions have shaped the human society, first the agrarian, followed by the industrial and now the third, the post industrial revolution, is taking place through development of computers and artificial intelligence. Indian society presents a peculiar mix of all the three changes, i.e. agricultural, industrial and post industrial - - a very complex situation. Therefore our challenge is to use the communication technology to solve our problems of providing basic functional literacy, training and education for development and also compete with others. Key questions include "What is offered by communication technology and what are its disadvantages? What role can be assumed by open and distance education? What about open education network (OPENET)? And what about satellite delivered education for all and its design?" These are some of the themes discussed in this convocation address. (By: LA)

Mr. Vice-Chancellor, Members of the Management Council, Deans of Faculties, Members of the Senate and Academic Council, Faculty, Staff and students of the university, distinguished guests, ladies and gentlemen,

It is my great pleasure and privilege to have been asked to deliver the Convocation Address at the Eighty First Convocation of Nagpur University. I thank the Vice-Chancellor, Prof. Gabhe and members of the Council of Management for giving me this honour.

Nagpur University is one of the oldest universities in Central India and spans eight eventful decades of meritorious educational programmes and services for the development of students, people and the region. I congratulate all the staff and students for their achievements on this auspicious occasion.

Educational Invasion

The universities, as we come to accept them, are or ought to be the centres of learning, of culture and of excellence. We are very well acquainted with the nature and functions of the teaching and learning in the university system. The colleges and universities with their campus facilities are the embodiment of academic life. The idea is that the teachers and students live together, work together, learn together and the few years a student spends in the alma mater build his character and career.

Our country is liberated from colonialism 48 years ago and started on the path of abundant development. Education is always considered a means of achieving quicker development and, therefore, the urge to establish more colleges and universities is obvious, particularly when only 6 % of the 18-23 age-group are fortunate to get the benefit of higher education. While living with the current realities, as a teacher and administrator who has spent an entire career in university education, I would like to raise a question: what is going to be the future of university education? Is it going to remain the same with minor changes or change radically? If it does change, what is in store for us? The questions are raised purposely since many events happening around us in education are creating confusion and threatening the very institutional nature of the university system. I do not propose to deal with various problems and concerns of the present day university education such as relevance and utility of education, financial and administrative problems faced or malpractices and corruption entering into education, but instead consider the global situation. The latest threat or promise is described as the 'educational invasion from the skies'.

Satellite Delivered Education

Look at this little ad. in a newspaper. "I welcome all the Indian youngsters who will soon be a part of our family at the Open University of British Columbia". This is an invitation by the Director of the Columbia university published recently as an advertisement in partnership with APTECH, a private computer education company. The university is offering B.Tech. degree in

Information technology and assures of high quality education and bright future. Internationally renowned London School of Economics is offering its programme in partnership with an institution in Bombay. Many universities in developed countries are trying to find partners for offering their programmes in many Asian and African countries. The National Technological , University of USA is offering engineering and technology courses at master's level on their electronic information system through International Network (Internet). Their students are spread all over the world. This is just a beginning.

Broadcast is also being used for offering educational courses. ZEE TV has started an educational channel called 'ZED' (Zee Educational) offering a computer education programme'. There are plans by Doordarshan and the Ministry of Human Resource Development to use TV channel for education through satellite. It should be noted that satellite is being used both for open transmission on TV as well as for network communication.

India has a legacy of and great fascination for an education from the great universities of the West, such as Oxford, Cambridge, Harvard, Yale, etc. Many aspirants for higher and quality education went to and are still going to western universities for their higher studies. Now many universities from the developed countries are offering in India their degree programmes through Satellite and Internet. The attraction of foreign degrees which are preferred by multinationals in India, is posing a challenge to the Indian education system.

Onset of the Third Revolution

Alvin Toffler, the famous futurologist, classified the development of humankind into three distinct phases through three revolutions. The First Revolution transformed humankind from the tribal to agrarian phase. The agrarian society relied essentially on nature, used muscle or animal power and continued for about ten thousand years. It used tools and crafts for the products it needed. The whole system was very much decentralized. The System of education developed for the purpose was of 'Gurukul' nature, Where students learned from -guru' by living and working at his home or 'ashram". The Second Revolution transformed the agrarian society into the industrial phase, invention of machine or engine was the basis of the industrial society and led to the process of centralised production in a factory workshop. The process of industrialisation led to urbanisation, produced goods and products of great uniformity, quantity and quality. All the society and nation got reorganised to support the productive processes by offering various services such as transport, housing, health, sanitation etc. The investment in industry, called the capital, became the measure of power and strength of a society and a nation. The system of education had to expand to provide for and lead the process of industrialisation. It did so by establishing schools, colleges and universities — the formal system of education with which we are well acquainted. This process of transformation is going on for the last three or four centuries in developed countries. The Third Revolution has just started with the development of computers and artificial intelligence and is hardly two-three decade old. It is now offering essentially intelligent machines and bringing out transformation at a pace unimagined so far. This phase of mankind is described variously as post-industrial society, information society, third wave society, twenty-first century society, scientific & technological society, etc. So far the societies were separated by national boundaries. Now globalisation has become the major direction of change. Automation and artificial intelligence will be used in' all walks of life. According to

Daniel Bell "Knowledge and information are becoming the strategic resource and the transforming agents of the post- industrial society". We are and will be experiencing the explosive changes in our personal, working and social lives during this phase of transformation.

We all are passing through epoch-making changes. What was experienced by the industrial society in the Second Revolution during their 10-12 generations {about 300 years) is being experienced in one or two generations in the Third Revolution. India presents a peculiar mix-in these changes; it exists in parts in all the three phases i.e. agricultural, industrial and now post-industrial, and therefore poses extremely complex situation, This is because, we essentially started on the path of Industrialisation after Independence. In Indian situation, therefore, simultaneous development of industrial as well as post-industrial phenomena in a basically agrarian society is offering challenging opportunities. Essentially we want to leap-frog into a new era of technology to solve our problems quickly and also to compete with others. One of the major challenges is, therefore, how to use means of communication in solving our problems of illiteracy, basic functional literacy, training, education and development in the modern technological society by educating all.

What is offered by Communication Technologies ?

Communication technologies can be grouped into two types: one belonging to broadcasting type which includes Satellite, TV, Radio, etc and the other, a non-broadcasting type which includes VCR, Cassette Tape Players, Computers etc. By using satellite, terrestrial communication lines and microwaves, many types of communication networks like NICNET, ERNET, INTERNET etc. are coming up for information flow. Already we are used to television broadcast networks such as Doordarshan, BBC, CNN, Zee TV, Star TV, etc. and information highway, super highway in network communications.

Today, Indian viewers have access to over ten channels as- against one just a few years back,, India has mastered space technology, and soon may have more than 30 channels besides globalisation of Doordarshan. The technology development in the near future may offer far more channels and easy access to satellite communication from any where within the next few years.

The communication networks are now capable of sending data (printed matter), voice and images (pictures) and therefore computer networking is creating new mind boggling possibilities, Integration of print, audio, video added with computer capabilities is creating a host of applications, We are now coming across such applications in education as virtual classroom, virtual lab/field work and virtual conferencing without using any 'paper' and giving out proceedings immediately on CD-ROM etc. The networking will be making available all the world of knowledge to a student at his home.

Television is being used for education in India for the last 20 years, starting with the first use of satellite covering 2,400 villages called SITE (Satellite Instructional Television Experiment) in 1974. Now education has taken the backseat and films, film-songs, soap opera etc. have dominated the TV channels.

The means of communication have accelerated the process of globalisation, brought the world together, 'made the process of democratisation stronger by giving access to information to all. The direction of development is certain and irreversible. However, it has led in some areas to bad social influence.

While studying the impact of TV on students, the Forum of Teachers from Public Schools representing 60-odd institutions in Delhi noted that on an average in a city like Delhi, students watch TV for four hours a day. Their conclusion is that the media has promoted vulgarity and stifled the mental growth of children without due regard to moral propriety. They would like to stop this 'cultural invasion' on students. The Times of India survey and many such studies have revealed that 'heavy exposure to televised violence is one of the causes of aggressive behaviour, crime and violence in society'. The eminent sociologist, Professor Rajni Kothari has lamented "the increasingly diminishing interventionist role of the State in media use by leaving it to the market forces to decide what is good to the people".

Whatever might be the effect on young generation and society, we cannot put the blame on satellite or the electro-magnetic waves that carry the information. It lies with the users, I may say, at both ends. We have to find how best, the media could be used for the good of people, particularly through the education channel.

One of the major disadvantage of the present day communication technology is its cost to the customer. In a country like ours, the poor will not be able to pay for the use of this high technology. Information and knowledge networks that are getting rapidly developed all over the world and even in India will be available only to the rich. This is another division of the world and the people into info-rich and info-poor. Poverty in information and knowledge may lead to a new cultural colonialism and may further widen the gap between the developed and the developing societies.

Open and Distance Education in India

The open university -system, started with the establishment of the British Open University in 1969, is hardly 25 years old. However, by now most of the countries in the world are having open universities or distance education institutions. In India, correspondence courses were started in 1962 by Delhi University and open university education in 1982 with the establishment of Andhra Pradesh Open University. Open universities use distance education methods with openness as the philosophy.

India is having at present one National Open University (Indira Gandhi National Open University, New Delhi), and seven State Open: Universities [Dr. B.R. Ambedkar Open University, Andhra Pradesh; Kota Open University, Rajasthan; Yashwantrao Chavan Maharashtra Open University, Maharashtra; Babasaheb Ambedkar Open University, Gujarat; Bhoj Open University, Madhya Pradesh; and Nalanda open University, Bihar). Government of India has adopted a policy of establishing one state open university In each major state. With 2 lakh students in (he open universities and 5 lakh students in the 46 Correspondence Course Institutes, the distance education system caters to nearly 14% o, the total enrolled students in higher education in our country.

The open and distance education system is a product of modern communication technologies and, is therefore, continuously evolving and Changing along with technologies. I, uses both the technology of education and technology in education, In the form of self-instructional materials by using multi-media approach i.e. audio, video and print. IGNOU programmes are broadcast over Doordarshan for 1 ,/2 hours per week in three slots and also on All India Radio. However, broadcast use so far is very marginal.

The open and distance education system has successfully developed methodologies for imparting no. only the conventional B.A/B Com programmes but also professional (MBA, B.Ed. etc.), medical (B. Sc. Nursing), technological (engineering and computer degrees/diplomas) agriculture and vocational programmes at various levels. The open universities are carrying out all the functions of teaching, research and extension, and are well established now considering their short existence for the last 10-12 years in India. Indira Gandhi National Open University has been conferred the award of "Centre of Excellence" by the Commonwealth of Learning for the quality distance education i, has provided and maintained.

Distance education in India is getting organized under the Distance Education Council (DEC) of IGNOU. DEC is currently developing a consortium of all the open universities in India for :

- (a) developing common pool of programmos well assessed for their quality
- (b) establishing norms for sharing common pool programmes by the members of the consortium and maintaining their quality in delivery to student
- (c) developing common credit system, so that students' mobility is easier and they may take programmes of their choice simultaneously from more than one university
- (d) maintenance of standards and.quality assurance in open and distance education in India.

The consortium of open universities will be expanded to include 46 Correspondence Course institutions in its fold from the 9th Plan period.

Open Education Network (OPENET)

One of the ambitious programmes envisaged is the development of a network for open and distance education institutions.

Indian Space Research Organisation (ISRO) has. established for IGNOU and other distance education institutions, a tele-conferencing system with one-way video and two-way audio, whose teaching-end conference room is located at IGNOU campus In Delhi and the receiver-ends are located at nearly 100 places in India out of which 23 belong to IGNOU and its sister universities. At the receiver-end, students can see and listen to the experts and teachers on TV screen and ask simultaneously question through telephone or fax. This is a virtual class-room now getting established in India. Common pool courses as in management, education, etc could be learnt by hundreds and thousands of students through these virtual class-rooms spread all over the country. The present facility is a broadcast network and can be extensively used for training and development activities.

Physical network is also getting established by sharing the facilities and educational services of the open universities, through their region, and study centres which numbers around 1,000. Computer network is so proposed to be established by linking a., the open universities and their regional and study centres in a phased manor, so that students can be served academically and administratively with efficiency and prompts.

There are, however, many deficiencies in the Network, which we are trying to establish with our limited resources:

- i) The network has to use existing telephone lines. By considering their present reliability and cost, a common student will not be able to pay the cost of the network use.
- ii) Talk-back a, the user ends will be located only a, the district Places or in big -cities where our Regional and Study Centres are located. The students, disadvantaged geographically or living in rural areas, will not be able to use this knowledge or education network.
- iii) We are using the extended C-band transponder which needs special dish antenna. A, present they are installed a, 100 Places. Even if they are multiplied.10 times whole country will never be covered. What is therefore needed is a dedicated educational channel available 24-hourly and accessible on general TV channel to every viewer.
- iv) Teaching-end facility is now located only at one place and needs uplink facility which costs around Rs.3 crores If education is to be made accessible on mass scale, such uplinks and teaching-ends have to be established in every state in every major Indian language.
- v) The total cost of establishing the network is quite high and cannot be borne by the educational institutions. Initial investment by the Government to create infrastructure is therefore necessary. Later on use of the network can be generated in such a way that the Network can be made operationally self- supporting.

By considering the global competition in which outside universities are likely to swarm the Indian educational scene, particularly for higher courses in the areas of management, technology and communications it is very essential, for the survival and development of the Indian educational system, to have national educational network that will allow flow of data, voice and images. Over the years, the Indian educational system has proved its quality and standards, easily seen from the contributions our graduates are making in developed countries. Now it is a competition of quality education on our soil. Every university has now to come up with high quality assurance in all its educational programmes The modern communication technologies are. enabling us to transmit a wide range of courses of high quality to reach students separated from the university campuses. The communication technology edge for better competitiveness and quality, therefore, needs to be acquired by the Indian education system. Open and distance education institutions are struggling to get it.

Network for Satellite Delivered Education for All

Television broadcast channel alone cannot impart education, since it is a one-way process of giving information. Education is best given when learner interacts with the teachers and learning materials, and goes through a series of activities of various types designed specially to achieve learning objectives of the course. The activities may include learning by work.ng, observing, interacting and participating in community or related activities. The learner must find motivation to learn and direct use of his knowledge in real life situations. Otherwise learning remains bookish and hardly gets internalised. Learning is a personalised process linked with locally and socially relevant activities. On the other hand, television broadcast is a centrally transmitted knowledge, often having universal applicability, but may lack local relevance.. Any design of satellite- delivered education has therefore to incorporate:

- i) 'Universal knowledge' elements appropriate to the target group requirement.
- ii) Multi-media use in learning materials made accessible to learners
- iii) expert counselling made available to-learners
- iv) multi-channel learning for wide variety of learning activities
- v) localised component added to the curriculum to make it relevant.

In open and distance education system, the first three components are included in the instructional design, multi-media self-instructional materials and Study Centre counselling. The fourth could also be built into the learning materials through various activities and delivered with the help of local experts or facilitators. The fifth one can be incorporated by having linkages with localised institutions and organisations who can be entrusted with the responsibility of helping the learners. Since the resource centres (open universities, distance education institutes, regional centres), study centres and learners, in most cases are separated from each other, excellent communication link alone will serve the close interactivity amongst them. This could be done effectively by the total design of the network.

The following design of the Network is therefore considered appropriate:

- 1) Offer Educational TV Channel to broadcast educational information (courses) and expert advice to all on general broadcast channel accessible to all.
- 2) Establish Computer Communication Network linking all resource centres and participating institutions and extending reach of network to every Public Call Office (PCO) or post-office.
- 3) Pooling all the educational resources (programmes/ courses, experts, counselling centres, etc) to offer rich, relevant and diversified courses to fulfil the educational and developmental needs of all.
- 4) Free access to the network courses to the disadvantaged learners.

Development of such an education or knowledge network is not beyond the educational and technological competencies of our country. If achieved, it will help in democratising education by giving access to all and in particular the poorer sections of society to the knowledge network. We may then come across educational scenario in which lakhs of students are learning a

programme or a course and millions are getting enrolled as learners by using Knowledge Network. The task is quite gigantic, integrative and innovative. If done successfully, we will be able to establish the educational system of the post-Industrial or information society ie Knowledge Network, wherein every educational institution in the country will have something to contribute and receive and every learner may have opportunity to learn according to his/her choice/convenience. Ultimately the beneficiary will be the millions of learners of this country poised to enter into the learning society.

Friends, we are at a stage when epoch making changes are taking Place in a., walks of human activities. The communication revolution will Obviously lead to an educational revolution, whose nature will become clearer as the communication techniques and technologies enter in our daily life. We are to prepare ourselves to face fast changes with open mind and be a life-long learner.

To those who are graduating today, I congratulate you not only for successfully completing the degree programme; but also for the youthful opportunity you are going to get in living and working in a new era of information society. On this great and eventful day, let me earnestly wish that our young friends would be able to face the challenges of the new era with great courage, strength and character; and the education you have received here will help you in making your life happier and richer.

I wish you all the best in your life.