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Access & Equity: Challenges for Open and Distance Learning

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1. An Inequitous World

Even at the outset I must commend the choice of the theme for the conference with emphasis on Access and Equity. These are interdependent: in any field of activity, lesser the access to opportunities, the more inequitous the situation. I may start my address stating that the 20th century is a century of inequity: a century when inequity grew as never before. It has left behind a legacy of gross divide threatening social stability and world peace.

In the long history of humanity, we have not seen a period when iniquity existed in more frightening form than now :

- An unusually vast divide exists between the rich and the poor within a country and between the rich and poor countries in the world
- The disparity which was bad enough even earlier has been growing rather rapidly during the second half of the last century

We have today on one side the advanced countries and on the other side the developing countries in the world, where about 20.0 % of the population in the richest countries has access to 86 % of the world GDP : the poorest 20 % has access to just 1.0 % of GDP in 1990s.

The nineteenth century itself has been a century of rather gradually growing inequities between countries in the world as a whole: the income gap between the top and bottom countries was ¹ :

3 to 1 in 1820

7 to 1 in 1870

11 to 1 in 1913

2. Widening Inequity

When we come to the 20th century the ratio of income between the fifth of the world's people living in richest countries and the fifth in the poorest grew rapidly as indicated below²:

30 to 1 in	1960
60 to 1 in	1990
74 to 1 in	1997

Similarly inequality within the country grew: for instance between parts of China, countries in Eastern Europe and OECD countries especially Sweden, the U.S.A and the U.K. The rate of increase in inequality grew faster as the years advanced in the last century.

As we stand at the beginning of the 21st Century, it is the widening inequity that within a country and across the countries, stare at us and pose a serious problem. It is the modern technology and the developmental strategy employed by the advanced countries that has brought about this situation. The potential to create inequity seems to be inherent in the use of high technology as a developmental device. Problems created by technology have to be solved by the application of technology only. In the ultimate analysis, it is a matter of education.

3. Education, the Key

A world bank survey conducted in 34 developed countries for 110 years from 1850 to 1960 showed that the economy in these countries started showing an upward trend only after they reached the level of universal education. Therefore we realise that to improve the economic condition and the quality of life in the developing world and to improve accessibility and reduce inequity within the country and across the countries, these countries have to launch a massive programme of education.

Universal primary education, though of great importance is not adequate to create wealth. In an age of Science and Technology, the society must be capable of innovations leading to the development of new processes, products and materials and applying them to development. Therefore tertiary education which was confined to the elitist section of the society is now

becoming gradually mass based. The progressive increase in the age group entering the university in U.K. (Table 1) will illustrate the point³.

Table 1. Age Group in % Entering Tertiary Education

Year	% of age group (18 years) entering the University
1960	8.0
1980	15.0
2000	30.0
2010	50.0 [Estimated] (in 18 to 30 years age group)

An increase of about 70% in enrolment within 10 years is rather difficult if one depends on conventional methods. A world picture of secondary and tertiary education is given in the Table below⁴:

Table 2. World Secondary and Tertiary Education Enrolments and Percentage Transition Rate

Country / Region	1990			1997		
	Enrolment Secondary Edn. Millions	Enrolment Tertiary Edn. Millions	Transi- tion %	Enrolment Secondary Edn. Millions	Enrolment in Tertiary Edn. Millions	Transi- tion %
World Total	315.0	68.6	21.8	398.0	88.2	22.2
More developed regions	68.9	29.1	42.2	75.8	34.2	45.1
China	52.4	3.8	7.19	71.9	6.1	8.5
India	55.0	5.0	10.0	69.7	6.4	9.2

World Edn. Report 2000 UNESCO

In India only 9.2 % of those enrolled in secondary education goes to tertiary education. The world average is 22.2%. Even if India is to provide access to tertiary education for 15.0% of the present strength in secondary education, we have to start 8000 new colleges of the conventional type. This is just impossible. We have to seriously examine the potential alternatives.

4. Evolution of Education

It is desirable to review briefly, but critically, the development that has taken place in the world of education. The end of 18th century saw the beginning of industrial revolution. Over the 19th century and 20th century, production in every field became technology based. The result of application of technology meant that technology replaced craft and productivity increased. Today the difference between an advanced country and developing country is the difference in productivity. Whether it is industry or agriculture, the productivity is many times higher in an advanced country than in a developing country. But when it comes to education, the situation is different. Industrial revolution did not enter the classroom even in advanced countries. The productivity in education did not change substantially till the middle of the 20th century. Even in advanced countries productivity in education remained stagnant during the 19th century and over a major part of the 20th century.

The art and science of communication became revolutionised in every area of operation – entertainment, advertisement, press and public platforms. But it remained tradition bound in the classroom. When technology was applied to education, ‘distance education’ was ushered in and classroom instruction changed from craft to technology⁵. This transformation marked the inauguration of ‘New Era’ in education. In the history of classroom instruction, distance education constitutes, as I used to say, the third stage of development in education, the first being the ‘Gurukul System’ and second the ‘Classroom System’⁶.

Starting with Bologna University established in Italy in 1075, the conventional university system evolved slowly over a millennium. Universities were established in other parts of the world much later, following U.K and Europe. By and large, the system remains the same all over the world with marginal changes. The conventional system, as is characteristic of any craft, did not undergo any revolutionary change over the centuries and among the countries.

The Open University U.K really heralded formally, the arrival of technology in imparting education and training. Within a matter of 40 years the system has established itself on a global basis and has seen four generations of development, notwithstanding the reservation on the part of academics who are in the conventional system and scepticism among the members of the public.

5. Demands of Access and Equity

We all know that Distance Education meets the education and training demands of two major sectors:

- i. Demands of equity in education in an extremely and widely iniquitous world
- ii. Demands of access to continuing education in a world of rapid obsolescence of knowledge, an essentially 20th century phenomenon.

The most important aspect is accessibility to education:

- To those who are employed, when they are free and have time
- To those who are handicapped, through various modes, specially designed for individuals of various handicaps
- To those who cannot reach the place of learning, by taking education to where the learner is
- To those who cannot afford the cost, by lowering the cost and offering it at affordable cost

Since technology entered education, the education system has seen rapid progress. In terms of delivery system it has seen four generations: every generation increased the productivity and efficiency of instruction.

- i. Correspondence education
- ii. Lectures through Radio and Television: audio-video cassettes and use of computers
- iii. Interactive radio – video teleconferencing
- iv. Virtual class room : internet
- v. Flexible learning

6. Low and High Technology

We need stress the following new development consequent to the use of technology. *Once technology entered the domain of taking education to people, it brought about the division of high technology and low technology.*

Printed instruction material and the use of radio and television, audio-video cassettes are well within the technological capability of every developing country. But once we move to teleconferencing and internet, we have entered the domain of high technology.

Education is tending to become an industrial operation. We face again the possible domination of advanced countries. We may have to examine the phenomenon.

During the process of development of industrial age, a wide gap developed early between the advanced countries and developing countries. We have not been able to bridge this gulf so far. But when it comes to distance education, we are not at such a disadvantage. The developing countries, at least many of them, are reasonably well placed and some in this region are well on their way to be almost level with the advanced countries. But the possession of a tool is a necessary condition but not sufficient condition to be able to use it. The beneficiary group must be able to avail itself of it. There are countries where tools falling under low technology will be more appropriate and practicable though less effective and limited in coverage.

We do realise that internet provides a vast scope for coverage at the national level and beyond the shores. However the availability, for the present and in the immediate future, of the hardware with the learners individually or as a community and the preparedness on the part of beneficiaries to use the internet constitute the restraint.

Fig.1 and Fig.2 give an idea of the internet access in advanced and developing countries⁷.

The use of high technology may appear to be attractive and satisfy the ego of certain institutions to make the claim that they have the most advanced infrastructure. But we must judge the appropriate technology for ODE in a given situation. *The most advanced is not necessarily the most advantageous in all situations.* As we gradually develop the infrastructure we must prepare the beneficiaries to take advantage of it. When technology comes in, considerations of appropriateness inevitably follow.

Since educational operation has taken the form of an industry, it has scope for seeking markets on a global basis. Like multinational corporations in industry, there are multinational corporations or consortia of educational institutions. The Global University Alliance (GUA) is a consortium that has nine members - 3 in Australia, 3 in U.S.A. and 3 in Western Europe.

Similarly Universitas 21 (U21) is another consortium consisting of 19 members – 4 in Australia and New Zealand, 5 in U.S.A., 4 in East/South East Asia and 6 in Western Europe. The objective is providing global online education: it is yet to be realised. However if the developing countries do not develop strategies for appropriate approach for ODE, it is highly probable that advanced countries will become a highly competitive providers of instruction and instruction materials and they will repeat the domination which they enjoyed in industrial market. *This would mean not only economic but cultural invasion.*

Educational requirements in the developing world are not necessarily the same as in advanced countries. The target group is different: the economic environment is different: the cultural background is different. Each developing country's programme has to be in conformity with the economic and knowledge environment of the target group.

7. Research

Technology is always accompanied by research. If not kept renovated by research it will starve to a state of anaemia. Education related themes are said to account for about 10% of the innovation literature⁸. In 1995 there were about 4000 publications on innovation. It is necessary for developing countries to promote active research in ODE and come out with appropriate hardware and software combinations. It is said that in Asia only OUHK, Hongkong and IGNOU, India have research programmes. In a new area involving technology, active research is inevitable for survival.

As in the case of industrial products, educational institutions from advanced countries offer programmes through distance learning and market educational materials on a highly competitive basis. Marketing opportunities are expanding rapidly in the academic world. We have to be careful that again the vast disparity that developed in industry does not develop in distance education. In industrial revolution, advanced countries marched ahead leaving us behind. In distance education we made a beginning early enough and we are not very much behind the advanced countries. We must keep up our near parallel position.

8. Indian Diaspora

I depart from the trend of discussion adopted so far, and mention here a new development in the use of distance education, especially employing internet. There are certain Tribes in the world that have a global presence. They are:

- i. The Britishers
- ii. The Chinese
- iii. The Japanese
- iv. The Jews
- v. The Indians

These communities who have a worldwide diaspora and live in different societies, have the problem of maintaining their ethnic identity. Every individual has his professional life: social life and spiritual life. Social and spiritual life are inextricably bound with the cultural heritage and traditional faiths and beliefs. All over the world enlightened Governments help the minorities to learn their language, maintain their identity and preserve their values. The main component of one's identity is the language. If you give up your language, you will slowly get dissolved in the dominant majority.

9. Tamil Virtual University

As I mentioned earlier, Indians are a global community, but they speak various languages as their mother tongue. Among those of Indian origin settled abroad for generations, the Tamils form an important group. The total Tamil population in the world is about 75 million; of them about 15 millions live outside the boundaries of Tamil Nadu in India and abroad. They live in over 50 countries. Representatives of these people have been requesting the Government of Tamil Nadu to provide opportunities for them to learn Tamil, Carnatic music, Bharatha Natyam and generally keep in touch with Tamil culture and Indian tradition. In response to this request, the Government of Tamil Nadu decided to set up a Tamil Virtual University. The Government appointed a Committee under the Chairmanship of Dr V.C. Kulandai Swamy, former Vice-Chancellor, Indira Gandhi National Open University. The Committee submitted a report outlining the hardware, software aspects and functions of the university⁹.

The Vision statement is as follows:

The Tamil Virtual University aims at providing internet based resources and opportunities for the Tamil communities living in different parts of the globe as well as others interested in learning Tamil and acquiring knowledge of the history, art, literature and culture of the Tamils.

The Tamil Virtual University [www.tamilvu.org] serves the needs of a new target group: a new requirement. It is a new experiment, perhaps the first one in this domain. A brief description is given in the Annexure.

10. References

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THE TAMIL VIRTUAL UNIVERSITY

1. Objectives

In order to meet the consistent request of the Tamils who live in more than 50 countries in the world, to keep in touch with their language, literature and culture, the Govt. of Tamil Nadu decided to establish a Tamil Virtual University as the distance education part of the Tamil University, Thanjavur. The Objectives of the University are as follows:

- To develop and deliver Internet based learning material on Tamil language, literature and culture to global Tamil communities and others interested.
- To develop and deliver customised programmes to meet the cultural needs of the Tamil communities in different parts of the world and help them retain contact with their heritage.
- To initiate and continue necessary measures to co-ordinate and pool together knowledge resources developed in Tamil in different parts of the world, for wider dissemination.
- To offer academic programmes in Tamil language, literature and culture for audit or credit and to award appropriate Certificate/Diploma/Degree through Tamil University, Thanjavur on completion of prescribed requirements.

2. Layout

The layout of the infrastructure facilities proposed for the Tamil Virtual University is given in the Figure, under the caption 'Internet Connectivity for TVU Website'. It consists of :

- i. Two main servers associated with a mass storage device and a CD Rom server housed at the VSNL premises nearer to VSNL gateways,
- ii. A Router with a firewall server between the main server and the internet gateway
- iii. A staging server at the office of the Tamil Virtual University.

It provides for one development centre at Tamil University, Thanjavur. Further, leasing of memory is provided in the ISP servers located in the U.S, Europe and Asia to serve as mirror sites for some of the frequently accessed materials.

3. Educational Programmes

The educational programme consists of the following:

- i. Certificate course for the beginners.
- ii. Higher Level Education programmes
 - a. Diploma
 - b. Advanced diploma
 - c. Bachelor's degree
- iii. Library
 - a. Books
 - b. Collection of dictionaries
 - c. Arts programmes
- iv. Bank of Technical Terms

Initially Tamil will be taught through English as the medium of instruction. Later, other languages like French as medium will be considered.

The beginners courses are meant for children and adult learners who are illiterate. The lessons are in multimedia format and will consist of assignments, exercises, questions and aids for self-evaluation. The lessons will be offered both for audit and credit.

The committee after detailed consideration decided to offer a few courses of general interest to the Tamil communities for audit. They may serve to introduce to the Tamils abroad certain aspects of Tamil language and culture that may serve a large section of Tamil population.

For those interested in studying for credit and certification the following programme will be offered:

- i. Diploma in Tamil language and culture
- ii. Advanced diploma in Tamil language and culture
- iii. Degree in Tamil language and culture

These will be in the form of an integrated programme consisting of modules on credit basis. Diploma requires 16 credits. An addition of another 32 credits to the Diploma will qualify one for Advanced Diploma. After the Advanced Diploma, acquiring another 48 credits i.e., a total of 96 credits, will qualify one for a Bachelor's degree. Appropriate exemption will be given for those who have completed certain requirements.

4. Library

The university has an electronic library. Starting from 2nd century B.C.: all the contributions of Tamil Sangam* most of the publications upto the beginning of 20th century and selected works of 20th century upto 1950 have been digitised and web enabled.

In order to help readers as well as researchers, a collection of Tamil – Tamil, English - Tamil and Tamil - English dictionaries have been stored in the web.

It has been stated that the objective of Tamil Virtual University is to help the Tamil Diaspora to keep in touch with the Tamil art, culture, festivals, places of worship and places of archeological interest. Clippings of audio programmes, video programmes, pictures of sculptures and buildings are kept in the virtual library.

5. Technical Terms

In the present generation of Tamils abroad, many are deeply interested in developing Science and Technology literature in Tamil. This effort needs Dictionaries of technical terms. Vast number of words in English have been found Tamil equivalents. Of them some 3.0 lakhs of words have been put on the web. More are being added.

* Tamil Sangam – An ancient Tamil Academy