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EDITORIAL

At the outset, I would like to apologise for the delay in bringing out the present issue of the Indian Journal of Distance Education. The delay, in fact, was caused by some unavoidable circumstanes. Even then it was resolved to bring out the Journal with the limited resources and meagre infrastructure at the disposal of our Department. Thus the computer type-setting of the Journal was done by our staff --- Mr. Jagdish Gandhi and S.P.Singh. Printing and binding was also done by our own staff.

I shall be failing in my duty if I do not thank all the contributors who have sent in their useful and thought-provoking articles. I would also wish to thank the staff of our Computer Centre, Copy-printer Operators and the binders. My very sincere thanks are also due to the executive editors, Dr. (Mrs.) Meera Malik, Dr. Vijay Rattan, Mr. Swaran Singh, Mr. I.S.Ghuman, Dr.(Mrs.) Surinder Kler Shukla, Mr. Jagdish Kalra and Dr. Ravi K. Mahajan for having gone through the contributions carefully and preparing the final manuscript for printing. Mr. Hari Ram Sharma and Dr. N.S.Malhi deserve my special thanks as they read the proofs. Dr. Malhi really took a lot of pains in the production of the Journal. My thanks are also due to M/s Gestetner (India) Ltd. , Chandigarh for offering to print the title cover of the Journal.

I sincerely believe that there might have occurred lots of mistakes for which all concerned will bear with us.

Chief Editor

CONTENTS

FUTURE PROSPECTS OF DISTANCE EDUCATION IN INDIA

BAKHSHISH SINGH

Introduction

The higher education problems faced by our country are colossal and in the future they are bound to be more formidable. In a democratic socialistic society like India, every person considers it his/her right to have higher education. The Government of India and state governments tried to cope with this problem by establishing more and more universities and colleges. Still a large number of aspirants of higher education are not covered. With our limited finances, it is impossible to meet the ever increasing demand for higher education through the convential system.

Growth of Enrolment in Higher Education

At the time of our independence, we had 19 conventional universities. Now the number of universities has risen to 148 and the number of constituent & affiliated colleges is 7.10 thousand. Total enrolment in Higher Education in our country in 1975-76, 1982-83, 1988-89, 1989-90 and 1990-91 has been :

1975-76 2490319
1982-83 3330648
1988-89 4074676
1989-90 4500000
1990-91 4425247

Growth of Enrolment in Distance Education

The enrolment in Distance Education during these years has been :

1975-76 64210
1982-83 197555
1988-89 459000
1989-90 454000
1990-91 600000 approximately

With 148 conventional universities, 29 deemed universities, and 7.10 thousand colleges (1990-91 states), India has reached a saturation point. Our limited financial resources will not permit establishment of more conventional universities and colleges. Moreover, any proliferation in this regard will lead to further dilution of standards. The Government had foreseen these problems as early as sixties and on the recommendations of Kothari Committee the U.G.C. encouraged part time and own time education through evening colleges and correspondence courses institutes. Delhi University was the first university in India that established the School of Correspondence and Continuing Education in 1962.

International Acceptance and Credibility

Distance Education has over the past two decades, earned wide international acceptance and credibility as an academically as well as economically viable alternative channel for imparting education to all levels and of varied types. The main reasons for this are :

Accountability

One of the important factors that goes in favour of distance education is that this system has accountability because the course materials are open to public scrutiny and criticism. This puts on alert all those who are connected with course-writing and development of scripts for Radio, T.V. and Audio & Video cassettes etc. As compared to this, the teacher in the conventional system can get away with anything that he/she may say in the class room.

Economic Viability

With their limited financial resources, many countries cannot afford to open new colleges and conventional universities to cope with the ever-increasing demand for higher education. Distance Education alone can meet the future demands at much lower costs as compared to the conventional system.

Academic Viability

As stated by the Kothari Committee, a properly organised distance education institute/open university can attain better standards and bring about qualitative improvement in education.

Sociological Impact

Sociological impact of Distance Education is one of the main advantages of distance education system. The conventional universities and colleges are virtually elitist institutes because they have limited seats and therefore admit limited number of students with high marks. Thus, millions of students who are keen to go in for higher education are denied admission. Distance Education institutes because of their large intake capacity and open admission policy admit students even with minimum eligibility condition. Open Universities generally admit even those who have no qualification. Of course, such learners are usually required to pass an entrance test and do some bridge/preparatory courses. Moreover, there is generally no age bar for admission thus enabling drop-outs and adults of all age groups to join the mainstream to continue their education. The system also allows flexibility in the completion time of courses. The greatest sociological benefit is that the students in distance education system can learn and earn simultaneously.

Multi - Media Approach

Distance Education institutes are supposed to adopt a multi-media teaching-learning technology comprising :

- Self-instructional course material
- Radio talks
- TV programme
- -- Audio cassettes
- -- Video cassettes
- -- Computers

The self-instructional course material is written by subject experts, individually or as a team. It is then subjected to content editing, language editing and format editing. The printed course material has been, is and will continue to be the mainstay of instruction in the distance education system.

Electronic Media

For any distance education programme for the masses, electronic media play a very important role in supplementing instruction imparted through the course material. In some cases, particularly in countries where TV, Radio, Tape-recorders and Videos are easily available to the people at large, these media could be made an integral part of the printed course material. However, in developing countries like India, it may take quite some time to reach that situation. We should therefore, for the time being, opt for some selected electronic media as a supplemental part of the distance education courses. Developed countries are using some very highly sophisticated media for reaching out large numbers, but we have to be content with some judiciously selected electronic media like Radio, TV, Audio & Video cassettes. Even for these we shall have to provide adequate playback facilities at the study centres to ensure their access to all the learners.

Student Support Services

It is necessary to provide adequate and well organised student support services to guide and help the distance learners in their studies. This can be done by setting up study centres which should provide facilities for counselling, personal contact programmes, regular evaluation of students assignment and their return to students in the shortest possible turn-around time, facilities for the play-back of audio & video cassettes, well stocked library etc.

A Sophisticated System for Imparting Education

These plus points and the good deal of thinking that was done, individually, collaboratively and at the World Conferences of the International Council for Distance Education (ICCE / ICDE) as also at a number of Regional Associations for the improvement and further development of the Correspondence Education System resulted in distance education becoming a reasonably sophisticated teaching-learning system of imparting education to large numbers of learners who could never benefit from the conventional class-room system comprising schools, colleges and the universities.

SOME SIGNIFICANT DEVELOPMENTS --- Abroad and at Home

Commonwealth of Learning

Recently there have been some very significant developments in the field of distance education which augur well for its future growth and popularity. The most important is the establishment of Commonwealth of Learning at Vancouver, Canada in 1988. This would greatly promote the very much needed staff development, production and sharing of course materials among distance education institutes, student mobility, and wider course- offerings for learners within the Commonwealth countries. The COL aims at bringing about effective networking among these institutes.

Research

Research in various aspects of distance education had been a neglected area, but during the past two decades, considerable work has been done in this direction by institutes like the Fern University, Germany: International Centre for Distance Learning, Milton Keynes, Wisconsin University and some institutes/universities in Australia, New Zealand, U.S.A., Sweden, Norway, Netherland, etc. This has added to the stature of distance education which has now come to be recognised as a distinct discipline. However, there is need for open universities all over the world to establish a special cell on Research in Distance Education in order to encourage their faculty members.

Establishment of Indira Gandhi National Open University (IGNOU)

The establishment of IGNOU at New Delhi in 1985 has proved to be a significant milestone in the development of distance education in India. It has provided a central organisation for guiding and coordinating the activities of all distance education institutes and state open universities in the country. It has popularised the concept of the open teaching-learning system.

State Open Universities

India now has 4 state open universities :

1. Dr. B.R.Ambedkar Open University, earlier called APOU, was the first open university to be established in the country in 1982. ;
2. Kota Open University in Kota (Rajasthan) ;
3. Yashwant Rao Chavan Maharashtra Open University at Nasik, and
4. Nalanda Open University at Patna (Bihar).

Distance Education Council

The recently constituted Distance Education Council under the aegis of IGNOU is a very significant step for the coordinated development of distance education in India.

Section 5(2) of the IGNOU Act charges the university with the duty to take all steps necessary for the promotion of the open university and distance education system in the country and also to determine and maintain standards in this system. The operationalisation of this statutory provision has been under discussion since 1987. Initially, IGNOU had set up a Coordination Council consisting of its Vice-Chancellor as Chairman, three Vice-Chancellors of the then existing state open universities and a representative each of the UGC and the Department of Education, Ministry of HRD as members. The Coordination Council held several meetings and recommended :

a. Establishment of the Coordination Council as Statutory mechanism under the IGNOU Act.;

b. Networking of all open universities and distance education institutions ;

c. Sharing of programmes and courses as well as student support systems among the members of the network, and

d. Assessment of the programmes and courses prepared by Distance Education universities and institutions by an Accreditation Committee f or admission to the network and the development of systems, norms and procedures for the efficient functioning of the network.

Based on these recommendations, IGNOU established a Distance Education Council (DEC) as an authority of the University under Section 16 of the IGNOU Act. The Distance Education Council (DEC) shall within the framework of the policies and guidelines laid down by the Board of Management, be responsible for the promotion and coordination of the open university and distance education systems, and for the determination of its standards. The Vice-Chancellor, IGNOU shall be its Chairman with representatives of Ministry of HRD, UGC, State Open Universities, Institutions of Correspondence/Distance Education, Board of Management of IGNOU, formal universities and also experts from vocational/technical education and mass media.

The Need and Popularity

The need and popularity of distance education programmes can be judged by the proliferation of distance education institutes and open universities all over the world. Already there are 376 [1] distance education institutes and over 25 [2] open universities catering to the needs of millions of learners in the world through 15,588 courses of varied types.[3] For developing countries in particular, this is the only effective channel for coping with the future educational demands.

In the Asian region, there are about 15 open universities and 61 distance education institutes [4]. Of these, India accounts for 5 open universities and 41 distance education institutes.

Future Projection of Distance Education in India

The recent decision taken by the Central Advisory Board of Education (CABE) that every state in India should have an open university as well as an open school is very relevant to our country's future educational needs. However, it calls for good deal of thinking and planning to ensure proper development of this system on such a big scale.

The present enrolment for higher education in India is approximately 5 millions. Of these about 8 lakh learners are studying through Distance Education. The future projection in the Eight Five Year Plan envisages an addition of 1 million learners in higher education by the end of the year 2000. 60% of these are to be covered by distance education. Thus, the total number of distance education learners to be during the period will be approximately 14 lakhs or 1.4 million.

However, if the open universities launch some programmes of continuing education, staff development and vocational/professional/technical course which are very much needed, the number of distance education/ OU learners will increase further. Programmes/courses aimed at covering target groups like rural women, youth and adults will attract fairly large numbers. We can therefore easily expect 2 million learners to be covered by distance education/OU, by the end of year 2000 A.D.

This makes it imperative that we gear up the existing distance education institutes and establish more open schools and open universities to cope with the future educational needs of the various sections of our society.

Streamlining of Distance Education in India

The first step in this regard should be the streamlining of existing correspondence / distance education institutes. These institutes should be helped particularly for :

-- adopting multi-media teaching-learning methodology

1. to 3. CD-ROM Database of International Centre for Distance Learning updated till Feb.1992.

4. ICDE Membership directory 1992.

--- organising student support services comprising study centres, tutors, coordinators, libraries, play-back facilities of Radio, TV and Audio/Video cassettes

-- evaluation of printed course material followed by improvement of quality, format, printing, delivery system etc.

--- autonomy for framing syllabi of courses run by the institutes which are not available in the university teaching departments, introduction of need based courses for different target groups, putting a ceiling on enrolment, particularly for professional courses so that standards do not go down.

--- financial autonomy to the director/head for operating within the sanctioned Budget.

--- utilising the surplus finance for the improvement of the institute and not diverting it for any other purpose

Finance

In view of the wide outreach, social impact, future potential and coverage of 60% the increase in enrolment for higher education in the future, there is a strong case for greater and liberal investment on this system so that future educational needs of our country are adequately met and there is qualitative improvement too in the education imparted through distance education. Various studies on costing show that the cost of educating a student through the distance education system, varies from 1/3rd to 1/6th of the cost in the conventional system. This confirms the financial viability of the system. According to a comparative study of unit costs in the school of correspondence courses and affiliated colleges of Delhi University, the unit cost in regular colleges is Rs. 3520 against the student fee of Rs. 260. Thus, the state subsidy per student is Rs.3,260. Compared to this, the cost per student in the School of Correspondence Courses was Rs.522 against the fee of Rs.260 charged from a student. [5] However, the cost per unit in the open universities is higher than that in the distance education institutes, primarily because of the colossal expenditure on proper development of course material, electronic media and the huge network of student support services.

If we are to uplift the existing correspondence courses institutes into multi-media distance teaching-learning institutes with strong student support services, electronic media and good course materials, liberal grants will have to be provided to them. The distance education institutes must not be considered self-financing or money-making institutes. Of-course, they should be economically viable to a reasonable extent. Taking all these points into consideration and keeping in mind the future projections and rising costs, the Government should be prepared to invest atleast 50% of the cost per student in the conventional system on educating students through the distance education system. From the various studies done on the financial aspect of distance education, it is clear that a considerable investment has to be made on the development of course materials, multi-media methodology, computerisation of various procedures, student support services including face-to-face personal contact programme and evaluation of a large number of students assignments. Thus if we want standards of education to be improved and 60% increase in enrolment for higher education to be covered by distance education and open universities, the Government and its funding agencies must ensure adequate financial support to distance education institutes and open universities.

5. Studies in Distance Education -- AIU Publication 1988

DISTANCE EDUCATION : A STRATEGIC TOOL FOR DEVELOPMENT

A. ROCHA TRINDADE

The Evolution of Higher Education Systems

Democratization of the access to higher education, which has been achieved in various degrees in a number of countries and which is still a significant priority for many regions of the world, has led to the considerable expansion of existing conventional higher education institutions, together with the creation of many new ones of the same nature.

In many countries of Europe, higher education has been mostly taught within the scope of public universities and, at a slightly lower academic level (through programmes of shorter duration) by the currently called polytechnic institutions. In some countries, governments tried to cope with an increasing demand for qualifications by opening the higher education sector to the private initiative; in some cases, however, significant increases of input did not yield corresponding good results in terms of quality of the outcome.

A different approach to the same desideratum led to the onset of a new type of institution, designed to take care of large number of students unable to attend conventional lectures in classrooms along the academic year, and using instead distance education (or independent learning) methodologies. The corresponding operational mode has been pioneered by the British Open University since the early 70's; similar "single-mode" institutions have been created since that time in all the regions of the world.

Another tendency has been observed, in many countries, to try to improve the social response and to increase the quantitative output of conventional universities by their providing access, besides regular students, to large numbers of extra-mural students and by teaching them through distance learning methodologies. These "dual-mode" institutions (using conventional classroom approach for some students and distance education methods, supported by telecommunications and information technologies for the others), represent a half-way approach to the question of massification of students, as compared both to the pure presential universities and the "single-mode", Open University-type approach acting fully in a distance education regime.

We believe that a further convergence of the two conceptually-distinct types of institution - the conventional universities and the dedicated distance education ones - will lead to a more hybrid type of methodology, based on the postulate that the pure "independent learning" mode will be used for those subjects, courses and parts of courses, for which such an approach provides good enough learning efficiency; while the remaining courses will be dealt with in more conventional ways - and this for the whole population of the students, without distinction. This hybrid or "mixed-mode" operation will become the common paradigm, we believe, for both old and new higher education institutions, in the years to come.

There are many reasons for this evolution, related to a relative loss of the educational priority that have been given, since immemorial times, to universities as national institutions assigned to the task of

creating and diffusing advanced knowledge. The former "elitist" point of view of providing top-level education to a few chosen has been changed into a "democratic" perspective, aiming at extending the benefits of higher education to whoever wants to take it - and this means providing, not only basic but also secondary education, to the whole population of young people. This leads to a shift in priorities of State budgets from higher to general and technical secondary education. Furthermore, while in the past, State-supported universities only had to cope with very limited numbers of students paying modest tuition fees, or no fee at all, in the present most governments are becoming unable to support this burden when student populations increase manifold, thus having to increase tuition fees closer to the level of actual costs. In this way, the conceptual distinction between public and private universities will become less and less obvious.

We may even reach the point where government yield to the temptation of abandoning this most important sector of public services by postulating the privatization of public universities, following the same rationale that has already been applied, in many countries, to airlines and railways, public health systems and telecommunication networks.

Another issue relates to the situation of quasi-monopoly that higher education institutions (and, in more remote times, only the public ones) had, in respect to the power of awarding academic --and sometimes even professional--accreditation to their students: certificates, diplomas and academic degrees were taken at face value by employers, both public and private, thus opening the doors to the work market. This is no longer the case in many regions of the world, wherein enterprises, as well as the public sector, have a growing tendency to distrust academic accreditations, possibly due to the unequal credibility of a large number of awarding institutions.

The observation of current practices shows employers submitting candidates to procedures of "ad hoc" examinations, irrespective of type of degrees presented; enterprises postulating a period of in-service intensive training, subsequent to admission of new staff; even, the creation of an autonomous infrastructure of higher education and training within the enterprise itself.

Another important question relates to the relevance of higher education programmes: the specific needs of the marketplace in terms of new qualification profiles tend to move faster than higher education institutions can adapt to it by creating new curricula, objectives and output profiles. In this context, enterprises have a tendency to underrate the more basic academic diplomas, which seldom fit exactly the qualification profile they require.

Duration of degree programmes may also become an important issue for countries where university tradition impose many years of studies to obtain each of the different levels of qualification in higher education. The general tendency seems now to be a convergence towards the anglo-saxon format, with short duration steps leading from bachelor, to master, to doctoral studies, while students are still in their early twenties.

Given the above trends --clearly visible in the more developed countries --the long-term survival of universities, in this context of massification of students, of shrinking budgets and of relative devaluation of diplomas, may lead them to search for new ways of increasing their productivity --while keeping adequate standards of quality --so as to be able to face competition from a non- institutional private sector of higher education.

The answer may be the forced adoption of a "mixed-mode" regime of operation by most universities, combining conventional and distance education methodologies, thus being able to expand their capacity without a proportional increase of their operation costs.

Another possible solution to cope with these general trends may lead to universities giving more and more attention to the non-higher education sector, as they did in a very remote past when the *University* was the generalised source of all knowledge within its sphere of influence. To support this argument we should look into the present panorama of needs in the fields of vocational training and continuing education, where universities might be motivated to intervene in a more systematic way.

The Changing Roles of Higher Education Institutions

The previous analysis may lead us to conclude that Universities will have to adjust to a changing social context of education and training needs, as well as to a shift of priorities in the allocation of public budgets, so that they can, not only survive, but also make even more obvious their social usefulness. As a kind of final synthesis, we may conclude that:

- To cope with the pressure of an increasing demand of qualifications, most universities need to adopt more cost-effective models of operation, the "mixed-mode" approach being the more pragmatic one.

- The relevance of higher education programmes and contents needs to become an even-present task for university, faculty, and department authorities, by adopting the concept of adjusting their supply function to the outside demand and not the reverse one. Diversity, as well as flexibility of curricula, will be major assets in this process.

- Massification of higher education cannot imply a significant sacrifice of quality of the outcome. Research activities aimed at updating and upgrading course contents and increasing their relevance, as well as at finding the ways to increase the efficiency of learning, should receive adequate priority.

- Tied with the reinforcement of the research activity in Universities, increasing the capacity and creating new advanced programmes for the training of top-level specialists and scientists will receive higher priority, as modern societies will require increasing numbers of these highly-skilled professionals, to work within and outside educational institutions.

- Taking into account the foreseeable expansion (or even explosion) of the new cultural industries, universities need also to be considered as the "natural" conceptors of learning materials for education and training at all levels, irrespective to the fact that some other type of organization may take care of huge numbers of persons seeking qualification, education or, simply, updated and structured information. The function of "authoring" all kinds of learning materials will become a most interesting "niche" of opportunities for the universities of the future.

- To cope with all these kinds of adjustments, universities need to establish alliances among themselves, within region, country and extended geographical, cultural or linguistic area, by taking advantage of present facilities in mobility of persons, products, information and ideas. Other powerful allies will be found in the productive sector, mainly among enterpreneurial large organizations in permanent need for upgrading and updating staff qualifications.

- Transnational telecommunications systems and networks are very special, strategic partners for universities to try to associate with, for they will provide the key to widening the scope of intervention of higher education institutions, as well as to the modernization of educational technologies; they will be,

possibly, the major clients for the provision of educational products that universities are uniquely qualified to develop.

All of the above goals are easier stated than achieved, for universities are in general entities difficult to reform and to change their ways, aims and perspectives. Their large autonomy, which spreads currently from the top of the whole body to the descending levels of faculty, department and chair, makes difficult to reach consensus and to obtain full adhesion from all the members of academia to the purpose of changing; students, sometimes, seem to be even more conservative than professors. Nevertheless, the potential risks of the present situation, as well as the importance of the stakes may provide the motivation and the driving force needed to achieve adaptation and change.

THE INFORMATION HIGHWAY: WHAT PERSPECTIVES FOR EDUCATION AND TRAINING IN EUROPE AND IN FRANCE ?

BERNARD LOING

Introduction:

An adequate starting-point on the subject could be a series of question-marks:

What is an "Information Highway", sometimes also called "Data", or "Electronic Highway"?

What do we want to know about it? As teachers, educators, trainers and tutors, do we want to know *as little as possible* on the assumption that we refuse to be technology dependent and prefer to have a pedagogy-driven technology rather than a technology-driven pedagogy?

Or on the contrary, don't we want to know *as much as possible* about **the IH** because we feel sure that in the long run, **it is going to provide** in a large measure **the shape of things to come in education** and training?

1. SOME GENERAL DATA ABOUT THE IH.

1.1. ATTEMPTS AT A DEFINITION

Launched by Vice-President Al Gore a year and a half ago as a sort of "New Frontier" for America and for the world, is the **IH** just a catch-phrase, a metaphor, a modern myth? What part of it is reality?

In fact it depends very much upon who is speaking, and upon the time referred to: today? tomorrow? the day after tomorrow? Do we refer to the ultimate goal to be reached in 10, 15, 20 years time, that massive **global broad band network** (GBN) integrating in a single system all the information technology available and carrying trillions of bits in a matter of seconds?

Or else do we refer to the Information Infrastructure of today, already at work with a global system like the INTERNET, and which can provide according to each country's equipment, many of the elements of **an IH in the making:**

- fiber optics, satellites, microwaves, video cables... for the wide area backbone;
- computers, TV sets, smart and mobile phones, set-top boxes.... for the terminals;
- protocols and more and more sophisticated software to navigate the networks?

In this paper we prefer to address the present day situation, with a prospective outlook, aware that crucial parts of the future GBN are still missing or under development, among which:

- the on-and off-ramps to access the highway;
- the necessary software to enable switching and full interactivity among thousands of communications exchanged at very high speed;
- the fully multimedia terminals available in everybody's home.

1.2 THREE MAIN POINTS TO PUT THIS DEFINITION INTO PERSPECTIVE:

The IH concept is very strong and pregnant because it always refers to **wide-area communications** and sheds a new global light on the fast developing world of information and communication.

Present day technology is still heterogeneous and cumbersome but it will soon become more and more integrated transparent and convivial to the end-users.

In the meantime the main issue lies in the worldwide competition engaged between the two possible approaches to the IH: -the access by video cable, the TV set (with its set-top box to make it interactive) becoming the central home terminal of the IH;

-the access by telecom lines, the personal computer with multimedia functions becoming the main home terminal of the IH.

The industrial war waged between the champions of these two different approaches is all the harsher as the economic and financial issues are gigantic.

1.3 THE IH AS THE MARKET OF THE FUTURE.

Integrated into the IH, the technologies of information and communication (audiovisual, telecoms and informatics) will be the major market of tomorrow.

In Europe it already amounts to 684 G$ (billion dollars) in 1993; with its enormous capacity growth it will be 3500 G$ in the year 2000.

This promise of profits is an incentive for industrial and commercial competition. It is also an incentive for R&D, and for regional organization in Europe.

In this market so far, the share of educational products is yet small but the expectations are great if the world of education and training becomes aware of the part it can play in the field.

1.4 AN INVESTMENT ON PRIVATE FUNDS.

The investments that will have to be made to implement the IH are difficult to assess precisely, but they will certainly be enormous if access is to be provided for everybody, both in terms of ramps and of software development.

Japan computes that it will cost some **450 G$** to connect all its homes in fiber optics; it intends to do it over the next 15 years.

For France alone the expense is estimated at some 600 GF (billion francs) = **100 G$**; 1//4 being spent on the fiber optic connection of every home to the network and 3/4 on the accompanying software.

In all countries and regions of the world, the motto is "the market must pay"; it is agreed everywhere that the IH cannot be developed on public funding. Both in Europe and in the USA, a minimal part only of the investment will be financed on public funds- 1 % at most-to launch experimental operations.

It will be **e ssential for the educational sector to be present in these experiments** and a strategy must be developed to insure this presence.

Yet in such a market-oriented landscape, the prospects for an early development of education and training programmes on the IH look at first sight rather gloomy, at least in countries and systems where the funding in that sector is mostly state- supported.

Another negative aspect is the **great gap** between the development of technologies, and the rather conservative approach and practise of most educators and institutions. It is a perfectly understandable

attitude since they don't really know what to expect from a technology perpetually in the making, rather foreign to their culture, generally too expensive to acquire, and whose supporting industry is not yet interested in the "market" of education and training.

But things are changing, and the leading part played by Distance Education in the introduction of technologies - together with the overall paradigm shift from teaching to learning - will have to be claimed, acknowledged and reinforced.

1.5 VIDEO-HIGHWAY OR TEXT & DATA-HIGHWAY : MORE A BOUT THE GREAT COMPETITION.

The landscape in which the **IH** is being developed is thus dominated by the great competition between cable companies on the one hand, and **talco and computer companies** on the other. This dual approach must be kept in mind to understand what is going at all levels, global, regional, national and even local. It could result in the development of two parallel highways, at least in the first period.

The strategy of the **cable operators is:**

-to use the existing cable networks already connected to the homes and able to carry broadband traffic;

-to build joint partnerships and even to absorb programme producers when they can (ex: Paramount bought by Viacom for 10 G$) to invest in the set-top box technology in order to turn the TV set into an intelligent instrument;

-to take advantage of the compression technology (MPEG2) to increase the quantity of programmes (the satellite companies have a similar strategy).

They prepare the *Highway of the video.*

On the other hand we see the tremendous effort of the computer companies to increase the power of their machines which become more and more accessible, convivial, flexible, intelligent, multipurpose and cheaper, and to make of the PC the universal terminal of the IH.

Connected through the telecommunication networks, they prepare the *Highway of the text and data,* or telco Highway.

Eventually they will also carry motion pictures into the home, but their main functions already are E-mail, computer- conferencing, services with graphic interfaces etc.

So as it happens, we could very well have *two highways* instead of one, at least over the years to come:

-one with the TV set (becoming more and more intelligent) mostly devoted to leisure, games, commercial services, aimed at the largest audiences;

-the other with the micro-computer as a telematic instrument for the end-user, at home but also at school, in resource centres etc, already multi-uses, multimedia, and much more interactive.

The strategy of the educational community should be to keep in close touch with the movement, and probably in most cases chose to connect with the *"text and data Highway"*, or "telco Highway", that of telematics. Yet in some cases, if implemented with educational services from the start - as is the case for instance in the *UBI PROJECT* just being launched in Quebec - the "video- Highway" should be chosen.

1.6 BROADBAND USAGE FOR EDUCATION

As a whole, the use of broadband telematics is still remote in education and training, but probably more so because of the lack of available tools than from the lack of teaching and learning situations in which the exchange of interactive motion pictures could provide much more efficient pedagogic situations; it would certainly be the case in geography, physics, economics, biology, medicine etc.

Such instruments will come into use, connected directly to powerful servers for simulation purposes, or to satellites for observation purposes. In may be 10 to 15 years time, TV and PC will have largely merged into one another to create a new multimedia powerful instrument.

In the meantime, the educational community should rather rely on telematics, more flexible and evolutive.

2. THE SITUATION IN EUROPE.

It will be examined in the light of these first remarks and, if one may jump to conclusions, show that, contrary to that of the USA, the European situation is probably better suited to the development of the "telco Highway" rather than the "video Highway".

2.1 CABLE NETWORKS IN EUROPE

Whereas in the USA 60 million homes are connected to a cable network, they are only 52 million in Europe for a population one and a half larger.

The cable networks are very unevenly distributed: strong in Germany (13 million homes), Belgium, Holland, the UK, they are weak or even nil in most other countries, even in France with only 1.5 million subscribers for a potential equipment of 5 million.

The investment to turn the cable networks into real **IH** would probably be smaller than the one required for telco networks, but still very high: it is now estimated at 100G$ for the European Union.

Yet the very dense satellite coverage of Europe could become a positive element in favour of the implementation of a "video Highway".

2.2 THE TELECOMMUNICATION NETWORKS.

They are as a whole of good quality, with already a lot of fiber optics installed, more evenly distributed than cable, and can easily become the backbone of the future IH.

Most European countries have a fully operational ISDN network; in January 1994 a general agreement for a *Euro-ISDN* was signed between 26 national operators, for common standards in file transfer, visiophony, fax, high quality sound..

Several countries also have high speed service networks for research --- connected to the INTERNET - such as RENATER in France, SUPERJANET in the UK etc.

Mobile telephony with the GSM cellular technology is in full development, and the present 10 million subscribers are expected to become 50 million in 2000.

2.3 THE EUROPEAN UNION IS A STRONG ADVOCATE OF THE IH

2.3.1. One conclusion of the White Paper of December 1993 on "Growth, Competitiveness and Employment" was to *accelerate the implementation of the data highways*, in a partnership between the private and public sectors.

Among the objectives put forward was that of *lifelong learning*.

Development number one identified 4 priority sectors: taleworking, *tele-formation*, tele-medicine and tele-administration. In tele-formation it was proposed to create in 1995 a European network of 100 universities and higher education institutions.

2.3.2 As a follow up, the *Bangemann Report*, prepared by a group of 20 prominent industrialists of the high tech sectors, recommended in June 1994:

-to accelerate the libralisation of the telecommunication sector;

-to take measures to implement the IH and especially create a Task Force to prepare the high speed European network, next stage after the Euro-ISDN has become fully operational in 2000.

In terms of *education and training*, many concrete measures are proposed in this report such as:

-launched projects for lifelong learning in 5 countries in 1995;

-create distance learning systems for 10% of the SMEs and public administrations by 1996;

-connect 30% of the European universities to the university network by 1997.

2.3.3 In the Bangemann Report, the network referred to is clearly that of telecommunications and telematics. No further public investment is admitted except by *refocussing existing* expenditure; but Martin Bangemann thinks that the new opportunities offered by the telecommunication deregulation and the opening of new markets will be an incentive for industrialists and operators to take their share of public service, especially in Open and Distance Learning.

2.4. EUROPEAN PROJECTS PREPARE THE COMING OF IH

2.4.1. IH prospects tend to generate activity in the information sector and in the creation of networks *at European level:*- the EBONE network interconnecting the research networks;

-the RAMA project in which 12 European museums interconnect their data bases; they will be 20 by the end of 1994 and 200 in 2000;

-Olivetti and Hughes are implementing a new satellite telco network called HOTSTAR;

-technologies of tomorrow like ATM (for fast transmission and switching) and ADSL (for the connection of end-users) are also at the core of network projects: ATM in projects METRAN, PEAN, BETEL; ADSL in a European forum composed of 30 major industrialists. Major telecom operators like BT, France Telecom, Deutsch Telekom, STET and Telefonica have created a forum on IH called ACE 2000 etc.

2.4.2. Several projects of the *DELTA Program* can be considered as preparatory, in their technology and contents, for the coming IH: under the heading of "Telematic Systems for Flexible and Distance Learning", 10 projects are directly concerned, most of them using ISDN at European level, some of them satellite transmission.

With them, the telecom type technologies have made a remarkable breakthrough since 1991 in European educational programs.

They will be followed in the period 1995-99 by the programs SOCRATES (for education with a budget of 1000 Mecus) and LEONARDO (for adult and professional training with a budget of 800 Mecus).

2.5 THE ACTIVITY OF TELECOM OPERATORS IN EDUCATIONTRAINING.

The main telecommunication operators have implemented important training programs for their staffs, and developed at the same time an experience of the applications of their own technologies to flexible and distance learning (FDL) which could be very profitable to the educational world as a whole. They have also developed projects at European level (EPOS).

2.5.1 EUROPEAN TELECOM OPERATORS AND FDL

D.TELEKOM (Germany) has an enormous production of training programs for its own staff: 2 Million hours a year spent in computer-assisted learning; 4000 local stations for self-learning (8000 in 1995 to include former Eastern Germany); 150 dedicated networks.

SIP (Italy) is a subsidiary to the Italian Telecom for its staff training, created in joint partnership with IBM, Olivetti and Apple. It offers 600 000 hours a years in computer-assisted learning; 3000 work stations; downloading systems on the network, and local tutors.

B.T. (United Kingdom) is engaged in numerous European projects; it has an educational subsidiary called CAMPUS 2000 for Distance Education with some 5000 subscriber institutions all over the world. 0.5% of its profits are devoted to "community projects".

FRANCE TELECOM has a strong national training service (SNE) and has devoted large investments to implement inner systems (VIF) for training and information. Some of its subsidiaries are active in the application of telecom technologies to distance education (CITCOM, VTCOM, FCR).

Thus in Europe, the know-how and resources in education and training are important in the Telecom operators. This experience is little known. The Distance Education systems and institutions should try to develop new partnerships with the telecom opertors on FDL "joint ventures".

2.5.2 THE EPOS PROJECT.

EPOS is a European consortium with 5 partners, the German, Italian, French, Spanish and Swiss telecoms; to implement a common software and multimedia architecture for computer-assisted learning. It will also include tele-tutoring.

It is first aimed at the training of their staffs but the operators intend to extend it to outside users in the world of distance learning.

3. PERSPECTIVES IN FRANCE FOR THE IH.

3.1 THE NETWORKS IN FRANCE

Weak in cable TV but endowed with a strong and modern telecommunication network, France already has the backbone of a data highway.

The French telecom network is being completely redeveloped in fiber optics: 1 million kms of fiber are in service the final goal being 2 Mkms in 2000.

Mobile telephony is developing fast with 3 opertors.

The ISDN service is fully operational with 80 000 corporate subscribers.

The RENATER network (medium broadband at 2 Mbits per second), connecting to the European network EBONE, is dedicated mainly to research, but several universities think of using it also for teaching.

3.2 THE FRENCH TELEMATIC SYSTEM

Developed over the last 15 years, the French telematic system - TELETEL, Minitel -is an important and original asset to reach the goal of the Information Highway.

Although slow (1200bps = bits per second) and not very flexible, the system is popular and widespread: 7 million minitels give access through ordinary telephone lines to about 25 000 various services, completely interactive. 20% of the homes are equipped with it. In 1993 people logged-in for 100 million hours and paid 6,7 billion francs for it.

It has been little used in education (a few services only have an educational content) so far, except for international connections with schools and colleges abroad.

But the TELETEL system is now being upgraded with a new generation called TVR, 8 times faster (9600bps) which could provide good applications for education and training.

Meanwhile, FRANCE TELECOM is also proposing access to INTENET on the Minitel, and access to TELETEL by ISDN, thus gradually paving the road towards the Information Highway.

3.3. A FRENCH REPORT ON THE INFORMATION HIGHWAY.

The report written for the French government by Gerard THERY, a former Director General of France Telecom, has just been made public.

It considers the *implementation of the IH as a major issue for French economy*, as were electricity, the train or the car in their times.

Thus it recommends to have a full national data highway built over the next 15 years. It should be based on the existing fiber optic backbone of France Telecom which should take part in the financing.

Homes, schools, libraries, hospitals and all the economic agents of the nation should be connected in fiber optic. 5 or 6 experiments should be launched immediately, to try various services, at the cost of about 200M francs each.

3.4. THE IH AND EDUCATION IN FRANCE.

Within the framework of this report, my recommendations bore on three main points:

3.4.1. Give *experimental priority to universities and to the level of higher education and training;* take advantage of the system to develop distance education in and among universities, where it is too little developed. Coherent with those of the European Union, this recommendation would also aim at a better retrieval of the enormous amount of knowledge produced in the universities.

3.4.2. The educational sector should move towards the IH issue with confidence because in the long run it will become the main provider of programs and contents for it: without education and training programs on its channels, the Information Highway would run the risk to remain mostly empty. The probable next evolutionary stage of the *Information Highway* is that of the *Education Highway.*

3.4.3. With such a perspective, the educational sector should build a new and close partnership with *the telecom sector*, not only for a better awareness of technology development and applications, but for a common approach to the cognitive revolution induced by the use of new technologies.

THE STRUCTURE AND MANAGEMENT OF DISTANCE EDUCATION IN INDIA

E. PARVATHAMMA

Education is popularly conceived as an instrument of social change and national development. It is considered as an investment for Human resource Development which would ultimately contribute to economic, industrial and scientific development of the nation. Distance Education is a means of achieving the same objective. Distance Education is used as a generic term to comprise all pattern of student-centred learning process in which the teacher has only limited role. The most outstanding characteristic of DE is the physical distance between the teacher and student. .DE is a self-paced learning process where in the students can frame their own time-table according to the time at their disposal. Further it also makes use of media as learning process in which students are separated from teachers. Distance Education covers various types of study at all levels which are not under the continuous immediate supervision of tutors. The main general characteristics of Distance Education (DE) is non-contiguous, mediated communication.'The learner is at distance from the teacher for much, most or even all the time during the teaching-learning process'. (Sims 1977) The main elements of DE are course materials & mediated communication between students & the supporting system.

DE has been defined in various ways but all of them have certain common characteristics. The most popular analysis of Keegan (1986) projects seven principal characteristics of DE. They are

* The separation of the teacher-student.
* The influence of an educational organisation.
* The absence of group learning.
* The provision of two-way communication.
* The use of technical media.
* participation in the most industrialised form of education.
* privatisation of learning.

The rationale behind the adoption of DE was to give a chance to study who could not go to formal education system for financial, social, geographical or medical reasons by providing opportunity to learn not only for the privileged but also under privileged, who inspite of having necessary abilities because of socio- economic deprivation. It is also due to the limited resources available to choose Distance Education.

It is realised that correspondence Education would help in expanding and equalising educational opportunities. The credit goes to Delhi University to introduce bachelors degree courses through correspondence in the year 1962. It has gained its high success within no time by enrolling large number

of students. Encouraged by this success Education commission 64-65 recommended fuller exploitation of correspondence education for a wide range of purposes. More universities were established in 60's and 70's. Presently there are 41 universities offering correspondence courses in the country.

The first open University which was established by the government of India was Andhra Pradesh Open University in 1982 with the objective of providing access of higher Education to adults and to upgrade their skills & to improve the quality of their life. The encouraging response to this culminated in the establishment of IGNOU in the year 1985 with dual responsibilities to provide opportunity for higher education for larger segment of population and to develop the open university & Distance Education systems in the country to co-ordinate and to determine standards in such systems. By 1991 open universities were established by state governments of Rajasthan (Kota Open University 1987), Bihar (Nalanda Open University 1989), Maharashtra (Yashwat Rao Chavan Open University at Nashik 1989). India is the only developing country with five open university.

The enrolment ratio in Distance Education has been changed tremendously. In the year 1975-76 the enrolment in Distance Education was only 2.6 % to total enrolment at university/ college level. But in the year 1988-89 enrolment raised to 10.3%.

The major objectives of Distance Education are:

* To supplement the conventional university system and to reduce the pressure on it.

*To provide "Second chance" education to those who had to discontinue their formal education or could not join regularly.

* To strengthen & diversify the degree certificate/diploma courses related to employment.

* To provide an innovative system of university level education, which is flexible and open in terms of methods and pace of learning, eligibility for enrolment, age of entry with view of promoting learning and encouraging excellence in the fields of knowledge.

* To the persons residing in geographically remote areas in which it is difficult or impossible to provide face-to-face teaching.

* To those who suffer from physical disability or long-term illness.

* To make easy accessibility to large number of students

* To provide cost-effective type of education which is lower than the formal education which inturn will help all segments of the community to participate in learning activity.

* To make study accessible to adult learners who have a number of responsibilities and social commitments and little time to spare for studies

* To educate the students who had to discontinue education because of lack of aptitude and motivation, but who may later on become motivated.

* To those who have been displaced (e.g.Kashmiries) and those who move frequently.

*To educate Individuals who look upon education as a lifetime activity and may either like to refresh their knowledge in an existing discipline or to acquire knowledge in a new area. (UGC 1983)

Applicability to large groups is a very important feature of Distance Education. Though it serves the purpose of education to large group at a time and sovereignty of the learner to study at their own pace and time. But there is a general feeling that Distance Education system waters down the quality of Education in comparison with the conventional system. DE on the one hand has limited success and

popularity, on the other it remained at lower levels in its status and credibility. DE is treated today as an alternative system and is expected to step where conventional system can not work. In order to acquire the social acceptability and academic cerdibility any non-conventional system needs to be structured and managed efficiently.

Management is the process of getting activities done efficiently and effectively making decisions on what to do and how to do it and then checking in a systematic way whether that is done or not. Management has to take place at two levels. The micro- level or Institutional level & the macro-level or country level. At institutional level we do not fund enough staff for writing good reading materials. Since it involves much mental labour it needs to be remunerated properly. The reading material is considered as the basic input, around which the whole system of Distance Education is to revolve. And at micro-level wastage and duplication must be avoided. For the effective functioning of DE at both levels management needs to ensure that integrated decision making across a range of functionally distinct areas. This can be achieved through joint decision making process which involve Academics, Administrative & financial staff.

The structure and Management of teaching and instruction in the existing Distant Education system are critically examined by the following heads.

* The development and production of course materials.
* Despatch of course material.
* The response sheet assignment system.
* The supplementary face-to-face contact.
* The other feedback provisions like: Study centre, Library etc.
* Examination and Evaluation system.

THE COURSE MATERIAL SYSTEM

Printed course reading material is the backbone of any Distance Education programme. It not only enhances the students learning but also determines the academic credibility of DE. In DE the course materials expressly serve the individual learner in the study he does on his own. However as these materials produced on large scale are supplied with great financial advantage to large number of students scattered geographically. "DE can be -and- often is a form of mass communication" (Holmberg, 1985). Print media in the form of course reading material dominates the other form of technological mass communication media and constitutes the mainstay of DE, since it serves in imparting instruction to thousands of learners at a distance (Singh, 1985). The course in Indian context of Distance Education system is a combination of three or more subjects leading to a degree or diploma. Each subject comprises of one or two papers. Preparation & writing of course reading material for DE would be a challenging task because the subject matter of high academic quality written by noted subject experts may not necessarily be suitable for DE. The familiarity with Distance Education system may not be there. There are main 3 qualities required to write for DE. They are subject expertise, teaching ability & writing skills.

The management of course material system adopted in the existing DE is stereo-typed, lacks innovation. These materials fail to arouse interest & sustain motivation. The combination of media such as graphical, figural presentation in text books & its supplementation in the form of electronic media like Audio-Video tapes etc. Thus the collective wisdom of both the subject experts and media experts called for developing course materials. There is an urgent need for fuller utilisation of Internal & External production facilities.

DESPATCH SYSTEM:

Distribution of course learning materials needs efficient staff to work on it. It is both complicated and difficult based on the requirements of students. If we analyse the present despatch system of DE in India, one would safely conclude that the biggest weakness of the distribution system lies in its failure to meet the requirements of individual student with respect of their study pace. But large enrolment compell the organisation to adopt uniform policies with reasonable pacing. Supplying reading materials according to the study pace of individual student in DE is a difficult but not an impossible task. It is a management problem and there are organisational strategies to tackle this problem. The study materials should despatch to the study centre within the stipulated period of time to the right address and to ensure that the materials that have been reached to the student or not.

The management of distribution of materials should be based on 'Assignment related system'. That means the materials to be sent only after the assignments for the previous materials have been submitted and checked.

ASSIGNMENT SYSTEM:

This is one of the important device for non-contiguous two-way communication in DE between the students and his supporting teacher to serve. Holmberg (1985) is of the view that assignments help in Distance teaching organisation by the following ways.

* To support students motivation and interest by contact with an encouraging tutor or counsellor.
* To support and facilitate student learning by having comments, explanation & suggestion.
* To assess the progress of the students.

In practice the assignments act as a feed-back device to support the learner. If the student has any doubt, he can send back the assignments to his tutor in writing his academic doubts clearly. In this way two way communication traffic through written media can be established between students & the tutors. It involves not only the correction of assignments and send them back to students but also include comments, since it provides feed back to the students by removing their difficulties & faults. The comments like what should have been done instead of what has been done etc... Such comments by tutors will help to form the real educational value as they enable the students to know their faults & rectify them. This kind of feedback serves as the backbone of Distance teaching-learning system.

Unfortunately the process is not being followed effectively by tutors because time allotted to them is very less and more involvement of labour. In order to save money and time in getting assignments corrected & commented, the use of two computers be made available for the purpose of marking & commenting. They are very cost-effective to apply in Distance Education.

PERSONAL CONTACT PROGRAMME:

Face to face sessions have often proved to be very useful & successful as supplementing materials (Holmberg, 1988). The term PCP in the Indian context denotes the collection of Distant learners & representative of the supporting organisation at a particular pre-decided place for a specific period of time. This face-to-face interaction serves the purpose of clearing academic doubts and removing the isolation from his fellow students.

THE AIMS OF PCPs :

* To formally teach the content to students.
* To conduct sessions to remove the difficulties of the students.

* To use PCPs as platform to remove learners isolation.
* To provide individualised tutoring & conselling to students.

PURPOSE SERVED BY PCPs :

* Learning, reading are supplemented by teaching.
* Students academic problems can be removed.
* Students are encouraged to put their problems & ideas.
* Report with tutors & distance teaching system is established.

VALUE OF PCPs

Though it serves the purpose of removing the problems but do not necessarily serve to reduce all academic problems since more concentration is being given only on lecture. In order to make it beneficial from the point of view of learner, more time should be allotted for face-to-face interaction rather than formal lecture. PCP will prove to be of optimum value of supplement to the distant study provided more time is allotted for discussion (Interaction). Supervision may involve visiting tutors when they are conducting face to face sessions to check on the quality of the feedback given by the tutors. Wherever necessary senior tutors should correct faults and provide training in the areas of weakness. The tutor's role is to support learners efforts to fulfill objectives that have been determined by the institution through the study of provided materials. The objective of management is to facilitate this process and to ensure that it happens.

The important question is why do we have face-to-face interaction? The answer to this question needs research based empirical answer. But unfortunately no direct research evidence is available. Logical answer to this question is that essentially one should clarify, those who join DE by choice & those who join DE by force. DE for the former group is a part-time enterprise since their motivations and time spared for studies are different whereas the latter is mostly a full time enterprise since they are forced to enter DE. It is suggested that the DE programme should be structured and support services be organised separately for these two groups of students according to their needs and requirement. Uniformity should be discarded. Unless this is done any programme designed or organised will not suit to obtain optimum utility to both part-time and full-time students.

THE STUDY CENTRE SUPPORT SYSTEMS :

PCPs and assignments are of the optimum use to the Distance learners. Inspite of that if the learner is actually in need of help, if that is not available which may result in reduction of learners motivation. Added further lack of library facilities & feeling of isolation remains untackled handicap. In order to minimise these disadvantages the study centres provide some support services like library & other media facilities. Tutoring & counselling has come to be widely recognised as a major input in supporting Distance Education. Generally study centres should set up where there is a good concentration of the learners & be equipped with the following materials:

* A mini library consists of relevant books, reference materials.
* Adequate facilities for sitting, reading & writing work.
* Staffed by a team of full or part-time counsellors/Tutors.

These study centres need to act as both resource & support centre within the vacinity of Distance learners because there is always possibility of meeting the other fellow learner in the study centre the isolation gets removed by interacting with them. There is no doubt that establishment of the study centre is an expensive business. It appears to be a gigantic task and people responsible for the educational budget dare not touch this issue. The Study centres have failed to act as platforms for removing learners isolation and provide library & other media facilities at the time when they are really in need. A training/orientation programme in the beginning, handling and using media materials may be mishandled by the students and may go out of order. A nominal charge may be taken to use gadgets like VCR, Computers, Photocopy machine and this amount may be utilised for the maintenance of these gadgets.

SOME OTHER SUPPORT SYSTEMS: PRE-ENROLMENT GUIDANCE COUNSELLING SERVICES:

It means providing the information about methods, procedures, materials & requirement of Distant Education to all for those prospective learners who desire to take Distance Education course. In order to reduce the drop-outs in DE pre-enrolment guidance would serve better. DE is the study which involves much straneous work like responding assignments in time, attending PCPs, lack of proper library materials for reference etc. Distant learner realises that he can not cope up with the DE. There arise drop-outs in DE also. Pre-enrolment guidance will result in the enrolment of only serious and deserving students. This would substantially help in reducing the Drop-out & failure rates in Distance Education. It is noted that highly intelligent & motivated students will learn even under the most adverse circumstances, provided they have access satisfactory and appropriate learning materials. This way Drop-outs can be arrested in Distance Education system by providing excellent study materials & creating a pleasant environment which encourage the students for Interaction with tutors & counsellers in order to maintain motivation & interest.

EVALUATION SYSTEM :

Evaluation system plays a dominant role in determining learners to assess their mental calibre. There are two types of evaluation. They are Formative & Summative Evaluation. Both types are extensively used in Formal as well as Distance Education. Formative refers to evaluation takes place from time to time. Where as summative evaluation refers to evaluation at the end of the course to award the marks/rank. In DE formative assumes to be very useful as it plays a vital role. The results of the periodic/continuous assessment serves important on the one hand by providing timely feed back to the Distant Learners to correct themselves, judge themselves, the value of the efforts they have put in & to monitor themselves. On the other hand they have been used to determine the eligibility of the Distance Learners to appear for final examination. Hence the Knowledge of positive results acts as a reinforcement to motivate to do better. Evaluation is important for number of reasons. They are

* To monitor one's performance and with a view of improving it.
* To Satisfy oneself to achieve self aims and objectives.
* To adopt the practice of getting internally written materials evaluated externally and vice-versa.

But one thing DE should bear in its mind regarding the autonomy of the students like taking the examination many times. Allowing a number of attempts to Distant Learner is no doubt a desirable thing and a healthy practice, but certainly not the autonomy and freedom to decide the papers in which

and when to sit in the final examination. Because the examination is held at scheduled time at fixed intervals and may not prove to be cost-effective from the point of view of the concerned organisation.

Distance education has been adopted in almost all the countries to equip the people who have willingness and ability, competence and confidence. Hence Distance Education schemes are useful means of Educational innovation, Technological developments and political requirement of the present day. Going school or university is not the sole means of providing education. Society has produced many able and pragmatic people who did not go to school. So Education should be made in such a way that student tries to take and ultimately gets self-education, self-direction, self-realisation and self-guidance. It is true to say that at present there is none so great as the discovery of Distance Education for the betterment of the mankind since it has its own advantages. It is not an alternative system but culminated to provide opportunity for continuing education to the interested learners through flexible learning system.

Almost all the Distance Education systems have committed to serve the learners with the best quality materials. But there may be many practical constraints in their working which lead to poor quality. It is obvious that even an open learning system, however open it might be, must insist upon a certain level of competence which one has to bear in mind. In doing so we shall be fostering yet another system of majority as unfit to receive the benefits of a modern kind of education. Disparity exists among conventional institution regarding the educational standard, when criterion of uniformity in testing and assessing there can not be a cause for decline in the quality of DE. It is often proved that the quality is acquired by the individual student in his own individualised process of learning is fruitful than the conventional system. Education is what survives the learning process and therefore it is immaterial by what process and media one learns.

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CHARACTERISTICS OF SELF-INSTRUCTIONAL MATERIALS DEVELOPED BY INDIRA GANDHI NATIONAL OPEN UNIVERSITY

S.P.MULLICK

Introduction

Self-learning materials (SIMs) are designed to impart measurable educational outcomes in specified target groups of learners. Irrespective of their format, they have three common features. They present a limited amount of learning material at one time. The student is required to learn that material and to answer a few questions on that material. He/she is then required to check his/her answers is before going on to the next segment of learning material. The material may be presented in book format or as audio tapes, video tapes or through any other media which may form a part of the multi-media instructional system. There is a constant assessment of the students progress, based on self-check exercises given in the materials supplemented by tutor-marked assignments and/or computer marked assignments to make sure that the
student derives the maximum benefit from the instructional system.

Psychological Principles Underlying SIMs

SIMs are developed in accordance with the principles of efficient learning evolved by psychologists under controlled laboratory conditions. These principles emphasise the need to specify the terminal behaviour to be developed in the learner and then design the instructional process so as to maximise the rate of acquisition and maintenance of terminal behaviour. This is achieved by the application of the principles of active responding, re-inforcement, gradual and successive progression and empirical validation.

A learner can learn if he actively responds in a learning situation. In Self-Instructional Materials, active responding is arranged with a limited amount of learning material with which he/she is ready to interact. After presenting learning material, the learner is required to respond to questions based on that information. In this way, the learner is made to pay full attention to the learning material.

The principle of reinforcement is used as a control process for the acquisition of responses. Responses are required as a result of a contingent relationship between the responses of the learner and the consequent event. They are acquired under conditions in which they are followed by rewarding events. For these contingencies of reinforcement to be effective, rewarding events must follow the occurrence of the responses being developed in the learner. If this is not the case, different and perhaps unwanted responses may be learnt. In addition, a sufficient number of reinforcements must be given to the learner so that the desired responses are strengthened and their probability of occurrence for the learner becomes high in appropriate situations. In the case of SIMs, the reinforcing event following a response is generally the confirmation of the right answer. The learning material presented in each step is designed

in such a manner that the learner, more often than not, gives a correct response. In this way, maximum reinforcements are provided to the learner. According to the principle of gradual and successive progression the initial steps are designed to evoke and reinforce responses that have some approximations to the terminal behaviour. In subsequent steps, changes which are in the direction of the terminal behaviour are reinforced. The SIM moves through fine graded steps, working from lower to higher and higher levels of complexity.

Another important feature of SIM is its empirical validation. Testing its efficacy on a sample of intended learner is an essential ingredient. It is revised and improved until it demonstrates what it purportes to teach.

House Style of SIMs

Every open university adopts a house style of developing of SIMs. In IGNOU a programme is presented in terms of a combination of courses in a particular field of study, e.g. Undergraduate programme of BA, Diploma Programme in Management, MA Programme in English etc. Each course is presented in the form of multi-media package consisting of a number of printed texts, audio-video components, contact sessions, assignments, library work, laboratory work, project work etc. Hence each course consists of a few printed booklets called blocks which form the pivot of the course. The block generally consists of 60-80 printed pages. It covers unified theme. It contains a number of units. Each unit is in the form of an interactive instructional lesson. It contains orientation for learners, introduction to the content, explanation of the topics covered and exercises to help the students learn the material. A unit generally consists of 5000 to 6000 words. This amounts to about 15-17 printed pages of A4 size paper.

All the IGNOU units display reasonable degree of uniformity. A unit has six main components viz. structure, objectives, introduction, sections, sub-sections, self-assessment questions, glossary and summary. The rationale for each component is as follows :

The structure shows important teaching points. It specifies graded steps in which information is presented. It facilitates the students to locate relevant content. The objectives show to the students exactly what they are to do and what they will achieve after they have finished the unit. The introduction provides linkage with the past learning. It also gives an over view of the unit and places the unit within the context of the other units contained in the block as well as its position in the course. The sections and sub-sections present the learning material in easily understandable chunks of subject matter and facilitate graded learning. They ensure the progress of the learner from the simple to the complex. The self-assessment questions provide evidence to the learners as to what they have learnt and what they have not learnt. They also show the learners what is important and also help them practice important responses. They also help them measure their progress. The glossary and summary help the students to recapitulate important learning points. They reinforce learning and refresh and clarify important points for proper comprehension.

Process of Developing SIMs

The process of developing SIMs is implemented through seven tasks as shown in the flow chart in figure 1. These tasks are as follows:

Task 1: Analysis of Syllabus (Programme specifications) and description of the target group

Task 2: Review of the structure of the courses, blocks and units in the course leading to the development of content outline and structure of the unit in hand.

Task 3 : Specification of objectives, analysis and sequencing of objectives and developing introduction to the unit.

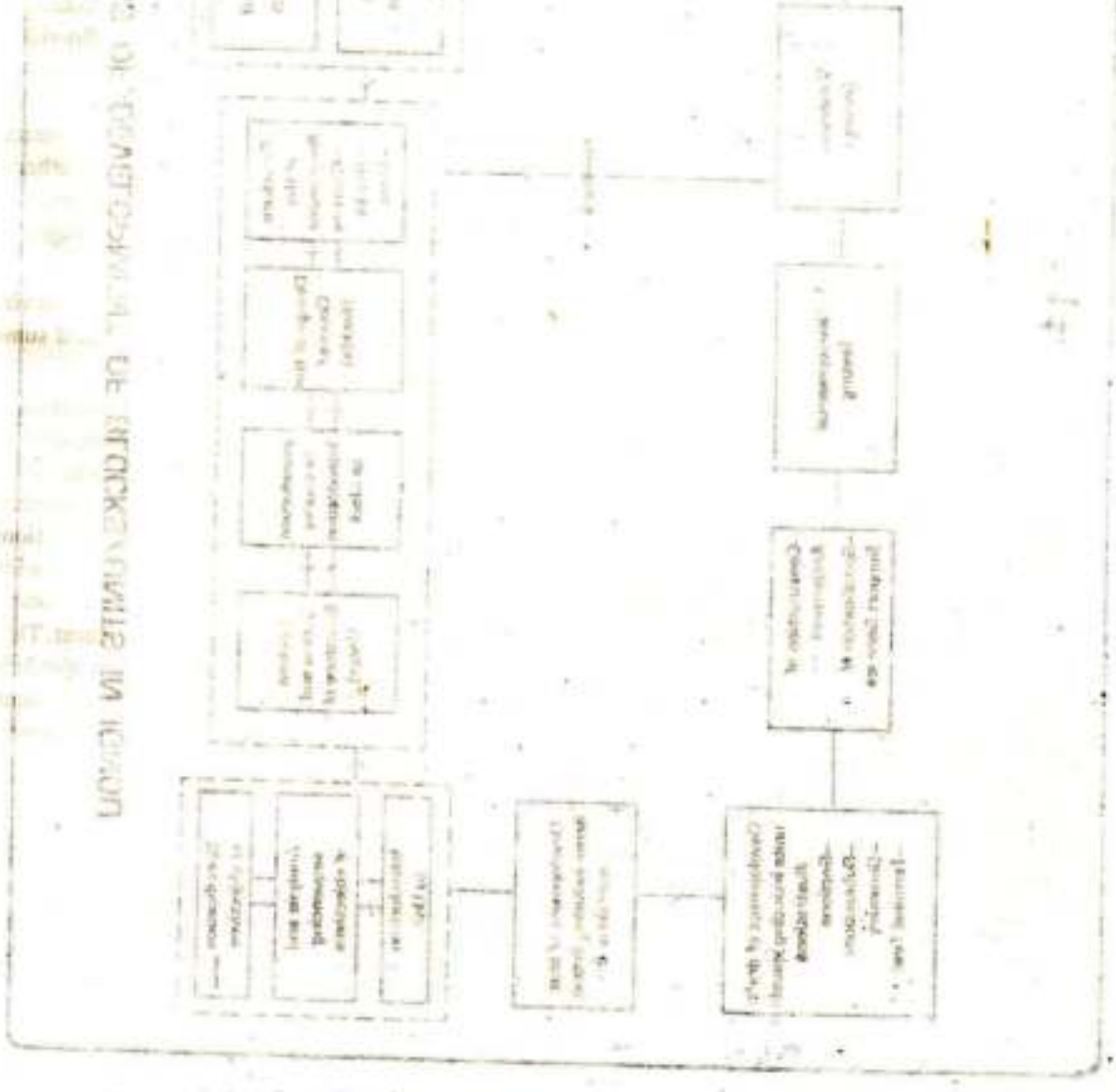
Task 4 : Development of test items including intext questions

Task 5 : Development of draft units including visual illustrations in sections/sub-sections as well as development of summary and terminal tests

Task 6 : Construction of assignments and specification of support services

Task 7 : Try out of materials including development and validation testing

It will thus be noted that the strength of SIMs developed in IGNOU does not lie as much in the materials but more so in the rigorous process of their development, tryout and validation.



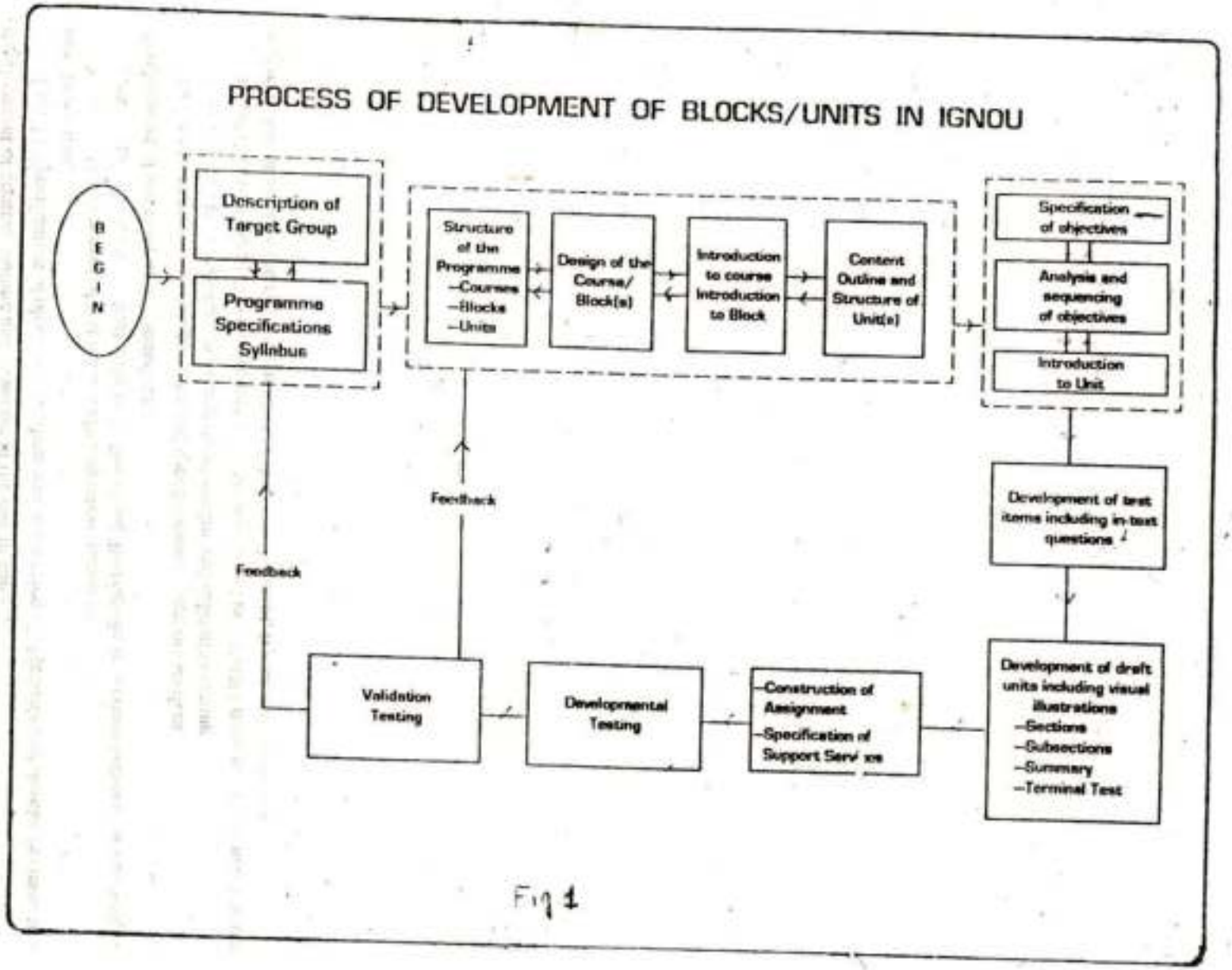

PROCESS OF DEVELOPMENT OF BLOCKS/UNITS IN IGNOU
BEGIN
Description of Target Group
Programme Specifications Syllabus
Structure of the Programme
–Courses
–Blocks
–Units
Design of the Course/ Block(s)
Introduction to course Introduction to Block
Content Outline and Structure of Unit(s)
Specification of objectives
Analysis and sequencing of objectives
Introduction to Unit
Development of test items including in-text questions
Development of draft units including visual illustrations
–Sections
–Subsections
–Summary
–Terminal Test
–Construction of Assignment
–Specification of Support Service
Developmental Testing
Validation Testing
Feedback
Feedback

Fig 1

DISTANCE EDUCATION RESEARCH IN CENTRE FOR EVALUATION : A REVIEW

G.SRINIVASACHARYULU *

1.. Introduction :

The Open University system has acquired high 'visibility' in India with the establishment of Andhra Pradesh Open University(now renamed: Dr.B.R.Ambedkar Open University(AOU) in 1982, though the development of Distance Education (DE) has occurred over years in the form of Correspondence Education Programmes. And yet very few seem to consider this as anything more than a secondary or a supplementary educational system. Despite the fact that Distance Education is offered as an academically viable alternative in an increasingly over crowded Higher Education environment, it is yet to move from the marginal to the main stream of education. While open access and equal opportunity are considered to be values, very little attention has been paid to the matter of how to make these two meaningful in terms of innovative programmes of study designed to secure socially desirable results. We cannot afford to take for granted questions relating to the kind, the quality and the content of open education in our country. There is a great need to initiate an informed debate on a variety of issues connected with Distance Education.

It is against this background that the Dr.B.R.Ambedkar Open University, which itself is a pioneer in India in the field of open system of education, has established a Centre For Evaluation (CFE) with the following objectives:

1. to plan and carry out both extensive and intensive research on various aspects of DE.
2. to evolve research-based alternatives for improving the instructional process at various levels;
3. to strengthen teaching in academic programmes at undergraduate and post-graduate levels;
4. to strengthen research at M.Phil and Ph.D. levels;
5 to provide for dissemination of research findings in the field of DE and
6. to act as 'a critical friend' in the process of formative evaluation of courses.

Though it is too early to trace the trends from the select studies undertaken by the newly started Centre For Evaluation, the findings give feed-back for improving the academic and organizational structures at various levels for making DE more effective. This paper discusses the work done in terms of findings and aspects studied while also pointing out future studies required. Related to this is an attempt

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The author expresses his deep sense of gratitude to Prof. C. Subbarao, Reactor and Founder-Director of Centre for Evaluation, Prof. P.Ramaiah, Registrar and former Director of Centre for Evulation and Prof. M.Satyanarayana Rao, Director, Centre for Evaluation for their constant encouragement, guidance and interest in the Centre's evaluation studies.

to direct systematic effort in particular areas, within an accepted framework, in order to enhance the theoretical knowledge.

2.0 Rationale of Research in DE :

It is only in the last few decades that the concept of the Open University System has enabled us to widen considerably the constituency of higher education. In the case of the Dr.B.R.Ambedkar Open University which is about ten years old, *wider access* meant initiating the process of democratisation and de-elitization of higher education. Gone are the days when educationists could say : MORE MEANS WORSE. How does this initiative affect the basis on which higher education has been viewed from times immemorial? Does it bring about social change commensurate with the directive principles of state policy of the Indian Constitution ? Although it is a little premature to embark on an evaluation of the system as a whole, (normally it would take anywhere between 15-20 years before an educational experiment merits evaluation), it would be appropriate to generate meaningful discussion on not only the socio-political objectives of this innovative educational experiment, but also examine the direction in which this is going. For this reason, questions relating to :

a) the standard or quality of instructional materials produced ;

b) the type of instructional methodology employed,

c) the multi-media support introduced in the delivery system,

d) the flexibility or the opposite of the institutional matrix built up,(whether it is sufficiently indigenous or imported, inclusive or exclusive, enabling or disabling),

e)whether the entire enterprise is effective, efficient ---

these are far too important to be allowed to remain unexamined for more than a span of one decade. Hence, the urgent need to initiate an informed debate on these basic issues with relevant data obtained from the Dr.B.R.Ambedkar Open University.

With this strong rationale for conducting duration for the improvement of DE through Dr.B.R.Ambedkar Open University, Centre for Evaluation, which was established as a separate Branch in 1987 has conducted the following studies:

3.0 Research studies at the Centre for evaluation :

It is expected that continuous researches can resolve several issues mentioned above in the area of DE. The Centre for evaluation has undertaken about thirty evaluative studies, of which twenty six studies have been reviewed (APPENDIX). The Indira Gandhi National Open University, a statutory body to coordinate open universities in India, has sent a visiting committee to AOU in 1989. The IGNOU-visiting Committee has observed that the Centre For Evaluation has undertaken certain useful studies; and suggested the CFE should be consulted before starting any new courses. Distance Education Council (DEC) has provided grants to the Centre for Evaluation to undertake research studies. These are in recognition of the important work being done here in the area of Evaluation of Education Programmes. Studies conducted so far in the CFE have taken into account different aspects of the system. The reports have been discussed under the following headings:

3.1. Eligibility Test

3.1.1 Profile of Non-formal Aspirants

3.1.2 Performance

3.1.3 Propagation of Educational Opportunities

3.1 Eligibility Test (ET) :

3.1.1 Profile of Non-Formal Aspirants :

A study of the profiles of candidates appearing for ET (SUBBARAO, et al.-a1989-a) revealed that a majority (82%) of the aspirants are in the age group of 21 to 30. Backward castes(scheduled castes and scheduled tribes) form only 12-17% of the total sample. Among non-formal aspirants unemployed candidates are dominating the scene (62-68%). Women had discontinued their previous education mainly because of marriage. In this non-formal group curiosity to learn, higher education qualification of family members and social status figure in that order respectively.

3.1.2 Performance :

The study of the performance of students in the ET(RAMAIAH & SRINIVASACHARYULU, 1992) reveals that among the successful candidates men. S.S.C. qualified, unmarried, non-backward castes (other castes) ,unemployed and young students out number others.

But contrary to the popular belief that the performance of weaker section (women, scheduled castes and scheduled tribes) and the employed groups would be low, as they come from a relatively poor socio-economic background and as they lapse into lower levels of educational standards respectively, the results of the study show that it is not true. With a few exceptions, pass percentage of weaker sections was found to be above that of men and non-backward castes. The study also reveals that women over men, students with higher educational qualifications over those with lower educational qualifications, the married over the unmarried, the backward over the non-backward, the employed over the unemployed, the aged above 31 years over the younger candidates below 30 years performed better.

From this it is clear that the Open University has realised its objectives by giving an opportunity for higher education through Eligibility Test in which women (including housewives), working population and adults fared well.

Though a separate study was not conducted, when the above study was going on, the overall data showed that there had been relatively a higher percentage of failures among non-formal candidates in 'GENERAL KNOWLEDGE' paper when compared to their performance in other papers relating to verbal aptitude, which has been a part of the academic aptitude test conducted for admission to Higher Education throughout the world. The content areas included in the Question paper on ' GENERAL 'KNOWLEDGE' as far as testing the candidates for admission to Higher Education is concerned, have no relevance to the required ability to pursue Higher Education. Hence, one of the main reasons for the relatively higher percentage of failures in General Knowledge, as expressed by the valuers of Eligibility Test, may be that the content areas included in Question Paper on General Knowledge do not reflect the intention mentioned in the prospectus that the content areas which are of interest to the educated people in general are included in Question paper on General Knowledge (SRINIVASACHARYULU, 1990-a). This has led to the decision of the University to modify the pattern of ET paper.

3.1.3 Propogation of Educational Opportunities :

On the basis of a study on "Eligibility Test: Non-formal Students' Response" (RAMAIAH & SRINIVASACHARYULU, 1993), conducted to find out (i) the role of print and electronic media and other sources of information in propagating the conduct of Eligibility Test, (ii) the study interests of students in terms of print media and (iii) the source of encouragement, a number of measures such as (i) selection of media for effective propagation of educational opportunities, ii) identification of new programmes to attract non-traditional students, (iii) conducting various programmes to develop study-skills, communication skills, arithmetic and logical thinking abilities for making potential students eligible for higher education were suggested.

3.2 Student Profiles :

There were two studies (RAMAIAH, et al., 1990-a; RAMAIAH et al., 1991) on students' profile - the first one of these was studied in 1989 where as the second one, an updated version of the first one, was studied in 1990. These two studies show the following trends:

i) The Dr.B.R.Ambedkar Open University is becoming increasingly popular as is evident from the increase in the student enrolment by about 432 per cent over the last eight years, i.e 1983-84 to 1990-91.

ii) The Dr.B.R.Ambedkar Open University has been able to extend educational opportunities to many sections of the people who cannot think of joining the formal higher educational institutions. A large number of students enrolled in the university belong to the non-formal stream, who could not join the formal institutions because of certain restrictions on admissions. To such sections the Open University provides access to higher education.

iii) The regional medium of instruction(Telugu) is more popular with the Dr.B.R.Ambedkar Open University Students than English,.

This indicates that students prefer to pursue their higher studies in the mother tongue.

iv) In view of the objective of offering even non-degree certificate courses for the benefit of working population in various fields, courses such as Postgraduate Diploma in Public. Accounting (PGDPA),

Postgraduate Diploma in Public Relation (PGDPR), Bachelor of Library and Information Sciences (BLISc) & Certificate Programme in Food and Nutrition (CPFN) have been introduced.

v) Age-wise details reveal that most (82%) of the students are young (16-23 years).

vi) For the last six years, the proportion of enrolment through formal entry channel has been increasing (from 15% to 34%).

vii) Though the proportion of unemployed students is more than that of the employed, in the Indian context the proportion of working population is significant (40%).

viii) Among women a large number of students are unemployed and are house-wives (88%).

In addition to these evaluation studies on student profiles the Centre has provided Database Documents on students' enrolment to various functionaries (RAMAIAH & SRINIVASACHARYULU, 1994-a to f).

3.3 Multi-Media Approach :

3.3.1 Print Material :

When the preliminary study on 'Courses and Programmes' (SUBBARAO, et al., 1989-b), was conducted it had revealed that most of the students felt that in the PRINT MATERIAL certain concepts were not explained and that a few ideas were not illustrated and that particularly, the lessons were diffiult in terms of their content. Later the PRINT MATERIAL was rewritten in self-instructional style. Post-Test has yet to be undertaken.

The major finding of the study conducted on counsellors' opinions (SUBBARAO, et al., 1989-d) revealed that the COURSE MATERIAL of AOU is appropriate in terms of content and readability for learners, accurate, good to excellent and adequate. Examiners reported, in another study (SUBBARAO, et al., 1989-e), that the print material supplied by AOU is used only partially in writing the University examinations.

3.3.2 Radio and other Audio-Visual Aids :

In the study on Multi-Media Approach (SUBBARAO, et al., 1989-c); it was also found that RADIO LESSONS were not popular, and the facilities for AUDIO AND VIDEO LESSONS available at the study centres were mostly not made use of. From these two studies -- (i) on the Eligibility Test and (ii) Multi-Media Approach . It can be concluded that though students joined the courses with an interest in learning through AUDIO-VISUAL AIDS, they were not availed of by the majority of the students for various reasons such as lack of physical facilities, lack of required attitudes and skills in coordinators and counsellors in using Audio and Video lessons effectively.

3.3.3 Counselling :

Relatively more students appreciated contact-cum-counselling classes. Altogether the components of instruction were not effective at the expected level, the study reveals and underscores the need to study indepth the implementation of multi-media approach (SUBBARAO, et .al. 1989-c).

The study on 'Summer Schools' (Ramaiah, et al., 1990-b) reveals that counselling classes in summer schools are attended mostly by those who do not possess any formal educational qualification. The non-formal students' experience were different from their expectations during summer schools while the formal students felt that their experiences were upto their expectations. In this study the responses of

observers and coordinators on the questionnaire reveal that lack of proper communication to students regarding the nature, scope and importance of conselling classes, and lack of special effort to motivate students may be important reasons for the absenteeism of the students in counselling classes on Sundays and during summer schools. From this study it was concluded that individual student's aspirations should also be taken into consideration while organising instruction.

The above mentioned studies reveal that print material is the only instructional component that reaches almost all the students. But it does not mean that print material is more popular than other instructional components such as radio and other audio-visual aids, and counselling.

3.4 Testing the and Evaluation Strategies :

3.4.1 Examinations :

The study on Testing and Evaluation Strategies (SUBBARAO et al., 1989-e) reveal that though the percentage varies from subject to subject, on the whole the majority of examiners felt that there was a need for necessary changes in the pattern of the question paper, particularly in terms of length of paper. Regarding the performance of the students who appeared for the examinations, 68% of the examiners graded the communication ability of the students as 'good to fair' while the understanding of the subject matter as reflected in the answers of the candidates was graded as fair by 57% of the examiners. It is interesting to note that none of the languages (English and Telugu) examiners graded the students as good either in their communication ability or in the level of understanding of the subject matter.

3.4.2 Assignments :

The following gaps are found from the study on 'Assignments' (SUBBARAO, et al., 1989-f) in the implementation of the schedule of assignments :

The assignments , which are supposed to play the role of giving feed-back to the students in learning during the formative stage, have not been used accordingly. The assignments were submitted , on an average one assignment per course that too once in an year, by few students who attended counselling classes regularly.

The valued assignments were not returned to the majority of the students for various reasons such as failure to value the assignments in time on the part of the counsellors, non- availability of the students to collect the valued assignments back.

The question papers for assignments had reached the majority of the students late. The basic concept and role of assignments in open learning is not clear to the functionaries. There is a lack of coordination among the different departments and functionaries. There is a lack of integration of assignments with counselling and Audio-video classes.

3.5 Distance :

From the studies on the 'Geographical Spread of Study Centres of APOU' (SUBBARAO, et al., 1989 -g), the 'Geographical Distribution of students of Undergraduate Courses' (SRINIVASACHARYULU, 1991) and also from the study on the effectiveness of counselling classes of First Year Undergraduate Courses (RAMAIAH & SRINIVASHARYULU, 1991), it was clear that distance played an important role in the enrolment of students and attendance. In the case of First Year Undergraduate Courses, the percentage of students enrolled in a study centre was inversely proportional to the distance between the study centre at the centre and the concentric zone of residences of the students. In the case of First Year Undergraduate students more than 85% of the students who attended the classes belonged to the zone in which study centre was located. But as per the study on the effectiveness

of counselling classes of Bachelor of Library and Information Sciences(BLISc) (RAMAIAH & SRINIVASACHARYULU, 1991) distance has not influenced the attendance of BLISc students at Sunday counselling classes. Though the attendance is not compulsory, there is no significant difference between local and non-local BLISc students in their attendance performance. In the study on Dispersal of Study Centre' (RAMAIAH and RAJAMOULI, 1992), a number of towns were identified for the establishment of future Study Centres of AOU on the basis of the aerial distances of each from the seventy four Study Centres existing at the time of the study.

3.6 Time-Schedule :

In the study of 'Face-to-Face support services' (RAMAIAH & SRINIVASACHARYULU,1991-c) from students' response it is evident that availability of student services, whether it is a counselling class, practical class or broadcasting radio lessons, at suitable time from student point of view is more important for the effectiveness of the services in terms of their usage. At least advance information about the dates of programme schedule was considered necessary by the students as reported in the study on 'Summer Schools'(RAMAIHAH, et al., 1990-b).

3.7 Peer Group and Others :

It is quite interesting to note that all the students, both formal and non-formal, in this study (RAMAIAH & SRINIVASACHARYULU,1991-d) have benefited from face-to- face contact learning if not through the contact classes provided by AOU with the help of their colleagues, friends or relatives.

Moreover, both the studies conducted on students of BLISc and First Year Undergraduate Course reveal that more than 75% of BLISc students and 86% of First Year Undergraduate Course Students found that meetings with other students were 'helpful' to 'very helpful.'.

3. B Practicals :

The study on face-to-face support services (RAMAIAH SRINIVASACHARYULU, 1991-C) shows that even in the case of practicals, among science students the majority of the open university students in general and all the employed students in particular would like to have two groups of time schedules for practical classes so that they could choose convenient dates. Besides, the provision of two groups of same practicals would help the weaker students if they want to repeat.

3.9 Socio-Psychological Factors :

3.9.1 Study Habits and Self-Concept :

The study of 'the relationship of study habits to self- concept, (SRINIVASACHARYULU, 1990) reveals that the measure of study habits is significantly positively correlated with self- concept. Self-concept of the aged and employed female students with high level study habits is better than any other combination of the variables relating to sex, age, employment and study habits.

3.9.2 Hesitation :

The responses of the students of a conventional university such as lack of interest on the part of their teaching community and their hesitation during lecture to get their doubts cleared reveal the social distance between the teacher and the taught (RAMAIAH & SRINIVASACHARYULU, 1991-C).

3.10 Cost-effectiveness:

From the study on 'APOU - A Critical Profile' (SUBBARAO & SRINIVASACHARYULU, 1991), the cost analysis shows the trend towards the gradual decrease in the ratio of Income and Expenditure of AOU during the last four years.

3.11 Need-based academic rogrammes:

The study on 'Social Demand and Need'(RAMAIAH et al., 1993) was conducted on a sample representing the characteristics of various groups from rural, tribal and urban areas, spread over the state, cutting across sex,caste, education and occupation. Though a number of new academic programmes and fields have been suggested to ensure need-based and relevant courses, it is interesting to note that the effectiveness of vocational education programme, the study observed, lies not in certificate courses of routine techniques but in those programmes which emphasize problem solving process. In other words, the adult learners appear to be concerned about those aspects of their lives that have not tradionally been regarded as 'academic'-emotional, interpersonal, spiritual and social factors.

4.0 On going Research Projects :

1.Cost-Effectiveness of Distance Education System - A Study

2. Performance of Study Centres - A Study

3. Use of Radio and Audio-Visual services -An Experimental Study

4. Appraisal of Counselling-cum-contact classes of AOU

5. Revaluation of Student, Answer-scripts - A Study

An important point to be noted about the ongoing studies in this Centre is that a majority of these studies concern themselves with problems of distance education among students in general and the deprived communities in particular. Another interesting feature is that these studies are increasingly adopting the methods of case study and participant observation in addition to the usual sample survey approach.

5.0 Future Studies : Scope And Perspectives :

The focus of future studies will continue to be on the education of deprived communities. Apart from these, attempts will be made to organize studies which explore the relationship between education and socio-economic development in rural areas in a comprehensive way. These studies would be broader in their scope taking villages and blocks as units instead of concentrating only on certain sections of the rural community. Thus, the main thrust of future studies in the Centre will be on "DE in a developmental perspective". The studies will be both extensive and intensive adopting both survey and case study approaches.

The initial efforts in the area of multi-media approach were restricted to studying the access and use of various instructional components.

It is through these initial efforts that a need is felt to investigate the scope of the print-material vis-a-vis other instructional components to fulfil comprehensively the different objectives of instruction. And, consequently, the broader view of researches in this area is taken in terms of Educational Technology.

In the area of educational technology, there is a need to identify the best possible combination and sequencing of multimedia. The Centre is planning to explore several ways of having external measures for the purpose of validation besides criterion scores of learners. Results for successive years, criterion score distributions based on the effects of different groups with known profiles of learners' attributes are some of the significant measures utilized for the purpose of validation. Moreover, the instructional practices will be studied in the manner that they can be seen in the perspective of the influence of all relevant factors. Methodologically, therefore, the issue here is to bring out the relationship between one or more factors and all other factors in the total system of instruction. This systematic approach to the study of

instructional problems may help identify the entire motive of relationship of an instructional variable with the total system.

Some of the studies which need urgent attention are :

1. Need assessment of target group learners, identification of courses and feasibility studies for new courses ;

2. Research efforts to be made for evolving appropriate strategies of instruction for different coures in DE;

3. Studies are to be made for understanding the intricate relationship and dynamics existing between different internal and external forces in a integrated form at AOU ;

4. The gradual decrease in the ratio of income and expenditure is indicative of the importance of the study of the economics of DE at AOU taking into account the overall functioning of an institution/system;

6.0 Conclusion

The future course of research in the Centre For Evaluation would be one which views DE in a wider perspective. In the research and development activities at CFE, efforts have been started mainly to systematize the practices of DE. This developmental effort, therefore, includes mainly the research attempt at bringing about improvement in the quality of system of DE. As a result of these researches the potential of various instructional inputs as they function in the system of instruction would be known in relation to many other attributes of the learner, and environmental conditions.

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The author expresses his deep sense of gratitude to Professor C.Subbarao, Rector and Founder-Director of Centre for Evaluation., Prof.P.Ramaiah, Registrar and former Director of Centreor for Evaluation and Prof M.Satyanarayana Rao,Director, Centre for Evaluation, for their constant encouragement, guidance and interest in the Centre's evaluation studies.

ECONOMIES OF SCALE AND CORRESPONDENCE EDUCATION

S.KISHORE

Iintroduction

The educational sector, especially the higher education in the country is largely financed by the Government. Due to the rapid expansion of higher education system in recent times the burden on the state has been steadily increasing. The challenge of ever growing demand for higher education vis-a-vis the declining trend in resource allocation can be expected to be met by an emerging alternative mode namely correspondence education.

There is a recent realisation that correspondence education can also overcome the spatial and temporal constraints faced by the formal system. However, in view of the fact that the state has not so far evolved a clear funding policy for correspondence education, they are considered as self-spporting. For their sustenance unlike conventional system, they need to be economically viable.

For the economic viability, any institution has to achieve economies of scale. In an industrial enterprise, the relationship between the volume of output and the amount of investment is said to determine the economies of scale. Akin to this, by assessing whether economies of scale is favoured or disfavoured, the viability of correspondence education is determined. This article proceeds to examine this issue by choosing the Institute of Correspondence Education (ICE) of the University of Madras as a case

Expenditure and per Capita Cost :

The Institute of Correspondence Education (ICE) of the University of Madras has been established in the year 1981. It is appended to the conventional system of the University and imparts education from certificate to Ph.D. level in various branches except in science discipline. ICE admits even those who have not completed 10+2/pre-degree to Bachelor's degree under the open system. ICE has the privilege of having recorded the highest enrolment among the correspondence institutions in the country, the annual enrolment having crossed a lakh in 1987-88.

ICE incurs expenditure under several sub-heads which have been grouped together and collected under four major heads. In doing so, only the annual recurrent expenditure has been taken into consideration and the capital expenditure has not been included for the study. The four items of expenditure incurred by ICE are (i) Salaries (ii) Material printing, distribution and examinations (iii) Contact classes and (iv) Miscellaneous expenditure. The total expenditure for the years 1990-91, 1991-92 and 1992-93 along with student(weighted) enrolment and unit cost have been listed in Table -1.:

TABLE – 1

Expenditure for ICE for the years 1990-91 to 1992-93

Year	Total Expenditure (Rs. Lakhs)	Student (Weighted) enrolment	Average Expenditure per student (Rs.)
1990-91	1188.26	126514	930
1991-92	1060.26	122566	865
1992-93	1177.56	112461	1047

The average expenditure per student has been calculated from the total expenditure and the student(weighted) enrolment, the latter being determined by standardising the student unit. Standardisation has been necessitated by the fact that knowledge imparted and efforts put forth by the University at various levels of study are not equal and hence the cost incurred for students at each of these levels would also vary (Pillai 1991). The student unit therefore requires to be standardised and this has been done in the present study by assigning appropriate weighting at each of the levels of study (Kulandai Swamy 1993). The enrolment determined in this fashion is called student (weighted) enrolment. Based on this the average per student expenditure worked out are Rs.939, Rs.865 and Rs.1047 for the three years of study (Table 1).

Cost and Cost Types :

Like in any industrial enterprise certain types of expenditure (also called cost) in educational institutions also vary with an activity and certain other types do not vary proportio nately to the size of the activity. In educational institutions activity refers to student enrolment. For ICE, therefore, costs can be analysed in terms of two different cost types namely fixed and variable costs, amenable to assessment of economies / diseconomies of scale (MADE, course : ES -317, IGNOU 1993).

(i) Fixed Costs : Cost types which remain fixed irrespective of the number of students enrolled. For ICE, salaries and miscellaneous expenditure are apportioned as fixed type.

(ii) Variable Costs : The cost which very with increase or decrease in the enrolment of students are categorised as variable. The expenditure on material printing, distribution, examination and contact classes have been apportioned as variable type.

The simple form of cost function relating fixed, variable and total cost (Rumble 1983) is given by equation (1).

$$TC = F + VN \quad \text{----------(1)}$$

there TC = Total Cost
F = Fixed Cost
V = Variable Cost
N = Number of Students

From the equation (1), the Average Cost (AC) is derived by dividing the whole equation by the number of students (N).

$$AC = \frac{TC}{N} = \frac{F}{N} + V \quad \text{.....(2)}$$

In equation (2), the average cost, AC, is the cost incurred per student or otherwise known as unit cost; the marginal cost is the cost incurred for every additional enrolment and is referred by V.

In Table 2 the total cost has been bifurcated into fixed and variable costs. The unit fixed and the unit variable costs have also been calculated by taking into consideration the student((weighted) enrolment..

TABLE -- 2 : Fixed and Variable Costs for ICE

	1990-91		1991-92		1992-93	
Cost Type	Total (Rs.lakhs)	Unit Cost (Rs.)	Total (Rs.lakhs)	Unit Cost(Rs.)	Total (Rs.lakhs)	Unit Cost(Rs.)
Fixed	963.30	761	722.64	589	782.69	695
	(81.0)		(68.2)		(66.6)	
Variable	224.96	178	337.62	275	394.87	351
	(19.0)		(31.8)		(33.4)	

Figures in parantheses are the percentage of the total.The salient feature which emerges in that fixed cost is very much higher than variable cost for all the three years(Table 2). It is also found that the ratio of the percentages of fixed to variable costs has been 2:1 (exception being the year 1990-91 in which it is 4:1) and this indicates that the expenditure incurred for administration and institutional overheads (fixed costs) outweigh the teaching and academic delivery costs (variable costs). The educational system of ICE as such can said to be fixed-cost oriented.

ICE AND ECONOMIES OF SCALE

It is generally possible to measure the viability of correspondence education in terms of 'economies of scale' (MADE, course ES-317, IGNOU 1993). In this study, the viability of ICE is subjected to test by assessing whether economics of scale is favoured or disfavoured. Economies of scale is not an independent entity but is a function of student enrolment. With the increase in student enrolment it is favoured as long as the marginal cost (V) is less than the average cost (AC) and it is disfavoured if V exceeds AC.

For ICE, as the fixed cost constitutes nearly 60 percent of the total cost (Table 2), the optimisation of resources is possible since the fixed cost does not vary with enrolment. Moreover, in view of the fact that the student enrolment is flexible, ICE is amenable to the application of economies of scale. The TC, AC and V have been worked out for the year 1991-92 for the student enrolment ranging from 5,000 to 5,00,000 and are shown in Table 3. In doing so it is assumed that the fixed cost of Rs.722.64 lakhs will not change with the number of students; the variable cost of Rs.275(marginal cost.V) is added to the fixed cost for every additional enrolment.

Fixed Cost = Rs.722.64 lakhs. Variable Cost = Rs.275

Figure 1 depicts the behaviour of average and marginal costs as a function of student enrolment. It can be seen that with increase in student enrolment the AC decreases while TC has shown an increase. In

TABLE--3 : Behaviour of costs at different levels of students enrolment for the years 1991-92

Student enrolment	Total Cost (Rs. Lakhs) TC	Average Cost (Rs.) AC	Marginal Cost (Rs.) V
5,009	736.29	14725	275
10,000	750.14	7501	275
20,000	777.64	3888	275
30,000	805.14	2683	275
40,000	832.64	2081	275
50,000	860.14	1720	275
60,000	887.64	1479	275
70,000	915.14	1307	275
80,000	942.64	1178	275
90,000	970.14	1077	275
1,00,000	997.14	997	275
2,00,000	1272.64	636	275
3,00,000	1574.64	515	275
4,00,000	1822.64	455	275
5,00,000	2097.64	419	275

the case of AC a steep decrease is noticed (Figure 1) whereas the increment noticed in TC has been only gradual (not represented in Figure).

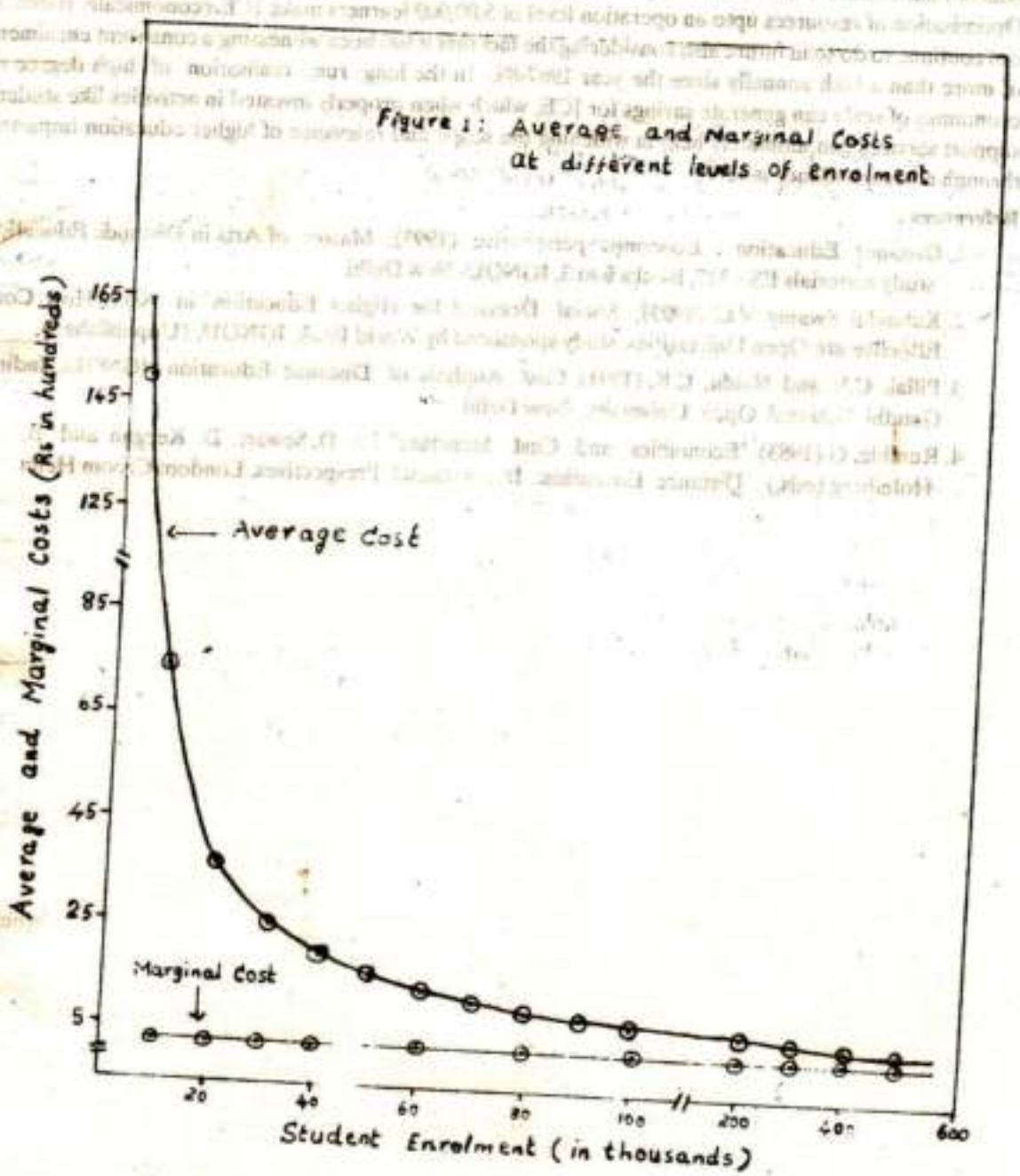
The following significant findings can be made from Behaviour of AC and TC.

(i) With increase in student enrolment, the AC starts decreasing. The fixed cost (Rs. 722.64 lakhs) is constant and is shared by more number of students with increase in enrolment. Therefore, AC is steadily decreasing and this is identical to the situation prevailing in an industrial enterprise.

In an industry, the average cost comes down as the production goes up. Similarly, ICE is benefitted by additional enrolment as higher the number of students lesser the AC.

(ii) Even though AC decreases, the rate of decline becomes progressively less with increase in student enrolment. When the enrolment level reaches 2,00,0000 students, AC is getting stabilised (Figure 1). At this sepicific enrolment level when the AC is getting stabilised, economies of scale is achieved by optimisation of resources. The system also reaches optimum efficiency at this level. However, even beyond this level of enrolment the marginal cost is found to be still lower than AC (Figure 1) and consequently, the system can achieve economies of scale to a greater degree at much higher levels of enrolment too. ICE is therefore capable of reaping economies of scale upto an operating level of 5,00,000 students attaining the economic viability.

Figure 1: Average and Marginal Costs at different levels of Enrolment



Conclusion :

In view of current economic scenario of declining trend in the resource allocation for higher educational sector, it is desirable especially for the correspondence education to be self- sustaining. Optimisation of resources upto an operation level of 5,00,000 learners make ICE economically viable. It can continue to do so in future also considering the fact that it has been witnessing a consistent enrolment of more than a lakh annually since the year 1987-88. In the long run, realisation of high degree of economics of scale can generate savings for ICE, which when properly invested in activities like student support services can ultimately help in widening the scope and relevance of higher education imparted through correspondence mode.

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Challenge of Human Resource Development & The Need to Strengthen Distance Education System:

S. BHATNAGAR

A developing society is always face to face with challenges; the more it tries to overcome them, the greater they multiply. The way the new challenges emerge and the sense of earnestness and the spirit of ingenuity with which these challenges are faced and tackled reflect the health of a given society. We, in India have been in this process of confronting and quelling the challenges ever since we have set our foot on the track of development.

To confine this paper to the problems of human resource development. This single aspect of development outshines in importance all other aspects of it. For, it is the quality of the human being which determines the over-all direction not only of its development process but also the day-to-day conduct of the society. It commands a significance of its own in so far as the functioning of democracy is concerned. We who have committed ourselves to the twin ideology of democracy and development must attend to this problem on a priority basis. If today both democracy and development, have run into some difficulties, it is perhaps because of the reason that we have not paid as much attention to human resource development as we ought to have done.

The challenge of human resource development that we confronted was unprecedented in the whole history of mankind. For, it involved, first, to make such a large mass of humanity literate, and, second, to inculcate in them the capability of forging ahead the cause of democracy as well as development. The latter aspect, though seemingly innocuous, was both profound and pervasive. Thus, the task was stupendous indeed.

As regards our past performance, it is a mixed bag of both successes and failures. This is evident from the fact that while on the one hand we have created a vast network of educational institutions and have also built up large cadres of first-rate scientists, doctors, engineers, technicians , managers, accountants, computer experts and the like, on the other hand, we could neither wipe out illiteracy nor could we assure elementary education to all.

Older challenges apart, various new challenges have come in our way. These may be broadly summed up as under:

a) The torrent of education-seekers is fast swelling with an unabated speed, making the existing infra-structure burst on its seams, and

b) Those who are already educated want more of education and that too of various new types, perhaps with a view to improving their station in life.

We may now examine these two challenges at some length.

Challenges of illiteracy and new entrants

That a little over half of our nation is literate and that too after a 'frantic effort' of nearly half a century speaks of the challenge ahead. If five decades were consumed to attain the literacy rate of 53.2 per cent[1], how much time shall we take to attain cent per cent literacy. Though we have of late been captured by an acute sense of urgency and as a result, we have initiated various types of voluntary campaigns. These have also begun to yield encouraging results. But whether the figures of literacy attained through these and other campaigns correctly reflect the ground realities is something which needs to be objectively studied. Anyway, the challenge is quite daunting.

The other aspect of this challenge is the problem of the new entrants to the higher education. Of late, we have been observing that the stream of the education-seekers at the higher echelons of the system is swelling day by day with an unabated speed. A number of causes account for this unprecedented rush, which may be spelled out, as under:

First, various measures of educational spread that we had initiated in the early years of our Independence (such as mass expansion of educational facilities, special concessions to the scheduled caste and the scheduled tribes and the others literacy campaigns etc. etc.) have begun to yield their fruits in recent years. The neo-literates are thus knocking at the door of the colleges and universities.

Second, the political process that has been under way ever since we installed democracy in our country, has also of late brought into its effective purview those sections of society which had hitherto been touched by it but marginally. Having become politically conscious of their stake in the decision-making process of the society, they too have been captivated by the ambition of higher education. Greater percentage of the new comers hails from these sections.

Third, Green Revolution which has galvanised the living conditions of the middle level peasantry, has provided an added spur to the hitherto educationally-closed society of the countryside. Now they too have realised the importance of higher education and have thus begun to send their sons (and even daughters) to schools and colleges.

Fourth[2], our inability to delink degrees from employment, despite our avowed commitment to do so, has made our youngmen and young women to continue chasing wildly the degrees, one after the other in an aimless pursuit. Had we been able to do our little bit to translate this ambitious part of the New Education Policy (1956) into actual practice, we might have been successful in curtailing the present rush to the institutions of higher learning to a great extent.

The cumulative impact of all these and perhaps of many other factors is that the rush of new admission-seekers in colleges and university departments is so great that the existing infra- structure has awfully failed to effectively cope with it. There is hardly an institution in the country which might not have taxed its intake capacity to the maximum possible extent. If the quality of instruction has marked some decline, one important cause is the unbearable burden in class rooms.

These new entrants seek education not only in simple arts but in all those technical and non-technical branches of knowledge which hold out to them the promise of respectable salary and status in life. Thus the demand is fast escalating for more of medical, engineering, science, managerial and such other colleges of higher learning.

The question that arises now is that if this rush remains unabated (which, instead of decreasing, appears to be continuously on the rise), where shall we accommodate the new- comers? And if new colleges and universities are to be set up, from where would the requisite funds for the same come? Already the

existing institutions of higher learning are facing an acute scarcity of funds. How to manage them in a proper way has become a source of deep concern for all those who run them. In such a situation further expansion appears to be a far-fetched idea. Thus, the challenge of the new-entrants is posing serious problems.

Challenge of the already educated ones:

Those who are already educated want more of education. Bitten by the bug of consumerism, everyone who is in some employment, aspires and makes frantic efforts to improve his existing salary and status. This is no doubt a healthy sign of development. But the strain that it is putting on the existing educational infra- structure is rather too unbearable. This section of society too is responsible for the escalation of the demand for more and more institutions of higher learning.

Besides those who want on their own to change over to better avenues of income and position, there are those whom society wants to do the same. This phenomenon of retraining the existing personnel (technical and non-technical) of a factory or office, came into prominence in the wake of the current national policy of liberalising the economy. As it is an open secret, there are scores of public undertakings and government offices which are going into loss and have thus ceased to have any worthwhile utility for the nation, may either be wound up or their extra flesh be chopped off. The question that has become an issue of a serious nation-wide debate is: Where shall those workers go who are shown the door by their employers? The only way by means of which these persons are saved of the danger of being thrown out of their jobs is to retrain them for new avenues of employment. Again, we need suitable institutions of various different types which may bear the brunt of retraining. Whether volitional or forced, retraining is not a one-time responsibility. Instead, it is an on-going process of an unending nature.

In sum, the situation is that we need more and more of schools, colleges and universities which may not only be able to absorb the ever-growing number of education-seekers but may be fit enough to cater to the requirements of the presently under- employed and the unsatisfied lot and also of those who need to be retrained for new jobs due to one exigency or another. Equally important (if not more) is that these institutions should be well-equipped and well staffed so as to provide to the nation a first-rate stuff of the trained personnel. Any compromise with the quality will adversely tell upon the health of this developing nation.

However, what has been observed in recent years is that the growing inability of the Government to set up new institutions has led many a private adventurists to jump into the fray. Objectively speaking, there is no harm if private venture comes forward and shoulders the additional burden. In fact we have arrived at a juncture where the Government shall have to encourage on its own the private institutions to share its enhanced responsibilities. But what worries the saner minds is that some of the individuals and even institutions that have come forward to bridge the gap between demand and supply, have been motivated more by the consideration of income and profitability than by the service to the community. Though by no stretch of imagination can we expect the private venture to become so selfless as to devote itself exclusively for the service of the society. Yet the way they fleece the young aspirants is rather too unreasonable. On the top of it, the quality of education that they provide is awfully poor. The institution that they set up is but an apology for the same. In fact, these self- seeking individuals, most of whom are politicians who enjoy vast power and patronage have discovered in this noble field a highly lacerative business to mint millions of rupees overnight.

Role of Distance Education:

In a ticklish situation like this where the state is unable to cope with the fast growing demand for higher education and the private individuals and institutions do not provide quality education for one reason or another, Distance Education has an immense role to play. This fact was endorsed, among others, by the G. Parthasarthy Committee which looked into the issue as early as 1970. It observed.

> "In a situation of this type where the expansion of enrolment in higher education has to continue at a terrific pace and where available resources in terms of men and money are limited, the obvious solution, if proper standards are to be maintained and the demand for higher education from different sections of the people, is to be met, is to adopt the Open University system with its provision for higher education on part-time basis." [3]

At one time, this system was full of misgivings. But all myths such as the incapability of this system to provide science and other technical education stand badly exploded. A number of institutions of Distance Education the world over have been providing very successfully instruction in medicine, engineering, computer technology and other services. The Indira Gandhi National Open University (IGNOU) after having achieved laudable success in arts and management education, has now stepped into the realm of science and engineering education. Recently, it has instituted Advanced Diploma in Construction Management and Water Resources Engineering , and a Post-graduate Diplomas in Computer Applications. There are a few other institutions in the country which have been successfully running for a number of years post- graduate degree courses in various science and technical subjects. Thus the potential of Distance Education cannot be questioned any longer. This system can safely be depended upon for quality education. If it is properly groomed, it can discharge the new responsibilities very commendably. Already, it has given a good account of itself by not only absorbing the mammoth overflow from colleges and university departments (total enrollment with the Institutes of Distance Education has exceeded 12 per cent of the overall population of students in colleges and universities of the country), but also by providing large cadres of trained teachers, librarians, cost accountants, company secretaries, management graduates, law officers, administrative personnel and the like.

However, all is not well with the system. Its functioning needs to be strengthened and streamlined both from within and from without. We identify some of the areas where attention needs to be paid, as under:

Public Policy :

Even after three decades of its inception in the country, no clear-cut public policy regarding the status, development and funding of Distance Education has been developed. There is no denying the fact that much thought has gone into this issue but much of it has remained sporadic and casual. The parliamentary statute governing the Indira Gandhi National Open University which entrusts the development, control and funding of Distance Education to this University, does not enunciate any policy about it. The much cherished New Education Policy makes but a passing reference to it, while recognising the immense potential of this 'powerful instrument'[5] It strikes a note of caution saying that "it will have to be developed with care and extended with caution."[6] The Rammurthi Review Committee does not appear to have thought fit to consider it at all, much less spelling out a strategy for its development as it has done with regard to the other aspects of the educational system. The Eighth Plan also remains silent about the

policy of development of this system. It simply lays down that "the additional enrolment in higher education during the 8th Plan is estimated to be around 10 lakhs of which 9 lakhs will be at the undergraduate level. This expansion in higher education, ... has to be accommodated... mainly by large expansion of Distance Education System."[7]

The obvious outcome of the lack of any proper public policy enunciation is that Distance Education could not acquire the status of an alternative channel of public instruction. In a developing democracy as that of ours Distance Education deserves to be conferred this status because of the inability of the conventional system to bear the growing burden of additional responsibilities.

This attitude of casualness and indifference on the part of the Government has led to a hap-hazard growth of the system. Not only has its growth gone astray but its harbingers, initiators and promoters have cast gleeful looks at it with a view to making money out of it. The cummulaltive impact of these developments has been that the system has developed so many deformities and angularities that it will take a long time to set them right and that too if serious efforts are made . Besides, there are a number of basic issues which have remained unresolved ever since.

Thus, it is high time that a proper policy regarding the status and role of Distance Education vis-a-vis the new challenges of development is enunciated. At the same time, a suitable strategy is to be devised as to how the thoughtfully enunciated goals are to be achieved. Once this is done, due attention can be paid toward the resolution of those basic issues that hamper the growth of the system.

Financial Support

There is no denying the fact that Distance Education, based as it is on the economy of the scale, hardly needs an external support. Some persons go to the extent of saying that it should yield some monetary surplus as well. Truly speaking, this is just a half truth. Once an institution goes into strides, it may be self- supporting or may even generate some surplus. But its establishment is a costly affair, perhaps far costlier than that of a college of the conventional type. For, the distant location and the scattered nature of its student populace as also its new mode of instruction sets it differently from the latter in so far as the initial requirements of an Institute of Distance Education are concerned. Unlike a conventional college, its administrative wing, must be large enough to maintain an effective and constant liaison with its students and cater to their multifarious requirements. Further, it must have the requisite infra- structure for the production and regular servicing of its study material which would comprise the written scripts, audio and video tapes. Furthermore, it must have a chain of study centres, having such facilities as lecture halls, libraries, laboratories and the counselling personnel. Then in addition to all this, it should have the necessary infra structure at its headquarters as normally go with an educational institution of the conventional type. Thus, the basic requirements of an Institute of Distance Education are both diverse and large, involving huge funds for their creation.

These requirements are far too many and too costly to be easily met by an Institution of limited means. But for the IGNOU, there is hardly an Open University or a Directorate of Correspondence Courses in the country which may provide all these varied types of facilities. The conventional universities which run most of the Directorates are no doubt in a position to create many, (if not all) of them. But their misplaced perception of the system, inhibits them from viewing the requirements of their Institutes of Distance Education kindly. That is precisely the reason why these Directorate of Correspondence Courses could not come out of the conventional cocoon of the printed lesson-script and are hence out of pace with the fast progressing system of Distance teaching.

These basic handicaps that this system suffers from call for an immediate financial support of the Government. It is high time that the Government should financially assist these Institutes in at least three specific areas. These are: First, the establishment of a network of study centres of a composite nature in the length and breadth of the country. Well-equipped with libraries, laboratories, lecture halls, video-screening facilities, hostel for the visiting faculty and the like, these Centres should serve the needs of all the Institutes of the country.

Second, the Government should also set up on regional basis Audio Cassette Production Units. These should be equipped with both hard and soft wares of the latest technology. That will facilitate the Institutes concerned to harness the electronic media for their instructional use.

Finally, the Government should assist these Institutes in modernising their printing technologies. How ironical does it look that these Institutes depend as they do exclusively on the print media, still employ the long-discarded letter press printing technology. Besides being inefficient and cost prohibitive, this mode of lesson production has been mainly responsible for bringing a bad name to these Institutes. The Government should assist them in switching over to the Desk Top Publishing technology. The latter would not only help them modernise their lesson-scripts but would improve their administrative methods in various different ways.

Besides helping these Institutes in these three specific areas, the Government should concede to them their due share in the annual maintenance grant. Since they enroll with them more than 10 per cent of the total student strength of colleges and universities of the country, they should be given a corresponding share of the total budgetary allocation for higher education. If this much claim of Distance Education is given due recognition, this system would come out of the woods in which it is lost at the moment.

Rationalisation of the System:

The system, as it has grown over the years, presents a spectacle of an unplanned and hap-hazard expansion of its network. Partly out of an allurement of income (as this system is supposed to yield) and partly out of the genuine desire to provide to the under-privileged higher education right at their door-step, the various universities of the country have recklessly gone ahead in recent years to set up their own respective Institutes of Distance Education. In this mad race, these have mushroomed in the northern and the southern regions a large number of Institutes in close vicinity of one another. Almost all of them administer, by and large, the under-graduate and the post-graduate degree programmes in arts, languages and commerce. Very few of them proliferate their activities in non-conventional and job-oriented directions. Apart from generating an unhealthy competition among them, this overlap of courses has resulted into the frittering away of the precious little resources. Some sort of co-ordination on regional basis needs to be urgently thought of if the existing study programmes are to be rationalised and the tide of further overlap is to be stemmed.

Another area of operation where due attention needs to be given is the quality of the study material that these Institutes service to their students. The printed lesson scripts which form the only medium of instruction suffer from the inadequacy of the subject matter, poverty of expression/explanation and illustration, out-dated information, abundance of printing errors and, above all, shabby set-up. This quality of the study material seriously reflects upon the prestige and social acceptability of the system at large. This is an area which needs to be taken care at the level of each Institute individually and by the Institute itself. However, the higher level co-ordinating agencies such as the parent universities, the UGC, the Distance Education Council can assist these Institutes by strengthening their faculties by

eminently qualified teachers. Those Institutes which draw their main sustenance from the guest faculty need to be specially taken care of in this respect.

To conclude, the daunting challenge of human resource development and the inability of the state to meet this challenge through the instrumentality of the conventional system call upon Distance Education to play its role in an enhanced and more constructive manner. However, keeping in view certain misgivings about this system (which still persist in the minds of the conventionalists) as also certain deformities and angularities that have crept into its functioning, demand that a high level commission/committee may be set up by the Government which may examine this system in all its varied aspects and suggest ways and means to suitably prepare for this big role.

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RELEVANCE OF TEACHING FOREIGN LANGUAGES IN THE DISTANCE EDUCATION SYSTEM

JAGMOHAN SINGH BAINS

The history of distance education in India dates back to the early sixties when the University of Delhi started the teaching of a few courses through the distance education technique. Other universities watched this experiment with interest and some of them have decided in favour of introducing this new mode of teaching. Since a beginning was made in this direction, there has been a steady but continuous growth of distance education in India. At present, distance education is imparted in India by the open universities and correspondence directorates/institutes. Among the open universities, the Andhra Pradesh Open University, Indira Gandhi National Open University, Kota Open University and Yashwant Rao Chavan Maharashtra Open University have carved out a place in about a decade, for themselves in the national education. While the open university system enjoys a good deal of freedom in the matter of devising new courses and evolving its own system of evaluation, the correspondence directorates/institutes continue to teach with the formal university system. The importance of both these constituents of DE is now widely recognized because the performance of their students, according to a survey conducted by the University Grants Commission, is in no way inferior to that of the students of regular colleges. As the distance education system is making steady progress, it holds out a great hope to the new and growing disciplines such as the foreign languages.

This paper is divided into three sections. The first section highlights the importance of teaching foreign languages in India. In the second section, various problems connected with the teaching of foreign languages have been discussed in detail, whereas the third section considers the possibility of introducing part-time courses in foreign languages in the DE system.

Importance of Foreign Language Teaching

FLT started in India nearly a century ago. During the colonial period, two major foreign languages, French and German, were introduced in our country in certain schools and universities. Prior to independence, both German and French were taught mainly as literary languages through the grammar-translation method. After the independence, due to the enlightened policy adopted by the Ministry of Education and the UGC, a vast number of foreign languages were introduced in various universities/institutions in the country. Thanks to the visit of our first Prime Minister, Jawaharlal Nehru, to the USSR, India's relationship with that country was strenthened and in the wake of development of Indo- Soviet relations a Centre of Russian Studies was set up at New Delhi in 1965 which is now part of the Jawaharlal Nehru University.

A Curriculum Development Centre in Foreign Languages was instituted by the University Grants Commission in 1986 as a general strategy or evolving more meaningful and effective language curricula which will be relevant to the aspirations of the individual and the society within the perspective of the New Education Policy. In its report published in 1990 the following areas of utility of foreign language learning were stressed:

a) For the purpose of diplomatic and foreign relations .

b) For developing cultural, scientific and technological co- operation among different countries of the world in general and with the countries of the Third World and those belonging to the Non-Aligned Movement in particular.

c) For developing trade and commerce.

d) For security and defence.

e) For technology transfer.

f) For cultural osmosis of our literary and cultural heritage in countries speaking different languages and vice-versa.

g) For keeping the state-of-the-art inventories of the advances in human thought and science English translations.

h) For encouraging international co-operation and understanding.

i) For fostering youth movements and exchanges.

j) For diffusing knowledge of cultural, scientific and technical developments of India to other of the world through the respective foreign languages.

k) For a balanced development of the personality of the individual learner.

It is well-known that among the foreign languages French has been more popular and a number of students join French language course to be acquainted with the French civilisation, culture , literature and way of life. It is with this end in view that Alliances Francaises (French Alliances) were set up in several states of India. In 1959, Mr. Marc Blancpain, Secretary General of the Alliance Francaise, explained in his preface to part I of *Cours de Langue et de Civilisation Francaises* (A course of French Language and Civilisation) why people study French; he writes: "It is, first of all, to enter into contact with one of the richest civilisations of the modern world to develop and enrich their minds through the study of a splendid literature, and to become truly distinguished persons". French is also a very useful language in which all sorts of information, from the fine arts to the modern science and technology, is available. It serves as a "Window on the World". Since French is the language of science and technology, it is important for the economic development. In 1971, J.Masselin, A.Desol and R.Duchaigne wrote a book for teaching French to foreigners *Le Francais scientifique et technique* (scientific and technical French).

In their presentation they write, "... Though France remains the mother of fine arts, it should not be forgotten that she is also a country where scientific, industrial and technological development are integrated into a value system that attributes to the exact sciences an importance, proportionate to the role they play in the life of the contemporary world". In India also the emphasis has clearly shifted over the years from the study of French civilisation to that of French technology. The reason is simple and clear. The times have changed and so have changed the expectations of the student learning French. Reading an interesting paper at the All India Conference on "The Current Issues in Foreign Languages Teaching in India" at Aurangabad in December, 1981, Dr.R.Borges, Professor at Jawaharlal Nehru University,

observed, "In India also a new type of student was born. The technical and social scientist in India is interested to learn French not so much because he wants to enter into contact with another civilisation. He wants to join a French language course because it is going to help him to consult directly scientific and technical books and documents written in French. He wants to learn to speak French because India is going to send him not only to France but to a Francophone country especially of Africa, under a joint collaboration accord." Some students may join foreign language course in order to become tourist guides while still others may aspire to become translators/interpreters.

Problems

The Times of India Year Book for 1979 quotes 13 foreign languages being taught in the country. In 1984 their number shot up to 25. All these figures point to a stupendous growth of foreign language learning within the five decades following the independence. Degree courses in some major foreign languages have also been introduced in this period, though part-time courses in them continue to be more in demand. It is now increasingly felt that the traditional method of teaching foreign languages with its insistence of grammar and translation should be replaced by one through which competence in spoken aspect may be developed. When we decide to teach foreign languages as living languages and at the same time satisfy the specific needs of an ever increasing number of students, the problems are bound to arise some of which are discussed below:

Needs of Learners Ignored

Let us begin with the students who register for the part-time course in foreign languages. They belong to a variety of professions: university and college teachers, young college graduates, engineers, doctors, science and humanity students,research scholars, senior executives, office clerks, secretaries, housewives, students desirous of going abroad, etc., in short, an extremely heterogeneous group. Obviously it is impossible to cater to the requirements of such a heterogeneous groups of students in foreign languages. Neither the books nor the methodology are suitable to the specific needs of the students because they aim at imparting an elementary working knowledge of the respective foreign language. How can such courses come up to the expectations of the students with varied motivations ? The natural outcome is that the students are frequently absent.

Evaluation and Examination System

In the part-time courses of foreign languages offered by some universities weightage is shown only on paper as being given to the spoken aspect of the foreign languages. However, at the time of final examination, marks are awarded to the students irrespective of their actual performance in the oral test. None tries to impress upon the students that spoken aspect is as important as the written one. Consequently, the students start taking the spoken aspect of the language casually and thus the very purpose of the course is defeated .

Insufficient materials and aids

It is the paramount duty of the university/institute authorities to provide the minimum facilities-proper class rooms, books, magazines, slides, tape-recorders, etc.. --- for an effective foreign language teaching. How can a teacher, however competent and qualified he may be, produce good results with just a text-book. Even the books prescribed for various courses are not easily available and the students have to get them issued from the library for short periods, with the result that they are unable to carry on with the course effectively

Too large classes

Among the foreign languages, French attracts more students. When the French part-time courses begin, the classes are usually quite large. It is not possible to teach a foreign language effectively in a class of more than fifty students. It goes without saying that one cannot apply the direct or audio-visual method to the teaching and learning of such large classes.

The aforesaid report of the UGC sums up the following problems of foreign language teaching:

i) Only a handful of States have provided for teaching of foreign languages at the high school level

ii) Foreign languages are hardly taught at the graduate level in a large number of universities.iii

iii) Though foreign languages are taught at the Certificate and Diploma level in over 60 universities, very few of them have adequate facilities for teaching foreign languages at B.A.(Hons.) and M.A. levels.

iv) In many universities foreign languages are grouped together in a single department instead of there being a separate department for each foreign language. This impedes free overall growth of foreign languages.

It follows from the above discussion that very little interest is shown by the universities and institutes concerned to encourage the teaching and learning of foreign languages in the degree or part-time courses. The FLT has not been given the importance that is due to it in a vastly changing world of meaningful international communication. In the last few decades, some efforts have been made to introduce FLT in the universities and other institutions of the country. However, in some universities that offered part-time courses in a few foreign languages, the situation was that foreign languages taught were appended to the English departments. Consequently, there is a strong feeling that foreign languages as an independent discipline have not yet been given adequate importance and stand neglected as compared to many other subjects.

Gradually, the scene is changing and departments of foreign languages have been established in a few universities. Even an entire faculty have been created at the School of Languages in Jawaharlal Nehru University, New Delhi,with a major thrust to FLT just like any other traditional discipline

FLT in Distance Education

A major development in FLT took place in late seventies when Central Institute of English and Foreign Languages, Hyderabad, started post-graduate courses in a few foreign languages through correspondence. These courses leading to M.A. are of three years duration with a Personal Contact Programme each year. These courses have proved to be a good success as a number of students and teachers seek admission into them every year. The stage is now set for the introduction of part-time courses in foreign languages in the distance education system. The basic course in foreign languages can continue to be offered by the traditional universities. So far as need-based courses are concerned, our only hope lies in the distance education system which can surmount most of the problems discussed above.

But the success of the need-based courses within the framework of distance education depends on the following factors :

a) Print media

In a country of limited resources like ours, one has to rely mainly on the print media. It is comparatively cheaper and more effective. But the print materials should be prepared with great care so

that the learners may understand them without any difficulty. They should be designed and presented in such a way as to create interest and excite curiosity of the learners.

b) Electronic media

The role of the electronic media in the distance education system can hardly be underestimated. It can meet diverse needs of a vast number of learners and can reinforce what has already been taught. That is why audio and video cassettes are becoming more and more popular in our part of the world and no programme in foreign languages can be considered complete without them. The learners should be encouraged to make extensive use of these cassettes by making them available at the study centres nearest to them. The learners may use them according to their needs.

c) Personal Contact Programme

The most important component of the distance education remains the personal contact programmes, which provide an opportunity to the distant learners to get their problems solved through personal and face-to-face discussions. It is the duty of the organisers to ensure that the learners get satisfactory answers to their questions and go back fully satisfied. Personal contact progrmmes are of particular importance in the matter of need- based courses in foreign languages because they make it possible for the teachers to understand the difficulties of the learners and attend to them personally.

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DISTANCE EDUCATION FOR PRIMARY AND SECONDARY TEACHER TRAINING IN TURKEY

U.DEMIRAY
B.OZER

Abstract

This paper describe in terms of the pedagogy, course materials, delivery systems and evaluation of the two teachers training programmes viz., Pre-Bachelor Certificate and University Degree to School Teachers, offered through Anadolu University's Open Education Faculty (OEF)

Distance education has proved particularly useful for training people in remote locations who can not attend classes at Universities. Studying at home, using distance education materials, allows individual adults working in various sectors of the economy to update their skills and continue their training. Distance education programm have also become increasingly popular with people in urban areas who want to study at home in their free time or after work without the long evening commute to campus.

Structure of Distance Education in Turkey

Anadolu University in Eskisehir, Turkey, has a dynamic record of producing distance education programs. The Open Education Faculty (OEF) was established in 1982 as a branch of Anadolu University, located in the Anatolian city of Eskisehir. It remains the only higher education institution in Turkey involved in distance teaching. The OEF began in 1982 with two open education programs, one in Business Administration and the other in Economics (Barrows, 1990). Today there are programs produced not only in those subjects but in Nursing, Foreign Language, Mathematics, Sciences, Tourism, Business and Training programs for the private sector, and Teacher Training (Demiray, 1990; Melsaac, 1992; Ozer,1991; Yangin, 1989). There are also new programs being developed in Social Sciences, Home Economics, and other branches of Teacher Training such as Foreign Language Degree Completion, Physical Education and Painting . These programs are planned for the 1992- 93 academic year.

Turkish educational programs are sent on videotape to around 3,000 Turks living in many European countries like Germany to provide students with curricula similar to that in the Turkish educational system. There are now about 400,000 students enrolled in all of these distance education programms, a vast undertaking, indeed. The Turkish Open Education Faculty, which is coordinated by Anadolu University, provides distance education courses using printed materials, television and radio programs. In addition, contact with students is maintained through academic counseling, video education centers, student information bureaus and a newspaper entitled 'Anadolu'.

Development of Two Teacher Training Programs

Two of the most recent distance education programs are the primary teacher and secondary teacher training programs. More than 130,000 primary school and around 54,000 secondary school teachers have participated in Anadolu University's Pre-Bachelor Certificate program (Onlisans) and the University

Degree Completion Program(Lisans Tamamlama). The Pre-Bachelor Certificate Program for primary school teachers began in 1985-86 and is now being completed. The university Degree Completion Program for secondary school teachers began in 1990.

The Open Education Faculty in cooperation with the Ministry of Education, offered new distance education opportunities to solve the vast teacher training problems in Turkey. Two main problems were addressed. One problem was that until 1973, teachers who worked in primary schools were graduates of teaching high schools, and they had only six years of education after primary school. After the National Education Basic Law of 1973, students wanting to be high school teachers had, at the minimum, an education from Two Year Educational Institutes. After 1982, the task of providing secondary level teacher training was given to the universities (Yuksel,1987).

Following their education, primary school teachers were hired to work directly in schools with little opportunity for upgrading their skills. In addition to this, the National Education Basic Law, Article 1739, of the Ministry of Education, requires teachers to undertake in-service training at some time during their professional life, thereby giving them the opportunity to pursue higher education during their free time in summer or during official holidays. By 1985 there were about 130,000 primary school teachers in need of in-service training. As a result, in 1985 the Ministry of Education decided to use distance programs to solve the problem.

For secondary school teachers, the problems were somewhat different. Those who received a two or three year university education through Educational Institutes wanted to complete their four year university Diploma and receive a Bachelor's Degree. So in 1990 the University Degree Completion-Program for secondary school teachers was begun.

Pre-Bachelor Teacher Training Program for Primary Teachers.

Prior to 1985, in-service training was provided by university education faculties in many universities throughout Turkey using traditional face-to-face methods. These in-service courses usually lasted only for 15-20 days and the number of teachers who received training was not high. By 1985 there were about 130,000 teachers still in need of in-service training. At that time the Ministry of Education and OEF signed an agreement to develop in- service teacher training programs at a distance.

In 1985-86 Anadolu University's OEF registered 46,774 of the 130,000 primary teachers for in-service training. In 1986-87, there were 83,852 more teachers registered. Additionally approximately 2,500 retired teachers were registered. Within at two years period, OEF had more than 130,000 teachers registered for the in-service teacher training program. The goals of the program were to help teachers become more effective in the classroom, update their subject area knowledge and provide them with a better standard of living by rewarding them financially for participating in in-service training. The Pre-Bachelor Certificate program is a two year course of study.

Characteristics of the Pre-Bachelor Teacher Training Student.

The age of the teachers who enrolled in the program ranged from 27 to 67 years. They were all primary school teachers. Their professional experience ranged from 6 to 40 years, Forty-five percent of them were female and 55 percent were male (Ozer,1991). Fifty-eight percent worked in the countryside and 42 percent of them were in city centers. Ninety four percent of the teachers were married and 6 percent were single or divorced. One hundred sixteen of the teachers who registered for the program were from the

North Cyprus Turkish Republic. These teachers were between 23 to 30 years old and their teaching experience ranged from 1 to 7 years (AOF,1990).

Pedagogical design of instruction. Three main types of instrcutional materials were used for the Pre-Bachelor Certificate Program. These were print materials, TV, and Radio course programs. All the materials were prepared by well known Turkish educational experts and edited by OEF and Anadolu University educational staff. Pedagogically, the materials were designed to allow students to work independently, using printed materials which were designed especially with the distant learner in mind. Because of limited availability of other types of media for the classroom teacher, broadcast television and radio were used primarily to support the print instruction. Print materials were designed with self-study and self-examination sections which provided individuals with feedback about their performance. Students corresponded with designated experts from Anadolu University when confronted with doubts or queries..

In addition to the teachers in Turkey, teachers also participated from Western Europe, Germany, Belgium, Britain and France. Materials which were produced in Turkey were transferred to VHS and Beta Video formats for distribution to the OEF centres in Europe. Lectures were presented via broadcast televisions by leading experts in the field. These lectures supplemented the printed text. Feedback was provided by the responsible project units. Because of the large numbers of teachers trained in the short period of time, support services traditionally available to other OEF programs, such as individual counselling and face-to- face tutors, was not provided. It is hoped that in future projects this can be improved.

In the first year of the pre-bachelor program 3,222 pages of printed material covering 9 courses were sent to students. In the second year 2,946 pages for 6 courses were sent. Thus during this two year program a total of 6, 168 pages of material was received by the students. TV and radio programs of approximately 15 or 20 minutes were produced for each unit. Each course contained 6 to 15 such units. One hundred ninety five TV program units (a total of 65 hours and 142 radio programs (a total of 4 hours) were broadcast during the two years that the students were registered in the teacher training Program (Demiray, 1990).

Table 1
First Year: 1985-86 Academic Year
Pre-Bachelor Certificate Program

Name of the courses	Number of units	Total T.V. broadcast time in minutes and seconds
1. Social Sciences	15	320' 42"
2. Science	15	293' 48"
3. Mathematics	15	313' 40"
4. Behavioral Science	15	314' 31"
5. Foreign Language-I	18	337' 30"
6. Principles of Ataturk	15	342' 14"
7. Turkish	12	262' 23"
8. Teacher Study Guide	6	137' 00"
9. Academic Counseling	-	- -
TOTAL	111	2321' 48" (38 hours, 41' 48")

(Source: Demiray, 1987, p. 38; Yüksel, 1987, p. 51).

Table 2
Second Year: 1986-87 Academic Year
Pre-Bachelor Certificate Program

Name of the courses	Number of units	Total T.V. broadcast time in minutes and seconds
1. Contemp. Technology	8	146' 13"
2. History of Civilization	6	83' 02"
3. Methods of Teaching	18	333' 29"
4. Educational Sciences	19	402' 11"
5. Principles of Ataturk	15	304' 16"
6. Foreign Language 1	18	343' 26"
TOTAL	84	1612' 37" (26 hours 52' 37")

(Source: Demiray, 1987, p. 38; Yüksel, 1987, p. 51).

The total time for the broadcast of tv programs during the 1985-86 academic year was	38 hours 41' 38".
The total time for brodcast of tv programs during the 1986-87 academic year was	26 hours 52' 37"
TOTAL 1985-87	65 hours 34' 25"
Total number of the brodcast program units during the 1985-86 academic year was	111
Total number of the brodcast program units during the 1985-86 academic year was	84
TOTAL 1985-87	195

Courses. There were 15 courses in the pre-bachelor teacher training program: 9 of them to be completed for the first year and 6 for the second . The names of the courses, unit numbers and times for TV broadcasts are shown in Tables 1 and 2.

Graduation and Drop-out in the pre-Bachelor Program. At the end of the 1985-86 academic year 41,718 students passed into the second class. Five thousand and fifty-six of the 46,774 students failed in the 1985-86 academic year, thus registering a passing rate of 89%. At the beginning of the 1986-87 academic year, there were 88,908 enrolled students including 83,852 newly registered students. At the end of the 1986-87 academic year 36,802 of 46,774 students completed their studies and were graduated from the program. In addition, 780 Turkish student-teachers who were living in Western Europe studied the courses and graduated. The graduation rate was estimated at 79%.

In the 1987-88 academic year 80,355 of the 93,198 students graduated, thus with a 89% graduation rate. Through the end of 1991 there were an additional 13,468 teachers who graduated from the program. A total of 130,625 students graduated from the OEF Pre-Bachelor Certificate Teacher Training Program for primary school teachers. The overall graduation rate, when the program was completed at the end of the 1987-88 academic year, was 92.3 %.

The Demographics were as follows. Thirty two percent of graduates were female and 68 percent were male. Twenty percent of the graduates were 41 years old or older. There were 143 students over 60 years old, and 3 of them were 67 years old. One of these was female, two of them were male (Ozer,1991).

University Degree Completion for Secondary School Teachers

This second teacher training project is a cooperative effort of Anadolu's Open Education Faculty and the Ministry of Education. The aim of the program is to provide one-year of additonal education to the secondary school teachers who have previously completed a two or three year university education. The University Degree program is designed to help them to update their knowledge of the subject they teach and to promote the opportunity to continue their academic career by obtaining a university degree.

The University Degree completion Program for secondary teachers began in April,1990 by enrolling approximately 54,000 teachers in several subjects. These were, Turkish Language and Literature, History, Geography, Mathematics, Biology, Chemistry and Physics. During the 1992-93 academic year, other branches of the degree completion program like language teaching(German, French and English), Physical Education, and Painting began (Anadolu Universities, 1992).

Since 1980, when the Open Education Faculty began, the number of students who enrolled in universities, including the Open Education Faculty, increased from 300,000 to 800,000. In spite of the overall increase in numbers of students in university programs, the proportion of students accepted into traditional university programs has declined while the proportion of students accepted into Open Education Programs has increased during the past ten years. For example, out of 322,320 students who were enrolled in university programs in 1983-84, 281,703, or 87.4 percent, were enrolled in traditional universities. During that same year 40,617 students,or 12.6 percent were enrolled in the Open Education Faculty.

In 1990-91, however, 798,500 students were enrolled in both traditional and open university programs. Of those, only 434,748, or 54.4 percent were admitted to traditional universities while 363,752

or 45.6 percent were admitted to the Open Education Faculty (Anadolu Universities, 1992). These figures reflect the fact that, although nearly twice as many students have been accepted into university programs over the past ten years, the Open Education Faculty is absorbing almost half of that population. In other words, while the proportion of students in traditional university programs has decreased, the proportion of students in Open Education Faculty Programs has increased.

Pedagogical Design of Instruction.: Similar materials are used for the Degree completion program as for the Pre-Bachelor Program. The primary medium of instruction is print material supplemented by TV and Radio broadcasts. At the beginning of the program, fifty-five books were prepared and published for the seven branches of study. Each book consists of eight units. All units are written and produced by the content experts who are drawn from diverse academic communities throughout Turkey under contract to the Open Education Faculty Board of Commissioners. Lecturers on broadcast television are given by academicians connected with one of the major universities. These lectures, alongwith books which are mailed to students, comprise the major part of the instructional package. Feedback is provided through tests and self instructional materials placed at the end of reading sections in the units.

The program in each subject consists of eight units of instruction for each of seven fields or branches of study (see Table 3). The television programs which reinforce the print materials run about twenty minutes per broadcast. TV and radio programs are produced by the Open Education Faculty and broadcast by Turkish Radio and Television (TRT) on Channel 2 (or TV2) in the morning and channel 4 (or TV4) in the afternoons. Radio programs are broadcast during weekdays on Monday, Wednesday and Friday nights(Yangin,1989). A total of 296 TV programs were produced and broadcast in 1991-92 for a total of 99 hours and 144 radio programs were produced and broadcast in 48 hours of programming.

Examinations : Examinations for both of these programs are set under the auspices of the Anadolu Computer Centre, twice a year. One of the examinations is mid-term, the other is the final examination. The examinations are weighted 30% for mid-term and 70% for the final examination. Apart from these, there is a make up examination opportunity for students who have failed. The composition of th make-up examination is similar to that of the final examination and is used in the same manner. Examinations use a multiple choice test system and are taken in 23 centres around the country.

Courses : The secondary teacher degree completion program consists of seven branches of study. The seven branches of study reflect the subject specialities of secondary school teachers who participate in the Degree Completion Program. The courses are designed to update teachers knowledge particularly in the areas of Science and mathematics. The curriculum is similar to a traditional undergraduate degree program. Each of the branches includes its own subject related to that area of study. For example, Turkish Language and Literature has 64 units of instruction covering 9 subject areas. Eight of the units is broadcast by television. Fifty-six of them are broadcast by radio. Each broadcast program, whether radio or television, is approximately 20 minutes long. All 64 units of instruction have their own print materials.

Table 3
1990-91 Academic Year
University Degree Completion for Secondary School Teachers
Television and Radio programs

Branches	Number of units	Television		Radio	
		Number of Programs	Broadcast Time	Number of Programs	Broadcast Time
1.Turkish Lang. and Literature	64	8	160'	56	1120'
2. History	64	8	160'	56	1120'
3. Geography	56	24	480'	32	640'
4. Mathematics	56	56	1120'	--	--
5. Biology	56	56	1120'	--	--
6. Chemistry	64	64	1280'	--	--
7. Physics	64	64	1280'	--	--
..Courses for all	16	16	320'	--	--
Total	440	296	5920'	144	2880'

(Source: The Open Education Faculty Degree Completion Unit, May, 1992)

Graduation and Drop-out in the Degree Completion Program : . Since the degree completion program for secondary teachers is still in its beginning stages, full statistics are not yet available. Of the estimated 50,000 teachers who have enrolled 8,525 graduated in 1991 with a bachelor's degree.

Table 4
1990-91 Academic Year
University Degree Completion for Secondary School Teachers
Graduates

Branches	Number of Graduates
1. Turkish Language and Literature	4903
2. History	708
3. Geography	2322
4. Mathematics	163
5. Biology	293
6. Chemistry	70
7. Physics	66
Total	8525

(Source: The Open Education Faculty Degree Completion Unit, May, 1992)

Conclusion

Both the Pre-Bachelor Certificate Program (Onlisans) for primary school teachers and the University Degree Completion Program (Lisans Tamamlama)for secondary school teachers have realised their goal of providing additional educational opportunities for almost 200,000 teachers in Turkey for whom in-service education was previously unobtainable. If numbers are a measure of success, then the Pre-Bachelor Program was highly successful. Virtually all of the teachers who enrolled in the program completed it successfully. The opportunity to receive training beyond the six year minimum post elementary education which many had received, was very well received by teachers. At the end of the three year period of the project, approximately 130,000 teachers were educated by distance methods through the Anadolu University Open Education Faculty. This education provided a wide range of advantages to teachers by updating their knowledge, keeping their minds fresh and promoting their professional lives.Their status and their salaries have increased and they have gained promotion within the Ministry of Education structure.

It is still too early to evaluate the success of the degree completion program for secondary teachers. Because many of the teachers are at different educational levels, it is difficult to estimate the length of time all will take to complete the program. However, since there are fewer secondary school teachers in this project, it may be possible to provide more counselling and tutoring support than was previously available in the larger scale primary teacher project. It is hoped that most of the over 50,000 secondary teachers will be successful in earning their bachelor's degree and upgrading their skills. The indicators are promising. Already between 8,000 and 10,000 are preparing to graduate this semester.

The teacher training projects in Turkey have been judged successful by the Ministry of Education, Anadolu University Open Education Faculty and many of the teachers. Through the use of distance education media and materials, teachers were offered an opportunity to keep pace with developments in education and work toward improving their teaching situations without having to disrupt their teaching schedules. There is no other way that such a large number of teachers could receive this type of cost effective training.

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PLANNING AND DEVELOPMENT OF DISTANCE EDUCATION PROGRAMME IN NEW BORN CARE

MS. PITY KOUL

INTRODUCTION

The status of new born care in India is a matter of grave concern and has serious implications for overall health status of children. Even though the improvement in health care services have resulted in bringing down the infant mortality rate, the neonatal mortality rate is still very high. The neonatal mortality is due to combination of factors including poor health status of the mother during pregnancy, inadequate antenatal care, unsatisfactory delivery practices, and inappropriate handling of new born.

This state of affair calls for well trained health workers mainly at grass root level equipped with knowledge and skills of providing new born care services effectively because 80% of rural population is catered to by these workers.

The need for improvement in quality of training of all categories of health workers has also been documented, there is a serious handicap in learning and training environment. As per Report of High Power Committee of Nursing and Nursing Professionals in 1989, the current training methodologies, training facilities and training situation reveals that health workers are not being sufficiently equipped to deal with the health problems including the problems of new born. Considering the fact that there is an imperative need to equip them with the necessary resources and skills to enable them to work effectively in their own field. There is a need to devise an alternative strategy of training to enable them to discharge their duties effectively.

This need can be met by the use of multimedia approach also described as distance education which is best suited for trial under current condition. The distance education is of immense importance to meet the demand of well trained and skilled staff, because under current situation and facilities updating of professional workers cannot be met by conventional means.

Though the concept of distance education in health areas in both developed and developing countries is of very recent origin but literature has indicated quite a few number of courses being offered through distance mode, in U.K.O.U. Athabasca, USA, Thailand, Scotland and so on. Similarly in India CMC, Vellore is offering a few programmes in hospital administration through distance learning in collaboration with Pilani (BITS) and Tulane. National Institute of Health and Family Welfare is offering programme on health and welfare management through distance learning for Doctors. At present IGNOU has taken the lead to launch B.Sc Nursing for inservice nurses, and is planning to launch more programmes such as MCH, Geriatrics and on Aids .

The present paper focuses on modern cost effective method of training that can be applied in any situation for various categories of health professionals viz. doctors, nurses and other para professionals.

The paper would review in brief:-

* Concept and characteristics of distance education.
* The need and challenges of distance education programme.

* Salient features of training and training environment.

* Target group.

* Strategy of distance education programme in New Born Care.

* Designing and development of distance education programme.

Concepts and Characteristics of Distance Education:-

Variety of terminologies have been used to designate distance education such as Telenseignment in France, Frenstudium in Germany, Education Distancia in Spanish speaking countries and so on.

Distance Learning is an educational approach in which a significant part of the teaching takes place at distance i.e. the teacher and the student do not need to be in the same place at the same time. The teaching is provided through study materials using a variety of educational media which may include print material, audio-tapes, video-tapes, radio, television or even satellite transmission combined with some face to face teaching, guidance and counselling.

Distance Education aims to foster an independent and self sufficient learner.

Characteristics of Distance Learning/Education

* The quasi-permanent separation of teacher and learner throughout the length of the learning process; this distinguishes it from conventional face to face education.

* The influence of an educational organization both in planning and preparation of learning materials and the provision of student support services.

* The use of technical media-print., audio, video or computer, to unite teacher and learner and carry the course.

* The quasi-permanent absence of a learner group so that people are usually taught as individuals and not in groups.

Besides these, three other characteristics that can be identified with the distance education are :

* Teacher facilitates learning but does not have the major responsibility to teach

* Learning in one's own home environment helps the student to develop a self confidence which is mostly lacking in the conventional teaching environment and

* Any training which requires mainly community based learning such as for the PH/HFA ANM,would be more suited to a programme of distance education.

Need and Challenges

In India, new born care services are provided by various categories of health professionals at various levels of care.

Neonatologists Pediatricians/Pediatric Surgeons General Medical Practitioners
Nurses ANMs TBA, etc.

The curriculum of medical and nursing education does not give much input in neonatal training. Although need for training has been realized by health planners professional bodies (NNF etc.) and nurse educators, but so for there is no formal training (basic and continuing education programme) in this area except some short term training courses being organized by various institutions.

The basic training programmes are designed in such a way that new born care forms a part of training. The course content is integrated in various courses at basic and post-basic levels of training such as pediatric nursing, community health and obstetric nursing without any specification of hours allotted to course content in new born care.

It has been seen that majority of these programmes are not relevant to current social and health needs of community and there is serious handicaps in training (report of High Power Committee, 1989).

In most of the institutions, the most common method of teaching is didactic lecture. Training relies upon orientation of the student to text books and paper and pencil. The learners are not exposed to clinical and field practice area because of inadequate facilities in various institutions. The training is teacher-based and subject centred with no emphasis on learner-based training and problem solving. There is dearth of teaching and learning material. The material is mostly foreign publications which are not suited to our needs.

Due to all these reasons the health professionals (nurses) posted in neonatal units suffer from large lacunas in their basic training. To overcome this, a holistic approach in training is needed to meet health needs of new born in hospital, community and family. As such a distance education programme for target group could be developed to address the needs of new born care.

Target Group

The programme of new born care could be designed for various categories of health professionals viz. doctors, nurses, ANMS and other health para-professionals. But, under current situation and training facility, training needs and training status, it would be suitable for practicing nurses who form the majority of the nursing manpower and have pivotal role in delivery of healthcare system as a whole in hospital and community. The programme could be developed after identification of training needs.

The entry level for admission to this programme could be General Nurse Midwife or B.Sc (N) (RNRM) with 2-3 years of work experience in the profession.

Objectives of the programme

* Strengthen knowledge and skills in new born care
* Improve essential new born care practices
* Provide quality care to high risks and sick neonates.
* Develop clinical competence to provide quality care
* Develop managerial skills in organising new born care units and services
* Participate in training and research activity
* Develop an effective multimedia package of learning material (self instructional material)

Strategy for designing distance education programme in new born care

In the overall strategy of training, distance education could be adopted as an adjunct to the need based orientation. To know its validity distance learning could be organized in specific areas of new born care on pilot basis and later on developed to produce ones leading to the diploma or degrees. Such programme will expose the learner to the society in which he/she is living and working. Hence, then the society with which health worker interacts is not a page of curriculum. It becomes a dynamic natural environment which the student can see, question, interact so as to develop practical experience to deal the situation with confidence.

The following are the important steps in developing such a programme.

The course to be designed on the actual tasks to be performed by the Health Professionals. Multi-disciplinary approach would be far more effective than the traditional segmented approach of training programme. The course contents are developed by a group of experts comprising of specialists in

(i) Subject matter (ii) Educational technology (iii) Media

(iv) Evaluation (v) Counselling

The package so developed must be pretested before use.

For this Intra-departmental coordination would be needed with AIR, Doordarshan, UGC, IGNOU and university department of distance education.

A careful monitoring of the programme and comparison of the students performance with traditional courses would be the best way to judge the efficacy of a distance education programme.

Steps in planning and development

* Designing of Material - Curriculum and Course Material
* Production of Course Material
* Distribution of Course Material
* Instructional System
* Support Services
* Assessment/Evaluation System
* Systems Management and Maintenance of Records of Learners

Designing of the Curriculum

The certificate 'Programme[1] of 16 credits (8 credits in theory and 8 credits in practical) in new born care could be developed/organized for target group on pilot basis. Experts from the field could be involved in identifying course content to be designed in the form of blocks[2] and units. Each course will be presented in the form of multimedia package consisting of a number of texts, audio-video components, contact sessions, assignments, library work, laboratory work/clinical work and project work. The proposed course content could be designed in following areas :-

(a) Physiology of reproductive system and fetal development.

(b) Basic concepts and definition.

(c) Organizing neonatal care units

(d) Preventive neonatology

(e) Perinatal problems

(f) Assessment and care of normal and sick new born baby

(g) Systemic disorders new born babies

(h) Surgical problems of neonates

(i) Therapeutic procedures and handling of equipments.

Course Preparation

Learning material in the form of self instructional material will be prepared by teams of experts drawn from various speciality/areas such as Neonatlogists, Pediatricians, Nurse specialists etc. This material will be then subjected to content, language and format editing. Similarly audio and video cassettes would be produced in consultation with the course writers, in- house faculty and producers. This material could be

1. In distance education, "Programme" refers to curriculum or combination of courses in a perticular field of study for example B.Sc. Nursing Programme, Management Programme etc.

2. One block is equal to 1 credit and 1 credit equals to 30 study hours. Each block contains a number of units. Each units is an individual interactive, self-instructional lessoe. It contains orientation for topics covered and excercises to help the students learn the material. A unit generally consists of 15-17 printed pages of A4 size (5000 - 6000 words).

previewed and reviewed by the faculty as well as outside media experts and edited or modified, wherever necessary, before they are finally despatched to the Study Centres and Doordarshan.

Production of Course Material

The materials designed by subject experts have to be produced in a form suitable for use by the students. This means, the course material is sent for composing and printing and also producing T.V. and radio programmes in the studio before they are distributed to the learners.

Distribution of Materials

Once the text material is produced/printed, then it has to be despatched to the learners by post. It may include open circuit or cable and a satellite transmission of Radio and T.V. programmes. Methods of delivery needs to be efficient, reliable and cheap. Distribution can be direct to the student's home or indirect to the centre where from they collect, depending upon convenience of students and also the system followed by the institution.

The most important thing is to get the material to the point of use and in time by the students. The students must know exactly,

* What they will next receive
* Where they will receive it
* How to go and get it if this is necessary

Instructional System

Different methods will be used to communicate with students at a distance. Usually Multimedia approach in instruction is followed. It comprises;

** Self-instructional printed course material
** Assignments for assessment and feedback
** Supporting audio-video programmes
** Face-to-face counselling by academic counselors at Study Centres.
** Practical at designated Study Work Centeres
** Telecast of Video Programmes on National network of Doordarshan
** Broadcast of Audio programmes by All India Radio
** Teleconferencing

Support Services

In order to provide individualized support to the students study centres/work centers are established throughout the country. At the study centres, the students interact with the Academic Counsellors/clinical specialists/laboratory demonstrators and other students, refer to books in the library, watch/listen to video/audio cassettes. They also have an opportunity to consult with Coordinator on administrative and academic matters. At work centres, students get practical experience and interact with field staff.

Assessment of Learners/Evaluation System

Like any other educational system, the final criteria by which distance education is judged is the quality of its product - be it a certificate, diploma or a degree.

The assessment of the learners will be done by :

(a) Self - evaluation exercises within each unit of study (need not be submitted for evaluation).

(b) Continuous evaluation in the form of periodic assignments. These can be Tutor Marked and Computer Marked assignments.

(c) Term End examination which will be conducted every year at study centres.

Systems management and the maintenance of records of learner

This includes appointments of staff, setting budget, account for expenditure, purchase supplies, maintaining building and equipment, organize internal and external mailing services etc. It also includes students information system such as

- accurate information to students and public
- quick and efficient response to queries made by learners and pullix
- maintaining and updating the records of students pertaining to the registration, admission and evaluation
- quick response in terms of comments on assignments

Conclusion

Distance education has enormous potential for extending educational opportunities and for transforming patterns of professional and vocational training mainly in the area of continuing education of health professionals.

In the context of technical advances in new born care there is a great danger of a health professional to become obsolescent. Consequently these professionals need mid career training to update, to upgrade, to broaden and diversify their knowledge and skills to remain competent in their profession.

Programmes leading to degrees or diplomas are to be offered to meet these requirements and often there is a limitation for meeting such requirement by conventional means because of problems of access, relevance and cost effectiveness. In such situation distance education offers a great challenge. These techniques could be seriously considered for training in new born care by keeping following points in mind:-

(a) Regulation of admissions on the basis of man power requirement

(b) Organizing and arranging intensive contact programmes

(c) Utilizing a variety of communication technologies and collaborative effort within and among the country.

(d) Establishing work/skill centres.

(e) Identifying technical committees at local and regional level for quality assurance.

The programme being highly technical and skill oriented in nature, quality can be ensured by producing quality print material (self instructional); with appropriate tutorial support, guidance and counselling and intensive practical contact programme, satellite transmission, electronic media, projects, case studies, exercises etc. and proper feed-back systems to monitor the effectiveness of the programme.

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The University of Philippines Distance Education Program*

*PROF. ELIZABETH LORENZANA DIAZ***

To many of us, distance education is nothing new. Personally, I was first introduced to distance education in the early 60s, when, fascinated by the possibilities of the broadcast media, decided to write my MA thesis on "The Use of Radio for Classroom Teaching" with the hope of developing and implementing it in the Philippines. Unfortunately, no concerted efforts have been mad e to exploit the full potential of radio and television for education ---- to solve the perennial problems of lack of schools, qualified teachers and other resources. The specific term used for broadcasting in education is "educational broadcasting."

A brief historical background on distance education will show that it had its beginnings in "correspondence education" in the late 19th century in England and the United States. The idea was to improve the education of those who could not attend formal classes on-campus due to various constraints like geographic distance, family and work responsibilities. Until recently, "correspondence courses" were considered inferior to the conventional kind of learning.

It was only in the 1970s when the term "distance education" was used and in 1982 it was adopted by the International Council on Correspondence Education (ICCE), a major international body which is now called the International Council for Distance Education (ICDE). This council is the only worldwide organization for open and distance learning and is responsible for "facilitating collaboration among its member institutions worldwide and providing professional development opportunities for its members through regional and world conferences on open and distance learning. The ICDE plays an important international leadership role in shaping the educational environment of the future."

What exactly is distance education? As the name implies, it is learning that takes place at a distance where student and teacher are apart, unlike in conventional classroom learning where both are face-to-face. This educational approach is more a program of self- study/independent learning where the student can learn on his own, at his own pace, time and place - whether for formal or non-formal education. However, some face-to-face instances can be scheduled for specific activities like orientations, consultations and examinations. DE makes use of a range of strategies and communication technologies like print, audio, video, CD-ROM and other new technologies combining telephone, computer and interactive communication facilities to provide learning opportunities off-campus. One important characteristic of

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DE is the need to individualize learning. Much of the learning which will take place is the student's responsibility and will depend on the degree of his commitment to pursue a career.

Many advantages can be offered by DE such as: serving the educational needs of students at all levels in a wide variety of courses, expand opportunities for education especially for the disadvantaged sectors and improve the quality of teaching with the use of the best teachers and resources. All these benefits outweigh the disadvantages of: isolation of students, rote learning, prejudice against correspondence education and the high rate of drop-outs. Most of these limitations can now be overcome with the use of new technology.

The University of the Philippines has taken up the challenge to provide the growing demand for quality education in the country by launching its distance education program. Basically, the DEP rationale emphasizes democratizing access to higher education by overcoming the economic problems, geographical constraints, the rigid structure of conventional education, strict admission rules, family responsibilities and restrictive academic calendars. The UP as pacesetter in higher education and as the premier state university offers the widest range of academic and professional fields of study and can draw from its existing academic resources, faculty, research programs, the College of Mass Communication (CMC), the Institute of Development Communication (IDC) and the Institute of Science and Mathematics Education Development (ISMD) to develop its distance education program capability.

The need for institutional self-renewal can be met through the establishment of DE which will Provide the opportunity to review, improve and upgrade U.P.'s own capability as an educational institution.

The DEP is U.P.'s response to "global development and institutional renewal." Studies have proven that Distance Education is an effective alternate mode of education - "an alternative to traditional classroom learning,"and U.P. is challenged.

The DE organizational structure is headed by the President who presides over his Advisory Council (PAC) in formulating strategies, policies and programs. The System DE Office is in turn headed by the Executive Director, Dr. Ma. Cristina Padolina and serves as the "focal point for DE resource generation in the university in planning, organization, monitoring and evaluation." The Executive Director heads the Executive Committee composed of the Campus DE Offices of each autonomous unit headed by a Director.

Presently, Manila's Director is Dr. Arturo Pesigan; Los Banos, Dr. Felix Librero; Visayas, Dr. Aurora Fe Bautista and Diliman, the author. the functions of the Campus DE Offices are: "to promote, plan, conceptualize and coordinate the implementation of, monitor and evaluate DE programs and provide expertise and needed support by the academic units in developing instructional materials for use in the DE mode.

The basic resources for the DEP will be provided by the university's existing quality faculty, library and other instructional facilities and degree programs which can be modified for DE cost-effectively. The experiences of the UP Los Banos, Diploma in Science Teaching, School-on-the-Air and the Telemedicine project of Up Manila can also provide other expertise and resources.

For its 1994 operating funds, UP received a lumpsum of P6.9 M for DE in the General Appropriations Act. The ISMED Science Education via TV project also received an allocation of P15 M for 1994. Financial assistance and instructional support is actively being solicited from UK, Australia, Canada, Israel, France, Germany, the US, UNESCO and UNDP.

So far, the UP Diliman DEP has received the following curriculum and course proposals:

College of Architecture, Master in Architecture; College of Arts and Letters, Speech and Drama (Voice and Diction); UP College Baguio, Master of Arts Program and Diploma in Physical Education; College of Education, Certificate, Diploma and MA in Education; College of Social Work and Community Development, Master in Social Work; and School of Urban and Regional Planning, Diploma in Land Use Planning (possible AIDAB grant from Australia).

The most urgent need of the UP-DEP is the training of personnel of distance education who have to be informed about the overall functioning of the DE system. In this connection, many orientations, seminars and workshops have been and are being scheduled and it is hoped that more faculty can avail of these training programs.

The University of the Philippines envisions the establishment of an Open University which will serve as its fifth campus principally responsible for overall planning, resource generation, coordination and monitoring of the conduct of DE and will operate from all AUs of the system. Regional centres will also be established to administer local student support services.

The University of the Philippines is advocating the passage of a pending bill in the Senate on the establishment of an Open University patterned after the British Open University with the UP as the implementing institution, considering the many advantages it possesses and can offer, particularly the manpower required, its credibility and experience in quality higher education.

Education at a distance has moved beyond correspondence learning especially with the increasing use of communication technologies. Today, Distance Education has come up to par and sometimes even superior to conventional education/learning on-campus.

With more and more administrators and educators realizing and implementing the unlimited potentials of DE for quality higher education, the country can be assured of achieving its educational objectives more efficiently and effectively.

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THE PRESENT STATUS AND THE FUTURE PROSPECTS OF DISTANCE EDUCATION IN INDIA

PROF. RAJ. KHANNA

We all are well aware that Distance Education has revolutionized the very concept of education. It has gained popularity all over the world as a means of universalizing and democratizing education. We have come to realize that the traditional system of education is not enough to impart education at all levels and to all kinds of people especially in the developing countries like India. Distance Education has emerged as an alternative system of education.

The wide-spread urge for higher education witnessed in the developing as well as the developed countries, and the inability of the conventional universities to impart such education, has given impetus to the growth of this system. We can say without exaggeration that Distance Education is going to be an essential part of life for the coming generations all over the world.

According to the constitution, India was committed to provide within ten years free and compulsory education to boys and girls upto the age of 14. Even till 1992 this goal has not been achieved. According to the Report of the Committee headed by Acharya Rammurthy (1990), only 41.9% of the boys and 61.5% of the girls in the age group of 6-14 do not attend schools. If the constitutional commitment is to be honoured, Distance Education is the only answer. The biggest attraction of distance education institutions is that they can meet the educational needs of the millions of students irrespective of their places of residence, irrespective of their age and irrespective of their socio- economic positions. There may be some practical constraints but undoubtedly one national university can cater to the whole nation and this is possible only through the growth of modern communication technology and its growing use in higher education. That is why Distance Education is called multimedia teaching learning system. It makes use of various communication media like printed texts, radio broadcasts, audio-video cassettes and computers to carry knowledge to the students. Therefore, we can easily define distance education as a teaching-learning process in which students are separated from the teachers by a physical distance which is bridged by Modern Communication Media.

Almost all the countries of the world, both developed and developing, have acknowledged the basic importance of the system of Distance Education as a method of taking education to those who were earlier deprived of opportunities of learning through the formal system. In both developed and developing countries, Distance Education has become popular with the educationists and the planners because of its utility, high productivity, greater flexibility, cost-effectiveness and new communication technology. Today more than 70 countries of the world are offering Distance Education programmes in different forms, at different levels, to different types of people. In India, Distance Education has already acquired a lot of

credibility which can be seen from the fact that day by day, multitudes of eager learners are getting attracted towards it.

Distance Higher Education in India has two major forms today (1) Open universities which are set up through parliamentary or state legislative statutes and hence are fully autonomous in all academic, administrative and financial matters as the other conventional universities are. (2) Departments or Directorates of Correspondence Studies run by the conventional universities. They confine their study programmes mostly to the traditional courses in various disciplines. These departments or directorates are controlled and financed by their respective universities and therefore, do not enjoy academic, administrative and financial autonomy as is enjoyed by the open universities.

In my brief paper I want to bring out certain problems which are being faced by the Departments of Correspondence Studies in India both at the micro as well as macro levels, both at the theoretical as well as at the practical levels. These problems are fundamental to the very existence of distance education instituted and hence they should be tackled seriously so that we are able to guide the process of development of this system which has immense potentialities for the coming generations.

The most vital question before us is whether we are going to be tagged for ever to the conventional universities having no Academic, Administrative and Financial autonomy ? At present correspondence departments are controlled and financed by their respective universities and hence have no freedom to frame their syllabi to innovate their system of examination. They have no option but to follow the syllabi of the traditional universities and adhere to their examination pattern. Sometimes the syllabi and courses of reading are finalized at such a late stage that it becomes, if not impossible, very difficult to prepare the study material in time for the students. Because after we get the curriculum, the study material is written, got printed and then mailed to the students. And it requires sufficient time to go through all these activities. Similarly, the administrative and financial powers of the correspondence departments are very limited, as a consequence sometimes they feel greatly constrained and hence hampered in their activities. And above all the representation of these departments on the higher decision-making bodies of their respective universities is very marginal. As a result their peculiar stand point is not properly represented before any decision is taken at the university level. The formal bodies of universities play a dominant role in taking decisions regarding the problems in the distance teaching directorates or departments. This asymmetry destroys all initiatives taken by these departments for devising innovations.

Inspite of the fact that it is almost two decades that correspondence departments are the part of the conventional universities, the higher authorities usually fail to appreciate their specific a problems. They fail to understand that even if they are the departments of the university, they have their peculiar nature and hence required specific treatment. As a result, the departments of Correspondence Studies are put into great inconvenience which ultimately leads to great frustration.

It is really surprising that inspite of the fact that almost forty one universities offer correspondence courses, no well defined policy for funding these institutions or departments exist. It is high time that at the micro or institutional level the position of the departments of correspondence studies is reviewed thoroughly. Their objectives should be properly defined and their potentials should be fully explored and put into the service of society. For correspondence system to succeed, it is not only desirable but also necessary that efforts be made to knit this educational system into the social fiber of the country at all levels.

Besides there are certain problems which we face within the system itself. Problems such as excessive enrolment of students, failure to use latest communication technology, poor quality of study material, poor

counselling and guidance, lack of motivation and absence of continuous student evaluation etc. lead to the deterioration of quality of Distance Education. Indepth studies and researches are to be undertaken in this regard so that we can bring about some improvement in the quality of the study programmes.

At the macro or national level what had been conspicuous so far is the absence of any perspective planning regarding Distance Education. So far as the functions of the conventional universities are concerned, we are very clear, but the functions of the institutes of distance education have not been defined with precision. The system is still evolving. We are still far from sure whether the departments of correspondence studies would have the same function as those of the departments of the conventional universities? If yes, in what respect we differ from the other departments and if no, what precisely would be the functions of Departments of Correspondence Studies?

The role of U.G.C. in macro level planning of correspondence or distance education in India may be taken into consideration here. The U.G.C. has been guiding the establishment of distance education institutes in Indian universities through elaborate guidelines prepared by it for the establishment of correspondence course. It has a Standing Committee on Distance Education which formulates policies. The U.G.C. deals with Distance Education separately from the other departments of teaching and research in the universities, and has special rules for the financial grants to the correspondence courses on the recommendations of the inspection committee deputed by the U.G.C. The latter gives grants to the universities starting new courses or departments of Distance Education. Originally the U.G.C. used to give financial aid to the university departments which were running on a deficit only. But this policy was later changed and the U.G.C. started giving grants to all the institutions irrespective of whether they were making profit or loss. The Inspection Committee examines the need and relevance of programmes proposed to be started, the competence of the university to manage the course, the competence of the teaching staff and other facilities available in the university relevant to the course. On the basis of the recommendations of the committee, funds are allotted for a specific programme. Beyond that, U.G.C. has not been seriously concerned with the management of correspondence courses. Guidelines are often not strictly adhered to. No steps are taken to regulate the quality of teaching materials and other functions. Consequently it is upto a particular university whether academic standards are maintained or not. Thus we find that the system of correspondence studies is running in the universities of the country without any perspective planning.

No doubt, recently under the chairmanship of Dr G.Ram Reddy, U.G.C. has set up: (i) A Working Group on Distance Education; and (ii) A High Level Committee. These committees have considered the problems of the institutes of distance education thoroughly and had prepared the proposals for upgrading the correspondence courses institutes or directorates to the Distance Education Mode. These proposals were discussed in May 1993 in the meeting of the Vice-Chancellors of 18 universities having institutes of Distance Education. Taking into consideration the various recommendations made by these committees, the U.G.C. has prepared a detailed and concrete proposals indicating possible action and steps needed to be taken at various levels for their implementation by the universities having departments of distance education. We have yet to see whether these guidelines would strengthen the Distance Education in the country or whether they would meet the same fate as has been met by the previous guidelines.

Again, with the establishment of a few open universities and more particularly Indira Gandhi National Open University, there was a hope that various departments of correspondence studies in the country would be coordinated in a better manner since the parliamentary statute establishing this university entrusted to it the responsibility of promoting and funding the system of Distance Education

in the country, but unfortunately, no worthwhile steps have been taken to implement this provision of the Act of Parliament.

In the light of the above problems afflicting this system and at the same time taking into considerations the great potentialities inherent in this system, a new national education policy should be formulated which can guide the institutions of Distance Education more meaningfully and effectively.

Taking into consideration the national as well as the worldwide perspective, it is very clear that the credibility of distance education no longer needs to be established. It seems to be assured of a bright future because of the changed social needs, increased competition within higher education, disintegrating curriculum and the new communication technology and many other factors. There is no doubt that distance education has come to stay. But now the problem before the planners is how to shape it.

The planning for the future development or organisation of educational programmes through the distance education system will have to be done carefully. First of all we have to evolve some strategies to encourage, strengthen and increase awareness about the system of distance education as an alternative effective and useful system of education highlighting.

The following steps are suggested :

To think of planning at two levels : 'Micro' and 'Mcro' levels. 'Micro' level planning pestains to the pedagogic aspects of distance education which includes : (a) planning and efficient infrastructure for distance education institutions; (b) planning standard reading material for the students; (c) strengthening efficient support services to the students in terms of delivery of the course material and other necessary facilities at the study centres ; (d) evaluation of the educational programmes for their academic excellence and their relevance to socio-economic needs; (e) use of electronic media and comupters in distance education system must be encouraged, with a view to develop and produce suitable multi-media packages, distance education institutes must have technological expertise. Collaboration with EMRCs and AVRCs for production and evaluation of suitable audio and video programmmes can strengthen this effort; (f) Research in the various aspects of distance education needs to be encouraged.

'Macro' level planning is concerned with (a) planning the future of distance education at national and even at global levels. It should be in terms of forming associations of distanct learners at national and international levels for the promotion of its interests. The planning should be for networking and collaboration at various levels towards strengthening the distance education system. (b) To study the relationship between distance education system and the conventional education system, the mode of their converging and the possibility of their finally merging together. The institutes in both the distance education system and conventional system should generate process of mutual understanding and collaboration for planning and development of various educational programmes conducive to national development. The perpetual financial crisis in the conventional universities can be resolved to a great extent if educational programmes pertaining to humanities and social sciences are transferred to distance education institutes and the programmes related to sciences, medicine, engineering and technology and other technical areas are confined to the conventional universities. Mutual exchange of teachers can also be encouraged for the betterment of both the systems. One should always bear in mind that these two systems are not fundamentally separate and distinct activities but are the parts of larger activity called education.

With these measures we can anticipate a bright future for higher education in the 21st Century not only in India but at the global level as well.

Personal Encounters : Remedial Classes For Distant Learners

MEERA MALIK

In the "National Pilot Training Workshop on Distance Education" [1] many aspects of Distance Education were discussed, thrashed out, and formulated. The Work-shop was a torch-bearer for the planning and execution of Distance Education in India. But here I would like to draw attention to an important suggestion which has been almost totally ignored. It was suggested, "Provision of remedial learning to the needy pupils, based on their performance in response sheets, could also be arranged."[2] What have we done about remedial learning for the distant learner ?

NOTHING

Or to put it gently, "Much remains to be done here." This paper is a humble attempt at making a beginning in this direction, in the teaching of English. It not a scholarly discourse on teaching of English but is based on my experience with the under- graduate students and particularly on an interesting and rewarding experiment, I undertook during our contact with the students. Our under-graduate syllabus, has been vacillating from prescribing Hardy and Shakespeare to prescribing cut and dried extracts about science, inventions and, discoveries -- for the same level of students. This I am sure was a sincere attempt to somehow make the students proficient in English. But we have failed. The students of B.A. I through college to the post- graduate level go on committing the same language mistakes. I place the blame squarely on what is done-- or infact what is not done-- in our language composition classes. Like the tutorials at the post-graduate level, composition classes in the college time-table are considered to be synonymous with 'Free Periods'. This is an extremely unfortunate development because it is in these classes that maximum work can be done. I have often heard the argument that those who use the language well cannot analyze it accurately or completely, and those who analyze it, often cannot use it. It may hold some water. But the mass of under- graduate classes, leaving aside a few who come from the English medium schools, are a totally ignorant lot so far as the usage of English is concerned. The teacher has to come to terms with this reality and work for improvement at the basics in the composition classes. The teacher has to cope up not only with the syllabus but also with what the student didn't learn or wasn't taught in the previous classes.

Coming to the brass tacks and the realities of college curriculum: a method that achieves amazing results but demands a half-hour a day per pupil in correction would have to be set aside as impossible. Even spending 15 minutes per student per week amounts to 25 hours a week of a teacher corrections, if the teacher has four classes of 25 students each. No wonder, the teachers and the students give this up as an impossible project even in the formal system of education. Keeping these constraints in mind my plea is for a qualitative improvement in the way these composition classes are tackled. Their frequency is not

so important. This is crucial to the distant learner. Because his contact with the teachers is minimal. Infact, I was astonishingly rewarded by meeting these groups just thrice in the whole session! The limited time available during the Personal Contact Programmes should not become an alibi or a limitation. The key to our success was the way we corrected these compositions (Please see Appendix I and II). The composition teachers are not proof- readers and the student response to teacher proof--reading is only a single feeble step toward real learning.

Recent researches in the psychology of learning have emphasized what good teachers already knew, that people are more apt to learn from their successes than their failures, that positive reinforcement of right choice is more apt to increase learning efficiency. Mistakes are a normal part of the process of learning. If strongly deprecated they have a markedly inhibiting effect on the students. This is particularly true of the distant learner, physically separated from the peer group as well as the teacher. So the teacher has to be extremely sensitive to the use of correction. An almost ideal system would be one in which the teacher was free of the alienating role of the error-hunter or penalizing judge and instead was able to assume a co-operating, praising role, especially with those weaker students who need reassurance and encouragement the most.

At the same time, a desirable system should also be honest. It should not mislead a student into thinking that he had mastered more than infact he had. It must be impressed upon the students that they are learning a foreign language and it certainly can't be learnt without 'goofing'. In the course of learning a second language, they will regularly produce utterances in speech and writing, which judged by the rules of the second language are erroneous or ill-informed.

Now I come to the crucial point, how do we check the compositions and what is their purpose? (Please refer again to Appendix I and II) Broadly they have three purposes: correction; remedial measure; and in the long run the formulation of syllabi. The need to make judgements on errors derives from two sources: firstly the need to assess learner's knowledge and secondly to determine priorities for remedial measures. It was in response to the problems of the students that I, in collaboration with a colleague prepared two audio-cassettes on i) How to use a dictionary and ii) Enhancing your vocabulary.

But to get back to the problem of checking and correction, it has to be a two-pronged approach: a qualitative linguistic classification of errors, and a quantitative statement of the relative frequency of each type of error. We need an evaluation of the gravity of each type of error and an explanation of the cause of each type of error so that we take appropriate remedial measures. Though having its limitations, the traditional classification into errors of omission, addition, substitution , and word order is quite useful. The students were encouraged to bring their corrected home- assignment sheets or response sheets . This was of great help in establishing the pattern and frequency of various errors.

It is important to distinguish between the gravity of different errors. Many red marks could be due to careless mistakes indicating sloppy work rather than lack of knowledge or practice -- e.g. forgotten terminal punctuation, capitals, or mixing of tenses. A careful revision of the composition by the student would do wonders and must be strongly recommended. If the same error is made consistently, it may be that elementary as the mistake is, it has been overlooked or unlearned at an earlier stage of English language learning and will have to be treated now as a new pattern to be learnt. The mistakes must be starred, classified, and provided a patterned drill to make the drill homework easier for the teacher to check. The sentences are written on a separate sheet of paper headed with the correct pattern. The student is expected to write additional 10 sentences of the starred mistakes. This would enable him to master that mistake.

The students improve. But the most gratifying result is the student initiative in asking for help on specific points. They learn to identify their areas of weakness.

Such remedial measures through the personal contact of a sympathetic teacher establish to give the learner sufficient comfort and confidence, so that it becomes a self-learning process.[4] The two important aspects of Distance learning are the ability to learn and the willingness to learn.[5] Such personal encounters of three sessions each, if undertaken twice in a session will motivate the learner in this direction and sustain his motivation.

Foot - Notes

1. *National Pilot Training Workshop On Distance Education : A Draft Report in Collaboration* with *UNESCO and Ministry of Education.* (August 26 - September 9, 1985). Delhi: CBSE Open School, 1985.
2. Ibid, S.P.Anand , p.I-16.
3. S.P.Corder, "Error Analysis, Inter Language and Second Language Acquisition," *Language Teaching and Linguistic Surveys*, Ed. Valerie Kinsella, Cambridge: CUP, 1978, p.64.
4. National Pilot Training Workshop on Distance Education, S.Bhatnagar op.cit. p.I-59.
5. Ibid, Asha Arora, p.I-45.

APPENDIX I

Level B.A.I

Write a brief paragraph introducing yourself:

My name is Rakesh Goyal. I live in Sector 38. I work in [1] office. We have just come to the city beautiful so I have few[2] friends. I'am[3] also studying by correspondence corses.[4] I play cricket and I like to see films but little[5] time is left for these hobbies of mine. Both my parents are working. We are a close-nit [6] family. I have a young [7] sister. She is studying in class eighth. I am going to work hard and enter [8] I.A.S. That is my ambition.

Rakesh was advised to revise the composition carefully. He corrected three of the eight numbered errors marked above -- 3, 4, and 7.

The Drill pattern for the other errors;

1. 1 and 8 - use of articles a, an, the (Exercise consisting of filling in the blanks after giving a sufficient number of examples). Then another drill, which needs closer application as given in Appendix II.

2. 2 and 5 - use of few, a few, the few and little, a little, the little.

usage - Five sentences each. The concept can be explained in the class room situation too - 'few', 'a few' 'the few' students.

3. 6 - the concept of 'sleeping' or silent' letters - knit, know, knife.

The teacher can use any one of the numerous grammar books. Books which I found extremely useful were i) T.L.H. Smith Pearse, *English Errors In Indian Schools* (Madras; OUP) ii) W. Standard Allen, *Living English Structure* (New Delhi; Longman).

APPENDIX -II

A. Fill in the blanks with 'A' or 'An' or 'The' as required:-

1. Ink is -- useful article.
2. He was struck by -- arrow.
3. He was -- African by birth, not --European.
4. It was -- unique sight.
5. -- lamb is standing in -- field.
6. He drives -- motor car at --- uniform speed.
7. Ivanhoe is -- historical novel.
8. -- Ganges is -- sacred river.
9. Have you read -- Ramayana ?
10. Yesterday I saw -- European riding on -- elephant.
11. His brother is -- University professor.

B. Rewrite the following sentences, inserting any article that may be required, or removing any that is not required:-

1. I saw dog coming towards me.
2. The jealousy is an evil passion.
3. He gave very wise judgement.
4. He is Daniel in wisdom.
5. He ordered servant to leave room.
6. The honey is made by bees, and they extract it from the flowers.
7. Fire broke out in our village.
8. He always practised the justice .
9. He was justice of the peace in Calcutta.
10. Ganges has overflowed its banks.
11. The Mount Everest is highest in the world.
12. He wrote very good letter.
13. Dead man tells no tales.
14. Bay of Bengal separates India from the Burma.
15. the Ceylon is beautiful island, and it is largest of the islands near India.
16. The Mount Abu is in Rajputana.
17. Live ass is better than dead lion.
18. you will never be Newton in astronomy.
19. Brutus is honourable man.
20. Bird in hand is worth two in bush.
21. Friend in need is friend indeed.
22. The man is mortal.

EDUCATIONAL TELEVISION IN INDIA

*D.R.GOEL**
*KIRAN JAISWAL**

Educational Television in india cuts across all the levels, pre-primary, primary, secondary, higher secondary, under-graduate, post-graduate, and continuing. Also, it takes various forms, such as, informal, non-formal and formal. Post-SITE (Satellite Instructional Television Experiment) Educational Television programmes for children in the age ranges (5-8) years and (9-11) years developed at Doordarshan kendra's UDKs, namely Delhi, Cuttack, and Hyderabad to cater to the requirement of children in and around Jaipur, Raipur, Muzzafarpur, Sambalpur, Hyderabad and Gulberga.

The ETV programmes for children produced by CIET (NCERT) are telecast through INSAT-1D for children belonging to the age group of (5-8) years and (9-11) years from Monday through Friday and for school teachers on Saturdays. These programmes are telecast in different States namely, Maharastra, Andhra Pradesh, Orissa, UP, Bihar, Gujrat and MP. The Ministry of Human Resource Development through the NCERT is the main agency to co-ordinate the planning and production of the ETV service under INSAT. Doordarshan has been producing these tele-teach programmes till now. But in view of their increased requirements, it has been decided that the Ministry should take over their production. The Ministry of Human Resource Development and Doordarshan are producing educational films on a 50-50 basis for the INSAT educational television service. Keeping this in view the Ministry of Education at the Centre is going ahead with the setting up of their own separate TV studios and other production facilities in the CIET (NCERT), and in each of the seven States under the INSAT scheme.

Central Institute of Educational Technology of the NCERT New Delhi is producing Massive Teacher Education ETV programme for the orientation of inservice teachers, which are telecast during summer vacation.

Syllabus based lessons for school students at primary/secondary levels are telecast by DDK Delhi, Bombay and Madras under the STV programmes for children. The enrichment type of programmes are also televised by these kendras as well as Srinagar and six UDK transmitters - Jaipur, Raipur, Muzzafarpur, Sambalpur, Hydrabad and Gulberga.

DDK Srinagar is telecasting one programme for the university students per week which is enrichment type. DDK Bombay and DDK Pune are telecasting 'Gyandeep' programme for the adults. The Countrywide Classroom programme is sponsored by the University Grants Commission. The aim of the project is to improve the quality of university level education. These programmes are targetted primarily at the under-graduate students especially studying in small towns located in rural and semi- urban areas. The programmes also serve the teachers in higher education to enable them to teach more effectively.

These programmes are produced at the UGC Media Centres, namely, EMRCs located at Ahmedabad, Hyderabad and Pune, MCRC located at JMI, New Delhi, AVRCs located at Calcutta,

Hydrabad, Jodhpur, Madras, Madurai, Roorkee, Srinagar, Patiala, Imphal and Indore. It is under UGC - INSAT TV project undertaken by the UGC, New Delhi. A Mass Communication Bureau is also established at the University Grants Commission, New Delhi. Some facilities for TV programme production have also been developed in the TTTIs. The function of these institutions are producing Audio-Visual materials, researches in Audio-Visual materials and Instruction.

The UGC has established about three dozens Curriculum Development Centres (CDCs) related to undergraduate level subjects. These CDCs are geographically distributed all over the country. In fact, about three dozens universities were directly involved to strengthen the college level curriculum. Each CDC has a co- ordinator who involves a dozen or more experts of the subject with a view to modernize the curriculum for the Indian universities. In continuation to the scheme of CDCs, the UC has taken another major step to the production of video-materials related to the subjects of undergraduate level. As many as sixteen different subjects have been identified in the first instance. The subjects co-ordinators examine the curriculum produced/developed by CDCs, and identify experts and departments in the country so as to produce subject related video-scripts. These video-materials are related to all the three levels, i.e., the Ist year, 2nd year and 3rd year of degree courses. Video- materials for each subject are produced under this scheme. This production programme is one of the major thrusts. However, the country has yet to develop experience, expertise and strategies so as to produce excellent quality programmes.

The Indira Gandhi National Open University has started telecasting its educational programmes. These programmes aim to supplement the printed material already sent to students. The target viewers of these programmes are, out of those registered for university. The University has around 1,12,000 students registered for its various programmes., who receive counselling of 170 study centres, coordinated by 16 regional centres, viz. Hyderabad, Patna, New Delhi, Ahmedabad, Haryana, Shimla, Banglore, Cochin, Bhopal, Pune, Shillong, Bhubaneshwar, Jaipur, Madras, Lucknow and Calcutta. The University has a production unit at Tughlakabad and a post production centre in the campus at the Maidan Garhi, both in Delhi.

EFFECTIVENESS OF ETV FOR CHILDREN

Jaiswal, K.,(1988) conducted a study of Science ETV Programmes for children in terms of their Contents, Presentation, Effectiveness and Reaction. The findings of the study are presented below:

i) Content presentation of Science ETV programmes for the children was quite suitable with respect to most of the dimensions. The number of teaching points presented against the time for the programme was adequate. The individual teaching points were discussed adequately. The level of the programme in relation to the grade was appropriate. The sound and visuals were clear throughout during the telecast. The choice of colours was thoroughly appropriate. There was necessary coordination between the sound and the visuals. The speed of delivery of the programme was normal and the level of the language used was appropriate. A large number of these programmes were presented well.

ii) There was significant gain in 80% of the programmes.

iii) The children were found to have positive reactions to the Science ETV programmes.

Doneriya, A.,(1988) conduced a study of general ETV programmes in terms of their contents, presentation student's reactions and effectiveness and found that the content and presentation of the

general ETV programmes for children were quite suitable. The gain of the students in general ETV programmes was significant. The children were found to have positive reactions to the general ETV programmes.

EFFECTIVENESS OF SCHOOL TELEVISION (STV) PROGRAMMES

Sudame & Goel, (1984) conducted a study on the Utilisation of School Television Programmes in five schools of Greater Bombay. It was found that the STV programme viewing facilities in most of the schools were inadequate. There was a problem of multi- sections in a standard. None of the schools was found to have more than one TV set. A single TV set could not accommodate a large number of students. The school teachers were not trained in using STV programmes for classroom instruction. Pre and Post-telecast activities were not carried out by them. The STV programmes on Science were in Marathi only which did not suit the multi lingual population of cities like Bombay. The STV programmes in English were found much below the levels of English medium students. Even then the programmes on Science could be well utilised by the Marathi medium schools. The programmes on English could be utilised by the non-English media schools. The study made a suggestion to explore why the existing facilities were not utilised or under--utilised.

EFFECTIVENESS OF COUNTRYWIDE CLASSROOM PROGRAMMES

Doneriya, A.,(1988) studied the general ETV programmes. The study concludes that in most of the programmes the post-test scores of both the English and Hindi medium students were significantly higher than their pre-test scores. There was no significant difference in the effectiveness of Indian and Imported Programmes.

Jaiswal, K.,(1991) conducted a study of UGC CWCR Science ETV programmes in terms of their contents, presentation, students' reactions and effectiveness. The pedagogical analysis of the Countrywide Classroom and reactions of the students reveal that the Countrywide Classrooms programme are quite useful but there is ample scope for adaption, correction, and perfection. The basic question emerging is--can the CWCR programme supply the needs of multilingual, multicultural, multilevel undergraduate population of India?

The identification of the topics for the CWCR has to be done more meticulously by ascertaining the needs of undergraduate students and teachers. Due weightage could be given to all the Science subjects which can be mediated through television. The programme should be interesting, entertaining and educative. More programmes are needed at understanding and reflective levels. The objectives of the programmes should be clearly enunciated. The programme should be so motivating that the students curiously wait for a programme to be beamed. The content volume should be in proportion to the time available and the level of students. The contents should be well sequenced and the individual teaching points should be dwelt on adequately. At times some of the teaching points are over treated, whereas, some other under treated. Different teaching points could be treated optimally.

The effectiveness of country wide classrooms can be enhanced by the development of audio-visual clarity. Every attempt should be made to shoot the natural reality. Even when the pictures, models, mock-ups, and diaromas etc. have to be inducted they should look natural. Audio-visual ratio could be optimum, say, usually 1:3. More attention could be given at times to the colour-hue, brightness and saturation depending upon the view plot and theme. View composition could be more balanced focusing on what was required rather than bringing in unwanted Visuals or voice or neglecting or less emphasising

its potency, so that the programme is accepted and integrated with the institutional schedules ? Can the CWCR programme improve upon its contents and presentation, so that, it is more suitable, appearing, and effective ? Could education as a system be more resourceful so as to utilise the strengths of educational resources like CWCR programmes ?

There is reasonably large hardware expansion in India in terms of TV stations and receive-cum-relay transmitters but the rate of production of software is comparatively slow. There should be more centres like EMRC, AVRC and more infrastructural facilities should be provided at the TTTIs, so that, the rate of production, and quality of the CWCR programme is improved. Also, the INSAT-TV project centre JMI, New Delhi--the interface between the producers and target users should be more resourceful so as to mediate properly.

The basic difficulty in designing, development and production is that content experts, pedagogists, TV talent, and technical producers usually exist in isolation. A content expert may not be a pedagogist and vice versa. A TV talent may not be content expert but media specialist. A technical producer may be merely hardware specialist. Now the objective is how to have inter disciplinarity, if not interdisciplinarity then multidisciplinarity with adequate interaction.

There is a need to enrich and expand the Countrywide Classroom programme , so that it is more credible and useful.

EFFECTIVENESS OF COUNTRYWIDE CLASSROOM PROGRAMMES IN TALKBACK AND INTERACTIVE MODES

It is a rather challenging task to introduce talk back and interactive modes in Countrywide classroom programme with respect to mass communication because for that additional network in terms of hardware and time slots on the limited channel TV transmission is required. It is a very systematic beginning to introduce talk-back. With the advent of time when education will have to encompass larger population scattered geographically, the country will have to depend upon mass communication, sizeable. While introducing the interactive mode one assumes the basic premise that these modes enhance communication through TV as a solo medium , it is supplemented through research evidence.

Sahoo, Namita, (1991) conducted a study of Countrywide Classroom with and without talk-back. The findings of the study are presented as follows :

(i) **Originwise effectiveness**- There was no significant difference between the mean achievement on Native and Imported programmes. It means the programmes were equally effective irrespective of their origin.

(ii) **Effectiveness of CWCR with and without talk-back** -The gain in three programmes out of ten was significant through the CWCR with talk-back, whereas there was no significant difference in the achievement in the rest of the seven programmes with and without talk--back.

(iii) Singh, B.B.(1991) found that the mean achievement with talk- back was found significantly higher than the mean achievement without talk-back in case of Concept Attainment Model(selection strategy) and Advance Organiser Model. In rest of the models, viz., CAM (Reception strategy), Synectics and Inquiry Training Model also the mean of the talk-back group have been found to be higher than that of without talk-back though not significantly. The mean achievement with interaction has been found to be significantly higher than the mean achievement without talk-back in case of Advance Organiser Model,

what was required. The size and font of captions should be optimum and in a suitably colour contrast so that it is clearly visible.The contents should be communicated through suitable media.

The programme should be comprehensible and in easy and simple English language or a suitable mix of languages, or ideally, dubbed and transmitted in regional languages, so that, they are intelligible to multilingual groups.Separate channels may be allocated for the ETV programmes. The different speech elements such as, volume, speed of delivery, modulation, intonation, pause, pitch, fluency, pronunciation and articulation should be observed very meticulously. The exposure time on the TV screen should be tuned to the viewing speed of the undergraduate students. The transition from one shot to the progressive shot should be quite smooth and sharp. Still there could be variety in the formats of the programmes. Many more formats such as, problem solving, project, sensitivity training, quiz, laboratory, heuristic, scientific inquiry, and interaction etc. could be inducted.

Rather than solo presentation efforts should be made to make it illustrative and interactive because of the simple reason that the interactive programmes very often result in better reception. Different teaching maxims could be more carefully identified and applied. Skills of probing questioning and reinforcement could be more thoroughly integrated.

In forty-nine programmes(98%) the post-test scores of both the English and Hindi media students were significantly higher than their pre-test scores. So the Countrywide classroom Science ETV programmes on Biology, Chemistry, Physics, Computers and General Science were found effective for both the Hindi and English media students.

The mean gain of the English medium students was not significantly different from the mean gain of Hindi medium students in fifteen (30%) Programmes out of fifty, whereas, there was significant difference in thirty (60%)programmes in favour of the English medium students and five(10%) programmes in favour of the Hindi medium students.

This shows that the higher education Countrywide Science TV programmes are effective for both the Hindi and English medium students. In some of the programmes there was no significant difference in the achievement of the English and Hindi medium students. This may be so because TV is an audio-visual medium. The visual stimuli support the audio stimuli or the language of delivery and compensate for the language lag. Otherwise, also TV is more of a video medium and visuals have their own language which is universal. However, in a large number of programmes there was significant difference in the achievement of the English and Hindi medium students in favour of the English medium students. It may be because the telecast is in English language. In some of the programmes the level of the language used was quite high, speed of delivery of the programme was very fast and the accent and articulation strange. The mean gain of Hindi medium students in some of the programmes was higher than that of the English medium students. It may be because of the low level of previous knowledge of the Hindi medium students as compared to that of English medium whereas there was no significant difference in their post-test scores.

One of the problems is how to ascertain the profiles of undergraduate students all over the country and even if ascertained how to match the CWCR programmes to their masses. It can be realised to a large extent by designing such programmes which cut across a variety of cultures through varied inputs, such as, illustrations, languages, and contents at different levels.

Some of the programmes are very well designed and produced, but still they are underutilized or not utilised. Can the CWCR programme convince the college and University administrators and teachers of

whereas in the rest of the four Models as presented above the mean achievement with interaction was higher though not significantly. The mean achievement with interaction group was found significantly higher than the mean achievement of talk-back group in Synectics and CAM (Selection strategy) and just higher in case of Jurisprudential Inquiry Model when pre-test score was taken as covariate, whereas, the mean achievement of talk-back group was higher in case of the other three Models though not significantly.

So the various modes like talk-back and interactive definitely add to the strengths of mass media like TV.

EFFECTIVENESS OF IGNOU ETV PROGRAMMES

Goel & Jaiswal (1991), conducted a study-IGNOU ETV; Pedagogical analysis. The findings of the study are presented as follows :

i) The medium of instruction of 80% of the programmes was English, whereas, in 20% of the programmes the medium of instruction was Hindi.

ii) Forty percent of the programmes were on knowledge enrichment, 20% on developing scientific attitude, 20% on explaining difficult concepts, whereas, 20% programmes were on creating awareness and stimulating learning.

iii) 80% of the programmes were found to have adequate number of teaching points,

iv) There was an excellent logical presentation in 40% of the programmes, in 50% of the programmes the logical sequence was satisfactory, whereas, in 10% the logical sequence was poor.

v) In 60% of the programmes, the individual teaching points were discussed adequately, whereas in 40% of the programmes all the teaching points were not discussed adequately.

vi) The transition from one idea to other in 80% of the programmes was smooth.

vii) In all the programmes the level of the language used was appropriate.

viii) The sound was clearly audible during the telecast in 90% of the programmes.

ix) The IGNOU ETV used music appropriately.

x) Visuals used were adequate in 90% of the programmes.

xi) In most of the programmes the sequence of visual presentation and coordination of sound & visuals was appropriate.

xii) The visuals were focussed sharply in all the programmes.

xiii) In 30% of the programmes the choice of colours was excellent, whereas, in 60% it was good.

xiv) The speed of delivery of the contents was normal in all the programmes.

xv) The programmes were appropriately produced indoor or outdoor depending upon the nature of the programme.

xvi) All the programmes were at a suitable level with respect to the target viewers.

xvii) Sixty percent of the contents of IGNOU ETV programmes was at fact level, whereas, 40% at concept level.

xviii) Lecture, demonstration and explanation methods were frequently used and found quite effective.

xix) Almost all the programmes integrated the skills of introducing lesson, stimulus variation, explanation, illustration and lesson closure, but the reinforcement and probing questioning skills could be used more meticulously.

xx) All the programmes made use of Graphics, Captions and experimental aids optimally.

xxi) The formats were well designed in all the programmes.

CONCLUDING REMARKS

The studies presented above make it clear that students gain significantly through the Children ETV programmes produced by CIET. The School Television programmes though useful could be improved. The Countrywide Classroom programmes and IGNOU ETV programmes in the direct mode were found quite effective irrespective of their medium of instruction, and production location (Native or imported). Also there is definite gain through talk-back and interactive modes under simulated conditions. The talk-back experiment which is to be conducted in our country would examine the feasibility of talk-back mode with respect to mass communication.

It is extremely desirable that TV be employed as a self contained master medium. Efforts have to be made particularly in developing countries like India to design and develop ETV programmes more meticulously, so that there is no room left for the other interactive modes, such as talk-back and interaction to supplement.

However, a perfect medium of communication is very often wanting, so an expanded infrastructure in terms of hardware to facilitate two--way communication is always desirable. There is a dire need to make ETV more developed in terms of source, message, format, medium and mode by focusing on them individually and globally.

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PROSPECTS OF DISTANCE EDUCATION IN INDIA
-- A view from Panjab University

DR.SURINDER K. SHUKLA

The method of imparting education from a distance is relatively a new method. In India it has even more recent origins. The electronic eighties of the 20 th century have made it possible to educate the student from a distance. The high-tech gadgets make this system a success. The 'Computer nineties' are bound to make it a greater success by bringing within it fold a large multitude of eager students.

A combination of an empirical analysis of the system of Distance Education, and the advancement of 'Computer nineties' and technological marvel of chip, make it possible to make futuristic projection . In this paper, I have highlighted the possibility of optimum use of technological methods to reach out and provide education to a large number of students. It has been argued that the more distance education initiative is defined and directed by the core distance methodologies, the greater the likelihood of success. One method to make an approximate assessment of success this system is to evaluate , the degree to which it serves the student community. This can be done by posing the six [1] following fundamental questions. Will the education scenario be served if :

i) the teachers and the taught are separated in space or time ?

ii) the course content is carried by a technical medium ?

iii) On explicit two-way communication mechanism (feedback) is control to the proposal

iv) the course emanates from an institution rather than from an instructor

v) course development is a separate activity from course delivery

vi) the instructions proposed in distance education are the result of an industrialized process industrialized' here, implies - good quality control and course improvement with each revision cycle.

If the answer to all six questions is positive, then the education scenario in India is strongly amenable to distance solutions. States like Japan have made strides in economic development as a result of total literacy in their social set-up. Surely then the long strides of development in India can also be made by tapping the large human resource and educating them. The reach of conventional system of education being limited, the answer lies with the all-encompassing Distance Education . To quote Mrs.Indira Gandhi: Education is a liberation force, and in our age it is also a democratizing force , cutting across the barriers of caste and class, smoothing out inequalities imposed by birth and other circumstances.

Objectives of Education

In a developing country like India, a streamlined education system is projected as a backbone of development . This assumes special importance when the rate of literacy in the largely populated India is considered, See Table I that follow :

TABLE--I (Total Population, Population aged 7 and above, Literates, illiterates and Literacy rate by sex and Rural Urban Residence, India 1981-1991)

Population	Total Rural Urban	1981			1991		
		Persons	Males	Females	Persons	Males	Females
1	2	3	4	5	6	7	8
Total Population	Total	659.30	340.76	318.54	816.17	423.56	392.61
	Rural	502.88	257. 56	245.32	602.89	310.98	291.91
	Urban	156.42	83.20	73.22	213.28	112.58	100.00
Population aged	Total	536.21	278.04	258.17	670.17	348.47	321.70
7 years & above	Rural	406.19	203.31	197.88	490.13	253.07	237.06
	Urban	130.03	69.73	60.29	180.04	95.40	84.66
Literates ages	Total	234.15	157.08	77.07	349.76	223.70	126.06
7 years & above	Rural	146.60	103.51	43.09	218.32	146.38	71.94
	Urban	87.55	53.57	33.98	131.44	767.32	54.12
Illiterates ages	Total	302.06	120.96	181.10	320.41	124/77	195.64
7 years & above	Rural	259.59	104.80	154.79	271.81	106.69	165.12
	Urban	42.47	16.16	26.31	48.60	18.08	30.52
Literacy rate	Total	43.67	56.50	29.89	52.19	64.20	39.19
among population	Rural	36.09	49.69	21.77	44.45	57.84	30.39
	Urban	67.34	76.83	56.37	73.01	81.05	63.42

* Excludes Assam and Jammu & Kashimir (Census of India 1991, Govt. of India, p.51)

There was a large urban-rural differential in literacy rates. Between 1981 and 1991 literacy increased substantially in both rural and urban areas, but by 1991 the urban literacy rate, at 73.01 per cent, was quite high compared to the rural literacy rate of 44.54 percent. The level of literacy in rural sector is especially poor. If the democratic India has to make advance in the next century, all sections of society must move along, In this scenario, Distance Education assumes importance because of the reach of this system.

Whereas, classroom teaching can cater to few hundreds only, Distance Education method can be employed for countless learners.

Education fulfils the important targets in society; **firstly** the human resource can be tapped for developmental purposes only if it is educated. **Secondly**, a well informed populace is an asset to the successful working of democracy. **Thirdly**, the populace acquires awareness about its rights and duties -- it teaches respect for discipline, it equips the people to solve or cope with problems in thier environment etc. **Fourthly** it gives a sense of direction to development. The method of Distance Education technological methods can reachout to fulfil the educational aspirations of the student/learners. It may be pointed

out here that electricity has reached the village level in India Besides a way has already been paved in this direction by the Satelite which covgers and become programmes to even the remote corners of the country through television.

Distance education system may thus be viewed in the following perspective :

1. On the one hand there is the conventional system of education , it has its use but a limited application alone is possible. On the other hand, there is the Distance Education System with a posibility of wide spread application.

2. Present set up of Distance Education

3. Futuristic projections in regard to Distance Education in order to equip us for the next century, in which technological revolution is expected to be develop still further. The latter two aspects of education have a direct relevance here and will be taken up in some detail in the following pages.

Present set-up and Projections for the Future :

The need for non-conventional method of education in India was realised as early as the sixties. And although some attention has been given to the concept of distance education in the recent past, yet a lot more needs to be done in this direction.

Management/Organisation /Structure of Distance Education :

The Distance Education System progresses efficiently with the team-work of both academic and non-teaching staff. Unlike the conventional system, distance education depends on non-teaching staff. This a largely because students can be reached through a multi-dimensional media -- i.e. printed matter, audio-radio talks, video films etc.

The staff needs to be trained specially and acquianted with the importance of the task undertaken by them. The efforts of the support services can and do make a difference to student scusses.

The management/organisation can deliver better goods if the goals(3) of the students are kept in view. The goals may be identified as follows :

a) Upgrading or gaining an academic degree

b) Updating or gaining certificates in one or more course untis

c) Personal cultural development i.e. gaining one or more certificates for scientific and cultural enrichment of the individual.

Course design and Preparation :

It involves various stages involving (i) Course Creation (ii) Course Production.

The courses are created by academics. In conventional distance education system, the course creation is the primary mode of communication between teacher and the learner. An attempt is made to produce reading material of a high standard which is easily comprehensible by the student who is physically at a distance.

The second stage of course production involves the printing section, the proof-reading section. Efficient well-trained staff-support can see through the assignment with a relative ease.

Alongwith the conventional courses it is felt that courses and curricula that are sensitive to the economic and social needs of the society in India should be prepared. Given the modern development, a need is felt to diversify the courses especially designed to meet the industrial and technological scenario for example, courses on computing. Other degree level courses relevant to industry and commerce can

be started. A wide range of non-degree courses meeting the requirements of professional and vocational updating on such subjects as micro processors, data processing, electronics management, agriculture, engineering tourism, hotelling. can help diversify the present curricula. Panjab University has started Master of Finance and Control, Master of Education (M.Ed) for inservice and teachers and for one-diplomas -- (i) Health, Family Welfare and Population Education (ii) Statistics from academic Session 1996- 97.

Counselling and Personal Contact Programme :

Counselling is a practice adopted towards the learner through different means in the Distance Education System. Counselling is carried out through the following methods

(a) Personal Contact Programme: During the Personal Contact Programme students attend classroom lectures which are guidelines towards comprehending the course.

(b) Other media include Printed material, questionnaire, response sheets, Radio Talks and Video programmes.

In the later pages, we have discussed the possibility of adopting more modern means for counselling and thereby enhancing communication with the student.

Continuing Education : The methods for continuing education are (a) vocational (b) non-vocational.

The Education Policy adopted in 1968 had a major objective i.e. of vocationalisation of higher secondary education. The Report of Ministry of Education, 1985 reveals that vocational training was limited to a few states only and the original target of covering 50% at + 2 stage remained marginal. By offering vocational courses and training as well as by conducting summer camps, the Distance Education System can help cover the gap. Distance Education facilitates the student, with an easy schedule and provides him the convenience required to undertake vocational training.

An enchanced role of education implies many things, both philosophical and practical. Since technological innovation creates new jobs and destroys old ones.. Distance Education System must cater for and plan a national system for training and retraining. This becomes important in modern Indian where due to technological advancement some conventional jobs may be replaced by new high technology ones leading to retrenchment. In 1994 alone , 343 cases were recommended by Bureau of Industrial and Financial Recontruction (BIFR) to the concerned High Courts for winding up under the provisions of the Companies Act' (Economic Survey, Govt. of India 1994-95,p.117.) In order to re-equip this human resources re-training programmes can be started through DE.

Communication Media in a Learning System :

'Media' implies various methods of distributing information. It includes books and teachers. In the distance education system, the application of mechanical or electronic media assumes importance.

(i) Use of Computers :

a) In Teaching and Learning (b) In organisation, support services etc.

At present computers are used to aid the teaching process. At the Panjab University, Department of Correspondence Studies, the Computers have been employed to supplement and file the reading material for students. The administrative support services can organise information regarding students, bio-data of students fund position, vital information etc. by using the computer.

But much needs to be done. In order that educational action takes place effectively within the total framework of state and national policies, the scientifically organised base for monitoring and evaluating all programmes. The present system of collecting data and storing in files is inefficient. A strong information base is necessary for manpower forecasting, for organising consolidation of the existing educational facilities (physical resources, human resources, financial resources) and for mounting programmes of education reforms .4

Use of Computer in Future:

The society is evolving from one whose formal communication channels have, for approximately 500 years, been largely based on print on paper to one whose communication (both formal and informal) will largerly by electronic. Society is moving from a print on paper era into an electronic era. At present we are in a transitional stage characterised by the following factors.

a) Computers are used to print on paper which is then disributed manually

b) Printed data bases exist along with their machine reachable equivalents.

Cognitive Memory System: can be adopted to facilitate the exchange of information. To promote an easy flow of information, computer terminals at all distance education centers, Universities , medical centers, industrial research laboratories etc. can be connected with a centally located full-fledged cognitive memory. This method may be helpful for conducting research on distance education and other disciplines. The user can explore the connections put to use relevant data without being frustrated by the need of crossing the boundaries of disciplines, journals, books and department.

Such efforts employing the electronic media are likely to pave the way for a 'paperless' society.

At the international level, the International Center for Distance Learning (ICDL) has a documentation center, specialisting in cleecting and disdsemination information on distance education worldwide. The services of education database available with ICDL can be used by the Distance Education System in India . This information is available by two methods --

a) *Online* by connecting to the Open University Computer. It is available all twenty four hours daily.

(ii) Electronic Mail (E-mail):- Electronic mail is one of the most frequent applications of computer communication in modern times. It detress text, voice and image packages electronically with the help of a PC (personal computer). Electronic mail can be employed to communicate a) text-based material such as simple messages, letters etc.

b) It can also communicate formatted text (any document prepared and saved as a non-processed document with or without graphics.

The advantage of E-mail are particularly important for distance education -

* It saves time and resources i.e. letters do not have to be printed on paper, placed in envelopes and transported over long distances.

* It allows the re-use of text-based material received via E-mail without retyping it into the computer.

* It has multi-media capabilities making it possible to transmit data, audio and video material.

* it can be transmitted at all hours regardless of time-zone differences.

USE OF RADIO AND TELEVISION: The radio and television provide audio and audio-visual mode of communication respectively. The ability to transmit 'live' or recorded sound through radio broadcasts increases the 'reach' of the audio medium. Besides it is a convenient, quick and inexpensive method of communicating with an unlimited number of learners. Since the attention span of listeners has a limit(approximately 13 minutes per sitting)the students need to motivated to make an optimum use of this method. The services of All india Radio are requisitioned for this purpose. Department of Correspondence Studies, Panjab University has a collection of approximately 322 and 8 video film alongwith 76 programms provided by UGC\IGNOU. These are used by students for a greater understanding of the subject taken up by them. A short term policy (for each academic year) and a long- term policy needs to be formulated for the quality production of audio-video programmes.

Video Films are a powerful medium. They combine all the advantage of motion film with a substantial reduction in cost and time production. Japed video film presents information to the learner in a serial fashion. DCS, Panjab University has 9 video films to its credit (8) 5 video films have been selected by the Doordarshan to be telecast for UGC programmes on the television.

Video disc is a new technology comparison to video tape. A video disc can store complex visual images on a small plastic disc Similar to a gramophone record. In this case video disc displays the picture on TV receiver/monitor. More sophisticated versions of video disc players, having built-in micro-computers may be used to control speed, sequence and time of presentation.

Video disc as a medium of education opens up the possibility of presenting the learner with on electronic audio visual medium which can store a large amount of visual information alongwith its audio counterpart.

Other Communications Technology : a Futuristic Projection: such as telephone, Fax, Skyradio, Inter-networking, Teleconferencing etc. will be discussed later in this paper. Suffice it to say here that these methods of communications will be adopted in the 21st century.

Video-tex and teletext system :

These are interacting systems for transmitting text or graphics stored in a computer data-base via telephone networking, for display on a TV screen. Videotex systems are simple to use and economically viable as they cater to a large number of users.

Teletext is similar to videotex only in this case, information is transmitted not through telephone system but as a part of the TV broadcast service.

Teleconferencing System : can be used for audio, video as well as computer data. The interaction takes place between geographically separate groups of people through verbal exchange of opinions and ideas.

Tele-Lecture System: A tele-lecture system connects a number of specially equipped class-rooms in the same city or different cities through the public telecommunication network. A teacher can address a large number of class-rooms scattered over a wide area from his class room.

Inter-Networking System has been successfully employed by IITs and should be used widely for disbursing distance education.

Integrated Video-Computer System :

The use of computer in distance education has a new role in the future. What is new is new and exciting is the innovation of mixing text, audio and video with a computer. Computer-supported multimedia is a new technology-based medium for thinking, learning and communication [10].

Futuristic projection: The above cited are known developments in the field of electronics. Keeping in view the galloping strides made in the field of electronics, the above cited modes of communication just may seem outmoded in the next century.

Recommendations/Guidelines: The Distance Education Programme development requires a perceptive planning for the future. The short and long term planning requires monitoring from time to time.

At the national level, with appropriate planning and adequate finding Distance Education can take over more 50% - 70% of the student/learners in higher education in the 21st Century, secondly, there should be two independent bodies dealing with education - one the University Grants Commission for conventional method and another for Distance Education to cover the exigencies of the system. Thirdly, a sense of direction may be planned for the future large number of students that are likely to qualify by the method of Distance Education.

An enhanced role for education implies many things, both philosophical and practical [11] For example, since technological innovation creates new jobs as it destroys old ones, National Body must plan a national system for training and retraining. In the absence of training and retraining both economic productivity as well as social fabric will suffer. Training and retraining may be carried out through the Distance Education System on the lives of Germany's apprenticeship scheme or Sweden's methods of preparing the discharged workers to learn new skills.

An extensive range of courses needs to be introduced at the Distance Education level. An impressive effort in this direction has been made in Pakastani Allama Iqbal Open University[12] , which offers courses such as Electrical Wiring, Kitchen Gardening etc.

At the state level, the state Governments should make adequate provision for strengthening the Distance Education System over and above the assistance given by University Grants Commission. The prevailing notion that these institutes should be self-supporting, as opposed to conventional system, should be discarded. The net return from this system may be far more economical and effective than through the formal system. At present there are approximately 40 centres of correspondence studies in the country. The relative strength of these distance education institutes are indicated in Table II. It is estimated that there is every possibility of increase in the number of students/learners in the future.

At the UGC level, the separate Experts Committee appointed by University Grants Commission should assess the requirements of the institutes of Distance Education System in the country.

Special efforts should be made to (i) promote research on methodology and communication technology, which can be produced indigenously and used economically (ii) courses/curricula should be designed to fulfil the social and economic needs of the society.

At the University Level, special staffing pattern should be adopted. Competent academicians and educational administrators can be trained for the purpose.

Workshops/summer camps can be organised, which highlight the importance of the task undertaken by Correspondence Studies, and improvement of professional skills providing motivation to the staff should be undertaken.

Special summer camps providing both vocational and non-vocational courses should be organised for the students/learner. Modern administrative buildings and hostels should provided to accommodate students attending the summer camps.

To supplement the distance education, special Radio and TV programmes may be prepared in consultation with experts and after careful planning and forethought.

Our Responsibility towards the Future - how much can Futuristic Projection help? No one can have readymade answers for the future. Yet we owe a free, consolidated, politically and economically strong democratic system to our future generations. The modern high-technology cannot but take us in the desired direction. We have a responsibility to provide for, and foresee a planned future. Distance education can help achieve these aims. Taking into cognizance the present educational scenario reach towards students can be magnified in the future through the Distance Education . We are at the close of 20th Century and taking into cognizance the present reach towards students by distance education system, one can predict, with a little amount of optimism, that the reach towards students is likely to magnify in the next century.; This seems especially true in view of the possibilities projected by Sky Radio, Teleconferencing etc.

TABLE- 2 LISTS OF CCIs

S.No.	Institute	Year of Establishment	Enrolment 1989-90
1.	University of Delhi	1968	41173
2.	Punjabi University, Patiala	1968	7142
3.	Meerut University, Meerut	1969	4730
4.	Mysore	1970	21032
5.	Madurai	1971	40292
6.	Chandigarh	1971	6396
7.	University of Bombay, Fort Campus	1971	15423
8.	Summer Hill, Shimla	1971	12760
9.	Tirupati, Andhra Pradesh	1972	4213
10.	Andhra University	1972	INA
11.	Hyderabad	1973	1108
12.	Patna University, Patna	1974	3194
13.	Tamil Nadu Agri. Uni. Coimbatore	1971	INA
14.	Barkatullah University, Bhopal	1975	2100
15.	Utkal University, Bhubneshwar	1975	6795
16.	J.L.N.Krishi Vishwa Vidyalaya, Jabalpur	1975	INA
17.	University of Kerala, Trivandrum	1976	4730
18.	Kurukshetra University, Kurukshetra	1976	4730
19.	Kashmir University, Naseem Bagh Campus	1976	5316
20.	University of Jammu, Jammu	1976	1145
21.	Osmania University, Hyderabad	1977	2525
22.	Allahabad University, Allahabad	1978	INA
23.	Shivaji Univ., Kolhapur (Maharashtra)	1979	40
24.	SNDT Women's University, Bombay	1979	12016
25.	Annamalai	1979	17238

26. University of Calicut, Calicut	1981	INA
27. University of Madras, Madras	1981	112740
28. University of Poona, Ganeshkhind	1983	INA
29. J.L.N.Technologycal Uni. Hyderabad	1983	1379
30. Tilak Maharashtra Vidyapeeth, Pune	1989	3010
31. M.D.University, Rohtak	1988	INA
32. Mother Teresa Women's Univ. Madras	1989	108
33. Gujrat Vidyapeeth Ashram, Ahmedabad	INA	31
34. Maraikudi	INA	NA
35. G.B.Pant Uni. Agri. & Tech. Panta Nagar	INA	INA
36. Panjab Agri. University, Ludhiana	INA	650
37. Jadavpur University, Calcutta	INA	INA
38. Bangalore University, Bangalore	INA	461
39. North Eastern Hill University, Shillong	INA	Recently set up.

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SPATIO-TEMPORAL VARIATIONS IN ENROLMENT OF DEPARTMENT OF CORRESPONDENCE STUDIES, P.U., CHANDIGARH

By S. S. Rana
Dr. Sodhi Ram

The Correspondence Education in India, has witnessed significant changes both in its concept and structural frame work since its initation in 1962 at Delhi University. Succeeding three decades saw this new system of education taking strides. Not only did a large number of correspondence courses/Institutions came up in various universities but many of them also provided post graduate courses, diploma courses and even non-conventional courses such as Post Graduate Diploma in Health, Family Welfare and Population Education (Panjab University, Chandigarh). The growing importance of this system and its emergence as an alternate cost effective system to the education demands serious thinking and research so that weaknesses and the problems of this system are identified. While doing so we should not over look the Dynamic nature of the system of correspondence education. In the last three decades this system has witnessed significant changes not only in the age, sex and employment structure of the students but in spatial patterns of the enrolment also. A persual of available literature reveals that some studies have been conducted to look into the growth, status and problems of the system as well as the instructional medium, cost structure and course development(Sujatha, K. 1988): Likewise, attempts have also been made to study the pattern of students by sex, age, and employment(Ruddar Dutt 1988). However, hardly any study has been carried out, so far, to analyse the changing spatial pattern of the enrolment of students over time. Therefore, the attempt is aimed at analyzing the spatio-temporal changes in the pattern of student enrolled with the Department of Correspondence Studies(DCS) of Panjab University, Chandigarh. To achieve the objective, data was collected from various Annual Reports, Cutlists and enrolment registers of the Department. Nine sample points in time i.e. sessions, were selected to assess the changing pattern of enrolment. The data constraints however, remained a major deterant in looking into all the desired aspects of the study in view of the objectives. Therefore, intra-regional analysis is based on the data for undergraduate students only and for the session 1995-96.

Since its inception in 1971 the DCS has grown over the years from undergraduate to post graduate level. However, the number of the students enrolled with DCS has always ranged between 9 to 10 thousands(Fig. 1). In the year 1976-77 there was an exceptional spurt in enrolment(Fig.I), when the number increased to more than 12,000, consequent upon the introduction of five new Post Graduate Courses and a Certificate Course in library Science. Similarly an exceptional decline in enrolment occurred in 1988- 89, 1989-90 and 1990-91 as a result of the introduction of the new 10 + 2 system of education and

the reduction in the number of under graduate classes from four to two. Since then the number gradually increased and touched a new high with more than 15000 students during the session 1996-97. Despite the fact that six other universities with in a distance of 300 kilometers started providing instructions through correspondence system during late seventies and early eighties with almost the same subjects, this increase in the number finds its explanation in the acceptance of this new system of education by the people on the one hand and in the improvement of students services and diversification of the course taught by the DCS on the other.

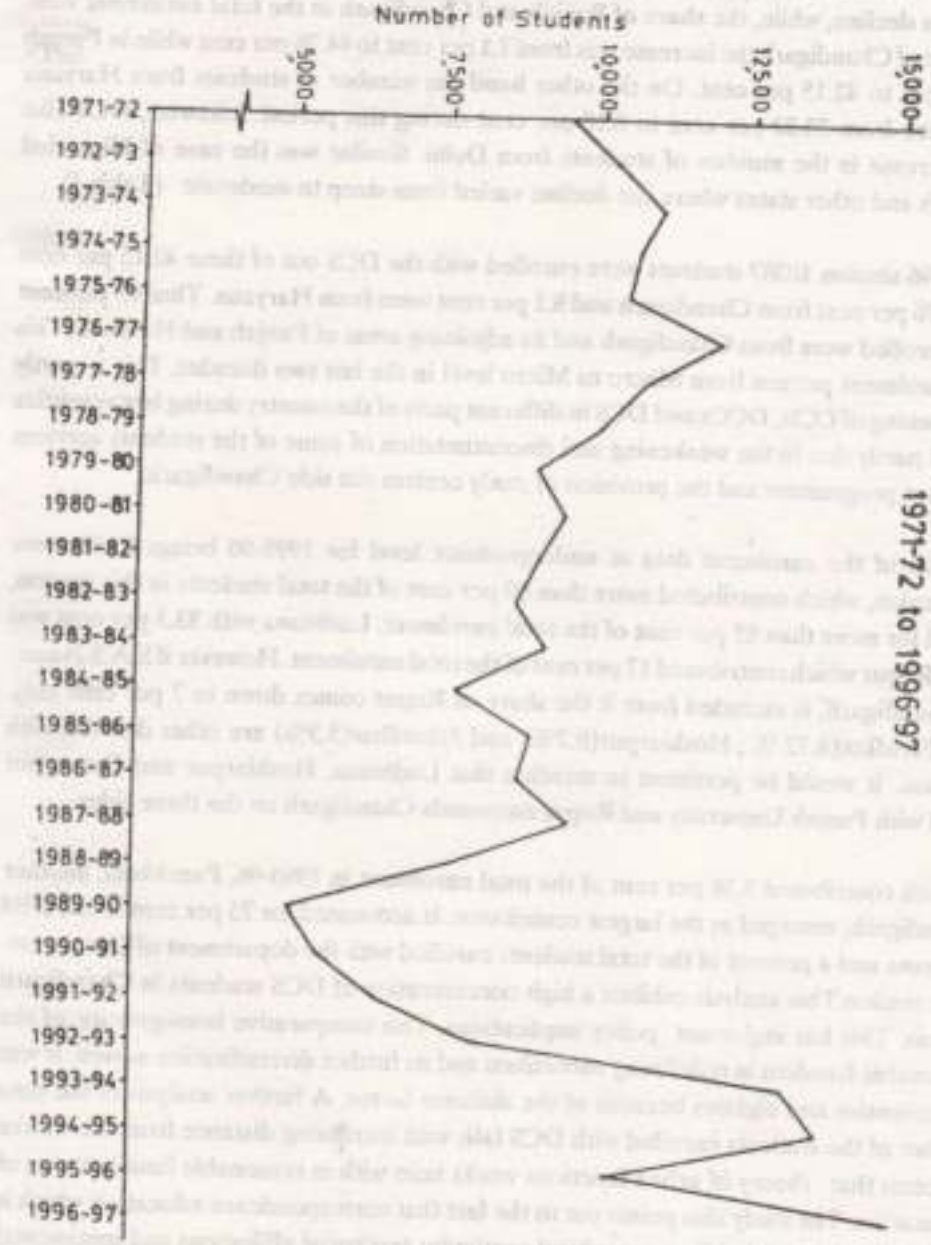
TABLE NO. 1

Enrolment of Students by State (in percent)

Academic Session*	Punjab	Chandigarh	Haryana	Delhi	Other states	Total enrolment
1976-77	34.85 (4 253)	7.1 (863)	33.22 (4055)	7.73 (944)	17.1 (2088)	100 (12203)
1978-79	32.80 (3284)	13.19 (1320)	20.19 (2022)	11.95 (1196)	21.87 (2189)	100 (10011)
1980-81	26.4 (2503)	25.0 (2378)	11.40 (1078)	15.28 (1444)	20.01 (2057)	100 (9460)
1982-83	26.46 (2313)	28.42 (2485)	10.5 (918)	17.27 (1510)	17.35 (1517)	100 (8741)
1984-85	27.71 (2155)	29.99 (2332)	10.4 (817)	16.63 (1293)	15.22 (1184)	100 (7775)
1986-87	2152 (24.50)	35.82 (3146)	9.19 (808)	17.22 (1512)	13.27 (1165)	100 (8783)
1988-89	24.74 (1910)	34.29 (2647)	17.15 (1324)	11.83 (912)	Nil	100 (7719)
1990-91	------- Data not available ---------					
1992-93	35.16 (2875)	46.33 (3788)	6.00 (491)	7.64 (625)	4.84 (396)	100 (3175)
1994-95	------- Data not available ---------					
1995-96	42.16 (4379)	44.83 (4656)	8.10 (842)	2.87 (298)	2.04 (212)	100 (10387)

* Sample Sessions

Figures in Paranthesis are absolute numbers.



Enrolment of Students
1971-72 to 1996-97

The spatial distribution of the students enrolled with DCS has experienced a significant change during the last two decades. Though the students from the northern states and Union Territories formed a major part of the total enrolment even during the early seventies yet the DCS continued to attract a fairly good number of students from other states also(Table-I). But over the years the number of students from other states witnessed a decline, while, the share of Punjab and Chandigarh in the total enrolment went up considerably. In case of Chandigarh the increase was from 7.1 per cent to 44.76 per cent while in Punjab it was from 34.8 per cent to 42.15 per cent. On the other hand the number of students from Haryana recorded a steep decline from 33.22 per cent to 8.10 per cent during this period. Likewise, DCS also registered a sharp decrease in the number of students from Delhi. Similar was the case of Himachal Pradesh, Uttar Pradesh and other states where the decline varied from steep to moderate (Table I).

During the 1995-96 session 10387 students were enrolled with the DCS out of these 42.15 per cent were from Punjab, 44.76 per cent from Chandigarh and 8.1 per cent were from Haryana. Thus 95 per cent of the total students enrolled were from Chandigarh and its adjoining areas of Punjab and Haryana. This shows a shift in the enrolment pattern from Macro to Micro level in the last two decades. This is partly the consequence of opening of CCIs, DCCs and DCS in different parts of the country during late seventies and early eighties and partly due to the weakening and discontinuation of some of the students services such as personal contact programme and the provision of study centres out side Chandigarh.

A further analysis of the enrolment data at undergraduate level for 1995-96 brings forth some interesting facts. In Punjab, which contributed more than 60 per cent of the total students in this session, six districts accounted for more than 85 per cent of the total enrolment. Ludhiana with 33.3 per cent was at the top followed by Ropar which contributed 17 per cent of the total enrolment. However if S.A.S.Nagar, a satellite town of Chandigarh, is excluded from it the share of Ropar comes down to 7 per cent only. Ferozepur(15.1 %), Faridkot(8.72 % , Hoshiarpur(6.2%) and Jalandhar(5.3%) are other districts with substantial contribution. It would be pertinent to mention that Ludhiana, Hoshiarpur and Ferozepur districts are affiliated with Panjab University and Ropar surrounds Chandigarh on the three sides.

In Haryana, which contributed 5.38 per cent of the total enrolment in 1995-96, Panchkula, another satellite town of Chandigarh, emerged as the largest contributor. It accounted for 75 per cent of the total enrolment from Haryana and 4 percent of the total students enrolled with the department of Correspondence Studies in this session.This analysis exhibits a high concentration of DCS students in Chandigarh and its adjoining areas. This has important policy implications. This comparative homogeneity of the students gives a reasonable freedom in redefining curriculum and its further diversification as well. It was not possible during seventies and eighties because of the distance factor. A further analysis of the data shows that the number of the students enrolled with DCS falls with increasing distance from the source i.e. Chandigarh. It seems that theory of urban functions works here with in reasonable limit in terms of Correspondence education. The study also points out to the fact that correspondence education which is an open system of education is bounded by geographical contiguity, territorial affiliations and sentimental intricaries.

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