FIRST CONVOCATION

JUSTICE R.S.PATHAK

Chief justice of India

I consider it a great honour to be invited to deliver the Convocation Address of the Andhra Pradesh Open University. It is the first Convocation of the University, and it is a unique occasion in the history of education in India. May I say how grateful I am to Vice-Chancellor Professor Narayana Reddy and the members of the Executive Council of this privilege. When Vice-Chancellor Reddy met me and extended the invitation, I must confess that I was somewhat hesitant because I did not quite know then what an Open University wall all about. But when he explained the nature of the institution and elaborated on the work it was doing I was so impressed that the concept commanded my immediate support. Here was an innovative idea, of particular relevance to our country and capable of brightening and enriching the lives of millions of our people.

The Open University is one of the remarkable concepts of our age. It is the supreme example of the triumph of an ideal in the service of the masses. It is revolutionary and daring, even for this era of experimentation and enterprise. It is of great consequence for our people, and of much moment to our national life. In its objective, its design and structure, it ranks with one of the far-reaching visions of human leadership. In a point in history, when the world is poised on the edge of great changes, the birth of this concept has not come too soon. Formal education was we know it, brings within the fold of higher learning, a small fraction only of the population of a country. Its nature, the principles on which it is founded and the direction it has taken through successive stages of evolution have confined its benefits to the comparative few. The philosophy of Distance Education has been evolved to supply the void, and it is expressed most appropriately in the Open University.

An Open University provides the opportunity of higher education to the great many, who for one reason or another either could not have, or have not had access to

Convocation Address delivered on 29.03.1987

it. The institution is of especial significance to a country such as India, indeed to all developing countries where orthodox custom or traditional prejudice or economic disadvantage or vocational preoccupation have combined to deprive a large segment of the population of the higher reaches of knowledge. There is the housewife who too early became condemned to the chores of domestic life, the student who was unable to secure admission to a College or University because he lacked finance or because he was not able to measure up to our present day fiercely competitive admission standards or because domestic economic pressures compelled him to abandon his aspiration for higher education. There are still others who wish to update their knowledge in specialized areas. For all of them the Open University affords the answer. Viewed in that perspective the institution discharges a high constitutional purpose. The access to education so provided acts as a powerful influence in the promotion of an egalitarian society, which was the ambition of the founding fathers of our great Republic and is the corner stone of our constitutional polity. The social scientist and the political economist will discover in this educational system the capacity bring about social integration and a significant upsurge in the level of national productivity. Education is a necessary pre-requisite in raising the quality of productivity, and as educational opportunities spread to the great masses so will expand the demographic area of creative potential. As the twenty first century beckons us, the emphasis for broadening the qualitative base of our people becomes more urgent. A new society is in the making, and I am convinced that the contribution made by open Universities in shaping it will be profoundly important.

To estimate the significance of this educational system, a description of what the Andhra Pradesh Open University is doing has been given. In the attempt to provide education for the masses, the University attempts to reach them through a co-ordinated mix of traditional forms with the modern achievements of technological development. In adopting a multi-media approach, it has taken advantage of the Print Medium, Radio Lesson, Audio Cassette Lessons, Video Lessons together with Counseling, Contact Programmes and Summer Schools. A widely distributed network of 56 study Centres covers the major cities and all the districts of the State and, what is especially

commendable, it extends to the inmates of the Central Prison in Hyderabad lending assistance to reformatory programmes through education. There is a comprehensive organization of educational instruction in which use is made of existing academic faculties and staff besides educational expertise for the preparation of course material. A system of continuing assignments and constant evaluation guarantees an intimate involvement in the progress of the student. The graded course enjoy wide flexibility, and care is taken to ensure a content of social relevance as well as vocational usefulness. The University has progressed into the sphere of Post Graduate specialized vocational education, and finds it possible now to extend Post Graduate education in Arts, Science and Commerce as well as advance to the undertaking of Research Programmes for M.Phil. and Ph.D. degrees. This brief survey demonstrates the capabilities of an Open University.

Eminent educationists the world over have lent their support to this concept of Distance Education. In the continents of Australia and North America, it has been employed widely where large sparsely populated areas do not permit the founding of colleges and universities in the vicinity of settlement. Conversely in India, this new system is all the more welcome because of the enormous population, a population still growing much too rapidly, for existing Universities o formal education to cope with. Professor G. Ram Reddy, Vice Chancellor of the Indira Gandhi National Open University, points out in his Endowment Lecture at Sri Venkateswara University, that the proportion of tertiary level student population in the age group of 17 to 23 years in only 4.8% in India contrasted with 25% in the Philippines, 18% in South Korea and in the U.S.S.R., 30% in Japan and 55% in the U.S.A. He estimates that the likely enrollment in higher education in the year 2000 A.D can be expected to double to 6.5 million students. In this illuminating address, he has also referred to the role of Distance Education in providing equal access to higher education between males and females in India, between rural and urban areas, between the upper castes and the scheduled castes and scheduled tribes, and between different regions of the country.

The concept of Open Universities has caught the imagination of progressive educationists in India as the most highly developed system of Distance Education

evolved so far. It is also of significance in our country as being one of the best instances of a high efficiency – low cost system in a public benefit programme.

During the four years of its existence the Andhra Pradesh Open University has established its high reputation and the student strength in 1986-87 reached the figure 47,872. That the experiment has been successful and the concept welcomed stands amply demonstrated.

Impressed by the importance of this new philosophy of education, Parliament at the Center has enacted a law setting up the Indira Gandhi National Open University at New Delhi. This will function not only as an Open University, but it will also maintain and co-ordinate Distance Education in the country. This is in recognition of the need in a vast country such as India to co-ordinate the educational effort of different Open Universities which can be expected to be set up in the States and to prevent avoidable duplication in the mapping out of courses. By appropriate co-ordination, a grid of Open Universities can be evolved, enabling the flow of educational course to the student community with an economy which could enable the diversion of finance to an enrichment of educational programmes all over the network. A fine balance can be achieved on all India basis with statesmanship and vision, enduring to the benefit of the millions of our country. The Open University concept will thus almost fully supplement the existing formal educational structure of today. Its existence will be an enduring tribute to those eminent educationists, whether in India or abroad, who initially formulated and evolved the concept, made it workable and were instrumental in bringing its blessings to our country. May I take this opportunity of felicitating most warmly Lord Perry and Professor G. Ram Reddy on the Honorary Degrees conferred on them by this University.

May I also now extend my heartiest congratulations to the recipients of the Gold Medals and Prize and Degrees and Diplomas at today's Convocation. It is customary on this occasion to address you. I shall not detain you with advice. That would be presumptuous. For advice is not for the mature. But I would earnestly request you that as you go out from this University you should constantly remember the great responsibilities which higher education has vested in you, that you should apply that

increased store of learning for the benefit of society and the country, and wherever you are, whatever you profession, vocation or service, you should serve them with renewed-dedication and devotion. It is the responsibility of society to give you education, it is your corresponding duty to serve loyally its institutions the aggregate of what you have gained here should translate its sum into the strength and prosperity of India. As the sons and daughters of this country, let India be proud of you.

SECOND CONVOCATION

PROF. K. SATCHIDANANDA MURTY

Vice – Chairman, UGC

It is nice of the authorities of this University to have invited me to address this Convocation. I am grateful to them for according me this privilege and providing me an opportunity to express some of my views on education.

Andhra Pradesh has the distinction of having established the first Open University in our country, and it and the good fortune of having as its first Vice Chancellor Professor G Ram Reddy, who had by then successfully headed a leading university in this state and, besides, acquired a first – hand knowledge of the objectives and implications of the Open Learning System. He was succeeded about three years ago by Dr. C. Narayana Reddy, one of the foremost contemporary Indian poets. The rapid, balanced and enormous development of this University in six year is due to the vision and dynamism of these two men and the team-work of their academic and non-academic colleagues. Their achievement in widening access to higher education deserves deep appreciation and felicitations. I wish the developmental plans of this University all success.

Our National Open University, this pioneering State Open University and others like it established subsequently may continue to provide distance education at various levels, applying a multimedia approach during the entire learning process, based on the planning, guidance and tuition of a number of academics. In addition to this, it may be appropriate for them as well as all concerned with education in our country not only to be aware of, among others, ideas subsumed under the rubric Lifelong Education, but to attempt to implement them insofar as they are found acceptable and good. One need not exclusively and forever depend on John Dewey, Paulo Freire and Ivan Illich, nor even on Tagore and Gandhi, or on Radhakrishnan and Zakir Hussain, in the formulation of educational ideals and practices. No mortal is omniscient and infallible, and there can be no policies and programmes which are perfect and immutably correct. Practical wisdom is often the result of a heated and direct clash of many different viewpoints.

The idea of a permanent, free and continuing education is as old as Plato. The important thing now is to make it universally accessible. The world around is changing rapidly, thereby affecting men's relationship with it. Consequently, men do not know how to maintain harmony within themselves, with others and with nature, as the atrophied and unsuitable education systems in vogue are unable to show them ways of transcending changes and leading whole lives. The need is to equip men individually and collectively to understand, control and dominate politico-economic development as well as technological progress. Aware of what man's existence is in the social and natural world today and foreseeing it as it will be tomorrow, education, whether formal, non-formal or informal, should now enable all to acquire and enhance enlightenment in the different stages and spheres of life. It is not mere extension of education that is required, but its qualitative transformation. It is not enough to learn how to earn; it is necessary to learn how to learn as long as one lives.

Learn to be what and to do what, and how? This should be through all possible methods and techniques which will engender in all unquenchable thirst for more and more knowledge not for accumulation, but for integration, deriving satisfaction only in perpetual inquiry and discovery, with a view to enrichment of life. This means a democratic and lifelong education, through contacts with reality, which will develop individual autonomy as well as potentiality for cooperative and harmonious living. It should result at least in the increasing awareness of human unity, if not of the unity of all existence, and in the enhancement of the quality of life of both individuals and their collectives.

It should be suffused with a concern for the needs of the disadvantaged, oppressed, excluded or exploited groups. The gulf between the cultures of the landless labourers and industrial workers, and the disparity between the rural and urban people, and such other contradictions, should be overcome: the best type of education must be available to all. Whatever comes in the way of this-division of labour, specialization, dependence, alienation and corporate subservience to economic systems, must be done away with.

For achieving what has been indicated above, the available material and human resources as well as the accumulated cultural experience of mankind must be organized so that everyone throughout his life continues to develop his capacities in order that he may first of all achieve inner harmony and contribute to the well-being and development of the nation of which he is a citizen, as well as of the universal Human Society of which too he is a member.

Apart from the usual type of universities, with or without correspondence courses, and open universities, there are a number of informal agencies that shape every society's thought, character and sensibility. For example, the family is an important agency through which a culture transmits itself across generations. Similarly, churches or religious orders, museums, radio and newspapers also educate people in different ways. In every case it is possible that education is socially controlling, manipulative or tranquillizing. So care must be taken that non formalization, vocationalisation or any such innovation would not result in differential education and categorization of recipients of education. Unless there is an effort to have common objectives and to have coordination of different methods to achieve them, there will not emerge a common learning society. This implies that people who receive non-formal education and formal education, and those who graduate from different sorts of universities (Universities like "rural Universities" or "Sanskrit/Telugu Universities") and from institutes of science/technology, should share a common world-view, if their thinking and action have to contribute to the harmonious development of individuals and the nation. One is not certain that this is being taken care of now; but it is important that this should be done if a common national consciousness is considered desirable.

I congratulate all those who have received degrees today. I wish all of them long, happy and fruitful lives.

Thank you all.

THIRD CONVOCATION

GENERAL K V KRISHNA RAO

Governor of Nagaland, Manipur and Tripura

I am delighted to participate in this Third Convocation of the Andhra Pradesh Open University and feel honoured to have been asked to be the Chief Guest and to deliver the Convocation Address. My pleasure is all the more great because your University has been in the forefront of the Open University System in India and has already made such a fine success of the idea. At the outset, I would like to compliment all those young men and women, who have received Degrees today. In particular, I congratulate those who have received various prizes for excellence in different spheres. I shall be failing in my duty, if I do not commend the Vice-Chancellor and all those Members of the Faculty and others, who have obviously taken considerable trouble in bringing up the students to the requisite standards through the academic literature made available, contact programmes, etc. With the success that you have made of the idea, it is good to see that the concept of Open Universities is catching up in the country. It is also a matter of greater satisfaction that a National Open University, named after out late respected Prime Minister Inidra Gandhi has been started at New Delhi.

In the policy perspective of the Government of India on the Challenge of Education, it has been aptly stated that "in any country, the goals of societal development reflect the aspirations of its people. In India these goals are enshrined in the Constitution which envisages a society based on 'justice, social, economic and political; equality of status and of opportunity; and it enjoins the state to endeavor to promote among all citizens, 'fraternity, assuring the dignity of the individual and the unity and integrity of the Nation. The constitution also underscores the country's commitment to socialism, secularism and democracy". It goes on to add "in the Indian context, the concept of national development goes far beyond economic growth; it is concerned equally with the development of a self-confident individual, with a strong commitment to democratic values, concerned with the creation of a Nation united in purpose out of people speaking different languages, professing different religions and

rooted in a variety of cultures. In a society which has chosen the democratic, rather than the totalitarian path to development, education has to be the mainstay of all National endeavours."

The Association of Indian Universities, in its recommendations on Higher Education, has identified one of the important objectives of Higher Education to be" to cultivate and inculcate values of humanism so as to promote tolerance among the diverse groups (social, cultural, ethnic and religious), the ultimate aim of which should be to foster and strengthen the spirit of National Integration, International Understanding, Social Responsibility and faith in the future of the Country". In its recommendations on planning strategy, the Association has suggested that "it should stress the strengthening and consolidation of the formal system in terms of quality of education as well as expansion of Distance Education for providing greater accessibility and national converge".

Keeping the above goals of societal development and objectives of higher education in view, it is indeed encouraging to note, that every year, an increasing number of students, who would otherwise have had no opportunities to upgrade their education or enhance their knowledge, have been taking advantage of the Open University system and are also perhaps improving their prospects inasmuch as their employment is concerned. However, it should be profitable both for the universities and the country at large, to review from time to time, the extent to which the national goals have been achieved, in order to identify the weakness and to initiate remedial measure. When I talk of such a re-appraisal, I do not envisage confining the study only to the Open Education system, but to the entire system of education and its achievements and drawbacks.

A re-appraisal of the achievement s of education would be facilitated by a review of the state of the nation, as it obtains today after over 40 years of the attainment of Independence. Constraints of time and the occasion itself, do not permit of a comprehensive review, which in any case, is best left to the experts in different fields. However, a quick and broad appraisal can be attempted. Since the attainment of

independence, the standard of literacy itself has gone up quite a lot in the country. We have become largely self sufficient in food. There has been considerable economic progress in the country. In the field of Industrial development, we are not only producing most of our requirements, but are also exploit natural resources, such as oil, gas, etc., and reduce imports, thus saving considerable foreign exchange. In Science and Technology, our achievements are impressive. Generation of energy has increased manifold. Considerable development of communications has taken place. In health care, longevity has gone up, but inadequate population control is diluting the benefits of our achievements. In human resources development, we have made appreciable progress and some of our people have attained international repute. In the field of defense, our armed forces are progressively building up their strength and we are capable of effectively meeting any external threat to the nation. We can be justifiably proud of our contribution towards international peace and progress. Of course, there is considerable scope for improvement in all these spheres of national development; and there is no doubt that it will continue to take place at even an accelerated pace. The significant contribution made by education towards all these achievements has to be recognized.

One aspect that should cause considerable concern to every Indian, is the internal situation in India. By this I mean, the increasing threats to the unity and integrity of India. Secessionism, negative regionalism, religious fundamentalism, communalism, casteism, linguistic fanaticism and parochialism of different sorts are eating into the very core of our Nationhood. These are manifested by insurgency, terrorism, extremism, riots and violence of varying degrees. I have chosen to dwell specifically, albeit very briefly, on this particular aspect as, to my mind, the success of our gigantic educational endeavours or, for that matter our very survival as a unified, cohesive and strong Nation, will depend on our ability to contain, nay, to eliminate, this hydra-headed monster from our body politic. This enlightened congregation, I feel, is an eminently suitable forum for sharing a few thoughts on this vital subject.

To understand the magnitude of the problem, let us take a quick peep into the situation in different parts of the country:

(a) In Jammu & Kashmir, certain political parties question the very fact of accession, from time to time. Of late, extremists trained in a neighbouring country and armed with sophisticated weapons, have been indulging in violent agitation, resulting in the killing of a number of people and destruction of property. The neighbouring country itself does not accept the present status; and there have been several efforts by her in the past to obtain a solution of the problem by the force of arms, but these have failed. They have been instigating the people to strive for secession. However, the people of the State have repeatedly affirmed their faith in the accession, through full participation in a number of elections that have since been held. You are perhaps aware that, in order to provide certain safeguard for the people of the State, a special Article (370) has been included in our Constitution, to conform to the Instrument of Accession. Considerable development of the State has also taken place. Past experience show that unless the extremists are effectively dealt with in time, the situation tends to get out of hand, leading to destabilization.

(b) Most of you are no doubt aware of the long struggle in Punjab. There has been a section of the population, small though it is, which has been demanding an independent State of Khalistan, supported, and in fact instigated, by secessionist elements based in foreign countries. In this, they have been aided and abetted by a neighbouring country and perhaps others. Terrorism has been resorted to, to achieve their aim; and it has taken and continues to take a heavy toll of lives in the State. Large scale internal security operations have been carried out, using even the Military, to regain control and some success was arrived at, but several obstacles have been put in its smooth implementation. Some of the political parties are riven with dissensions and are confused. The people in general are earnestly craving for peace. Considerable Para-Military forces in addition to the state police, are deployed to control terrorism and recently a package of political measures has been announced. It will have to be seen whether these will bring the desired peace and normalcy.

(c) In the North-East, insurgency continues in Nagaland, Manipur and a part of Arunachal Pradesh. This is problem that has been going on since even the British days considerable part the area was really unadministered in those days and whenever the Tribal's carried out any depredations into the plains, the British used to carry out punitive expeditions into the hills and subjugate them. Otherwise, no development of the area was done. However, after the attainment of Independence, the Government of India made every effort to willingly integrate them in the national mainstream. In the case of Nagaland for instance, a special provision has been made in the Constitution itself [Article 371A(1)] to protect and promote the interests of the Nagas. Over a period, by carrying out vigorous military operations, the back of the insurgency has also been broken and thereafter some development of this backward region has taken place. However, insurgents, mainly based in a neighbouring country and with assistance from other countries, have been carrying out depredations from time to time. While controlling insurgency by the use of necessary force, a political solution will have to be ultimately found for the problem. You are perhaps aware that in the States of Mizoram and Tripura, after considerable endeavours, such solutions have been found and the States are now peaceful. Similar is the case in another area, west Bengal, where the Gorkhaland problem has been resolved. In Assam, a small insurgent group, which has a nexus with the Naga insurgent group, has emerged and will have to be dealt with. In addition, some of the Tribals are highly agitated over their neglect and have been seeking separation from the State.

(d) Apart from the insurgency or near-insurgency conditions in some of the states that I have mentioned about, certain States are afflicted by Left Wing extremist violence or Naxalite violence. In particular, Andhra Pradesh and Bihar need urgent attention. In Andhra Pradesh a people's War Group, operating mainly in the northern Telangana Districts, has been indulging in considerable violence. A number of incidents have taken place and there have been many killings. Equally, in Bihar, a number of incidents and killings

have taken place due to the activities of the Left Wing extremists. In addition, there is also caste based violence. Some Central Forces along with the State plaice have been trying to tackle the violence in both the states, but with limited success.

In addition to the violence that I have mentioned earlier, from time to time, agrarian unrest, communal riots, caste tensions, labour problems, and so on, keep taking place in many states. A typical example is the Ram Janambhumi – Babri Masjid issue in Uttar Pradesh which has been defying a solution since a long time and which arouses passions not only in the State but all over the Country.

A careful study of the problems of insurgency and other extremist forms of violence reveals certain common factors, responsible for the situation. Briefly, these are:

(a) Strong conviction among some (though few) of being separate from the rest of the Country, or lack of sense of belonging to the country, mainly due to non-participation in the national movement.

(b) Fear of losing identity, fear of being swamped by other major populations, feeling of neglect and injustice, deprivation, and geographic isolation. In some cases, even assertion of separate identity, to derive undue benefits.

(c) Interference by the local Government or majority population in the affairs of the local people, mainly in religious, cultural, social and other matters, to the detriment of their interests.

(d) External support, generally, from a country or countries inimical to our country. There have been cases where large numbers of personnel have been trained, armed, equipped and motivated to fight for so-called liberation.

(e) Support of local population, either willingly, or in many cases due to fear of reprisals.

(f) In many cases, the agitation starts for greater autonomy, then for separate Statehood and finally for secession, if the problem is not attended to in time.

(g) Vested interests exploiting the situation for their own cause, such as disgruntled, immature and irresponsible politicians wanting to come into power through the backdoor at the point of the gun or by other unscrupulous methods. In some cases, certain political parties even at the National level, extending support to them, for their own reasons. In this connection, I am tempted to quote from the Sarkaria Commission Report which is much talked about these days. Dealing with political and socio-economic developments in the country, the Commission has stated on the growth in sub-national forces that" although they all start with differ bases and address themselves to different group affinities and sensitivities, the common characteristic of many of these groups in a plural society like ours is to promote sub-nationalism in a manner that tends to strengthen divisive forces and weaken the unity and integrity of the country". It goes on "among the more pernicious of these motivations can be recognized the role of vested interests in converting legitimate aspirations into strident discord and dissent by clever manipulation and encouragement of psychological alienation. The use of the subnationalist plank for building of group leadership which commands attention at the national level, is another strong motivation which is sometimes responsible for throwing up the more vociferous leader. It is from these origins that the more extreme forms of dissent and revolt against the existing order emerge in the form of extremist and terrorist actions".

Experience has shown that insurgency or for that matter terrorism, cannot be tackled by force alone. It has to be controlled and ultimately eliminated, by a combination of force and political effort. The force is for keeping the situation well under control, so that the insurgents are made to realize the futility of their violent approach. In the employment of force, it is essential to ensure that the population in

general is not alienated. The effort should be directed towards eliminating/ apprehending the insurgent. Insurgents are generally well – armed, well-trained in hit and run tactics, know the terrain well and get the co-operation of the public. The security forces employed against them must therefore be superior to them in every respect and must be fully backed by the administration. Timely and accurate intelligence, effective co-ordination between various agencies operating and civil administration, legal cover to security forces and speedly trial of apprehended culprits, Spartan discipline among security forces and above all public co-operation are vital for the success of operations. The army should only be used as a last resort. On the political front, the legitimate problems of the people must be understood, effective and speedy measures taken to redress them within the Constitutional frame work and generally endeavours made to win over the people, so that they willingly join the Mainstream. Political parties on their part, particularly at the national level, must not try to exploit the situation. Instead, there should be a national consensus in dealing with the problem, for if it gets out of control, the security of the whole nation may be jeopardized. Education of the people concerned with a national bias, is also important.

As far as violence resulting from religious fundamentalism, communalism, casteism and other forms of parochialism is concerned, it is worth giving a deep thought, as to why these are thriving in the country and are on the increase, despite the passage of over 40 years since Independence. While the central and state administrations try to deal with the situations arising out of these problems, is there not a way of preventing the occurrence of these? Are the majority communities in the States, discharging their duties towards the minorities, weaker sections and underprivileged? Why should disturbances occur, if we consider ourselves to be educated and cultured people, with a great heritage? Rajaji said "consideration for the feelings of others, of the rights of others, for the faults of others, these are the highest marks of culture, without which a man would be definitely uncultured. Where are all the values, that we talk so much about, gone? What is education without enlightenment? If the education that a person has received, has not made him into a good citizen, what is the worth of that education? Dr. S. Radhakrishnan, the great philosopher – statesman said "it is the duty of teachers

to make pupils good citizens of the new democracy". In a different context, Benjamin Disraeli said that upon the education of the people of a country, the fate of the country depends. Parliament had to amend the Constitution, by virtue of the Constitution Forty – second Amendment Act 1976, to include an Article (Article 51-A) of Fundamental Duties, to remind our citizens of their duties towards the Nation! As you are perhaps aware, these include the duty to abide by the – Constitution, to uphold and protect the sovereignty, unity and integrity of India, to promote harmony and spirit of common brotherhood amongst all the people of India transcending religious, linguistic, regional and sectional diversities, to value and preserve the rich heritage of our composite culture, to adjure violence, etc. it is note strange that, after centuries of alien rule and great sacrifices by our founding fathers for achievement of freedom, we have to be reminded of our basic duties towards the country? Perhaps everyone is conscious of their fundamental rights, but not of their fundamental duties! In another context, Aristotle said "the greatest of all the means ... for ensuring the stability of Constitutions – but which is nowadays generally neglected – is the sprit of his Constitution does not consist in his doing the actions in which ... the adherents of democracy might delight. It consists in doing the actions by which ... a democracy will be enabled to survive." Should we not desist from doing anything that threatens the very survival of democracy, in the largest democracy of the world?

In the long and chequered history of India, the better part of the sub-continent was united during the reign of only a few emperors. Otherwise, disunity among the various principalities was fully exploited by alien conquerors, who subjugated the country and ruled for long periods. We must realize that we are still a nation in the making. A number of people are yet to come willingly into the mainstream; and no effort should be spared by the rest of the nation in this regard, if we are to safeguard our sovereign and integrity. Within the nation itself, fissiparous tendencies of various sorts must be controlled and eliminated, by making people realize the adverse consequences to the unity and integrity of the nation. In other words, we must make serious and conscious endeavours to save the hallowed concept of "Unity in Diversity" from becoming a shibboleth through mechanical and indifferent lip service. Through

collective infusion of purpose, this epithet has to be made a living reality. The policy perspective says "whether the Country can face these internal as well as external challenges successfully will decide the quality of life of the citizens of tomorrow. Education is the most effective instrument to meet these challenges. Only education can imbue people with knowledge, the sense of purpose and the confidence essential for building a dynamic, vibrant and cohesive Nation capable of providing its people with the wherewithal for creating better, fuller and more purposeful life. "I hope, you will agree, that there can really be no dispute with this line of thinking. Let the Nation in general and the Educationists in particular, mull over our achievements and failures; and work towards meeting the challenges facing the nation.

I end with the famous prayer from our scriptures:

FROM UNTRUTH LEAD ME TO TRUTH

FROM DARKNESS LEAD ME TO LIGHT

FROM DEATH LEAD ME TO IMMORTALITY.

Thank you.

FOURTH CONVOCATION

DR. JAMES AJODHYA MARAJ

President, Commonwealth of Learning

This is a very special occasion for you and for me. In everyone's life, there are certain unforgettable events. Today's ceremony is such an event. Years from now, whatever the future holds for you, recollections of this day, even in the afterglow, will always be accompanied by feelings of warmth and of well-being. For graduations are joyous occasions, times for congratulation and commendation and for savouring the experiences of achievement and accomplishment. They are also occasions for reflection, for stock taking and for both retrospect and prospect. It is in that vein that I address my remarks to you today.

May if first of all, then, join with those assembled in welcoming new graduates to the academic fraternity. Years of earnest endeavour, of sacrifice and to sheer dedication have brought you to this point. Yours is no mean achievement. You have earned our commendation and as we salute you today we also extend to you your blessings.

We commend also the many others who have played a part in your success-parents, spouses, teachers and friends, all of whom share the pride that now fills your hearts. It must be a source of great satisfaction to you and to them to be present and witness this impressive ceremony. As I recall my own first graduation so many years ago, in distant, foreign land, away from relations and friends, unable to share the moment with loved ones, I feel impelled to remind you to count your blessings! In doing so, spare a kind thought for those who fell by the wayside – not through lack of ability but perhaps through force of circumstances. And spare a thought, too, for the myriads who never got to the starting line – brothers, sisters, perhaps, - friends? In this your hour of glory let not pride so dominate your feelings that you become vain and pretentious, unworthy of the degree you have just received, or of this University. Even of yourselves!.

I am not sure how aware you are of the heavy responsibility which now falls on your shoulders as graduates of Andhra Pradesh Open University. Although it is India's first open university, it is still less than 10 years old and as universities go, it is very young indeed. Already it has made a significant impact, bringing higher education to thousands who, but for POU, would never have had that opportunity. But it is a new kind of institution – an open university – and as such still subject to scrutiny, assessment and evaluation in ways that conventional instructions are not. For open learning and distance education are not yet in the mainstream of educational thought and practice, and there is an inevitable tendency in many quarters to regard such forms of education and training as "second best" – if not "second rate". Branded as you are with the APOU stamp, the judgment s made of you will be somewhat severe, even harsh. The way you perform and conduct and acquit yourselves will either reinforce in the minds of those who judge you, their own preconceptions or win a measure of recognition for yourselves and the University. I very much hope it is the latter. You are not alone, however, for thousands of others here in India and in other parts of the world confront the self same situation. Conventions die hard Most of today's decision makers and power brokers are products of conventional systems. It will be some time before institutions such as this and graduates like you, receive the regard and recognition they deserve. Take heart, nonetheless, for no country in the world today can adequately respond to the demands for greater access to quality education by continuing to rely on conventional approaches alone. Distance Education will be turned to more and more. The evidence is mounting. Students in conventional institutions and their teachers are both making increasing use of good quality materials prepared for distance education and independent learning. And initial fears that open universities and open colleges would pose a threat to the established order are being put to rest, albeit gradually. Mixed mode approaches, utilizing both simple and advanced technology are being increasingly used in combination with face-to-face teaching and are becoming quite common. Certainly for professional updating and upgrading distance education has an unparalleled role.

The creation of the Commonwealth of Learning by Heads of Government just over on e year ago with mandate to promote the development of human resources through the application of distance education techniques has been heralded as a major development on the international scene. Our efforts so far have not been without frustrations but we are confident that we will succeed for we are indeed, an ideal whose time has come. Among my colleagues in Vancouver is a former Vice-Chancellor of this University, a stalwart who has been in the vanguard of distance education developments both in this country and further afield. I am happy to recognize Prof. Ram Reddy who is with us here today. He brings considerable experience and expertise to the wider Commonwealth stage. I know that with his help, as Vice-President of COL, we can and will make a difference.

Your open universities have in the short time of their existence facilitated quantitative expansion. The essential question now is to ensure QUALITY. That is more difficult, of course, and it is in this regard that the Commonwealth of Learning, which I am privileged to lead, will seek to join hands with you in enhancing what you offer to your people. There can be no substitute for quality. We must not rest until it becomes the norm rather than the exception. But let us not confuse quality with standards, for the latter often implies an external frame of reference. Quality can be high without necessarily reflecting all of those features which others deem essential. If I may be so bold, let me say that it is time India manifests greater confidence in its own values and in its own sense of worth. You need apologies to no one for doing so.

I said, Mr. Chancellor, that this was a very special occasion not only for the graduating class but also for me personally. That is indeed so. In many ways this visit to India represents a kind of homecoming, with all that signifies in terms of sentiment and deeply felt emotions. Nearly 150 years ago, my forbears left this ancient land to plant sugarcane in the West Indies. They were simple folk illiterate, unlettered. Theirs was an extraordinary mission! And a poignant story too, but one, alas, that only a few here know or remember. Through blood, sweat and tears, they contributed to the development and advancement of their adopted homes. They demonstrated remarkable qualities of patience and perseverance, industriousness and self sacrifice so that their

descendants might have a better life. (Incidentally these are also the attributes of successful distance education students). And if today, some of us of that lineage are acknowledged and recognized, it is particularly gratifying that that acknowledgement should come from India.

In the district where I grew up the streets were named after major Indian cities – Bombay, Madras, Calcutta even Hyderabad and Cawnpore and while the names Guljari, Etwari and Pirjadi may mean nothing to you, to me they conjure up images of ancestors and relations, long gone, but whose memories you sanctify today in honouring me.

In accepting this prestigious degree which you have so graciously bestowed on me, I pay tribute to the memory of those who left these shores and sweated in the cane fields of Trinidad, Guyana, Fiji and elsewhere in the Empire of yester year. I do so, on behalf of my peers third generation descendants of those who crossed the Black waters in search of a more fulfilling life but who found instead, indenture and servitude – the scars of which are evident to this day.

Lest I be misunderstood, let me affirm that our loyalty and allegiance remain unquestionably to the land of our birth – to those countries where our real roots are and where we, like our ancestors before us, make our lives and have our being! Unlike our ancestors we do not hark back to India (to the Molook they knew and revered) for we are and must remain West Indian, Fijian, Mauritian, or East African as the case may be. On that there can be no compromise or equivocation. Not to regard India, however, as something special would be to dishonor our antecedents and to reject history as meaningless.

India is indeed a special place, a legendary land, one that has given much to the world. Your achievements since Independence, just 43 years ago, cannot but make you proud. In every filed of human endeavour the advance has been remarkable. That progress has been due to the genius and devotion of its people. Now a new leap is called for as the new millennium approaches. Every talent must be drawn upon, every resource exploited. It is not enough to look back with pride! India needs to look forward

with confidence, secure in the knowledge that its young with whom we share today's honour roll, possess in even greater measure, the same qualities and attributes that their forefathers demonstrated at home and abroad, in making this republic not only legendary but truly great in the contemporary world.

Much is yet to be done. Put your hands to the plough and your hearts and minds to the challenges ahead. Look forward with your faces to the sun and let the shadows fall behind you. May success crown you every effort and peace, progress and prosperity attend you.

FIFTH CONVOCATION

PROF. SRISA

Permanent Secretary, Ministry of University Affairs, Thailand and Former Rector

Sukhothai, Thammathirat Open University

I am very honoured to be invited to deliver a convocation address on this auspicious occasion of the Fifth Annual Convocation of Andhra Pradesh Open University. The selected theme is Distance Education for a changing World which deals with looking ahead into the future of distance education. I am speaking today not in the capacity of futurologist but rather to persuade all of you here this morning to help define what the future may hold for all of us and the implications that exist for distance education.

At present a considerable number of academics have volunteered their services as futurologists. There are the prophets of doom who predict a nuclear holocaust and a quick end to the planet earth. And there are the optimists who have visions of a Utopia born out of continuing technological developments and faith in human beings, ability to use them for universal well being and social justice. Being neither a prophet of doom nor a utopian, and mot certainly not a professional futurologist, I therefore wish only to present the thoughts and speculations of futurologists whose views I have read and heard elsewhere as issues for your consideration.

It stands to reason that if we are to propose new directions for distance education for tomorrow's world, we should have, however tentative and imperfect, a perspective of what the world might be in another decade or so. I venture to suggest the following future trends which seem to be for paramount concern to all of us:

1. **Continued acceleration of scientific and technological change**

   Advancements and development sin science and technology, especially microelectronic technology, have played an important role in transforming society into an information society. A study on new jobs created in the United States during the 1970s have revealed that only 5%were in the field of

manufacturing and about 90% involved in information, knowledge or service. It is most certain that information technology will have a strong impact during the next decade on developed as well as developing counties. It may be said that the information society that used to be only an intellectual abstraction is now taking shape and will become a reality in the next decade.

2. **Increasing rate of communication within and between countries**

   Communication within and between countries utilizing information technology will be more rapid and widespread. Modern breakthroughs in communications enable people in different countries to learn about each other through visual contact which never before existed in the history of mankind. Faster means of transport and advances in telecommunications have subsequently made the world smaller. People are now able to communicate widely and speedily with every region of the world.

3. **Greater level of global interdependence**

   The changing world of future will be characterized by increasing cooperation. The nations of the world will become more closely bound together in a web of economic, social and technological linkages. The changing of cultural values is likely to be intensified in the cause of modernization and global interdependence among countries in the world may bring harmony, but it could also lead to grater complexity in the problems facing mankind. Nevertheless, we certainly hope that greater interdependence will lay a foundation of global awareness and understating for a peaceful world in the future.

4. **Rapid obsolescence of knowledge and greater degree of insecurity and uncertainty**

   The future world will be a rapidly changing world. The rapid advancement of technology will make it necessary for people to always keep abreast of new developments. The eternal search for knowledge will be stepped up. Lifelong education for continuing self-improvement of everyone in society will become commonplace.

If these future trends, are to become a reality in the next decade, the management of education which is essential to prepare citizens for tomorrows

world, will have to undertake a critical appraisal of current principles and practices in a spirit of open and innovative inquiry. A critical question is "how do we prepare tomorrow's citizens today?" what essential knowledge skills and attitudes need to be inculcated in a tomorrow's citizens? What we need to contemplate for the coming decade is the fundamental change in our view toward educational philosophy and practices in the light of the changing conditions of society.

The present decade could be considered the decade of educational reform. Educational programs in various countries throughout the world are being criticized for failing to respond to the needs of societies that are rapidly changing. Education is being attacked as inefficient, inferior in equality, and not sufficiently development oriented for the modern world. Commissions have been set up to seriously study, analyze and offer guidelines for educational reform. There have been numerous reports dealing with educational reform at both the national and the regional levels, the latter of course dealing with matters international in scope. In this region Asia and the Pacific, major educational reforms are taking place in a number of countries. It is interesting to learn that, whenever there is education reform, the matter of distance education is inevitably an important component and there are always proposal for development in this area.

I would like to take this opportunity to share with all of you some my thoughts and experiences on distance education as an integral element of educational reform in Thailand and many countries around the world. Several emerging trends are now evident:

A. The wider application of distance educational methods within the conventional educational system.

The rapid obsolescence of knowledge and the greater role of information dissemination in modern society have gradually increased the demand for universal access to education. Governments everywhere now realize the significant contribution of education to the social and economic well – being of the country. Educationed individuals become human resources for

national development. It is a fact that, in this increasingly competitive world, only countries with well informed, well educated human resources will survive. This has led to the reform of educational system in many countries from a traditional elite system to a more open and diverse system of education so as to build a base for the future stability of the society.

In higher education in particular, evidence has shown that reform has moved distance education into conventional institutions. Many universities are now two mode universities employing both conventional and distance delivery systems. In Thailand, for instance, continuing education and extension programs represent one of the fastest – growing areas in Thai universities. In Australia, a majority of universities now admit both on campus and off campus students and heavily utilize distance learning methods for these non-traditional students. In the process of disseminating knowledge to a wide range of dientele, these programs also introduce to the higher education community the role of mass media as an alternative to traditional modes of learning. The far reaching effects of distance education have made it a securely established feature within conventional universities and have gone even further to put traditional modes of learning under public scrutiny.

We have now come to witness a strong and persistent demand for mass education as opposed to elite education. While the merits of the both types of education can be appreciated distance education as s means of expending educational opportunities is evidently taking over, if not replacing the conventional ways of teaching and learning.

B. The increasing role of 'Hi-tech media' in distance education

The next decade will see open universities employing a more sophisticated delivery system using integrated media and advanced technologies as a means of reaching out to greater numbers of people with greater efficiently. Electronic media will particularly play a significant role in enhancing and diversifying the system of distance education. In the near future, we may see more widespread use of computer assisted instruction,

individualized learning, video libraries, and direct telecasts through satellite, all of which will mark education more accessible to people from all walks of life. Through multi-media distance education utilizing technologies of the future, the notion of life long education will become reality. In the United States there has already been discussion of a birth to death curriculum and birth to death delivery system of education. Although this may sound very technology – intensive and perhaps too distant for most other countries, I hope that we at least appreciate such developments in distance education. In fact, such developments may not be as far away as we might think.

C. The emerging networks among distance – education institutions

The state of development in information technologies and telecommunications has now made it possible to set up cooperative network among distance education institutions of the national, regional, or international level. A concrete example is the National Technological University (NTU) in the United States which involves many campuses and industries being linked together though advanced telecommunication system. A special lecture by a Nobel Prize chemist at the main campus can now be simultaneously seen and heard via satellite by thousands of other students sitting hundreds of miles away at other campuses and offices. In South East Asia there has been a similar attempt to establish a satellite network among countries in the region, and we look forward to seeing such a network bring new dimensions to our educational systems.

As information technologies are now shrinking the world into satellites, and fax machines, rapid internationalization of social, cultural, as well as economic elements in countries around the world is inescapable. Under such a trend toward internationalization, we will also see new forms of global education emerges as a means of bringing together people from different social, cultural and economic backgrounds.

Above, all distance education will play an integral part in the effort to globalize education for the harmony and understanding of making. I am very optimistic that networking relationships among institutions in the region

will make it possible to bring education across national boundaries to make all of use feel much close together in the interdependent world.

To conclude my address to all of you, I would like to just simply say that life-long education in this rapidly changing world is not a mere rhetorical statement anymore but an absolute necessity for modern living. Distance education is therefore emerging very strongly as an answer to the desire for knowledge of every one in society. Distance education will not be a supplementary mode of learning anymore. It will become the principal mode of learning for the majority of people in the future. In Thailand, already over 10% of all students at the tertiary level are now enrolled in open universities, and the number keeps rising. Ten years from now, we may be able to achieve the goal of life – long learning through distance education. Let us hope that by that time, education, in all its diverse forms will be universally accessible to meet the intellectual and professional needs of everyone in the society.

Let us regard distance education as a mission we must accomplish and a challenge we all accept. Ladies and gentlemen:

Please allow me to take this final moment to say congratulations to every graduate assembled in this hall. As a result of hard work and a strong sense of determination, they have accomplished a difficult task. With pride and joy at being here on convocation day, I would like to say that distance education not only provided them with knowledge, skills and ways of analyzing things, buts also taught them how to learn. With perpetual desire and the ability to learn, they are now equipped with the most important tools as citizens of the modern world. They are now able to pursue life long education for the betterment of their lives, their careers and their society.

Graduates:

Now that you are ready to explore the new horizons waiting for you, please keeps the lamp of learning always burning in the years that lie ahead.

Thank you,

SIXTH CONVOCATION

SHRI ARJUN SINGH

Union Minister for Human Resource Development

I consider it a great honour to be invited to deliver the convocation address of the Dr. B.R. Ambedkar Open University.

Let me congratulate the Government of Andhra Pradesh for being the first in the country to give institutional educational opportunities to large sections of people. It is appropriate that the University should be named after Dr. B. R. Ambedkar, the great architect of our Constitution. Dr. B. R. Ambedkar always reminded us of the imperative need in our country not to idealize the actual but to actualize the ideal. It is intimately related to the concern of the open concept of education, an innovative idea of immediate relevance to our country and an idea which is capable of brightening and enriching the lives of millions of our people.

Broadening Social Base

It is a matter of great satisfaction that you are engaged in broadening the social base of democracy by making higher education accessible to all not only just to those who are young but also to those who are n the non-formal sectors of the society, the unemployed and employed and women, working both in offices and at home, and such of those who have not been able to quench their thirst of knowledge for some reason or the other.

Policy Shift

Independent India witnessed a marked shift in priorities in the sphere of higher education. The emphasis has been on making education socially relevant and accessible to all. We are all aware of the phenomenal expansion of higher education in our country ever since independence. This has understandably raised questions about the relevance and quality which have to be met by our polity makers and educationists.

With our stress on universalisation of elementary education, the demand for acquisition of higher levels of knowledge can only increase and rightly so. With the

obvious limitations of the traditional university systems, conscious spread of distance education is perhaps the only alternative in widening access to higher education. In line with this thinking, it is envisaged, that during the VIII Five Year Plan the distance education system would be expanded to absorb approximately half the additional enrollment in higher education.

Sharing knowledge

Open learning is based on the primary principle of sharing: sharing your knowledge with others. Another significant attribute of the open university system is its cost-effectiveness. The open university system is in a position to utilize the infrastructure and facilities of the conventional system for its study centres and to engage university and college teachers as counselors. It is my understanding that the per capita cost of educating open university students is between half and one third of the cost of providing education to a student in a conventional university or college.

Regional Needs

In addition to the usual B.A., B.Sc., and B.Com., and a few vocational courses offered by the university, your plans for continuing education, for short-tem courses designed in modular form like Marketing management, Women and Health and Environment and Consumer Education will go a long way in meeting the educational needs of the region. Your efforts to use Telugu and Urdu as media of instruction in appropriate courses are also commendable. Having established its credibility and reputation, the University is now truly poised for a 'take off' in its second decade of development.

Let me one gain congratulate the graduates of this university. I also have the pleasure of congratulating the Chancellor, the Vice-Chancellor, the Faculty and the entire staff of this university for their contribution to the development of this university during the last decade.

JAI HIND

SEVENTH CONVOCATION

SRI. K. V. RAGHUNATHA REDDY

Governor of West Bengal

Open University is a unique institution top provide facilities for higher education to all those who did not have the opportunity to avail of the advantages of institutions of higher learning. It is indeed highly commendable that the Dr. Ambedkar Open University has 92 study centres spread over the entire state of Andhra Pradesh wand working people including housewives could have benefit of higher education. By locating some study centres in central prisons at Hyderabad, Warangal and Rajahmundry, the prisoners are also helped to enroll themselves as students of undergraduate courses and postgraduate diploma courses. This would indeed help to reform such of them also to become useful and law abiding citizens.

We may recall what Nehru said: "if the life of the mind is not encouraged, then inevitably civilization deteriorates, the face deteriorates and ultimately both collapse in some big cataclysm or just fade away and become as other races and civilizations have become". Dr. Ambedkar University providing highly imaginative opportunities to enliven the minds of thousands of those who had no access to formal education.

Our respected Rashtrapati Dr. Shankar Dayal Sharmaji said regarding the role of the University system –

"The system must inculcate and promote basic human values. It must preserve and foster our great cultural traditions and blend them with essential elements with other cultures and peoples. It must promote a rational outlook and scientific temper. It must enrich the Indian languages and promote their use as important means of communication on national development and unity. It must develop the total personality of the students and inculcate in them a commitment to society.

This is the goal which all Universities including yours should aim at.

The Universities also help in creating equal opportunities. At the time of their birth, all children are born equal but they are born into a society of castes, religions and unequal economic conditions. They have no choice. They become heir to all institutional advantages or disadvantages that accrue to them.

Dr. Ambedkar, the architect of our Constitution, warned at the time of adoption of Constitution of India that

"We must being acknowledging fist that there is a complete absence of two things in Indian society one of which is equality. On the social plane we have in India a society based on privilege of graded inequality which means elevation for some and degradation for others. On the economic plane, we have a society in which there are some having immense wealth as against those who are living in abject poverty. On 26th January of 1950, we are going to enter into a life of contradiction. In politics we have equality and in social life and economic life we will have inequality. We must remove this contradiction at the earliest possible moment or else those who suffer from inequality will blow up the structure of political democracy which this assembly has so laboriously built up".

Nehru also had expressed similar views in this book The Discovery of India.

"If the spirit of the age demands equality, it necessarily also demands an economic system which fits in with it and encourages it. "At the Lucknow Session of the Indian National Congress, he further stated.

"I am convinced that the only key to solution of world problems and of India's problems lies in socialism, and when I use this word, I do so not in a vague humanitarian way but in the scientific economic sense. Socialism is however something even more than economic doctrine: it is a philosophy of life and as such also it appeals to me. I see no way of ending poverty, the vast unemployment, the degradation and the subjection of Indian people except through socialism".

Albert Einstein, the great scientist, also expressed the same view almost echoing what Nehru said.

He said – "I am convinced there is only way to eliminate these grave evils namely through the establishment of a socialist economy, accompanied by an educational system which would be oriented towards social goal".

In line with the se lofty goals the people of India in their wisdom solemnly resolved to constitute India into a Socialist, secular, Democratic Republic.

The recent judgment of the Hon'ble Supreme Court of India in S.R.Bommai – Vs – Union of India is a landmark in the progress towards that end. The court had held

"Secularism is one of the basic features of the Constitution .... Politics and Religion cannot be mixed. Any State Government which pursues unsecular policies for unsecular course of action acts contrary to the Constitutional mandate and renders itself to action under Article 356.

Like secularism, socialism and democracy too are the basic features of our Constitution. Indeed as Acharya Vinoba Bhave said years ago:

"Indian synthesis of democracy and socialism has heightened their respective dignity without prejudicing either of these ideologies".

The integration of democratic and socialist values and ideals gives birth to anew personality of socialist man ready for cooperation and living with others in a dynamic world, representing a synthesis between self-assertive forces of liberal democratic society and altruism of socialist society. To achieve this ideal, man must march beyond a democratic socialist society into a just and moral society.

As I wrote in 1968 – "A Democratic Socialist Society is not the final stage of development of man. It is only the beginning of his true moral history. Nor is it social change that brings about a democratic socialist society like an irreversible chemical reaction. Its stability and effectiveness depend on the consolidation of moral effort that has helped its creation".

You will soon enter the twenty – first century globalization of world economy and emergence of techno globalism which can be described as a structural revolution, have now become an integral part of the world's political and economic scene. However, the agonizing reality is that in the last fifty years, since the United Nations was created, to quote Human Development Report 1994.

"What emerges is an intersecting picture of unprecedented human progress and unspeakable human misery, of humanity's advance on several fronts mixed with humanity's retreat on several others, of breathtaking globalization of prosperity side by side with depressing globalization of poverty".

Three quarters of humanity, i.e., about three and a half billion people live in developing countries.

"Despite all our technological breakthroughs we still live in a world where a fifth of the developing world's population goes hungry every night – at such a margin of human existence that words simply fail to describe it"[3].

In the last fifty ears, the global G.D.P. increased by seven fold – from about $3 trillion to $22 trillion. The world population has more than doubled from 2.5 billion to 5.5. billion. Then per capita income has more than tripled.[4]

The gap between the richest and the poorest is startlingly wide. At a global level in 1989 – of global income – the poorest 20% had 1.4%, whereas the richest 20% had 82.7% to their respective shares.

These facts remind us of a well-known Biblical statement which lays bare the nature of the operation of the economic system and consequent growth of economic inequality in society.

"For unto every one that hath

shall be given and he shall

have more abundance and from

him that hath not shall be taken

away even that he hat".

Even the highly developed neo-corporatistic welfare States are facing the problem of unemployment and increasing poverty. Eleven to fifteen percent people live below the poverty line. Human Development Report of 1994 suggested that an Economic Security Council should be set up by the United Nations.

Our Prime Minister, quite conscious of the prevailing situation, in his speech at the Economic Forum in Devos said –

"My realistic assessment indicates to me quite clearly that poverty will continue to be the most serious challenge to mankind during the greater part of the 21st Century if not longer. My reasons are simple. Poverty is as much a breeding ground of disunity and tension as any other factor one may cite. Those tensions are bound to dominate to such an extent that the effort to deal with poverty as the first priority will simply not succeed in many cases.

Friends, economic growth does not necessarily lead to development. "There is no automatic link between economic growth and human progress"[5]. If growth should translate itself into development, it depends upon the socioeconomic structure and role of the State. "Trickle down theory provides only a psychological and conscious rationalization for the accumulation of wealth by powerful elite groups.

The present shift towards Market forces and monetarist policies alone by themselves cannot help to solve the problems of poverty.

Mixed economy as conceived by Nehru is still relevant in the Indian context. As our Prime Minster said, "The mixed economy concept has saved India time and again from political submission and economic dependence".

In the context of globalization of economies and technoglobalism, we have to concentrate on Research and Development. Self-reliance should become the keynote of course development.

However, since we live in an interdependent world and the globalization and the processes of structural adjustment influence the patterns and magnitudes of economic development, we should have a pragmatic approach to self-reliance, and the strategy for technological transformation should occupy a central place. In this regard the Universities have a significant contribution to make.

In the creation of democratic socialist society the youth must become the pioneers. Nehru looked forward to them to create such a society. In his convocation address to Delhi University he said:

"We have to live in the present and mould the future. That duty and high task are especially cast on young men and women of today. They will have great burdens to carry and great difficulties to face. But they will also have the chance of high adventure and great living for great living comes by attachment to great causes. They will have to fight the many evils that beset us and narrow us and make us have to fight the many evils that beset us and narrow us and make unworthy of this adventure, like the evils of religious conflict and bigotry of provincialism, linguism and casteism. There is no hope for us if we allow these disruptive tendencies to influence sour national life".

His sage advice is very much relevant today even to the teaching community.

Coming back to the main theme of my address, I wish to re-emphasise that to achieve the ideals enshrined in the preamble to the Constitution, a democratic – socialist state is the major premise. In such a society, the quality of human personality imbued with moral values counts more than money or position.

As Nehru said –

"A sense of values lies at the very basis of life. All culture after all is a sense of values, certain restraints and certain responsibilities joyfully undertaken".

Swami Vivekananda said:

"What the world wants is character. The world is in need of those whose life is one burning live, selfless. The love will make every word tell like a thunderbolt".

The Universities should have a commitment in this regard to develop the personalities of the students imbued with moral values, to help toe create a democratic socialist society. In such a society only, they, their children and future generations can lead a peaceful and creative life without fear of insecurity of any time.

What Gurudev Tagore wrote should always be remembered by us.

He wrote:

"When the mind is without fear

And the head is held high;

Where knowledge is free;

Where the world has not been broken up

Into fragments by narrow domestic walls,

Where words come out from the depth truth;

Where tireless striving stretches its arms

Towards perfection;

Where the clear stream of reason

Has not lost its way into the dreary desert of dead habit;

Where the mind is led forward by thee

Into ever – widening thought and action –

Into that heaven of freedom, my father,

Let my country awake."

There is no time for procrastination.

I may recall what Martin Luther King said in this regard. He said:

"Over bleached bones and jumbled residues of numerous civilizations are written the pathetic words – Too late. There is an invisible book of life that faithfully records our vigilance or our neglect."

I wish you all success.

Thank you.

Jai Hind

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EIGHT CONVOCATION

PADMABHUSHAN, DR. K. KASTURI RANGAN

Secretary, Department of Space & Chairman, ISRO

It is indeed a matter of proud privilege and honour to be amongst this august gathering to deliver the 8th Convocation address of this prestigious University, which is the first of its kind in the country. I would like to express my sincere gratitude to your Excellency, the Chancellor and Mr. Vice Chancellor for inviting me to do this pleasant task. At the outset, le me extend my heartiest congratulations to all the graduating students of this University, which bears the name o Dr. Bhimrao Ramji Ambedkar, who as Pandit Jawaharlal Nehru said "was a symbol of revolt against all the oppressive features of the society" and gave the slogan "Educate, Organize, Agitate" to the downtrodden and depressed, which depicts his firm conviction about the inevitable role of education in transforming the society.

The strive to understand the boundary of knowledge and the quest too look beyond to unearth the hidden facts, has been the faithful companion of humanity, in its growth of progress. The increasing demand on resources along with the basic instinct to improve the comfort, forced successive generations to use their intelligence and skill for an improved quality of life. In other words, the saga of human accomplishments not only narrates the story of man employing his physical strength for a better living but also the progressive change in utilizing the intellectual skills for transforming his life by interacting with the environment. The concept of humankind as the parasite on Earth's resources, progressively changed to the realization of humans as physical capital and today as 'manpower' developed out of the available human resources.

Manpower resources constitute a primary and essential input of a country's socio-economic development process. The goals of economic and social development can only be achieved if there exist adequate supplies of manpower with requisite education and skills. It is an accepted fact that the key to national prosperity, apart from the spirit of the people, lies in the effective combination of the three factors: technology, raw materials and capital, primarily the human capital. This fact was

well materials and capital, primarily the human capital. This fact was well recognized by our nation, when it accepted the Scientific Policy Resolution in 1958, which stated: "the wealth and prosperity of a nation depend on the effective utilization of its human and material resources through industrialization. The use of human material for industrialization demands its education in science and training, in technical skills ... India's enormous resources of manpower, can only become an asset in the modern would when trained and educated".

The catalytic role of education in improving the living standards of the people is an accepted fact. Least developed countries with literacy rates of 20 – 30 percent have a national per capita gross income of less than US $200 per year. On the other hand, in developed countries where literacy rate is more than 95%, the average annual per capita GNP is US $18000. Similarly an analysis of the female literacy, along with infant mortality rate, life expectancy and level of development also brings out the inevitable role of education in the overall development of a nation. For example, average number of children per uneducated women in Brazil is 6.5, whereas women with secondary education have only 2.5. In Liberia, women who have been to secondary school are ten times more likely to use family planning services. Another study in 4 Latin American countries have shown that education was responsible for 40-60 percent decline in birth rate. A recent study by International Food Policy Research Institute reveals that if men and women had education and access to agricultural input such as fertilizer and technologies, gains in agricultural output would be substantial. Even otherwise, considering the fact that 70 out of every 100 illiterates in underdeveloped countries are women, eradicating illiteracy contributes to women's liberation.

In India, education is considered as an integral part of the country's development process and thus has been accorded a high priority. Phenomenal expansion has taken place in the field of education, since independence. The successive national policies on education reiterated Government's commitment towards universalisation of education. The number of primary and upper primary schools increased from 20 thousand in 1950-51 to 730 thousand in 1993. A quarter million non-formal education centres also exist for school children and primary school drop outs. The total enrollment in 1993-

94 in primary classes has crossed 100 million with another 40 million in upper primary classes as compared to less than 20 million in 1950-51. There has been significant growth in plan outlays on education too. The eight plan outlay on education of Rs.19,600 crores is 2.6 times that of the seventh plan. The annual allocation by the Government of India in 1996-97 rose to Rs.3375 crores compared to 1875 crores in 1995-96.

The substantial increase in the numerical strength apart, thee has been tremendous improvement in the quality and excellence. The country has not only been able to create excellent institutions of international repute, but also produce world – renowned academicians, engineers an technologists. Besides, considerable progress ha been achieved in a number of high technology areas, cutting across disciplines ranging from agricultural and genetic engineering to electronic and super computers: and in a variety of themes starting from mining and construction, to atomic energy and space. For example, Indian accomplishments in Space technology development and utilization is widely acclaimed and India is considered as one of the front – ranking nations of the world.

While we have made considerable progress in identifying and developing the human resources, how far have we succeeded in realizing the objectives of the scientific policy of 1958, which stated that one of the aims was "to encourage and initiate with all possible speed, programmes for the training of scientific and technical personnel, on scale adequate to fulfill the country's needs in science and education, agriculture and industry and defense?". For a great country like India, with its traditions of scholarship and original thinking and its great cultural heritage and having a population of more than 900 million, there cannot be a scarcity of manpower, if the available human resources are properly assessed, efficiently developed and optimally utilized. The number of scientists, engineer and technicians per thousand population in Canada, Japan and Sweden is 180.66, 112.77 and 113.63 respectively. The corresponding figure in India is 3.76. The conflict between availability and market demand still continues as a major issue primarily because of the lack of compatibility between the academic output and market demand, leading to unemployment and underemployment in some

areas whereas certain sectors are affected by severed scarcity of required manpower. Also, the qualitative degeneration as an offshoot of certain critical defects in the academic systems is adding further complexities.

As the famous scientist Carl Segan, said, "we live in an extraordinary age. These are times of stunning changes in social organization, economic well-being, moral and ethical precepts, Philosophical and religious perspectives and human self-knowledge as well as in our understanding of that vast universe in which we are imbedded like a grain of sand in a cosmic ocean". Between 1917 and 1950, countries containing one third of the world's population seceded from the market economy and launched an experiment in constructing an alternative economic system. A massive effort was made to centralize control of production and allocate all resources through state planning. This vast equipment transformed the political and the economic map of the world and set the course of much of the twentieth century. Today, the limitations of the very same system, has set in motion just as radical a transformation, as these same countries change course, seeking to rebuild markets and reintegrate themselves into the world economy. Today, most of the economies have rejected all or much of central planning and have embarked on a passage – a transition – towards decentralized market mechanisms underpinned by widespread private ownership. Not all follow the same path. Despite common futures, the mass of centrally planned economies was far from monolithic. It was composed of countries with different histories, cultures and resource endowments. Whereas political change toward multiparty democracy was a prime – objective in the post – 1989 reforms in Central and eastern Europe (CEE) and the Newly Independent States (NIS) of the former Soviet Union, neither China which initiated economic reforms in 1978 nor Vietnam has experienced a political transition away from governments patterned on the earlier concepts. There is thus tremendous variety in the departure point, strategies and outcomes of transition, across the countries.

The era of liberalization, globalization as well as stabilization and the transition towards an integrated world offers tremendous opportunities coupled with formidable challenges. The ongoing transition is not simply the adoption or modification

of a few policies or programmes but a passage from ne mode of economic organization to a vastly different one. The underlying habits and 5rules of an economic system are often so pervasive and ingrained that they are taken for granted. Transition often unleashed a complex process of creation, adaptation and destruction. Old institutions and organizations evolve, or are replaced, requiring new skills and attitudes. Also, in the transition economies, the magnitudes are exceptionally greater. For example, transition economies have privatized more that 30,000 large and medium size enterprises in five years. In the eleven years between 1980 and 1991, the rest of the world privatized fewer than 7,000.

The challenge related to manpower planning is two fold in this context: meeting the requirements to explore and exploit the opportunities available in the global market in an integrated world and catering to the national requirements in tune with the wind of transition in our own country. The global opportunities are so vast and indeterministic that how much we can exploit with the national capability and capacity is the question. It will be worth while to identify certain areas of national eminence and international competence and prioritize the targeted markets and segments which will be in consonance with the current scenario. This will in turn enable us to identify the manpower needs and hence the challenges towards arriving at a plan of action.

The inevitable role of modern communication technologies in fulfilling the task ahead in the educational sector is well reflected in the National Policy on Education (NPE). It states: "Modern communication technologies have the potential to bypass several stages and sequences in the process of development encountered in early decades. Both the constraints of time and distance at once become manageable. In order to avoid structural dualism, modern educational technology must reach out to the most distant areas and the most deprived sections of beneficiaries simultaneously with the areas of comparative affluence and ready availability". It is quite natural for a country with 900 million people on 329 m. ha area, speaking over 50 major regional languages and representing almost all the religions of the world to adopt this strategy as it is the only means to meet the national goals in a cost-effective and timely manner. This is

further compounded by the problem of illiteracy, which is 47.8% as per 1991 census and will be a major challenge as we enter the 21st century.

Recognizing the immense potential of satellites as a medium for mass communication and education, particularly in the rural areas, India embarked on a planned programme in the seventies. Satellite Instructional Television Experiment programme (SITE) , considered as the biggest even exercise of this kind anywhere in the world, involving 2400 villages in six Indian States, was successfully conducted using NASA's ATS-6 satellite in 1975-76. Careful preparation of programmes tailored to the profiles of SITE village audience and pretesting them to evaluate audience reaction for their comprehension, utility and entertainment preceded the actual audio-visual transmission: Using the vast amount f folklore, mythological backdrop and the rich cultural heritage in the form of dances and folk songs as background material, messages of social value were projected to the audience. Special efforts were made to produce science programmes to make children realize that science permeates their everyday activities. The year long programme which ended in August 1976, conclusively established the efficacy of the audiovisual medium for enhancing education, in the shortest time possible to remote rural areas, in health, hygiene, family planning and better agricultural practices.

The success of SITE led to the establishment of the operational multipurpose Indian National Satellite Systems viz., INSAT in the early eighties. INSAT system with its four operational satellites presently provides telecommunications, broadcasting and meteorological services. These satellite will be augmented by INSAT-2E in middle 1998. The satellite television component consists of eighteen TV channels which include national and regional language services. These are rebroadcast through the terrestrial TV transmitters. Cable operators also distribute them through cable. The terrestrial TV network consists of over 750 transmitters converting 85% of population and 68% of area. INSAT is being used to provide Educational TV (ETV) service for primary school children in selected three – district clusters in the six State of Andhra Pradesh, Orissa, Maharashtra, Gujarat, Bihar and Uttar Pradesh. Separate programmes for primary school children in the age group of 4 to 8 years and 9 to 11 years are telecast. The ETV

programmes are targeted for rural school where TV bring the teaching aids which are otherwise unavailable or scarce, to the class rooms. Programmes for the guidance/ training of primary school teachers are also telecast. Programme production infrastructure for TV programmes for primary education has been created through the Central Institute for Educational Technology (CIET) and six State Institutes for Educational Technology (SIETs).

Realizing the need to impart periodic training to various sector of the society, we have embarked upon a scheme of further experimentation and demonstration in distance education using satellites for development. Training of the primary school teachers, village level workers or extension workers, adult literacy activists or volunteers and retraining of industrial workers are the three target groups which were selected. Since such training of trainers has to be interactive, a two-way audio and one-way video system was evolved. The trainers or village level workers already have a wealth of information that they could share with each other and it is necessary that the medium enables this. Hence, the interaction is not only between the lecturer and students, but also amongst the students. The basic system consists of a teaching end, a model classroom with the teaching aids such as blackboard, video recorders and personal computer terminal. This classroom is located close to a satellite earth station which is again configured to be as simple and inexpensive as possible. At the end of a lecture or a demonstration, the persons assembled at the distant classrooms could ask questions to the resource person at the teaching end and obtain clarifications. Convinced of the need to have an operational system, a Training Development Communication Channel (TDCC) was earmarked on INSAT in 1995. A number of experiments for adult education activists, industrial workers, State Bank employees of Panchayat Raj Institutions, etc., have emphatically demonstrated the system viability.

Community education for better resource management is yet another area where space systems have emphatically provided their worthiness. Industrialization driven by wasteful human consumption patterns in the developed countries has resulted in promoting a totally unsustainable way of living and has aggravated poverty elsewhere by creating large imbalances in livelihood of different regions. Achieving sustainable

development will require not only substantial improvement in the production but also adjustments in the consumption pattern and optimal use of resources linked to the carrying capacity of the land. This in turn demands the adoption of appropriate agricultural practices taking into account the nature of terrain, soil type, availability of water resources, etc., particularly in the developing countries. Space offers viable technological options to arriver at, as well as to reach this information to the concerned sectors of the society.

To demonstrate the efficacy of a satellite based development communication and training netwerok for rural development at Pilot Project viz., Jhabua Development Communications Project (JDCP) is being carried out in the Jhabua District of Madhya Pradesh for a period of two years. The regular transmissions have started on November 1, 1996. This end – to end Project would demonstrate the effectiveness of the communications support to the developmental activities in the District and also in providing interactive training to the field officials and the people in general. It will also provide inputs for planning and establishing of operational systems on a wider scale in the country.

JDCP and TDCC are only the beginning. Apart from increase in the utilization of these networks and their replication, newer and innovative technologies are being experimented with by ISRO to make them more effective and responsive to meet the varied requirements of information services. Introduction of digital technologies is a must. The cost of digital equipment based on MPEG – 2 compression technologies are coming down. The multi – media technologies are coming to package knowledge into an integrated audio / visual / text / graphics formats using computers. Internet and internet technologies are fast emerging. Toward this, ISRO is utilizing the flight opportunities on the first developmental flight of GSLV to experiment and demonstrate new technologist meeting the requirements of the future.

The GSAT – 1 satellite scheduled for launch on the first development flight of India's Ego- stationary Satellite Launch Vehicle (GSLV) carries two high powered (46

dBW) S-band transponders. Under GSAT-1 Applications Project (GAP-1), ISRO is working on demonstrating digital audio an date broadcast services, multiple digital TV channels via a transponder and hybrid internet system which is based on low speed dial – up line and high speed satellite broadcast.

Each transponder of GSAT-1 can support 4 to 8 compressed digital TV channels depending on the quality. Alternatively, each transponder can also support 48 audio channels at 16 kbps or 8 CD quality channels to small portable receivers. Since bent – pipe transponders are used, the satellite is transparent to other modulation techniques. Availability of such a large number of channels is expected to revolutionalise the radio broadcasting scenario in the country. Apart from the channels of general nature, introducing dedicated channels for news, sports, different types of music, business information, development communications, etc., are also feasible. Broadcast of curriculum based audio lecturers for students of distance education and school children is expected to be a major usage. The digital nature of the signal is also envisaged to provide a host of data broadcast services. These include dissemination of lecture notes to students of Open Universities, distribution of electronic news papers, broadcast of information by utility agencies, downloading large volume of internet data, etc.

In an era of inevitable compulsions from an exponentially growing population for better quality of life and an expanding national economy that needs to adapt itself to a changing world of economic liberalization and global integration, development of the available human capital into valuable resources for the empowerment of the nation is a formidable challenge. As Dr. Ambedkar said, "the object of primary education is to see that every child that enters the portals of a primary school does leave it only at a stage when it becomes liberate and continues to be literate throughout the rest of his life". Learning is continuous process by which one strives not only to improve his intellectual faculties, but also to realize the transformation towards complete manhood, in a continuous process of enrichment. I am happy to see a cross – section of the Indian populace who has realized this reality and reached the successful culmination of yet another phase in their life. I once again extend my sincere compliments to all the successful students and hope that this example will be emulated by a large multitude

win the coming years. With the change in the concept of education as an investment in human capital with the aim of not only the generation of manpower, but manhood, the challenges ahead are daunting and formidable. While you continue to enrich your knowledge you also have the onerous responsibility of sharing this knowledge with the less privilege and the needy in our society, thereby creating a multiplier effort, which I am sure can only make a strong, vibrant and prosperous Indian of the 21st century. As the great Czech educationist Comenius state 350 years ago, "Our first wish is that all men should be educated to full humanity; not any one individual, nor few nor even many, but all men together and single, young and old, rich and poor, of high land lowly birth, men and women in a word all those whose fate is to be born human beings; so that at last the whole of the human race may become educated, men of all ages, all conditions, both sexes and all nations. Our second wish is that every man should be wholly educated, rightly formed not only in one single matter or in a few or even in many but in all thins which affect human nature".

NINTH CONVOCATION

JUSTICE A.M. AHMADI

Former Chief Justice of India

I am deeply grateful to you Mr. Chancellor, and to you, Mr. Vice Chancellor, for your gracious invitation and for the honour done to me in asking me to address the Convocation of your prestigious University. Apart from this University being the first of its kind in the country, it has within the short span of its existence acquired a reputation of being an institution of excellence which has attracted students from far and wide. Starting with 26 study centres in 1983, the study centres have now grown to 117 with 13 post graduate centres and the student population too has shown from a merge 6,231 in 1983 to over 90,000 by now. The academic programmes have increased from 3 to 20 in this small span. These figures indicate the fast growing popularity of this University. The University, though yet young, stands well in the estimation of the intellectual world of India. The University authorities that nursed this Institution in its infancy and its staff members deserve to be congratulated on this outstanding performance.

I am aware, assembled today on this special occasion in the backdrop of the picturesque surroundings are special people, men and women who enjoy a special status in society because of their contribution to the common tide in their own special way. It would sound untrue if I were to say that I do not experience a sense of diffidence as I stand before this august gathering. In fact my nervousness is compounded by the presence of your Chancellor whose knowledge and attainments are at once the envy of men of learning in India. I can therefore only count on your patience and generosity to be able to discharge my obligation to the University and to this august gathering.

Every University is a place of learning where the pursuit of knowledge is ever continuing. Being a continuing process, even teachers are not at once senior students, and from teachers to junior students, all are in their own way engaged in the pursuit of knowledge. Education is a never ending process, no matter whether you are in a University or engaged in a profession; your thirst for knowledge must never die because

once the desire to acquire further knowledge dies, the individual is more dead than alive. I therefore describe a convocation as a milestone of a long journey where we stop to assess our progress thus far and then proceed to cover the distance yet to be covered to reach the desired goal. We live n an ever changing world. No University can train its students for an unknown situation but can only prepare them to face challenges with confidence. This means a degree is not an end in itself but only a beginning of a continuous process of learning.

The ideal of education is that which prepares for direct self-preservation; that which prepares for indirect self – preservation; that which prepares to recognize and concede the rights of others; that which prepares to shoulder obligations; that which prepares for responsible citizenship; that which prepares for parenthood; that which prepares for other refinements of societal membership. These elements do not constitute separate compartments; they are intricately entangled and inextricably woven to create a responsible and disciplined member of a civilized society.

In a country where a large segment of people are denied education because of economic constraint, where even the Central Government failed to give effect to Article 45 of our Constitution which enjoins the government to provide free and compulsory education upto the secondary level within ten years, even after the expiry of four decades, until the Supreme Court had to convert it into a fundamental right, you are the fortunate few ho have had opportunities to receive higher education. What you have paid by way of fee is just a fraction of what society has spent on yur education and therefore always remember that you have a certain obligation to discharge toward society which you may discharge at an appropriate stage in life when you have made adequate4 provision for self-preservation. Every society comprises people with different background and characteristics. Bhartrihari in verse 64 of Niti Satka divides them into (i) Sat-Purush (good citizens), who eschew their own interest for the welfare of others; (ii) Saamanya Purush (ordinary people), who work for the welfare of other without sacrificing their own interest; (iii) Maanav Rakshas, demons who destroy others to satisfy their own interest; and (iv) those whom he found difficult to describe because thy would enough destroying the welfare of others even where their interest is not

involved. If you turn the pages of the newspapers every morning, it would appear that the number of those belonging to the first category is shrinking and the number of those belonging to the third category is on the increase. Even otherwise in every society people belonging to the first category are always in a minority, but it is a pity their number is further shrinking. On obvious reason I slack of proper liberal education. Education is not expected merely to enhance knowledge and provide information but is also expected to build the character of students and make them good citizens. Character building is an essential feature of education because education devoid of character can prove to be disastrous. Bererand Russel said "with every increase in knowledge and skill, wisdom becomes more necessary, because every such increase augments our capacity for evil if our purpose is unwise. Unfortunately our education policy has not paid sufficient attention to this important element of education.

Every educational institution must endeavour to inform its students of a set of values they must assimilate in their personality which must guide them in future. Character comprises those bundle of basic values which every member of civilized society must possess to ensure harmony in society. This would not be possible it life of man in society remains unregulated. Please and security cannot be expected in a society which is not regulated. Respect for law and respect for the rights of others is an essential feature of civilized society. In act, to what extent a society is civilized is measure d by the extent of protection it offers to its deprived members. Dr. Rajendra Prasad, while addressing the Constituent Assembly on 25th November, 1949, spoke thus:

"If people who are elected are capable and men of character and integrity, they would be able to make the best even of a defective constitution. If they are lacking in these qualities, the Constitution cannot help the country. India needs today nothing more than a set of honest men who will have the interest of the country before them".

If a real objective of education is enlightenment, it must ultimately aim at creating an enlightened society or what is generally described as a civilized society. A society, in order to be civilized, must be well regulated; where every member is disciplined and abides by the regulations made by the society, regardless of his own needs or beliefs.

Unless every member of the society develops a spirit of tolerance and sacrifice and is willing to subordinate his own interest to that of the community at large, regardless of caste, creed or community and abides by the values of justice, liberty, equality and fraternity, the four pillars of our constitutional edifice, real freedom and democracy will remain a distant dream.

Can a society which is in constant turmoil, where one segment strives to deny to the other equal rights and opportunities, ever develop into a mature democracy? In 1945, Mahatma Gandhi, while replying to Pandit Jawaharlal Nehru observed:

"The real question according to you is how to bring about man's highest intellectual, economic, political and moral development. I agree. In this there should be an equal right and opportunity for all".

Gandhiji saw the need to emphasize the concept of 'equality' as he was conscious that intellectual, economic, political and moral development would not be possible unless every member of the society had an equal right and equal opportunity to compete regardless of caste, creed and community. Our constitution makers laid emphasis on equality which is found reflected in Articles 14, 15 and 16 of the constitution. Our aim being an egalitarian society and a welfare state, it hardly needs to be stated that the purpose of development must be improvement of the quality of life of our citizens. The quality of life cannot improve unless we inculcate a sense of oneness, social justice and healthy competition in our citizenry. Development for a social purpose requires transformation of society which can be achieved by change of social values and attitudes. And this change must come through peacefully and in an orderly manner and not through force or coercion.

Have we in the five decades of our independence moved in the direction of bringing about the desired social transformation to achieve the desire objective? Unfortunately, in the five decades of our independence, instead of bringing about oneness, our political bosses have been responsible for fragmenting society on the basis of caste and religion, the haves and have not and in the recent past there has been a concerted militant effort in that direction for purely political reasons. The political

bosses are either too weak to nail those who indulge in such nefarious and mischievous activities or are deliberately turning a Nelson's eye in the misplaced hope that they will benefit politically. This has left a sense of insecurity among a section of our people.

If 'peace and security' have been regarded as Law's goals, they would be empty concepts if lumpen elements can target their preys with impunity. Instead of moving in the direction of raising the standard of living of the masses, reducing the disparity between classes, spreading education and ensuring equality of opportunity to all groups, particularly the weaker ensuring sections like women, SC / ST etc., we are dividing our society. How then can we expect development on the desire lines? This menace has been introduced in academic life also and student unions are based on political groups which have been responsible for spreading the cancer of casteism and communalism in educational institutions also. Surgery is needed to remove this cancerous growth from our schools, colleges and universities, if we are desirous of healthy growth.

Mahatma Gandhi and those whom he inspired looked at our freedom struggle as part of larger design to remould our society by eradicating poverty and to shake off various forms of superstitions, social discrimination and injustice. This spirit was maintained by our Constitution – makers also. This manifests from the Preamble and the other provisions of our Constitution. Our fundamental rights guarantee certain freedoms and prohibit discrimination on grounds of religion, peace, caste, sex or domicile. Our Constitution – makers were broad – minded persons and they hoped that the successive governments will endeavour to transform society in keeping with this spirit. But Alas, that has not happened. We have strayed away from those objectives and indulged in violence. Over the years, there has been a gradual souring of respect for law and in the recent past it appeared we were sliding towards chaos. Small groups of people took law into their own hands to impose their will on the community. Mercifully, there is some respite but we do not know if it is a lull before the storm. The Rule of Law is in crisis as never before and freedom consequently is in the direct peril. We cannot be complacent and we cannot allow a handful of people to blunt the efficacy of the law. By our complacency, we will permit impoverishments of our great heritage. The younger generation must raise the warning voice in a loud chorus to deter those

who show scant respect for law and use violence as their weapon to imperil societal 'peace' and 'security'.

Having failed to achieve the desired social change, I wonder if we have secured real freedom and true democracy. Part III of our Constitution has guaranteed certain rights which can be equated to human rights but the question is whether the vast majority of people really enjoy those rights. A tiny minority, which can afford to knock at the doors of the courts in India, may be able to assert and enforce the given right but the vast majority of our people are silent sufferers to their violation. In these fifty years, we have not been able to introduce a culture of respect for the rights conferred by the Constitution or human rights. Has the attitude of our police force changed for the better after independence from what it was during the British Raj? The same inquiry can be made in regard to the bureaucracy. In a democracy, the people are the true sovereigns. 'we the people' says the Constitution. But what is the treatment meted out to the people when they visit the police station or any government office for their work. Is any police officer government official conscious of the fact that the person standing before him enjoys certain fundamental rights guaranteed by the Constitution. True freedom will be realized only when every public servant is conscious of the fact that he is the servant of the people and he is duty bound to respect their rights without the need to even assert them .the 'maai-baap' culture must be replaced by a culture of respect for the fundamental rights of others. Leon Dugit, the famous French Jurist, in this book 'Law in the Modern State' observed:

'The idea of public service replaces the ideal of sovereignty. The state is no longer a sovereign power issuing commands. It is a group of individuals who must use the force they possess to supply the public need. The idea of public service lies at the very base of the theory of modern state. No other notion takes its roots so profoundly in the fact of social life'.

Is ours a true democracy? What is the type of democracy envisioned by the constitution? On account of paucity of time, I will not embark on an analysis of the various provisions of the constitution to show that the Founding Fetchers had south to

introduce a liberal democracy. This is clear from the Preamble of the constitution, the Fundamental Rights, the protection granted to SC/ST and backward classes, the removal of untouchability, the minority rights, the emphasis on economic upliftment of the poor and removal of socio-religious restrictions, to quote a few. Added to these are the concepts of equality, protection of life and liberty, non-discrimination, protection to women etc. all these taken together, leave no doubt in my mind that our Constitution – makers were very broad – minded people and they envisioned a liberal democracy for our country. But Alas! After the initial years, power gradually slipped in the hands of people who did not adhere to these values. Petty politics began to take its toll and gradually communal – and – caste based politics raised its ugly head. Tolerance gave way to belligerence and in recent times resort to violence in the name of culture tarnished our country's image internationally. Liberal democracy has been replaced by illiberal democracy. The damage is extensive but not irreparable if all of us join hands to restore our democracy to its pristine glory.

Let me conclude by offering my warm felicitations to the young women and men who have acquired their degrees and received awards. I wish them a very happy and fruitful life and express the confident hope that they will make worthy contribution toward peace, prosperity, harmony ad security and will use their full mite to eradicate the aberrations and restore the true spirit and the pristine glory of our constitution. Let your achievement you to higher goals and not lull you into complacency. Remember the words of the Urdu poet:

"Khudi ko ker buland etna ke har taqdeer se pehle

Khuda Bande se khud puche, bata teri raza kya hai"

Thank you for your kindness in permitting me to encroach upon your valuable time.

Jai Hind

TENTH CONVOCATION

PROF. IAN H MACDONALD

Chairman, Commonwealth of Learning

The honour which you have conferred on me today is greatly appreciated but also undeserved- at least in contrast to those to those who have worked so hard for the degrees which have been awarded this afternoon. At any time, the completion of a course of University studies demands dedication, determination and devotion. To do so by the distance mode also requires a certain degree of self-sacrifice, and I want to salute my fellow graduates on their accomplishments which we celebrate together on this happy occasion. May I also pay tribute to the distinction and growing reputation of this University with which I am proud to be associated as an honorary doctor. India has been a pioneer in the field of distance education and open learning, and your University, as the first such institution of its kind in India, is among the leaders to which we, in the Commonwealth of Learning, look for inspiration.

Your founder Vice-Chancellor, the late Ram Reddy was also among the driving forces in the establishment of the Commonwealth of Learning – one of our first Vice – Presidents and already a distinguished Board Member when I became Chairman. On July 2 of this year, I was privileged to deliver the G Ram Reddy Memorial Lecture in New Delhi. At the conclusion of my presentation, one of the professors present challenged me on an issue that I have pondered for years. I have always argued that education is a prerequisite not only for personal fulfillment but also for peace and harmony in the world. Education leads to a broadening of human understanding which should, in turn, contribute to greater tolerance, wider compassion, and an enhanced quality of life for mankind. Why, then, I was asked has this not happened? Indeed, science and technology has produced weapons of mass destruction as well as improvements in agricultural productivity, modern medical research has brought threats of biological terror as well as improvements in public health, while the limited access to education has widened the gaps in the quality of life between individuals as well as between nations. And now the very activity in which we are a common interest

– distance education – is employing modern technology and tools that could well result in what has been described as the digital divide.

Has our education failed us? Have we nourished false hopes? Does the so-called knowledge society contain the seeds of its own destruction whereby it will ultimately crumble under its own weight? On the contrary, I would argue that it is we who have failed our educational system. We have fallen short in providing the leadership to harness the benefits of education for the purpose of achieving a better world, and the accompanying globalization has, until very recently, had every appearance of widening the gaps and increasing tensions on a global scale. In a sense, then we have not given education the opportunity to deliver its high promise, and its capacity to provide for a better world. In the first place, so much remains to be done in widening access. As we proceed into the new millennium, over one billion people are lacking the literacy necessary to sign their names or to read a book. Among them are over 140 million children who do not have access to primary education; a large proportion of those designed education are girls and women. Of the children with access to primary education, and as many of you know at first – hand, a large percentage of those who find themselves in the poorest countries of the world will be in crowded classrooms that are in a very bad state of repair and some will be in situations where there may not be any classrooms at all. Many will be taught by untrained or poorly trained teachers, located in ill – equipped schools with no learning materials, laboratories, libraries or connections to the outside world. Moreover, a good proportion of these children will not complete their primary school education. I need not remind this audience that most of these un-or under-provided learners are living in Commonwealth member states located in Sub – Saharan Africa and South Asia. Not surprisingly, these countries also suffer educational deprivation at other levels on the educational ladder.

Now, these young people, along with the billion adults who never receive nor benefitted from education when they were young, will find themselves attempting to function in a global environment where the following requirements prevail:

- Long – term job success necessitates a focus on continuous learning regardless of profession, geographic location or age:
- Developing a strong human resource base is essential for economic and social development;
- Training and the upgrading of skills and knowledge are necessary to improve the productive capacity of the labour force;
- Relevant education and training have been accepted as potential solutions to address key issues such as environmental degradation, burgeoning population, and domestic violence; and
- The impact of technology and increased levels of education on governance issues is being recognized, assessed and appreciated.

It is under these circumstances that the design and delivery of education is being reconsidered by nations both rich and poor. A consensus is beginning to emerge that opportunities for and provisions of life – long learning will require a reformation in the ways in which the educational environment is constructed, organized, structured, governed and financed. There is also an increasing acknowledgement of a shift in instructional philosophy where the instructor or teacher is no longer the sole source of knowledge but, instead, acts as a facilitator, supporting student learning. In other words, your university model is becoming the exemplar to the world, and you are the best proponents of how education must be redesigned and delivered.

In the process, we now see distance education being incorporated into mainstream education and training efforts; it is reshaping the new educational landscape, including to whom and how education is delivered. New educational designs are being developed as rapid increase in technology continue to lead the world in the imaginative ways in which they have applied distance and open learning. However, that capability is neither distributed equally among all commonwealth countries nor in all sectors of education in those countries where open and distance learning has found success in one form or another. To overcome that disparity is our immediate challenge, and a challenge that I invite you to address.

The Commonwealth of Learning can take pride in the fact that, over a period of twelve years of work in and for the Commonwealth, it has not only brought attention to opportunities presented by open and distance learning but also trained people, built partnerships, developed model and provided expanding capabilities among nations of the Commonwealth in the application of open and distance learning. Therefore, in honouring me today, I believe you are really acknowledging that significant contribution to the enhancement and enlargement of educational opportunities.

However, nations alone cannot accomplish all that is required. Indeed, what is nation in terms of the geo-political construct of the world today? That takes us again to the topic of globalization and its unquestioned value in the minds its delivery agents, the multinational corporations of the world. However, as I have suggested, education is about human resource development, and the betterment of people as well as the enhancement of economic opportunity; thus it must always be perceived and assessed in the context of human values. As the economist Kenneth Boulding has suggested: human values are the product of an evolutionary process: they have no more equilibrium than anything else... We are always moving into a changing future in which we hope that things will go from bad to better instead of from bad to worse. That is all the quality of life means, going from bad to better instead of bad to worse." Our task is not only to enlarge the gross national product, but also to ensure that relief of poverty, improved health services, and accessibility to basic education for those 140 million of the worlds children of whom I have spoken become priorities for action.

I want you to know that I, for one, do not believe that Western economic values are necessarily the most appropriate for the rest of the world. Indeed, they are not necessarily always the best for the West. We must be cautions about whose interest globalization is designed to serve; certainly it is not always the interest of the people of the world. As Nelson Mandela remarked: "Is globalization only to benefit the powerful and the speculators? Does it offer nothing to men, women and children who are ravaged by poverty? "and well he might ask, for 51 of the largest economies in the world are corporations, while the 300 largest corporations account for 25 per cent of the world's productive assets, and the combined revenue of General Motors and Ford, the two

largest automobile corporations, exceed the combined gross domestic product for all of Sub-Saharan Africa.

For the past 50 years, missionaries from the Western world have been suggesting to the developing world "how to do it" and have been preoccupied with studying the conditions in those countries. During the next 50 years, might it not be beneficial – or at least – fair – to reverse the trend and have the developing world examine the West more closely to see if that is what it really wants? In particular, I am mindful of the continuing attitudinal wave of reform sweeping the Western world, driven by what some call neo-liberals, and others neo-conservatives, but what I believe are really neo-mercantilists. It is best summed up by the proposition that governments can do no right! But good government is central to development, for who else does provide for the well-being of the people? That is a lesson that is now being driven home every day in a world of uncertainty and turbulence.

As far as the Commonwealth is concerned, there is an acknowledged need to sensitize stakeholders to the variety of new learning technologies applicable to the delivery of quality education. There is also increasing demand for the sue of open and distance learning methodologies to address a number of capacity building issues. These include the extension of literacy and numeracy skills among millions of adults through the use or radio, television and telematics, helping rural women to develop entrepreneurial skills, assisting agricultural extension workers to improve their capacity to educate farm workers, training legislators in legislative drafting, increasing the speed of in-service training of un-or undertrained teachers, and delivering continuous professional development programmes for health workers, managers and administrators.

The past five years has seen a phenomenal increase in the application of new technologies to the learning environment. As I have suggested, this development is removing the distinction between conventional and distance learning. However, it is also eroding political and geographical barriers to the movement of knowledge while many view this as a good thing others fear a new form of imperialism underlying these developments. This imperialism has all the potential to undermine a nation's intellectual and cultural assets in the longer term and we must be forever vigilant

about that unwelcome by –product. Although it may be difficult to arrest those developments, a lot can be done to increase the national capability to exploit the new technologies, to increase local competitiveness, and to enhance local capacities to create and deliver learning and cultural products to the people.

To achieve this, skills must be developed to use the technologies in the learning environment, content has to be produced in sufficient quantity and quality, information technology connectivity has to be improved, appliances have to be made available at affordable costs, appropriate uses for the technologies have to be identified, and policy frameworks need to be established to support these ventures. The Commonwealth experience in all of these areas can be put to use for the Commonwealth at large. I am proud to say that the Commonwealth of learning is well placed to do this.

It is most likely that, in the next quarter of a century, a few key issues that will preoccupy the minds of educational planners and administrators will also determine the style and state of education in the Commonwealth as indeed in the world at large. These factors will include, among other things, expansion, equity, access, costs, globalization, competition, quality, efficiencies, effectiveness and technology. While there may be debate about the relative importance of these various factors depending on the particular sector of education, the location of where the education is delivered, and the prejudices of those participating in the debate, there can no longer be a debate about the importance of learning technologies and their impact on the delivery of education and training. Among the many reasons for ascribing this importance to technology, the following are most prominent.

- **Death of distance:** The belief that distance is a factor in human communication is dying. Thee is hope that the cost of communication will not be determined by distance even in the most regulated of environments. Reaching out to students through the electronic highway will be determined more by willingness to the education providers to utilize the newer technologies than by fear of inaccessibility because of communication cost.
- Cost of appliances: As the computing capacities of such appliances increase, cost of appliances which are so necessary for participation in educational transactions

reliant on the ICTs, will continue to drop. The cost o the networking computers of the future is expected to decrease to the level of present day televisions making it possible for many more householders to own appliances where households are too poor to have the appliance, the emergence of tele-learning centres can provide an intermediate solution.

- **Location does not matter:** Providers of educational services can be located nay where on earth and can reach the user of the educational service wherever they may be as log as there is a basic communication infrastructure. Even today, Indian students already have access to, say, courses from North America without having to be in North America. Similarly, courses from India can and should travel across the globe.
- The size of the organization: Providing the educational service is not relevant; what matters is the quality of the service. Small and specialized organizations can offer their products to large groups and be globally competitive.
- **Content customization:** sophisticated pedagogy can facilitate individuals to customize their learning needs. Learning can become either a multi-channel or a mono-channel experience. The final authority on customization will be the expected learning outcomes of the subject and the learning preference of the student.
- **People as the ultimate scarce resource:** The really difficult challenge for institutions will be recruit people with the necessary skills to perform the tasks required, as well as to train and retrain those already in service to work in the new environment.
- **Emergence of globally used language**: The emergence of English as a dominant second language of science, technology, business and international relations, as well as education and training, will mean the availability of globally useable knowledge products. In turn, there will be an increase in the choice of educational and training courses.
- **Communities of culture**: The opportunity to make available content in other languages, apart from English, toe a larger audience will become feasible. Declining cost and ease of use of communication tools will mean the availability of a vehicle to disseminate other cultures and traditions.

Commonwealth countries have themselves been responding to the possibilities of using distance and open learning in an increasing range of sectors. This means that, in the past, the nature of COL's work differed markedly from one sector of activity to another. In the university and teacher education sectors, for example, where distance education approaches were already in use, there were existing bodies of experience and knowledge that COL could draw on when developing its own responses. However, in fields like technical and vocational education and training, the situation was quite different. Until recently, there was a widely held belief that trade and other forms of vocational training could not be taught effectively through open learning. COL's tasks in such circumstances was to search for and bring together available experience in the filed and, on the basis of lesson learned, device programmes and initiatives aimed at spreading the application of open learning to Tech / Voc education. In higher and tertiary education, the position was much the same with, perhaps, more emphasis on continuing and professional education. As we look ahead as far as sector focus is concerned, COL may wish to continue its focus on teacher education. Tech / Voc education, continuing professional educational and add pre-territory non – formal, basic and secondary education with special attention given to marginalized and out-of-school youth and adults.

Meanwhile, while funding and enthusiasm for technology is crucial, education will continue to be the most vital factor in the internet age. As John Chambers, CEO of Cisco systems, has suggested: "in the long-term, education will be the key differentiator for all economies around the world" and, of course, I recognize that much of this technology will be slow to penetrate many parts of the world. In the interim, we must employ whatever techniques fit the local situation.

In whatever way we look at it, education and training is at the heart of any serious development of citizens, for economic development, participatory citizenship, protection of rights, safety of families, conflict resolution, poverty alleviation, wellness and well being of the individual. The all for more education is clear and Commonwealth Heads of Government, at their most recent meeting in

Durban, echoed that sentiment. For many who are engaged in the business of delivering education there is recognition that:

- Learning in the future will become the essential part of everyday human activity.
- Access to learning in the future will need to become as near universal as possible.
- Learning providers of the future will need to respond flexibly to learner needs.
- Learning suppliers of the future will need to adapt their ways to meet the changing demands of their clients and to maximize the potential of new delivery techniques.
- Governments of the future will need to play an active role in supporting the learning infrastructure, but should not attempt to control the learning agenda.
- Learning organizations of the future will need to be collaborative enterprises.

In all of these tasks, we must ensure an over-riding objective. Education must not be an end in itself. Rather, we, as educators and as university graduates must be constantly aware of our mission to prove the questioner, to whom I referred at the beginning, wrong. Education must become the source of a more peaceful, tolerant and human world if the globe itself, let alone globalization, is to survive. I have no doubt that it will and that you, the graduates of today, will be major contributors to that process of survival and improvement.

ELEVENTH CONVOCATION

PROF. V C KULANDAI SWAMY

Former Vice – Chancellor, Indira Gandhi National Open University

Your Excellency the Chancellor, Mr. Vice Chancellor, Members of the University Authorities, Members of the Faculty, Dear Graduands, Ladies and Gentlemen.

It is certainly for me a rare privilege to be invited to deliver the convocation address when the university is in the process of celebrating its second decennium I value and cherish the opportunity to be with you on an occasion that truly marks a milestone in the progress of an institution which has the reputation of having been a pioneer in ushering in a new stage in India in the evolution of education.

It is an act of great kindness on the part of the Authorities of the University, especially the Chancellor and the Vice Chancellor to have chosen to confer on me the degree of Doctor of Letters (Honoris Causa). I feel really humble and flattered at the same time, when I bring before my mind's eye my illustrious predecessors who were privileged to receive this honour. Even the most eloquent of expressions in language is but a poor translation of the humblest of feelings of human heart. I can hardly express my gratitude adequately and so content myself with saying, kindly accept my sincere thanks for the distinction that you have so graciously chosen to bestow on me.

I learn that the fourth of December that you have fixed for the Convocation happens to be the birthday of Prof. G. Ram Reddy, the first Vice Chancellor of this University and a crusader in the promotion of distance education in the country. I learn that the authorities have resolved that in future the convocation of Dr.B.R.Ambedkar Open University will be held only on this day in honour of Prof.G. Ram Reddy. It is certainly a magnanimous decision and will be highly appreciated by the academic community.

Universities in advanced countries do have a tradition of honouring their great academics. Gauss who is considered a prince among mathematicians, was a Professor

in Goettingon University in Germany. You find an impressive statue of Gauss welcoming a visitor as he enters Goettingon University. Similarly Bunsen, the inventor of the popular Bunsen Burner which every chemistry student knows was a Professor in Heidelberg University. The statute of Bunsen greets you as you walk into the campus of Heidelberg University, one of the oldest European Universities. We see in the extensive lawns of Hanover University in Germany a grand bust of Leibnitz, a great mathematician and philosopher. Greatness does not come like rains from the sky; it occus only where it receives recognition.

I also learn with great satisfaction that Dr. B.R. Ambedkar Open University has set up a research institute entitled G. Ram Reddy Academy of Distance Education (GRADE) to pursue research in all areas of distance education. In an era of knowledge, it is innovation that guarantees success in any enterprise and survival in any competition. If we take our industries, it was reckoned some time back that in the technologies we use, about 50% is imported and directly used: 45% is imported and modified to suit our requirements and 5% constitutes wholly indigenous contribution. With the progress of globalization and internationalization, new technologies will not be available either for buying or for borrowing. We have to slowly develop our innovative capacity. In the past, we have demonstrated that whenever technology in crucial areas was denied to us, we were able to develop it on our own. Education in class rooms and instruction in laboratories which remained for long, a craft, even after the industrial revolution have been transformed into technology with the advent of communication revolution. Compared to the earlier periods when changes were slow and almost imperceptible, far reaching developments have burst on the education scene during the last decade, transforming what has been for centuries a social service into an economic commodity and a commercial product. Education will emerge as a fertile field for research and innovation and the establishment of an academy for research in distance education is an imaginative step and naming it after Prof. Ram Reddy is a generous gesture.

Dr. B.R. Ambedkar Open University has distinguished itself as an institution satisfying all the rules of grammar for distance education. This cannot be said of many

institutions in the country. From a humble beginning of about 6300 students and 22 study centres, it has grown steadily to serve the cause of higher education with an admission strength of about one lakh students; enrollment of 4,50,000 in 22 programmes with a network of 140 study centers. It is an admirable achievement in a new area of teaching and learning and the members of the faculty as well as the management deserve to be highly commended.

We may take a look at the emerging demands on education in India as we visualize them. Dr. Abdul Kalam, now our president expressed the hope in1998 in his book India 2020, that India could become a developed country by 2020. While no official statement has been made to that effect, there appears to be a widespread expression of either a resolve or a desire to reach the status of developed country b2020. It is always desirable for an individual or a nation to have a goal and work towards it. If we are serious about it, we need consider the implications. The per capita income of high income countries is $27510; it is $ 1970 for middle income countries and $ 420 for low income countries. The world average is $5150 [World Development Report 2002]. I presume, reaching the level of high income countries in 20 years may not reasonably be our objective: that does not appear practical. We may have to aim at a level somewhere in the neighbourhood of world average. We need consider the ramifications of any such decision for education.

It is now clearly understood and accepted that certain specified levels of educational preparation is a pre-requisite for overall development. If we take the advanced countries:

- They have achieved universal literacy.
- They have achieved universal secondary education
- They are moving towards mass higher education, the average age group in tertiary education being around 50% and many countries have reached a much higher level, for instance U.S.A. 81 .0%; and Finland over 70%.

- Education has become an economic commodity: there are Consortia producing instruction materials for world market: there are already corporate bodies that establish universities and announce their shares in the market.

- Distance education is not a tool exclusively of open universities: it has become a part of the general university system also. Virtual class rooms and instruction through internet are on the increase.

Against this background, the Indian education scene as of now is rather unencouraging.

- The literacy level is 65.38% as of 2001.

- When we come to secondary education, persons with the 10th standard level and beyond may only be around 10% of the population.

- If we consider higher education, the age group in university level or tertiary level education is only around 7.0%.

- In our work force, nearly 90.0% is in the unorganized sector and of them only around 10% might have received formal training in skill. Consequently the productivity in the unorganized sector employing 90% of our work force is low.

A World Bank survey conducted in 34 developed countries from 1850 to 1960 showed that in all the 34 countries economy started looking up only after the attainment of universal literacy. Our aim now is to reach universal literacy by 2010. Our literacy level moved rather slowly from 18.3% in 1951 to 52.2% in 1991 making an average of 8.5% per decade: but the increase was around 13.18% in the decade from 1991 to 2001. If we could substantially improve our performance, we may succeed in fulfilling the requirement of universal literacy by 2010 and perhaps the requirement of free and compulsory primary education up to the age of 14.

So far we have not fixed any target for achievement in secondary education; nor do we have any target in higher education. It may be necessary to have a critical

mass in the population with secondary education and higher education for a country to reach developed status. On the basis of the experience in some of the advanced countries, we may estimate the critical mass required, define a goal and initiate concrete measures to achieve it in due time.

Universal literacy is a pre-requisite; a necessary condition for economic development: but it is not a sufficient condition. We need in addition trained skill. It was A.N.Whitehead, the great philosopher and mathematician who said:

'In the paths ordained by the Gods, he goes farthest whose talents are trained"

Development is a complex process. A few large dams, huge steel plants and big industrial installations, however important they may be, they by themselves will not constitute development. In the Indian conditions, a carpenter must use better chisel, better saw and produce four sets of furniture instead of one in a given time; a farmer must use better seed, informed practice in cropping and produce four grains in place of one; an office assistant must use better file keeping methods and dispose off five files in place of one. Even though the marginal increase in wealth in each individual case may be small, the number involved is so huge that the sum total of wealth created will be substantially large.

The infrastructure facilities created in this country for training at the post secondary education level is rather poor. We produce more doctors than nurses. We produce almost as many engineering graduates as technicians. We have today a little over 12,000 Arts and Science Colleges that produce Bachelors and Masters degree holders. But the number of institutions that provide education and training at the sub-university level i.e., at the ITI level in different disciplines for candidates who have completed the 10th standard are not as many as we need. In my estimate they may even be less in number than the arts, science and professional colleges while they have to be many times more to provide skilled labour. We may possibly have to bring about a massive increase in the number of institutions spread all over the country for skill development.

It can be seen from what has been stated so far that we really have a massive problem of education and training. It is neither an exaggeration nor a slogan to say that the battle for development has to be fought more in the class rooms, laboratories and workshops than elsewhere. How well prepared are we for the battle? Our armoury is big: but the weapons need honing: the army is large, but the forces need training. The deficiencies are remediable, but only with will and determination not demonstrated so far either by the academic bodies or by political leaders.

The conventional higher education system, apparently large, is not really that large, and absorbs only about 7% of the age group which is not too big even for a developing country. Attempts have been made since the 1960's to modernize and update the academic and administrative structure with no tangible success. A series of committees, commissions and even national policies has not brought about the reforms contemplated and the changes advocated. When we think of the higher education system and the efforts made to reform it, one is reminded of the story of a Chinese philosopher that I have quoted in my book on Higher Education in India.

A renowned philosopher in China was maintaining that the heart for the human beings is on the right of the body. A modern doctor discussed the matter with him and proved by appropriate demonstration that the heart is a little to the left. The doctor was immensely pleased that he was able to correct a grievous error in the knowledge of a great philosopher of his country. But when he met him next, he found much to his dismay and disappointment that the philosopher was maintaining the same belief as before. The doctor enquired about it and expressed great surprise. The philosopher calmly said:

Young man, big and small are comparative; far and near are relative; right and left are arbitrary. Your left can as well be my right. Your arguments were good; but they did not warrant any change in my position.

The Indian higher education system is very much like this philosopher and has not accepted suggestions for reform. Consequently we have moved into the 21st Century

with a huge burden of anachronistic practices. Urgent measures must be initiated on a nation wide basis to bring about the pending reforms.

As regards Distance Education, it has become an established and accepted part of the educational scene in advanced countries. Within a matter of thirty years, it has seen five generations of development. The invention of internet has opened for the acquisition and dissemination of knowledge, opportunities whose impact and dimensions are hard to fully comprehend and visualize. It is fast revolutionizing the spread as well as the status of higher education.

In India, unfortunately, even academics keep debating about the quality attainable in distance education vis a vis the face to face system. The advanced countries have long outlived this stage. The quality in any field is not dependent on the system alone. It depends on the operation and the will to maintain quality. We have enough instances of poor quality in the conventional system also. In U.K. the awards given by the U.K. Open University are ranked on par with those of Oxford and Cambridge Universities.

It is my endeavour so far to indicate that our efforts to meet the demands on education must make substantial use of distance education and for that objective, organize it on a parallel basis, to serve the target groups that conventional system may not be able to serve; to fulfill the demands of education and training that the conventional system will not be able to meet or has not been designed to meet and all these with great economy and high productivity.

The distance education system in India has developed so far on evolutionary process. There has so far been no well defined national policy beyond the establishment of IGNOU, a reference to it in the National Policy on Education (1986) and Programme of Action 1992. We have to-day:

i. Ten open universities.

ii. About seventy conventional universities offering correspondence I distance education programmes.

iii. About forty conventional universities in different stages of preparation for launching correspondence / distance education programmes.

In the total enrollment in higher education, about 20% is covered by the distance education system and it is contemplated that this may reach 40% at the end of the 10th plan. As we scrutinize more closely the distance education scene, we realize that much is left to be desired.

i. The general universities which run distance education programmes, started them primarily to augment their financial resources and have not gone beyond the first generation level of instruction material of varying qualities sent by post and supplemented by a few contact classes.

ii. Distance education in multi-media form still remains confined to open universities which are in different stages of development.

iii. We are yet to develop a funding policy for distance education.

iv. While conventional universities and colleges are in the process of being assessed and accredited, an accreditation procedure is yet to be established and administered for distance education. The matter I learn is being discussed and is to be agreed upon between NAAC and DEC.

v. The Distance Education Council (DEC) established by IGNOU is vested with the responsibility of determining the standards and promotion of distance education. As the one who has been associated with the establishment of the Distance Education Council, I may say that DEC, has certain inherent weaknesses and as of now is unequal to the task. The IGNOU Act must be amended to make an explicit provision for DEC, with its composition, powers and functions.

vi. The DEC must be provided separate block grant by MHRD through IGNOU.

As I mentioned earlier, distance education is contemplated to cater to 40 percent of the students in the higher education system by the end of the 10th Five year plan. It

will play almost an exclusive role in 'continuing' and 'life long' education. It represents the third stage in the evolution of education and represents the application of technology to education which has long remained a craft. Since independence we have had many committees, commissions and working groups that have gone into the problems of the conventional system. We are yet to make a detailed study of the status, trends of development, state and national level funding policies, accreditation and cross border service in the context of globalization and GATS. It is my considered opinion that the Government of India must appoint a National Commission on Distance Education to study this relatively new tool, in terms of its potential and develop a vision for its promotion and use in all its aspects in the next two decades.

Dear Graduands! two centuries after the industrial revolution, with momentous developments in science and technology and with vast resources created, the world unfortunately has come to be a place of vast disparity, extreme accumulation of wealth on one side for a few and trying deprivation on the other for many. This global picture is reflected in our economy also in its humble state of development. I informed you already that among hundred boys and girls of your age, only around seven have the benefits of university education. You are privileged to be one among them. I must congratulate you most sincerely on your success in your academic endeavour. The most enduring part of your learning under this system is the capacity you have acquired to learn by yourself. This will help you to keep your knowledge updated and your competence in good repair.

In conclusion I have one humble appeal to make. The university system in the country has been built by the sweat and toil of the people who may never know what university education is and whose children may not be one among the seven: not one among you. The infrastructure in the form of libraries, class rooms and laboratories have been developed and the faculty is maintained by the contributions mainly of those persons whose names we do not know; whose faces we may never see. We are deeply indebted to them; we owe a duty to them. Wherever you may be and in whatever position you may be discharging your responsibility, you have an obligation to think about these unknown patrons, unknown persons and contribute whatever you can for improving the general welfare of these millions. I wish you vast opportunities in your career, hard work in your responsibilities and all-round success in life.

TWELFTH CONVOCATION

PROFESSOR RAM TAKWALE

Emeritus Professor, University of Pune

Former Vice-Chancellor, University of Pune, YCMOU & IGNOU

On Developing the Open Learning System for
Life Long Learning (L3) and a Learning Society
By
Professor Ram Takwale
Emeritus Professor, University of Pune and YCMOU, Nashik
Chairman, National Assessment and Accreditation Council, Bangalore

Honorable Chancellor, Vice-Chancellor, Directors of Schools, Members of the Board of Management, Faculty, Staff Members and Graduates of the University and Ladies and Gentlemen:

It is my great honor and privilege to become a student of the First Open University of India; and I am grateful to the Chancellor, Vice-Chancellor and Authorities of the University for conferring the honorary Doctorate on me. This is no doubt one of the happiest days in my life and I will cherish it throughout of my life.

I am really fortunate to have quite a long association with this university since or rather before its establishment. I had participated in the International Symposium on the need for the Open University, organized by Professor Ram Reddy as the founder of the Andhra Pradesh Open University. I am also a frequent visitor to this university. In fact I have taken inspiration from this Open University and its founder, late Professor G. Ram Reddy, the doyen of the Indian Open Learning System. Professor Reddy was my dear friend, philosopher and guide and helped me throughout my efforts in establishing Maharashtra Open University. So intimate was our friendship that we worked together at the national and international levels, and even met in UK a day before he left this world. It was he who made me move from Nashik to Delhi to head the Indira Gandhi National Open University (IGNOU) as its Vice-Chancellor. I sincerely

express my gratitude to the authorities of BRAOU for strengthening my bonds with this university.

I am well aware of the honor this university has received recently in global ranking as one of the best ten mega open universities of the world. I compliment the Chancellor, Vice-Chancellor, authorities, faculty and staff members of this university for this great achievement. I take this opportunity to pay my respects to the memories of Professor Ram Reddy; and wish that the University Professor Reddy founded, develops and progresses to become a leading university not only in India but in the whole world; and leads in transforming education to make it appropriate to the emerging knowledge-based society.

1. CHANGING TIMES

Friends, we are passing through a great transformation. A transformation, which is changing humanity from its present form of industrial society to the new information or Knowledge-based society. Charles Dickens had written in A Tale of Two Cities in 1775:

"It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the season of light, it was the season of darkness, it was the epoch of belief, it was the epoch of incredulity, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us...."

The period then was very much like the present period. Today too, two worlds exist; one is disappearing in the past; and another is emerging on the horizon. I am an optimist and would work for the new world. As the name and nature suggests, Open University should welcome the new world and lead the change.

The computer, invented nearly six decades ago, and the Internet, getting used extensively since 1995, are changing the world; and are creating a networked global society. The dream of one world, 'Vasudhaiva Kutumbakam' could now be realized with the help of Information Communication Technologies (ICT). In fact the driving force behind the New Age is the Information Technology (IT), and is changing the

way we live, work, entertain, communicate, market and carry out various individual and institutional activities and functions. The speed of change is really mind-boggling. In India at present, every month nearly one million mobile phone users are added to the number having this device. Such changes are not linear but exponential. By considering the fast increasing capabilities of mobile appliances like cell phones, decreasing cost of procuring and using them, and increasing diversity of services they offer, it is predicted that within ten years 80% of the Indian population will be using IT devices for communicating. Indian society is fast getting highly networked.

Networking activity has just started. The University Grants Commission has undertaken a task of networking all universities and colleges; and is creating electronic content or e-content for university courses. It is preparing a platform on which learning content could be deposited by any teacher and expert to make it accessible to any learner anywhere at anytime. The Indian Space Research Organization (ISRO) is placing an Educational Satellite (EduSat) in the sky within a year. It will enable all colleges and their classrooms to connect to any learner anywhere through broadband Internet and can make DTH, Direct to Home possible. Open universities can now fulfill their dream of delivering education to learners at home and at workplaces. Wireless in Local Loops (WLL) and other recent developments are making high bandwidth available to all. All these will give access to the last person located at the remotest place and solve the 'last mile' problem. Maharashtra Knowledge Corporation Limited (MKCL), a new organization, founded by the State Government and universities in Maharashtra, are developing software that will radically change the governance and management of the educational transactions. Availability of IT tools such as Learning Management System, Content Management System and Delivery Management System to manage teaching and learning of all learners in a paperless environment, will create the environment for e- education.

All these IT applications for networking, connecting and communicating with Anyone Anywhere Anytime are offering excellent opportunities to educationists, educational planners and developers, to design and develop systems of education, and create new paradigms of education; the paradigms that will address Indian

problems of poverty, illiteracy and backwardness; the paradigms that will address the problems of globalization and localization and help in building a new Indian Society of the Information Age.

2. NEW AGE AND NEW EDUCATION

The new emerging society will be a **networked society**, connected through broadband Internet, which is itself a network of networks. Every institution and organization in a society will establish its own subnet, created to carry out its functions and activities. Institutions and individuals will be using **IT tools and techniques** for carrying out their functions and activities related to life and work.

• Defining Role of Tools and Techniques

One of the major requirements of the networked society is the **development of tools and techniques**. Tools are essential for carrying out functions, and techniques essentially redefine functions. They are essential to evolve a new way of doing the function to achieve the same objectives. Hence they both evolve new paradigms, suitable to the needs and requirements of individuals, groups and communities.

In fact, the relationship between the nature of tools and the type of society that it permits and facilitates is very interesting. In the evolution of human societies, tools have played defining roles in creating communities and cultures of the age.

Human society has seen two major transitions; one from tribal society to agrarian society and the other from agrarian society to industrial society.

The driving forces for transformation in each case are different; for the first transition, it is the knowledge of nature about sowing seeds and growing plants and tools and techniques necessary for agriculture. The agrarian society used animal power for doing agriculture and ensuring its security. The second transition came up with the evolution and the use of automation and created an industrial society. Industrial society created different tools, which have centralized planning, production and management processes; and created mass production that helped in satisfying mass needs at low

costs. The machine is the driving force of the industrial society; and centralization and mechanization are the processes that shape the socioeconomic processes. The education system of the industrial age has therefore helped in educating large numbers (mass education) and created manpower that is essential for building and serving industrial society.

The third transformation has begun since 1995, when extensive use of Internet accelerated development and growth of Information Technology. The Information Communication Technology (ICT) is the driving force for this transition, and is transforming rather, very rapidly, the ways of living and working. In all these changes now taking place in various processes in industrial society, one key process stands out uniquely; the convergence of communication technologies, integrating computing, tele communicating and broadcasting sciences. Development and progress in Information Technology (IT) has created global communication networks and generated globalization.

ICT not only enables to connect people and places, but also helps to customize services and products to the needs of individuals. This customization or personalization is achieved through the Second- Generation Information Technologies currently being developed.

- **Centralization and Localization**

Any network has two major components; global or central and local, identified on the basis of demand by regional / national I international societies and by local communities. The central facilities such as websites, servers, content etc are created by various participating institutions; whereas the local network is created to connect local people and their institutions. The hub and spokes model developed by Dr. Swaminathan in villages near Pondicherry is a model of locally networked community and is useful to put on network all life and work related information and services needed locally.

- **Networking**

The Educational Network will connect universities and all related institutions engaged in education and development at the central level. Each one will have its website, server, content and services; and will carve out its own subnet out of the bigger network. The local level network could be built around a local college / institution as a hub; and spokes will be linked to schools, Community Learning and Information Centers (CLIC) at the village level.

All these networks at local and central levels are to be managed to ensure information flows. The new grid architecture enables the creation of a Knowledge Grid that can help share information from any one server by all other servers. Any provider of education, training and learning services can push or pull information from any server depending on his or her needs and requirements. The Knowledge Grid will, therefore, help in sharing of content and services with all, and will make education accessible to anyone connected with the network.

The broadband Internet with grid network enables us to create educational programs that could:

- Make teaching and learning possible from anywhere, anytime,
- Link education and learning with life and work related processes and places,
- Create a National /Regional Grid network of educational content and services, which can flow in the network and support the processes of educating- learning, teaching and evaluating- anywhere, anytime; and
- Enable educators and educational institutions to create new paradigms of education dependent on various developmental processes and models.

The process essentially generated by these types of changes would lead to new reorganization and also de-institutionalization of existing 20th century institutions.

Tools and techniques of the Information Age have inherent facilities and capabilities to enable planners and designers to build new, transparent, accountable and efficient processes, not only for educating but also for various social activities and functions.

3. NEW EDUCATIONAL PARADIGMS

In the larger context, education is always linked with the development of individuals, groups, institutions and society. However, in the existing educational programs, the linkages are often not direct. New paradigms of education should make this developmental link direct and visible. Besides, ICT should be able to address the larger issues and concerns listed below.

- **Issues and Concerns**

  i. How can we create an open learning system for all, particularly for including all those who are disadvantaged and unreached?

  ii. Current developmental processes have created disparities and divides such as the rich - poor, the rural -urban, and now the digital divide —with IT haves and IT have-nots. How can we bridge digital and other divides?

  iii. The existing educational system tries to give only access to the learners. It does not ensure success, and there are failures in the system. How can we ensure access with the success of each one?

  iv. Many graduates coming out of the system do not find employment; and often are unemployable. How can we link education with employment and development so that a student does not face this problem?

  v. Globalization has created competition for quality, access and cost. How can we compete with foreign educational providers who are marketing their education in India, and enable weaker Indian institutions to raise the quality and standards of their offerings?

  vi. Education these days has become a marketable commodity. This is rather contrary to the Indian culture. What type of educational models could help in 'marketing' education on the basis of equity and justice in consonance with Indian values?

Many of these issues are quite complex and will need policy and program support from society and the state. We will however consider the possibilities of creating an educational framework that could possibly address these issues.

The application of ICT to the basic educational processes such as teaching, learning, evaluating and managing leads to a new form of education, called e-Education (electronic education). Evolving e-education, which will address the issues mentioned above, is the goal of the New Education, and a challenge for the Open Learning System.

The ODL of the Information Age is based on extensive use of ICT and will help to evolve convergence of formal, non-formal and informal modes of education. The system will be based on e-education, and will require its own infrastructure and tools to promote mass-personalized education in an open environment.The goal and objects of the Open Learning System should be the development of new educational models and appropriate infrastructure suitable for the knowledge-based society.

- **Educational Models**

In Agrarian Age, education was very much at the feet of Guru in the Ashram Schools (Gurukul). It was a very personalized education; and content, level of achievement and objectives of learning were different for different learners. The teacher decided methods of teaching and learning; and learners received knowledge from Guru through oral and personal communication. The education was localized, dependent on the teacher's expertise available locally; and students had to move to other places in search of the proper Guru and experts. The same approach continued during the early centuries of the second millennium.

However, with the emergence of industrial society, when more manpower was needed in various trades, production and service centers, educational institutions started admitting more students to fulfill the needs of the industrial society. The form of education changed from personalized education to mass education; and a mechanism of a classroom was evolved in which a single teacher instructed a large number of students.

Classroom based education introduced new methods and practices such as a common syllabus, uniform examinations, and common achievement levels for passing and grading. They are usually decided by the teachers to suit the economy and convenience of the educational system. The principle is: 'One size fits all', and the system is often described as a 'Factory Model'.

The system is therefore teacher-centric. The education is localized in the sense that it is available at the local and nearby institutions with all its advantages and disadvantages. Students have to move to other institutions, and even go abroad for further and higher education. The unit cost of higher education is quite high; since the major expenditure is on salaries/honoraria of teachers and cost of infrastructure facilities. As education and higher income in most cases are linked, there is a high pressure in developing societies on places in educational institutions.

- **New Paradigm: Personalized Mass Education**

Dr. Chitra Naik, a renowned educationist and former Member of the Planning Commission, has raised a very interesting question: "Do we accept the industrial metaphor of 'input-process-output' in which the learner is treated as a chunk of the raw material to be processed into uniform bits of product, or do we agree to consider education as a 'blossoming out' process in which an organism grows to its full capacity because of its symbiotic relationship with its environment?"

The industrial society model may be appropriate to the Industrial Society, which is inherently an exploitative system, exploiting workers by treating them as cogs in the machine, and society for selling the products and services created by industry for the benefits of the producers. The 'blossoming out' or self-actualization model is closer to the model of agrarian society; and is not now replicable. The supportive environmental nature then available for all development and growth is not available now, due to so much of exploitation and destruction of nature and social transformation that has taken place during the last millennium or more. However, creating a new environment

that would give freedom to individuals and communities to think and act, to pursue self- actualization activities in accordance with one's own or community ideas and ideals is certainly possible.

- **Developmental Education**

Developmental education essentially links education directly with development, and its evaluation is based on participation and achievement of development. In a networked educational system, a learner can be located at a workplace near his/her residence; and the dominant process of developmental education would be working, learning and developing continuously. This mode of education is therefore most suitable for life-long learning and learning societies for their continuous development and progress.

By developing and employing personalization technologies, it is possible to create a mass personalized e-education system based on developmental education. By using ICT, it is therefore essential to develop a learning and developing environment, for serving individuals, groups, institutions and communities for achieving their developmental goals. Such a system of education has to be based on the process of empowering people. their institutions and communities. The essential tools for empowering could be the mobilization technologies that could help groups and communities to organize their functions and activities efficiently and effectively. Such a social developmental approach is very essential for developing societies like the Indian society.

With the initiative of UGC and COL, a platform for content storage is getting developed. It could form the basis for Indian Knowledge Grid and will enable experts and teachers to create small units of content called granules , which are the smallest units of instruction.The granules could be put in a database by attaching multiple tags so that the content becomes reusable in different contexts, for different purposes and in different processes of learning. Similarly personalized technologies are getting developed which will allow a '360 degree view' of a student to a teacher.

This type of meta-databases with personalization technologies would enable a teacher to offer a personalized curriculum to suit the needs and requirements of a student; and prescribe the learning path to achieve his! her goals of learning. This is offering the IT driven scenario not possible earlier, and can offer just-in-time education to learners who want to combine learning and working. In a way IT makes it possible to otter not only access but also success to every learner.

- **Education For All**

The Open Learning System (OLS) has the challenge of evolving new paradigms of Education for All by using mass personalization. The OLS should, therefore,

i. Expand coverage of learners so as to include all in the society.

ii. Network all the educational institutions, social and industrial organizations and institutions along with resources by promoting private and public partnership.

iii. Promote Life-long-learning and Learning Communities by organizing Special Interest Groups / Swadhyaya and Prayog Pariwar! as continuously learning groups and their communities.

iv. Empower groups and communities economically, socially, culturally and politically.

In the Indian context, illiteracy becomes a great hurdle in extending education to all. In the new scenario, however, the less educated and even illiterate could be educated by using the audio and video media. The print medium, though otherwise helpful, need not be the only medium of educating. This is proved to be right by a success story of the skill training of tannery workers in Chennai by IGNOU.

The Open Learning System already created through open schools / universities in the country is best suited for the leadership of this networking arid mobilization, since they have:

i. **Friendliness for adopting ICT**

ii. **Openness to change**

iii. **Integrative skills** for mobilizing groups and organizations, and

iv. **Pedagogically well-designed print materials**, which could be easily converted into e-content. The open universities should take a lead in developing new organizations that will lead the transformation towards education for the New Information Age.

- **National and Regional Infrastructure**

The e-Education System requires the following framework and infrastructure:

i. Network with the latest hardware and technologies along with broadband connectivity and grid architecture giving network access to anyone, anywhere, anytime.

ii. Software tools and techniques that enable creation of databases and information flows, offer facilities to learners, teachers and institutions to receive / give personalized education on a mass scale.

iii. Content in e-formats on a knowledge grid that enables teachers and students get a personalized curriculum of high quality, relevance and utility.

iv. Educational delivery system that ensures quality and developmental relevance of educational offerings (Developmental Education) for individuals, institutions and the community.

v. Quality Assurance and Certification Mechanism to maintain competitively high and acceptable standards at national and international levels.

The Framework given above can serve as a national and regional infrastructure to support educational processes of any provider institution, individual and organization in India. This also helps providers of education to design their content and delivery channels through the e-Education Framework with distinctive models of development.

A new initiative in the form of Virtual Universities is now getting developed. The Virtual University is essentially a consortium of institutions which come together by pooling their best strengths to offer the best quality education to the learners. It is a new way for weaker institutions to survive in cooperation while facing global competitiveness. Four Virtual Universities are coming up in India: and the initiative has already been taken or their establishment by ICRISAT, Hyderabad, MS Swaminathan Research Foundation, Chennai, Department of Agriculture of Government of Maharashtra, and Maharashtra Knowledge Corporation. They are, however at the initial stages of development.

4. CHALLENGES IN CREATING LEARNING COMMUNITIES

The information society creates omnipresence of information throughout the networks. Education has therefore, to cultivate skills and competencies in using IT tools and techniques in the networked, globalised and localized context with a view to creating and nurturing innovativeness and entrepreneurship to convert knowledge into wealth., Education has to help in identifying and creating work and employment opportunities that would lead to new types of self-employment opportunities such as knowledge workers, information service providers, tools / technique developers, process! system software designers, developers, implementers and leaders in transformation processes.

Teachers and educational managers have to play different roles in the knowledge-based society. They will have the opportunity of developing new systems, which should be accountable and transparent, allow democratic participation, and empower people through decentralization and participatory decision-making. Through these activities they can offer academic leadership in social and economic changes.

This is a process of creating and shaping an information society and a continually developing economy. The roles of teachers are quite different; they will have to participate in the development process and lead the change, while offering learning services to the students. Teachers are the catalysts and participants, processes of learning, teaching, working and developing together. In the learning society every learner is going to be a consumer of knowledge as well as a producer of knowledge. Teachers, and for that matter every learner, will have to acquire that role of producer and consumer (prosumer) while participating in the developmental processes. They, in turn, would be promoters of various socially relevant models of development.

The models of these types of developmental education must rest on the four pillars often recommended by Dr. Swaminathan:

(i) Productivity,

(ii) Quality

(iii) Affordability, and

(iv) Sustainability.

Development of such models is the main challenge before the developmental education. Further, the current models of development are often exploitative, give disproportionately high benefit to a few, and the majority remains poor and marginalized. Creation of a model, that gives freedom and recognition to individual initiative and simultaneously enables 'equitable and just' sharing with others, is a challenge before communities and societies. Evolving new philosophies and practices, which were followed in large joint Indian families in an older context, is a great task. Ultimately, the new Indian society has to be founded on the basic values enshrined in the Indian Constitution offering

(i) Liberty by giving freedom and autonomy to individuals, groups and communities.

(ii) Equality in sharing rights and responsibilities as well as benefits.

(iii) Fraternity in living together, and

(iv) Justice to all.

Vested interests at local and global level may not allow all these changes and sharing so easily. Teachers along with their learners can participate in real development processes, and mobilize development-centric groups and communities. After all education is itself a developmental process. Using the developmental processes for social transformation or total revolution becomes easier in the knowledge society, since they are supported by the intrinsic nature of ICT. Information Technology primarily generates

(i) Globalization

(ii) Decentralization and Localization

(iii) Access and Personalization

(iv) Transparency and openness.

These processes and values could be built in the SIGs and Learning Communities; and the participatory democratic system of decision-making could be promoted. After all, the new society should be open and dynamically changing to achieve peacefully coexisting communities and societies, blooming with different shapes, sizes, colors and scents.

This is a rare opportunity of shaping a new society. Teachers and education systems should play a center-stage role this transformation process. Dr. Babasaheb Ambedkar and Sri Jayaprakash Narayan, who had the life mission of achieving total transformation and total revolution, have advocated a path for change based on:

(i) Educating,

(ii) Organizing,

(iii) Creating, and

(iv) Agitating

The new educational system aiming to create a new and just society will have to play a leadership role in transformation.

I consider that educating means creating futures; futures of learners and youth. Every teacher should be a dreamer, and every educational institution must have a dream. Let the Open Learning System led by Open Universities in India take up this challenge, and help create new paradigms of Education for All and lead transformation for creating a new knowledge- based society based on equity and justice.

CONGRATULATIONS TO THE NEW GRADUATES

Dear graduates, you have today received degrees for your educational achievements from BRAOU. Many of you are already busy in the world of work. Being mature students, I am sure, you might have ideas about using and applying the education you have received in this university. Learning, however, does not stop here. Now starts your life-long-learning. You are going to face the challenges of the Information Society. Many of our experiences and practices belonging to the 2O century may not be of much use to you in this 2ls century. You have to grow continuously through your learning and personal development, and offer leadership in developmental activities not only at the local level but also at the national and international level.

Dear graduates, you have many challenges and opportunities before you. I am sure, skills, competencies and functionalities you have acquired, and the knowledge you earned in this university, will guide you in your future career and development.

Let me congratulate you on your graduation, and wish you all the best success in your life and career.

Thank you all.

THIRTEENTH CONVOCATION

PROFESSOR. H P DIKSHIT

Vice – Chancellor, Indira Gandhi National Open University

Chairman, Distance Education Council

Chairman, AICTE

His Excellency, Shri Shinde Garu, Andhra Pradesh and the Chancellor of the Dr. Ambedkar Open University, Esteemed Dr. Ram Chandram garu vice-Chancellor of the University, Members of the Statutory Bodies of the University, Distinguished Guests, Members of academic and other staff of the University and my dear students.

It gives me great pleasure to present this address on the occasion of the Thirteenth Convocation of Dr. B. A. Ambedkar Open University, the most premier Open University of the country and I take this opportunity to express my grateful thanks to the Hon'ble Chancellor and the authorities of the University for giving me this unique privilege and opportunity to interact with some of our talented young minds who are among a few most fortunate youths of our country who are able to receive tertiary education. I also extend my heartiest congratulations and best wishes for fulfillment of their dreams and missions, as they move out of the university system and enter an entirely new domain of life full of exciting challenges and opportunities.

Our country has a very long tradition and glorious history of providing education. So is the tradition of holding ceremonies or celebrations on the occasion of completion of education by the students. This has continued from the Gurukul Shiksha system through the Great Institutions like Nalanda and Takshila of international repute to the present system of Universities and other institutions of higher learning and research. I firmly believe that such ceremonies have great relevance, importance and significance for the students coming out of the system. They tend arouse confidence,

new ambitions and dreams in the minds of our students and also remind them about their responsibilities and abilities to significantly contribute for the cause of national development. The form and the pattern of such celebrations have, of course changed with times but the objective, purpose and importance attached to these ceremonies has perhaps remained the same. I myself was greatly enthused, motivated and transformed by listening to the first Convocation Address that I attended as a new entrant to one of our premier universities after witnessing the convocation and listening to a most exciting and wonderful Convocation Address by Pt. Jawaharlal Nehru our first Prime Minister of the country. Memories of this Convocation including the exciting event of the award of honorary degree of Doctor of Science on the internationally renowned scientist and founder of our country's well-recognized capacity and achievements in the area of Atomic Energy, Dr. Homi Jahangir Bhabha are still fresh in my mind.

As providers and facilitators of education, we draw immense satisfaction and joy in seeing the young men and women produced by our systems to achieve highest levels of success in different sectors of their choice. We witness this happen year after year, which makes us visualize the greatness, uniqueness and nobility of our teaching and learning profession. Teachers realize the Convocation as an achievement of success in training the students. It also reminds the students of a major transformation in their lives, which propels them to enter a new dimension of facing challenges of real life situations. It also motivates them to applications of their knowledge to overcome the challenges and to successfully avail new opportunities. It is on these accounts that Convocations have been of significant importance both for the students, the teachers and the institution itself. We are seeing beaming faces of our students in this Convocation and we will see a new group of enlightened faces a year after in the next convocation and it is indeed remarkable that this process will continue and the University will train generations of students one after the other. The very thought of the process is exciting and spectacular.

I would like to remind ourselves about some of the unfulfilled promises that we made to our countrymen on the eve of independence of our country. We emerged as

an independent country through a long drawn struggle for freedom and today we remember with reverence some of our great men and women who made highest sacrifices to achieve freedom from the British rule. Having attained freedom we realized as a nation, at that juncture, in the transition of history of our country, that we had to urgently deal with some serious challenges concerning social transformation of our communities. I would like to focus on some of the most important and initial tasks like reviving confidence, building capabilities, creating awareness and empowering our people so that they were enabled to actively and meaningfully participate in the process of national development and reconstruction. The difficulty of the task can be imagined from the fact that at that stage, just 20% of our people were literate with only 2% of literate women. This is suggestive of the complexity of the problem and difficulties in achieving our cherished goals for a total transformation of our society for the general betterment of quality of life of our people.

Education, as we all know liberates, empowers, enlightens and enables. It is under such considerations that some of our important contemporary leaders like Pt. Jawaharlal Nehru, the first Prime Minister of India declared that the most important task for the country was to focus on educating every Indian. We were thus lead to the important task of developing systems to educate hundreds of thousands of our people with very limited resources and within a reasonable time frame. But any expansion in access to education through the conventional system, which we had inherited, required heavy expenditure in terms of basic infrastructure and other supports. Even then, the system was not capable of providing access to any reasonable percentage of our people. Nevertheless, to fulfill our mission to educate the nation, we continued developing more and more institutions in the conventional mode with as much strain on available financial resources as was possible.

All these years, we have been consistently realizing that our efforts were inappropriate to the task that was to be accomplished. This lead to substantial gaps in the targets set for education and the extent to which we could provide it. In the foregoing background several major and successful initiatives have been taken since independence and we have tremendously increased access to education by opening large number of

a variety of institutions but we all know that we are still far from the target of attaining even total literacy. In our efforts to increase schooling at a fast rate we encountered a situation where we have ended up with a large number of untrained inservice teachers in our schools. This adversely affects the quality of education itself with the result that on one hand we are constrained to provide limited access to school education and at the same time we have to sustain a loss of 40% capacity of the schools in the form of school dropouts. We have also to address now the problem of training of a few hundred thousand inservice teachers.

Through the foregoing initiatives, experiences and efforts we realized, though late, that we had to supplement conventional education with other innovative and flexible alternative systems, specially those capable of providing quality education to large target group of learners in the vicinity of their dwellings. Sustainability of such systems in terms of low costs and maintaining quality are other important issues, which require to be ensured. It is in this scenario that the potential and capability of Open and Distance Learning system was uniquely realized and it started emerging in our country.

I am very delighted to mention that Andhra Pradesh Open University (now Dr. B. R. Ambedkar Open University) is the first dedicated Open University set up in our country. In this context we record our deep sense of gratitude to the vision of Dr. G. Ram Reddy, the founder Vice Chancellor of both the Andhra Pradesh Open University and the Indira Gandhi National Open University which lead to the establishment of Open Universities in our county.

Those in the Open and Distance Learning Systems have encountered questions from fellow academics, educationist and others starting with:

What is Open and Distance Learning System?

Why Open and Distance Learning System?

We have been defensive in our responses in initial stages but whatever has happened and has been achieved during the last two decades or a little more by the

Open and Distance Learning System, we are now in a position to ask counter questions like

Why not Open and Distance Learning System?

What else to meet the ever-growing requirement for education and it's emerging new but important dimensions like Lifelong Learning?

I talked about education for awareness; school education and some other forms of education and I would now like to turn to higher education systems. In the sector of higher education the situation of access is no better. As of today we are able to provide higher education to not more than 7 % of students in the relevant age group and out of these only 14% are able to receive professional education.

Nearly 70% of our students are being provided the usual graduate degree education like B.A., B.Sc., B. Corn. Even there, some of our conventional institutions are practicing perhaps the weakest systems of education like that for private students. The only obligation of the University for such students is to register the students and conduct examinations. At times such students who are deprived of any academic support by the University perform well. Unfortunately there are instances where funds raised in the form of fees collected from such students are diverted to support the highly subsidized regular system of education. I believe there is a serious question of ethics involved here. In order to transform similar weak systems, Distance Education Council has aggressively carried out a massive campaign to transform these systems by extending financial and professional support to several universities and institutions. Our goal is to encourage development and sharing of quality content and to improve the quality of student support to learning.

I must clarify that I do not mean to undermine the excellent work being done by many of our Universities and other Institutions of higher learning and research. There are areas specially of advanced learning where face-to-face contact between the students and teachers becomes essential and that must be carried out with utmost rigour and effort. The academic transactions and research conducted in many of them

is as good as in some of the finest institutions in the world. We, as a nation, feel proud about their achievements. Appropriate support to such institutions has to be continued for them to further innovate and excel. But in a situation where under severe financial constraints we are forced to engage low paid, under-qualified teachers on periodic contracts only, we have to seriously review the system to ensure quality of higher education. It may be a tall expectation to look for quality education through the conventional 'tern with low-paid and under-qualified teachers.

A few centuries ago, the form of revolutions were very different and quite often they resulted in tremendous loss of precious lives of people and property. A revolution in the contemporary context is altogether different. It is not based on destructive powers but on acquiring knowledge and its useful applications for the general well being of the people. This is why, we now hear of economic revolution, information technology revolution, space technology revolution, agriculture revolution, etc. All of these are focused to innovate, useful and meaningful applications of knowledge for improving quality of life of our people. It is good that in general, nations are not aiming at acquiring geographical expansions. There is a greater focus on acquiring knowledge to develop new capabilities. Thus, different nations are globally competing in developing knowledge societies and generating appropriate new knowledge, which has direct relevance to the nations' needs and requirements. It seems that there is some urgency in redefining and repositioning education in the contemporary context. Education needs to be revolutionized and a new form of education may emerge to match the following quote:

"A moment comes, which comes but rarely in history, when we step out from the old to the new..."?

Pt. Jawaharlal Nehru,

First Prime Minister of India.

In the last decade or so we were fortunate to have witnessed two very visible and vibrant revolutions in our country with global impact. One is of course, in the area of Information Technology that has placed our country, as the most favoured

destination for Information Technology Applications in the World. It is indeed very satisfying to observe that in achieving this success and placing India among the few most advanced nations in Information Technology, the Distance Education played a very crucial role. As we advanced in Information Technology, we urgently needed the support of a large number of trained manpower in Information Technology, and it is very satisfying to mention that the Open University system very well fulfilled this national requirement. Indeed, the National Open University alone provided education to nearly 150 thousand students in Master's Level programmes in Information Technology to meet this crucial and massive manpower requirement.

Our country is credited with a similar revolution with global impact in the sector of Space Technology and its Applications. We are thrilled to observe that the Indian Space Research Organization (ISRO) has successfully achieved indigenous capabilities to design, develop and launch satellites. We are now rated among the top six countries in the world with such capabilities. We have really excelled in this area. Keeping in view, the following vision of the founder of Space Technology in our country,

"We are to play a meaningful role nationally, and in the community of nations, we must be second to none in the application of advanced technologies to the real problems of man and society."

- Dr. Vikram Sarabhai,

The Father of Indian Space Programme

ISRO has always focused its strides in Space Technology and its Applications to provide support to initiatives aimed at development of our society. ISRO and IGNOU, thus collaborated by using satellite communication to enrich learning processes and increase access to education through distance mode. Distance Education which is dynamic and innovative, successfully absorbed the technology well to provide more effective learning support. Thus capability for four TV-channels and two interactive networks dedicated for education had been developed under ISRO-IGNOU

collaboration by2002.These successful joint interventions propelled the idea of designing and developing a dedicated satellite for education by ISRO. As we all know, it did happen in September 2004 and we now have a Geostationary satellite EDUSAT successfully orbiting in space with six Ku-Band and Extended C-Band transponders each providing 6-7 National Beams and 5 Regional Beams. We are unique in the world in this respect and we feel that this capability will immensely support our mission to provide seamless education and to accomplish the target of education for all. The following observation by His Excellency Dr. A.P.J. Abdul Kalam, the President of India about the potential use of EDUSAT for education is very encouraging and illuminating

"Democratization of knowledge indicates knowledge for anyone, any time, any place. EDUSAT will be extremely helpful in making this shift possible and decreasing the digital divide."

- Dr. APJ Abdul Kalam,

President of India & Visitor, IGNOU.

I would now like to draw your kind attention to a third major revolution which has been greatly influenced and even complemented by the other two revolutions in the Sectors of Information and Space Technology. This is in the form of emergence of Open and Distance Learning system with global impact, which has revolutionized the education system of our country. This revolution has emerged silently but very rapidly, successfully and effectively during the last two decades. In support of my claim I am pleased to mention that as of today, nearly 23% of the total number of students in higher education are receiving education through the Open and Distance Learning mode. The National Open University alone provides education to nearly 13 % of students in higher education. Similarly, Dr. B.R. Ambedkar Open University and other Open Universities are providing massive education in the country. The system is dynamic with modular approach which provides multilevel entry and exit to suit the convenience of learners. It is cost effective and has ensured excellent understanding and cooperation with the conventional system in terms of sharing of facility and faculty to optimally utilize the existing infrastructure support and manpower. Open

Universities in our country have registered a phenomenal increase in enrolment with the current average rate of growth of students at nearly 24% per year. Due to the success achieved and credibility gained by the Open and Distance Learning System, especially by the Open Universities, the Ministry of Human Resource Development, Government of India have given special focus to development and expansion of the system during the 10th Plan Period.

In terms of international impact of our system we may like to mention that our National Open University alone has presence in thirty countries and this is expanding. The success of the system was appreciated in the recent meeting of Heads of Countries in SAARC region, where in the last meeting held in January 2004 in Islamabad, it was decided to form a Consortium for Open and Distance Learning in the SAARC region namely, SAARC Consortium of Open and Distance Learning (SACODiL) with its first secretariat at Indira Gandhi National Open University with Vice Chancellor of the University as the Chairman of the Board of Governors. Again the secretariat and the Chair of a Global Organization of the Heads of 20 Mega Universities of the World is at Indira Gandhi National Open University.

It seems that the Open and Distance Learning system is the process of redefining education and repositioning the objectives of educational institutions. It has great potential for transformation of an extensively large manpower into manpower skilled with knowledge under a tight time frame. We o understand that such a transformation will completely change the concept of viewing large population as a serious problem under resource crunch to an extremely useful human resource with significant and visible contributions for the cause of national development. There cannot be any dispute about the importance of the issue and the national priority that it deserves. We encounter this requirement in almost all areas of human development. As a first step, any process of implementation of projects and plans, we require as an essential prerequisite of training large numbers of master trainers who in their turn carry out the process to educate, motivate and create necessary awareness for further target groups of people. Several Institutions in the Open and Distance Learning system have already made a visible and successful dent in this direction. This is what I mean by

redefining of education system leading to a very purposeful and directed education. The tailor made, prescription-based education which is often quite independent of the learners varying capacity, capability, aspirations and expectations is getting transformed to education for people as per their expectations and requirements, at their convenience, pace and place.

It gives me great pleasure to mention that B.R. Ambedkar Open University had very distinguished Vice-Chancellors, who have been very kind to me. The Present Vice-Chancellor, Dr. Ram Chandram Garu is taking very keen interest in overall development of this pioneering institution of Open and Distance Learning. From Distance Education Council and IGNOU, we have been extending all support to the development plans of Dr. B.R. Ambedkar Open University and I am sure the University will attain higher and still higher levels of success under the dynamic leadership of the present Vice-Chancellor. Dr. Ram Chandram Garu.

The purpose of highlighting the success and credibility of the Open and Distance Learning system is to assure our students about the quality and credibility of the Degrees and Diplomas earned by them through the Open University. You have to have confidence in you and I am sure you wilt successfully accomplish your ambitions and missions as you pass out from the system.

Thank you,

FOURTEENTH CONVOCATION

DR. C. RANGARAJAN

Chairman, Economic Advisory Council to the Prime Minister

It is a great honour to be invited to deliver the 1 4th convocation address of Dr. B.R. Ambedkar Open University. I am grateful to the Chancellor and the Vice-Chancellor for extending this invitation to me. Between 1997 and 2002. I had the privilege of being the Chancellor of this University and it gave me an opportunity to observe at close quarters the evolution of this institution. It is gratifying to note the progress made by this university in terms of enrollment of students, courses offered and direct contact centers. Dr. B.R. Ambedkar Open University was the first open university to be started in our country, but that is not its only distinction. Over the years, the university has maintained intellectual leadership in this area by initiating and implementing many innovative ideas. Thus, it has been a trendsetter.

Distance Learning

Open University or distance learning has today come to be recognized as a distinct and important channel of higher education. It has 'democratized' higher education and made it inclusive. It has helped to widen the student base. It has reached out to people who would otherwise have remained outside the pale of higher education. The effectiveness of distance education is now well acknowledged. Studies have shown that well-designed and well managed distance education programmes produce learning outcomes equal to those of conventional face-to-face instruction. In fact, they have shown that students registered through the distance mode show greater commitment and interest. Historically, distance education meant correspondence study. However, recent developments in technology have dramatically transformed the concept of distance learning.

Today, besides print, audio, video and computer technologies have become the delivery modes. As someone said, distance education is a phenomenon which is 'geographically dispersed' but 'technologically united'.

The open university system has changed our concept of pedagogy as well. It casts greater responsibilities on the teachers. The teaching materials have to be prepared with great care and with a clear understanding of the psychology of the learners. Due to the pioneering efforts of Dr. Ambedkar Open University, we now have a fund of knowledge on how to make distance learning effective. I take the occasion to congratulate all those who are graduating today. I would like to add a word of special appreciation to those who are receiving awards. May the education that you have received through this University help you to find careers which suit your abilities and temperament, and also make you productive and responsible citizens of the country.

Quality in Higher Education

It is a cliché to say that higher education in India is at cross roads. But this hackneyed and overused phrase still contains an element of truth. We have reached a point when the need for bringing about some radical changes in higher education can no longer be ignored. The excellent quality of the best students of our universities and colleges are well recognized and accepted at home and abroad. Indian students who go for postgraduate studies to foreign universities do extremely well. Most university departments abroad have Indians in a fairly large number on their faculty and many of them have earned international recognition and reputation. While the quality of our best students is not in doubt, it is the average which is causing discomfort. The system of higher education as it operates now in India has raised many concerns which include deterioration in quality, resource crunch and the consequent poor infrastructure. Serious problems of governance have been caused both by the quantitative expansion and the present system of educational administration.

The importance of higher education in building the nation is beyond doubt. The agricultural, industrial and scientific growth of this country depends upon creating a corpus of well-trained professionals in a variety of academic disciplines and this can happen only with good quality higher education. We need not belittle what we have achieved. However, there is a crying need to strengthen higher education in terms of quality and effectiveness.

In the context of growing population, some quantitative expansion in higher education is inevitable. However, the emphasis in the years to come has to be on the quality of higher education. We need to have a network of colleges where state-of-the-art knowledge is imparted and where there is a high degree of commitment on the part of teachers and students. If need be, we should amend the laws and procedures to create such institutions. In the pursuit of quantity, we should not sacrifice quality. The global context makes it even more imperative.

Globalisation and its Implications

The world has moved into a new century and a new millennium. In this context, a country like India with continental dimensions cannot ignore the changes that are occurring in the rest of the world. While it is difficult to predict what the future holds, we can perceive at least three strongly emerging trends. First, technological changes are going to be even faster. Second, the new century will see greater integration of the economies as the process of globalization gathers further momentum. And third, the wave of rising expectations will surge even further. Not only different countries but also different sections within a country will demand that their rights be fully respected.

Globalization has become an expression of common usage. While to some it represents a brave new world with no barriers, for some others it spells doom and destruction. Broadly speaking, 'globalization' means integration of economies and societies' through cross-country flows of information, ideas, technologies, goods, services, capital, finance and people. Cross border integration has several dimensions

— cultural, social, political and economic. In fact, some people fear cultural and social integration even more than economic integration. The fear of 'cultural hegemony' haunts many. But globalization, in one sense, is not a new phenomenon. It is as old as history, starting with the great migrations of people across the great landmasses. Only recent developments in computer and communication technologies have accelerated the process of integration, with geographic distance becoming less of a factor. Borders have become porous and the sky is open. With modern technologies which do not respect geography. it is not possible to hold back ideas, or for that matter people, trade or technology to the boundaries of a nation-state. Each country must prepare itself to meet the new challenges so that it is not bypassed by this huge wave of technological and institutional changes.

Economic integration among countries can occur through the three channels of (a) trade in goods and services, (b) movement of capital. and (c) flow of finance. The gains and losses from globalization can be analyzed in terms of these three channels of economic globalization.

International trade, in general is beneficial and restrictive trade practices impede growth. That is the reason, why many of the emerging economies which originally followed the growth model of import substitution, have moved over to a policy of outward orientation. Emerging economies will, however, reap the benefits of international trade only if they reach the full potential of their resource availability. This will require time. That is why, international trade agreements have to make exceptions by allowing longer time to developing economies in reducing the trade barriers. "Special and differentiated treatment" as it is very often called has to become an accepted principle in trade negotiations.

Capital flows across countries play an important role in enhancing the production base. Capital mobility enables the total savings of the world to be effectively distributed among countries according to their investment potential. Under these circumstances, a country's growth is not constrained by its own domestic savings. Not

only historically but even in the recent period, the inflow of foreign capital has played a significant role in the development of several countries.

The rapid development of the capital market has been one of the important features of the current process of globalization. While the growth in capital and foreign exchange markets has facilitated the transfer of resources across borders, volatility in these markets has often tires created panic situations. The most recent example of this was the East Asian crisis.

What should be India's attitude in this environment of growing globalization? At the outset, it must be mentioned that opting out of globalization is not a viable choice. We need to stay and win. What is needed is to evolve an appropriate framework to wrest maximum benefits out of international trade and investment. This requires action on two fronts. First, we must work towards reforming the trade system in such a way that developing countries like India can reap fully the benefits of international trade. Second, we must take such actions as are necessary domestically in order to realize the full potential of globalization.

T here have been protracted negotiations at WTO in reforming the trade system. Admittedly, the tariff and non-tariff barriers are coming down. However, there are apprehensions that the concerns of developing countries are not being addressed adequately. Looked at from this angle, the recent Hong Kong Ministerial is a modest success. Despite reservations, we must acknowledge that it is a step forward. Domestic support to agriculture by developed countries constitutes a major stumbling block to third world trade expansion. However, India's stand in relation to agriculture has been defensive'. We are not a major player in the world agricultural market. The impact of what has been accepted in relation to Non-Agricultural Market Access and services will vary from country to country. Despite some contrarian opinion, the gain to India from services can be significant. However, the Hong Kong Ministerial is only a broad statement of intentions. Much will depend upon how these ideas are translated into concrete actions.

To realize the full benefits of globalization, the Indian economy must become efficient and competitive. This, in turn, would require an appropriate macro-economic policy framework as well as actions at the enterprise level.

Nothing is an unmixed blessing. Globalization in its present form, though spurred by far reaching technological changes is not a pure technological phenomenon. It has many dimensions including ideological. To deal with this phenomenon. we must understand the gains and losses, the risks as well as rewards. To be forewarned, as the saying goes, is to be forearmed. But we should not throw away the baby with the bath water. We should also resist the temptation to blame globalization for all our failures. Most often, as the poet said, the fault is in ourselves.

The risks of an open economy are well known. We must not, nevertheless, miss the opportunities that the global system can offer. As an eminent critic put it. the world cannot marginalize India. But India. if it chooses, can marginalize itself. We must guard ourselves against this danger. More than many other developing countries. India is in a position to wrest significant gains from globalization. However, for achieving this. as mentioned earlier, we must voice our concerns and, in cooperation with other developing countries, modify the international trading arrangements to take care of the special needs of such countries. At the same time, we must identify and strengthen our comparative advantages. It is this two-fold approach which will enable us to meet the challenges of globalization, which may be the defining characteristic of the new millennium.

The key to India's growth lies in improving productivity and efficiency. This has to permeate all walks of our life. Contrary to the general impression, the natural resources of our country are not large. In fact, from the point of view of long-range sustainability. the need for greater efficiency in the management of natural resources like land, water arid minerals has become urgent. In a capital-scarce economy like ours. efficient utilization of our capacity becomes even more critical, For all of these things to happen. we need well-trained and highly skilled people. In the world of today, competition in any field is competition in knowledge. That is why we need to

build institutions of excellence. I am confident that Dr. B.R. Ambedkar Open University will play its role in strengthening higher education in this country and in moulding its students into responsible and conscientious citizens of the country.

Since we are still in January may I wish you all a Happy New Year?

FIFTEENTH CONVOCATION

PROF. SUKHADEO THORAT

Chairman, University Grants Commission, New Delhi

Introduction

It is little more than half a century ever since the government initiated a planned development of higher education in the country. The planned development of higher education began on the eve of independence, the establishment of University Grants Commission in 1953. Thus early 1950's is an important reference period from which we could look back at our progress of higher education.

I therefore wish to use this opportunity to reflect on the progress and status of higher education in the country. Several issues have figured in the discussion on the higher education in the country. Among them, those relating to Access, Equity and Quality are the most important which have prominently figured in the current discussion. Given the importance of these discussions, I decided to focus on these three issues. In doing so I take a review of achievement; discuss the need for further development and ponder over the possible directions for further advancement of the higher education in the country.

Governing Goals of Higher education

It is necessary to recognize that the present approach towards higher education is governed by the "National policy on Education" of 1986 and Program of Action of 1992, (1). The 1986 policy and Action Plan of 1992 was based on the two landmark reports namely, the "University Education Commission" of 1948-49 (popularly known as Radhakrishnan Commission), and the "Education Commission" of 1964-66,(popularly known as Kothari Commission Report). These two landmark reports in fact laid down the basic framework for the National policy for higher education in the country.

The University Education Report had set important goals for development of higher education in the country. While articulating the goals for development of higher education the Radakrishnan Commission on University Education, 1948-49 put it in following words:

"The most important and urgent reform needed in education is to transform it, to endeavor to relate it to the life, needs and aspirations of the people and thereby make it the powerful instrument of social, economic and cultural transformation necessary for the realization of the national goals. For this purpose, education should be developed so as to increase productivity, achieve social and national integration, accelerate the process of modernization and cultivate social, moral and spiritual values."

The National Policy on higher education of 1986 translates this vision of Radhakrishnan and Kothari Commission in five principles goals for higher education which include Greater Access, Equal access (or equity). Quality and excellence, Relevance and Value based education.

The Action Plan of 1992 articulated the broad schemes to translate these goals into practice. The University Grants Commission funds these schemes which aim at (a) expansion of intake capacity at aggregate level in general, and (b) of disadvantage groups such as poor, SC, ST, minorities, Girls, physically challeng persons, and the educationally backward regions in particular, (c) to Improve the quality and excellence by strengthening academic and physical Infrastructure, and (d) to help develop curriculum to inculcate right moral values among the youth.

Expansion of Higher education capacity

Given the importance of first three goals, namely Access, Equal Access and quality. I confine the discussion to these three Issues. But before I do let us take over an view of the created institutional capacity for higher education since the establishment of University Grant commission in 1953.

Since the early 1950s higher education has been diversified and has extended its reach and coverage quite significantly.

At the time of independence, 1947, the size of the higher education system in terms of number of educational institutions and teachers was small but since that time onwards there has been an exponential increase in two indicators of higher education.

The number of universities has increased from 20 in 1947 to abut 357 in 2005 indicating a thirteen-fold increase. There are now 20 Central Universities, 216 State Universities, 102 Deemed to be Universities. 5 Institutions established through State legislation and 13 Institutes of National Importance established through Central legislation.

The number of colleges has increased from 500 in 1947 to 17,625 in 2005. (including 1700 women colleges) in the country indicating twenty-six-fold increase.

In the spheres of technical education by 2004 we had about 1265 engineering and technology colleges, 320 pharmacies, 107 Architecture, 40 hotel management, making a total about 1749 Institutions. In respect of post graduate educational institutions there are 958 MBA/PGDM and 1034 MCA In 2004.

Similarly the number of teachers has increased from 700 in 1950 to 472 Lakhs in 2005.

Thus there has been several fold increase in the educational institutions and number of teachers. With this progress in the educational infrastructure in terms of institutions and faculty, we expect improvement in the level of higher education in terms of aggregate access, access to disadvantage groups and the quality of higher education.

Let us discuss the progress with respect to these indicators of higher education development.

Extent of Higher education

The extent of higher education is generally measured by enrolment ratio in higher education.

Three alternative methods are used to estimate the extent of access to higher education.

(a) Gross Enrolment Ratio (GER)

(b) Net Enrolment Ratio (NER) and

(c) Enrolment of Eligible (EER)

These three concepts capture the access to higher education from three different angles.

a) Gross Enrolment is a ratio of total students of all ages enrolled in under graduate / post graduate / post - graduate degree / diploma courses to total population in the age group of 18 to 23 years.

b) Net Enrolment Ratio (Age specific) is ratio of total of graduate / post graduate / diploma / certificate students in the specific age group of 18-23 years to total population in that age group, namely 18 to 23 years).

c) Enrolment of Eligible is a ratio of total graduate / post graduate / diploma / certificate holders in the relevant age group (that is 18 to 23 years) to total of those who completed higher secondary in the relevant age group (that is 18 to 23 years).

Thus GER measures the access level by taking the ratio of persons in all age groups enrolled in various programs to total population in age group of 18 to 23. The NER measures the level of enrolment for age specific groups namely those in age group of 18 to 23. While the EER measures the level of enrolment of those who completed higher secondary level education. These three concepts thus look at the access to higher education from three different angles.

Enrolment at Aggregate level

The Education Commission, of 1964-65 provided an estimate of enrolment ratio for early 1950. In 1950-51 the enrolment rate was 0.7%, which increased to 1.4% in 1960-61.

For the recent years three sources provide data on enrolment in higher education. These are National Sample Survey, Population Census and Selected Educational Statistic.

The National Sample Survey (NSS) and Population Census (PC) data provide us with enrolment ratio for the recent years. As per the NSS data the GER in 2003/4 is 13.22%. The population census came with GER of 13.82% for 2001. Thus both NSS and population census came with fairly identical figure of GER. But the same based on Selected Education Statistic (SES) is 9.39% for the 2003-about 4% less than the estimate by population census and NSS.

The GR estimate of NSS and PC are greater compared with SES by about 4-5% because the former also include private institution which the letter generally remain to confuse the public.

Enrolment for eligible students is a useful estimate as it indicates the access to education to those who have completed the higher secondary stage. These estimates are available for NSS data only. In 2000 about 59% students who completed higher secondary were enro1led in higher education.

The estimates on the number of students vary according to sources. The selected educational statistic put the total enrolment in higher education at 104 lakhs in 2005. While National Sample Survey came up with 161 lakhs in 2003/4 and population census with 182 lakhs in 2001. Since the latter sources also include both public and private educational institutions their estimates are higher than selected educational statistic.

Enrolment at disaggregate level

After having assessed the progress at aggregate level we now look at the progress with respect to certain groups and regions and reflect on the situation with respect to inter-group and inter-regional disparities of multiple natures. This will include variations between (a) rural and urban (2) Inter-State (2) Inter-caste (3) Inter-religion (4) Male-female (5) occupation group (6) and Poor and non—poor.

Rural and Urban

There are significant disparities in enrolment ratio between rural and urban areas. In 2003/4 the GER for rural and urban areas was 7.76% and 2 7.20% repective1y-GER in urban areas being four times higher compared with rural areas.

The population census came up with the GER of 8.99% for rural areas and 24.58% for urban areas in 2001 – the GER in rural areas being all most three times lower compared with urban areas.

The EER worked out to 51.1% for rural and 66% for urban areas-latter being higher by about 15% points.

Inter-State Variation

There are considerable Inter-state variations in the level of higher education. While the GER at aggregate level is about 13%, It is more than national average in state like Nagaland (38.6%), Goa (27.3%), Kerala (24.2%), Manipur (24.7%), H.P.(20.0%) and J&K, T.N. and Pondicherry (with 18%).

By national comparison the GER is lower than the national average in states like Tripura (3.2%), Assam (6.6%). Meghalaya (7.2%), Chattisgarh (7.6%), Orissa (8.2%), Jhar1anci (10.3%).West Bengal (9.7%), Bihar (10%), Sikkim (10.8%), and Rajasthan (11%).

The enrolment ratio based on eligible student (ERE) is a useful estimate as it indicates the access to education to those who have completed the higher secondary

stage. In 2003/4 about 59 % of those who completed higher secondary entered in higher education stream. This ratio is higher than the national average by a substantial margin in Mizoram (87.1%), Manipur(87.7%) Nagaland (85.6%), J&K (76.6%) and Kerala (70.6%) By national Comparison the ratio is much lower in Taipura (37.8%), Chatushgarh (49.3%), Orissa (50.2%), Arunachal Pradesh (53.5%). In the rest of the major states the ratio was around national average of 59%.

Group disparities

After having examined the enrolment rate at the aggregate level we now look at the same by caste, religious and gender.

Inter — caste

In 200-04 the GER was about 13.22% at over a11 1evel. However there are significant disparities across social groups. The GER is much lower for ST, SC and OBC as compared with others (than is non-SC/ST/OBC), being 5%, 7.51%, 11.34% and 24.89% respectively. Thus the GER at ST was five times of SC about three times and of OBC about two times less compare with non-SC/ST/OBC population.

Between the SC/ST and OBC, however the GER was higher for OBC. The GER of OBC was higher by six percentage points compared with ST and about four percentage points higher compared to SC. Between SC and ST, the GER was higher for the SC by about 2.51 percentage point. Thus the GER was the lowest for ST.

The estimates based on the population census for 2001 also revealed disparities across the social groups in GER For instance, as against the GER 0f 15.57% for general Hindu population (non-SC/ST) the GER for SC and ST was 8.39% and 7.46% respectively. The GER of the general Hindu population being higher by about two times compared with SC and ST.

In the case of EER the pattern is somewhat different. The ERE in 2003-04 was 54.4% for ST, 57% for SC, 54.8% for OBC and 62.5% for the other Hindu population. Thus the ERE of SC, ST and OBC was lower as compared to the general Hindu

population. It needs to be mentioned that the differences in the EER between SC, ST, OBC were marginal. The OBC seems to be almost on par with SC and ST with respect to ERE. This implies that although the OBC managed to have higher enrolment rate, based on GER, compared with SC and ST, nevertheless, of those who managed to complete higher.

Caste, religion -Inter face

It is evident that SC / ST / OBC persons belonging to Hindu religion lag far behind the higher caste Hindu population in terms of access to higher education, in so far as the enrolment ratio is generally lower for these three social groups compared to the general Hindu population.

It is also necessary to mention that SC / ST / OBC from other religious backgrounds namely Muslim. Christian and Sikh religions also suffered from lower access to higher education as compared with their higher caste counterparts from these religions.

For instance, in 2003-04 the GER of OBC Muslims was 7% as compared with 9% for other Muslims. Similar disparities prevail in the case SC Christians and non-SC / ST Christians. In the case of Sikh SC the GER was only 7% compared with 21% for non-SC Sikh population. Similarly the GER of tribal Christians was 21.73% compared to 37.28% for non-tribal Christians.

Similar differences are observed in the case of Eligible enrolment ratio (EER The EER for OBC Muslims is lower (50.16%) as compared with other Muslims (63%).The EER is much lower for the Sikh SC as compared with non-SC Sikhs - the rate being 20.60% and 52% respectively in 2003.

It is thus evident from these results that the SCS from all religions suffered from a lower access to higher education as compared with their high caste counterparts. However between the various religious groups, SC from some religious groups suffer more in access to higher education than others. For instance, the GER of SC Buddhists is relatively high (14%) followed by SC Christians (9.97%), SC Hindus (4.88%) and SC

Sikhs (2.33%). The SC Buddhists and SC Christians seem to perform better with respect to access to higher education as compared with their counter part from Hindu and Sikh religion. However the limitation of sample size in case of SC Buddhists and Christian need to be kept in mind.

Inter-religion differences

Disparities are also evident in enrolment ratio between religious groups in 2003-04. In general the GER is higher for the persons belonging to Jainism followed by Christians, Sikh / Buddhist, Hindus and Muslims. The GER for Jains, Christians, Sikhs / Buddhists, Hindu and Islam is 57.43%, 27.29%, and 15.0%, 13.47% and 8.19% respectively. The GER was the lowest for the Muslims followed by Hindus.

In the case of EER also similar inter-religion differences are observed. The Jains and the Christians came on the top with 74.7% and 71.3% EER respectively. Next come the. Buddhist and Hindus with about 60%. The EER is the lowest for the Sikhs with 52.8%.

Gender Differences

The access to higher education is also low for girls as compared with boys. The GER being 15.25% for male and 11% for female. Gender disparity in enrolment ratio is mainly because of visible differences in rural areas. In urban areas the gender differences are minimal.

Significant male-female disparities also exist in the enrolment ratio for the eligible student (EER). In 2003-04, the EER is 62.9% and 54.1% for males and females respectively, the female EER being lower by nine percentage points. Unable GER the differences in the male and female EER are visible both in rural and urban areas.

Gender — Caste Religion Interface

It needs to be recognized that although the enrolment ratios are generally lower for the female compared to the male, the female belonging to the lower caste and some religious groups suffer more in access to higher education than others.

For instance in 2000, as against the overall average of 9.4% for the female, the GER was 2.4% for ST female followed by 4.7% for SC female, 7.6% for OBC females and 17.2% for other female. Thus the GER for ST female was seven times less compare to the higher caste females. Similarly, the GER of the SC females was lower by about four times compared with higher caste females.

In the case of religious groups the Muslim women suffer the most. The GER of Muslim females was 6.3% compared to 10.8% for Hindu females, 12.7% for Sikh/ Buddhist females, 20% for Christian and 48% for Jain females.

In the case of enrolment ratio for eligible (EER) the inter- caste disparities in the female population are particularly significant. The EER for SC/OBC females was the lowest with about 50% compared to 57% for ST /other high caste females.

Similarly, the EER was the lowest for the Muslim females compared with the females belonging to other religions. The EER was 48% for Muslim females - about 54% for Hindu/ Buddhist females, 56% for Sikh and about 69% for Jain/ Christian females.

Poor —Non poor

There are also significant differences in enrolment rate among the poor and non-poors. In 1999-2000 the GER for the poor was 2.4% as against. 12.91 % for non-poor, the average being 10.10% .The GER for the poor was almost twelve times lower compared with the non poor.

Similar disparities are evident in rural and urban areas. In rural and urban areas the GER for poor was 1.30% and 5.51%, quite low compared with 7.12% and 27.15% for non — poor respectively for rural and urban areas.

Within the poor, however, the GER was the lowest among the poor belonging to ST and SC, followed by OBC and others. The GER for poor belonging to ST, SC, OBC and other is 1.55%, 1.89%, 2,30% and 3.58% respectively.

A similar pattern s observed for the poor in rural and urban areas. In rural areas the GER is the lowest for ST with only 1.11% followed by 1.35% for SC, 1.13% for OBC and 1.66% for Other - the overall GER being 1.30%.

In urban areas the GER for the urban poor is 3.86%, 4.78%, 5.16% and 7% respectively for SC, ST, OBC and Others — the average being 5.51%.

Even among the non-poor the GER for the ST, SC and OBC is lower as compared with others. For instance, the GER is 6.68%, 9.70%. 8.69% and 19.73% for SC, ST, OBC and Others respectively — while the all India average is 12.81%.

Occupation and Enro1ment

Self Employed and Wage Labour

Differences in gross enrolment rate are also equally clear across occupation groups in rural and urban areas. In rural areas the GER is generally higher for self employed households engaged in farm and non farm — economic activity as compared with those who work as wage labour in farm and non farm activities. For instances the GER for those engaged in farm and non farm activities as self employed was about 5% as compared with 1.41% for farm wage labour and 3% for non farm wage labour. In 2000, the GER for Farm Wage Labour being particularly low.

Similarly, in urban areas the GER is clearly much higher for those engaged in business, regular salaried and other activities as compared with casual labour. The GER was 50%, 28%, 15.74% and only 3.26% respectively for other, self employed, regular salaried and casual wage labor. The GER is particularly low for casual wage labor.

Thus both in rural and urban areas the enrolment rate for the wage (casual) labour was the lowest as compared with self employed and regular wage earner and salaried. The GER is particularly low for Farm Wage Labour.

Caste —Occupation Interface.

It is to be noted that among the occupation group the enrolment is particularly low for ST, SC, and OBC as compared with higher caste. Thus although GER is generally lower for wage labour, it is particularly low for SC/ST compared with other groups. For instance, as against 1.41% at over all level for wage labor in rural areas, the ratio is 0.67%, 1.63%, 1.16% and 1.93% for ST, SC, OBC and other wage labor respectively.

Similarly in, urban areas the GER for casual labour is 3.26% at overall level as against 1.53%, 2.61%, 3.34% and 4.30% for ST, SC, OBC and other wage labour respectively.

Similar inter - caste differences are observed in case of self - employed cultivators (farmers) in rural and urban areas - the GER for SC/ST/OBC being much lower as compared with others. For instance, in rural areas as against the GER of 5.64% at overall level for self employed in agriculture in rural areas the ratio is 3%, 3.95%, 4.21% and 8.33% for ST, SC, OBC and others respectively.

In the case of self-employed in nonfarm activities or business in rural and urban areas also the GER is lower for the SC/ST compared with other groups. In rural areas the GER for self employed (or business groups) is 2.53%, 3.77%, 3.97% and 7.73% for ST,SC,OBC and Others. In urban areas the GER for self employed groups among the ST, SC, OBC and Others works out to 6.15%, 7.37%, 10% and 22% respectively indicating much lower rate for SC/ST.

Occupation, caste and poverty interface

Among the self employed and wage labor the enrolment is particularly low for the poor household among them. For instance, the enrolment rate at overall level for self employed cultivator, self employed in non-farm sector, agriculture labour, other labour, other households in rural areas is 5.17%, 1.41%, 2.99%, 5.64%, 18.55% respectively compared with 1.43%, 0.86%, 0.37%, 1.78%. 2.98%, 1.30% for poor self employed cultivators, self employed in non-farm sector, agriculture labour, other labour, other households in that order.

Similarly in urban areas while the enrolment rate at overall level is 15.74%, 28.10%, 3.26%, 50.15% for self employed, regular salaried, casual labour and other household respectively, the same for the poor households belonging to self employed, regular salaried, casual labour and other households is 4.59%, 8.60%, 2.38% and 14.39% respectively.

In other words although the enrolment is lowest among the poor casual wage labour household in rural and urban areas (agriculture labour, other labour in rural and urban areas - .86%, .37% and 2.38 respectively), it is particularly low among the same poor groups from the ST/SC/OBC. The enrolment rate being 0.9%, .01% and .93% for agricultural labour for ST, SC and OBC respectively. Similarly it is nil for ST and SC .52% for OBC Casual non-farm wage labour in the rural areas.

In Urban areas the enrolment rate for poor casual labour is 66% for ST, 2.61 % for SC and 3.92% for OBC.

To sum up the pattern relating to enrolment following pattern emerged fairly clearly in 2003-04 and in some cases for 1999-2000.

1) Aggregate: While the GER based on population census and NSS is about, 13%, during 2000/01. The GER based on the education statistics is 9.39%. The educational statistics estimate of GRE are on the lower side compared with population census and NSS estimates probably because latter two sources include both public and private institutions while the former covered only public institutions.

2) Rural —Urban- There are significant disparities in enrolment ratio between rural and urban areas .The GER for rural and urban areas in 2003/4 are 7.76 % and 27.20% respectively. The GER in urban areas was about four times higher compared with rural areas.

3) Inter-caste differences -The GER of SC, ST and OBC is lower as compared with the general Hindu population. Between them however the GER is lowest for ST, followed by SC and OBC. In the case of EER the differences between SC, ST, OBC are marginal and the OBC are almost on par with SC and ST.

It is also necessary to mention that SC/ST/OBC from other religions such as Muslim, Christian and Sikh religion also suffered from lower access to higher education as compared with their higher caste counterparts from these religions. In general the SC Buddhist and SC Christian seem to be doing better as compared with their Hindu, Muslim and Sikh counterparts.

4) Interre1igion difference - In general the GER is higher for the persons belonging to Jainism (57%) followed by Christians (27.29%), Sikh/Buddhist (15%), Hindus (13.47%) and Muslims (8.19%). Thus the GER is the lowest for the Muslim.

5) Male-female -Gender disparities in the enrolment ratio are also clearly visible. The gender differences in gross enrolment ratio are mainly due to disparities in the rural areas as the gender gap is insignificant in urban areas.

It needs to be recognized that although the enrolment ratios are generally lower for the female compared to the male, the female belonging to the ST /SC and those from Islam and Hindu religion suffer more in access to higher education than females from other religious groups.

Poor-Non poor

The GER is generally lower for poor compared with non poor households.

Among the poor, however the GER i much lower for SC / ST followed by OBC and Others.

Self employed and Casual Labour

The GER is also generally higher for the self employed (business group) and regular salaried households as compared with casual wage labour engaged in farm or non farm activities in rural and urban areas. The GER is the lowest among the poor casual labour households engaged in farm activities in rural areas and in non-form activities in both rural and urban areas.

6) Inter-state - Similarly there are considerable inter- regional variations in the level of higher education. The GER and NER were more than national average in states like Nagaland, Goa Kerala, Manipur, H.P and J&K, T.N. and Pondicherry and lower than national average in Tripura, Assam, Meghalaya, Chhattisgarh, Orissa, Jharkhand, West Bengal, Bihar, Sikkim and Rajasthan.

Quality and Excellence

In the preceding section we have analyzed the achievement of the higher education. Obviously this improvement has been made possible due to significant expansion of higher education institutions in India. The question that arises at this stage is about the quality of these educational institutions in terms of physical and academic infrastructure and the quality of outcome in terms of academic standard of student and quality of research, creativity by faculty.

What is the quality and excellence level of our educational system? These are important issues, which are being currently discussed, which I believe needs to be addressed.

There are limited number of studies which have empirically examined quality and excellence of our university and colleges system. Therefore, although everybody talks about the quality of higher education, there is no systematic evidence about the academic standard of our university and college system. In the absence of such studies, I wish to present the status of quality and excellence with the help of conceptual and methodological framework developed and used by UGC to quantify the quality and excellence of the universities and colleges engaged in higher education - a sector which is the backbone of our higher education system. As we will see this provides only a partial picture of the quality of university and college sector.

To regulate and promote the quality and excellence, the UGC has made a distinction between quality and an excellence in conceptual and operative terms. And therefore separate indicators are used to measure quality and excellence. The UGC's measures for excellence are in the nature of addition to the indicators used to measure the quality of higher education. Therefore, I prepare to discuss them separately.

Measurement of Quality of University and College education system

As far as the quality is concern the UGC has laid down indicators under provision of what it called, 2(f) and 12 (b). These two together assess the minimum quality requirement to provide the grants to the universities and colleges. The college is recognized under 2(f) if it is a registered body with a temporary affiliation with the university and carrying undergraduate programme. The recognition under 12(b) is granted provided the college has a permanent affiliation with university. Obviously the university would provide permanent affiliation after satisfying the required conditions and academic standard of quality.

Thus 2(f) & 12(b) is the initial and presumably the minimum framework of regulation of quality for the colleges.

Besides the UGC has set up National Assessment and Accreditation Council (NAAC) to assess the quality of higher education institutions Which use fairly expanded criteria of quality for, universities and colleges in the country.

Measurement of Excellence of University and College education system

For assessment of excellence, the UGC has developed a specific methodology involving a number of indicators. It has developed a concept of what is called "educational institutions with potential for "excellence".

The UGC by some measurable indicators of "excellence" identifies

a) The universities as a whole with potential for excellence.

b) The Centers with specialized programs in the universities with potential for excellence.

c) The Departments within the universities with potential for excellence and

d) The Colleges with potential for excellence.

Size of quality institutions

Let us discuss the quality of the university and college sector.

College Sector

Let us first discuss the college sector. As on today (February, 2006), there are about 17625 colleges in the country. Out of these, about 14000 come under purview of UGC's system. This accounts for about 80% of the total colleges in the country.

Out of this, only 5589 are Included under Section 2(f) and of them 5273 have been recognized under Section 12(B) of the UGC Act - making them eligible for UGC assistance. Thus of about a total of 14000 colleges about 40% are recognized under 2(f) and about 38% under 12(b).

Alternatively, it means that about 60% of colleges (equivalent to 8411) in the country are not assessed even with the minimum criterion of 2(f) and 12 (b) (equivalent to 8727). Therefore, we cannot comment on the quality of almost 60% of the colleges coming under the purview of UGC.

The NAAC is involved in the assessment of quality and accreditation of these colleges, recognized under 2(f) & 12(b). The NAAC used an expanded criterion of quality measurement. In 2006 of the total colleges which come under 2(f) 12(b) about 2780 have been assessed and accredited by the NAAC.

The percentage of accredited colleges thus accounts for about 5.7% of the colleges covered under 2(f) & 12(b).

But accredited colleges account only 18% of the total colleges (i.e. 14000) which fall under the purview of UGC. Thus we don't have much idea about 82% of the 14000 in the country.

Thus as per the criterion of UGC of 2 (f) and 12(b) of total of 14000 colleges about 40%ae assessed for minimum criterion of quality and hence we know little, about the quality of the remaining 60% of the colleges. Why the remaining colleges

(i.e. 11102) don't seek recognition under 2(f) and 12(B) when they become entitle to get UGC grants is the question. The sample study conducted by UGC Indicate that approximately 1/3 of these colleges are probably self-financing which the UGC excludes for any grant and therefore these colleges do not have any incentive to acquire the status of 2(f) and 12 (b). The remaining 1/3 probably don't have permanent affiliation to be able to get UGC 2(f) and 12(b) status. We have a reason to believe that the quality of these colleges may be lower than what is required to get the 12(b) status.

With an extended criterion of NAAC only 18% of total of 14000 colleges are assessed for quality. They account for 57% of colleges recognized by UGC under 2(f) and 12 (b). What is the quality status of the colleges assessed by NAAC? The NAAC gradation provides some idea about the quality status of the college sector. The NAAC gradation indicates that 245 colleges are in A range (A++, A+ and A), 1785 in B range (B++, B and B) and 668 in C range (C++ C and C-). They could be respectively graded as high medium and low quality colleges which constitute 9%, 66% and 25% respectively.

University Sector

As far as the university sector is concerned, at present there are about 357 institutions of higher learning. Of this, 20 are Central Universities, 216 State Universities, and 103 Deemed Universities making a total of 319 universities .This constitutes about 81% of the total universities in the country.

Before giving the Grant UGC assesses the quality of these universities by some measures of quality.

Of about 317 universities, about 164 are recognized under 12(B) and, therefore, entitled to receive grants.

This means about 50% of the Universities are assessed for some academic standard and quality under 12(B) rule. The remaining half of the universities are not assessed. Therefore, we don't have much idea about their quality.

Out of 164 Universities about 128 are assessed with more elaborated indicators of quality by NAAC. Such universities account for about 78% of the universities supp6rted by the UGC (i.e. 164) only 40% of the total universities (that is 317).

To summarize the situation thus out of a total of 317 universities about 50% of them (that is 164) have been assessed for minimum quality under (12 b) and about 40% (that is 128) have been assessed for more elaborate criteria of quality of NAAC. Thus about 50 to 60% of the universities are not properly assessed for quality of education that they offer.

Measurement of Excellence

There is also an intense discussion about academic excellence of the university and college sector. Like quality the Information about the academic excellence is also limited. Beside quality assessment, the UGC is also engaged in promoting excellence. The UGC has developed some measures to assess the academic excellence identify and recognize excellence at the institutional (i.e. universities and colleges) and departmental level, and help them to retain and achieve further excellence. UGC's framework for identification of excellence is discussed below.

Universities with Potential for Excellence

To promote excellence in teaching and research activities the UGC has been assessing the universities for granting the status of 'Universities with Potential for Excellence'. This scheme was introduced in 2000. Since that time the UGC has recognized 9 universities with potential for excellence. Out of 234 Central and State Universities accounts only for the figure 4% of the total universities.

Centers and Departments with Potential for Excellence

Within the university the UGC has developed the scheme for identifying and supporting the center of excellence and department of excellence.

In the case of center of excellence, the centers are identified around specific areas of specialization. During the 10th Plan, 12 Centers of Excellence ;with specific specialization were identified in 12 universities.

Special Assistance Programme (SAP)

Under the SAP, university departments are identified for purposes of assessing the excellence in research and teaching. The scheme operates at three levels viz departmental Research Support (DRS), Department of Special Assistance (DSA), Centres of Advanced Studies (CAS).

The total number of departments approved by the UGC under the Special Assistance programme at the levels of DRS, DSA and CAS was 477 on April 2005.

Colleges with Potential for Excellence

In addition to the universities, the UGC has also developed the scheme to identify "Colleges with Potential for Excellence" and to support them to improve their academic infrastructure, adopt innovations in teaching, modern methods and learning/ evaluation and also introduce a flexible approach in the selection of courses at the degree level. So far 97 colleges have been ident1ed for the scheme.

Emerging Issues Related to Access, Inclusiveness and Quality

The overview of the present status of higher education brings out the situation with respect to the level of enrolment, equity (or Inclusiveness) and quality. We shall discuss the issues nature of problems and with respect to these three aspects of higher education and indicate the task involved in promotion of higher education in the country.

Issue Related to increase in Enrolment rate

The first issue relates to the expansion of enrolment rate. There has been a considerable improvement In the enrolment from one percent in early 1950s to about 13% in the 2003. The 13 percent is little more than average for Developing countries which is 11%. But it is too low compared to 23% of world average or 36.5% for countries in transition or 54.6% for Developed countries.

There has been a huge increase in the demand for higher education since the independence. However the increase in demand has not been matched by corresponding increase in the educational infrastructure in terms of educational institutions and other facilities. Due to the demand outstripping the capacity, a large number of aspirants are also denied access to higher education. This has led to a situation where institutions are required to manage more students thin they afford, leadings pressure on the facilities. Therefore, in addition to creating new universities and colleges the strengthening and expansion of exiting institutions is equally necessary.

If our target is to come closer to world average of 23% we need to expand the intake capacity during the 11th Plan quite substantially. In crease from 13% to 20% or 23% will have to come both from public and private Institutions. This will involve planning for increase in institutional capacity both for public and private educational institutions. Definite targets will have to be set up of government and government aided institutions. This will also mean that some planning and targeting for educational capacity in private un-aided educational sector will be necessary. This will have to be done both by expansion in the capacity of existing educational institutions and also by establishing new ones. The approximate number of additional educational institutions is some thing, which will have to be worked out. Both will require substantial increase in the public expenditure on higher education.

Enrolment in Higher Education by regions 2001-2 (in %)

Groups of Countries	**Gross Enrolment ratio**
Developed countries	**54.6**
Countries in Transition	**36.5**
Developing countries	**11.3**
World India	**23.2 (about) 13%**

Source -Higher Education in the World –

Promoting Equity and Inclusiveness

The second important issue that confronts us, relates to multiple disparities. Although the overall enrolment ratio is about 13%, there are disparities across groups like State, rural- urban, male-female, inter—caste and inter-religious, poor—non poor and between occupation groups. And in some of these there is a considerable overlap.

The extent of enrolment is low in rural areas compared with urban areas and low in some States. It is particularly low among the STs, SCs, OBCs compared with higher caste .The enrolment is low among females compared with males. Among the religious groups the enrolment is lower among the Muslims and Hindus compared with Jains, Sikhs and Christians.

The enrolment is also low among the poor and particularly low among persons as engaged in some economic activities such wage labour households as compared with those engaged in business as self employed.

It needs to be mentioned that the lower enrolment among the SCs and STs is not only confined to Hindus but also extends to other religious groups. Further among the SC and ST the enrolment is much lower for the females. Similarly, the enrolment is low for Muslim women.

Thus the groups which suffered most from lack of access to higher education are SCs, STs, OBCs and Muslims in general, but particularly the female from these groups in particular, as also those engaged as wage labour in rural and urban areas. Among them all, however, the poor from these groups suffered most. Among the SCs, STs, Muslims, female and wage labour, those from rural areas are the worst sufferers.

They thus suffered from multiple disparities. Therefore there is a need for a comprehensive policy of Inclusiveness which will help to reduce disparity among them.

Given the uniqueness of each of these groups, namely social groups like SCs, STs, from all religions, OBCs, religious minorities like Muslims in general and OBCs in particular, females, and wage labour and the poor among them, It Is necessary that the constrains

of each of these group are addressed separately and group special policies and schemes are developed to bring them on par with others.

Promoting quality and excellence

The third Issue relates to the quality of higher education. There are some issues which are related to quality which need to he recognized. It is important to recognize that a substantial portion of colleges and universities are not assessed for quality and therefore we don't have a full picture of the quality and excellence of university and college sector engaged in higher education.

College sector

For Instance In the case of college sector we observe some specific features.

a) Of the total of 14000 colleges which fall under the purview of UGC, only 40% and 38% have been brought under 2(f) (about 5589) & 12(b) (about 5273) status, which satisfy some minimum educational standards.

This means that about 61% or equivalent to about 8500 colleges are without proper assessment for quality. We do not know much about the quality of these colleges. It is therefore necessary to bring these colleges under the fold of quality assessment to improve the standard of college education in the country. Most of these colleges are self-financing and without permanent affiliation. We need to bring them under the fold of regeneration and UGC support.

b) Out of these 5589 colleges which are recognized under 2(f) and 12(b) about half have been assessed and accredited by NAAC.

In fact accredited colleges constitute only 20% of the total colleges (that Is 14000). This call for a much bigger task of assessment and accreditation on the part of NAAC.

University Sector

As far as the university sector is concerned, at present there are about 357 Institutions of higher learning. This constitutes about 81% of the total universities in the country. Of about 317 universities, about 164 are recognized under 12(b) and, therefore, entitled to receive grants. This means about 50% of the Universities are assessed for some academic standard and quality under 12(b) rule. The remaining, half of the universities are not assessed for quality and we have no idea about the quality of these universities.

Out of 164 Universities under 12(b), about 128 are assessed with more elaborate indicators of quality by NAAC. Such universities account for about 78% of the universities supported by the UGC (i.e. 164) only 40% of the total universities (that Is 317).

To summarize the situation thus out of total of 317 universities about 50% of them (that is 164) have been assessed for minimum quality under 12(b) and about 40% (that is 128) have been assessed for more elaborate criteria of quality of NAAC. Thus about 50 to 60% of the universities are not properly assessed for quality of education.

Besides the quality assessment, the UGC is also engaged in promoting excellence through many schemes.

So far, the UGC has identified only 9 universities and 97 colleges with potential for excellence, and they constitute about 6% of the total Universities and 2% of the colleges. Besides about 500 Departments, centres and about 12 centres have been identified with potential for excellence.

Excellence needs Quality

We have to recognize that quality and excellence are interlinked. For excellence to grow and emerge, it requires at the base a quality education in universities and colleges. Excellence may not be encouraged and enhanced without quality education in the vast institutions of higher learning, namely the universities and colleges.

If only 9 universities and 97 colleges have potential for excellence and only 12 universities have been identified as centers of excellence in certain specializations and that only 477 departments have been identified as those with a potential for excellence, it is because the university and college education has suffered from the lack of adequate academic and physical infrastructure.

It needs to be recognized that quality education at the college and university level serve as a base for excellence to encouraged and to grow. The university and college education serves as a catchment areas for some upper level specialized institutions to emerge as institutions of excellence. If the quality of the university and college education is neglected it will have limited potential for growth of excellence in institutions of learning. Thus the potential for excellence in the specialized institutions is indeed based on the quality and strength of the college / state university sector, which needs to be improved. If we go by the present evidence, a vast number of colleges / at state the university sector are of low to medium quality, by NAAC measure. Therefore, there is an urgent need to improve the physical and academic infrastructure of these institutions. This calls for a "Regeneration of college and state university sector",

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Note-The estimate of enrolment ratio aggregate and by social groups and some dimensions of quality are based on the on going Studies sponsored by UGC - under taken by Ravi Sriwastwa, S.Sinha, Sarswati Raju, (Jawaharlal Nehru University, Delhi) Sudhanshu Bhushan (National Institute of Educational Planning and Administration, Delhi) Axreresh Dubev, (NCAER, Delhi) Dr. Draiswamy (Madras university, Madras) and Menon (Delhi University), 2006

1 The report of The University Education Commission

- (December 1948-August, 1949) Ministry of Education Govt. of India, 1962.

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- National Policy on Education-1986, (With modifications undertaken in 1992), ministry of Human Resource Development. Department of Education, Delhi

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2 Report of the Education Commission-1964.-66, chapter I, Page 41

3 Gross Enrolment Ratio

Total enrolled students (graduate plus post-graduate and diploma/certificate holder) in all age group / population in age group of 18 to 23.

Net Enrolment Ratio (Age specific Enrolment ratio)

Total graduate/post graduate /post graduate diploma holder in specific group (say 18 to 23) /population in that specific age group.

Enrolment of Eligible Ratio =

Total graduate/post graduate /post graduate diploma holder in specific group (say 18 to 23) /population of those in the relevant age group (say 18 to 23) who have completed higher secondary education.

4. Source - figure for 1950- and 1960 are taken from" Report of the, Education Commission" 1964-65. chapter xii, page 550 table 12.1 (Enrolment in Higher, Education -1950-51 to 1965-66), and 1983-84 to 2004 from Annual Report 2004-2005. UGC, New Delhi. Appendix —III PAGE 151, also from Mid Term Appraisal- 11th Plan, Planning Commission.

Table I: Enrolment Ratio by alternative sources

Years	Graduate & Above			Technical/Vocational			Total Higher Education		
Source	**SES**	**NSSO**	**Census**	**SES**	**NSSO**	**Census**	**SES**	**NSSO**	**Census**
1	2	3	4	5	6	7	8	9	10
1983	3.77	6.66	na	0.26 (0.62)	na	Na	4.04	7.67	Na
1987-88	4.28	7.51	na	0.41 (0.87)	na	Na	4.69	8.57	Na
1991	4.22	Na	na	0.40(0.83)	na	Na	4.63	Na	10.95
1993-94	4.35	6.45	na	0.45(0.90)	na	Na	4.80	8.85	11.74*
1999-00	6.77	7.71	na	0.45(1.00)	na	Na	7.22	10.08	13.19*
2001	7.41	7.6	12.4	0.44(1.03)	2.33(3.54)*	1.4	7.85	9.91	13.82
2003-04	8.14	Na	Na	0.39(1.29)	na	Na	9.01	13.22	14.48*

Notes:

1. Figures in parentheses pertains to al technical & vocational both degree, diploma and certificate courses.

2. na = non available or estimated.
3. * denotes estimated figures.
4. SES figures are provisional for years 1991 onwards.

Source: Studies sponsored by UGC, Undertaken by Ravi Sriwastwa, S.Sinha, Sudhansu, Sarswati Raju, Ameresh Dubey, Duraiswamy and Menon (2006).

Table 2: Enrolment by Major Streams of Higher Education from various sources (in lakhs)

Years	Graduate & Above			Technical/Vocational			Total Higher Education		
Source	SES	NSSO	Census	SES	NSSO	Census	SES	NSSO	Census
1	2	3	4	5	6	7	8	9	10
1983	28.7	51.1	na	2.0(4.7)	7.8	na	30.7	58.9	na
1987-88	34.6	65.0	na	3.5(7.0)	9.17	na	38.0	74.1	na
1991	43.3	Na	102.2	4.0(8.2)	na	3.8@	44.7	na	106
1993-94	44.5	65.7	na	4.6(9.2)	24.55	na	49.1	90.2	115.2*
1999-00	77.3	85.7	na	5.2(11.5)	25.23	na	82.4	110.9	154.3*
2001	86.3	88.5	114.3	5.3(13.1)	27.4(41.2)	16.6**	91.4	115.3	160.9
2003-04	100.1	Na	na	4.8(15.9)	na	na	104.9	161.1	182.3*

@ Technical and non-technical diploma and certificate courses

Source: Studies sponsored by UGC, Undertaken by Ravi Sriwastwa, S.Sinha, Sudhansu, Sarswati Raju, Ameresh Dubey, Duraiswamy and Menon (2006).

Table: 2(a)

Enrolment Ratio by Groups and Categories

(Higher Secondary in Higher Education, Diploma/ Certificate Courses, Graduate & Post Graduate)

Groups	Gross Enrolment Ratio			Net Enrolment Ratio (NSS)	Eligible Enrolment Ratio (NSS)
	NSS 2003	PC* 2001	SES 2003		
1. Rural	7.76	8.99		6.10	51.50
2. Urban	27.20	24.52		21.90	66.00
Total	13.22	13.82		13.22	59.00
1. Scheduled Tribes (ST)	5.00	7.46		4.00	57.40
2. Scheduled Caste (SC)	7.51	8.39		5.90	56.40
3. Other Backward Class (OBC)	11.34	-		9.20	54.40
4. Other (Hindu)	24.89***	15.57**		20.10	62.50
Total	13.22			13.22	59.00

Groups	Gross Enrolment Ratio			Net Enrolment Ratio (NSS)	Eligible Enrolment Ratio (NSS)
	NSS 2003	PC* 2001	SES 2003		
1. Hindu	12.00			9.00	57.00
2. Muslim	8.19			6.30	58.10
3. Other Religion	30.87			24.30	65.80
Total	13.22			13.22	59.00
1. Male	15.25	17.13		12.30	62.90
2. Female	11.02	10.16		8.70	54.10
Total	13.22	13.82		13.22	59.00

* PC = Population Census 2001

Rest of the figures relates to NSS 2003 – 2004

** Non SC define as Net of SC, ST & OBC

*** Other Hindus define as Net of SC, ST & OBC

Source: Studies sponsored by UGC, Undertaken by Ravi Sriwastwa, S.Sinha, Sudhansu, Sarswati Raju, Ameresh Dubey, Duraiswamy and Menon (2006).

Source: Three Rounds of NSS Employment – Unemployment Survey 2003-2004

Population Census – 2001

Table: 4(a)
Groups with lower enrolment ratio in Higher Education – 1999 – 2000
Some stylized facts (figures in %)

Social Groups						
Religion	**Categoroy**	**SC**	**ST**	**OBC**	**Non – SC/ST/ OBC**	**All**
	Hindu	4.88	6.16	7.06	19.71	10.44
	Muslim	1.83	4.41	3.94	5.91	5.34
	Sikh	1.81	NA	NA	18.94	11.28
Gender	Female (Total)	3.16	5.57	4.70	16.52	8.05
	Rural (Female)	1.64	4.75	2.08	7.10	3.56
Rural	Rural	3.30	5.15	4.11	10.58	5.72
Poor	Poor	1.69	1.32	2.42	5.57	2.43
	Poor Rural	1.31	0.89	1.25	2.50	1.30
Occupation	Wager Labour (Rural	0.67	1.16	1.93	1.41	
	(a) Agriculture	1.63				
	(b) Non-Agricl.	1.52	0.91	4.26	4.02	2.91
	Wage Labour (Urban)		1.53	3.34	4.30	3.26
	Poor Wage Labour Household (Rural)					
	(a) Agriculture	0.01	0.91	0.47	0.93	0.86
	(b) Non-Agri.	00	00	0.52	1.08	0.37
	Poor Wage					
	Labour (Urban)	2.61	1.93	2.70	1.80	2.38
	Landless (total)	2.96	11.46	4.15	8.85	5.59
	Rural	1.05	1.38	0.73	0.85	0.94
	Landless (poor) Rural					
	Total					10.00%

Source: Based on Studies Sponsored by UGC, 2006.

Table 4(b)

Muslim – Enrolment ratio in Higher Education – 1999 – 2000

Some stylized facts (Figures in %)

Caste (percentage)

Average	SC	ST	OBC	Ors.	All
Muslim total					5.34
Muslim Rural	2.90	00	2.10	2.99	Na
Muslim rural Poor	00	00	0.14	0.61	Na
Muslim (Female)	00	1.54	3.01	4.17	3.82
Muslim Female (Rural)	0.0	0.0	1.72	1.36	1.49

Source: Based on Studies Sponsored by UGC, 2006.

Table: 5(a)

Quality estimates of college sector under UGC – 2006

Colleges (as on 31.3.2005)	Nos.	% of row Previous Row	% of total colleges (14000) under UGC's purview
Total no. of colleges	17,625		
Under UGC's purview (about)	14000	79.43%	
Include u/s 2(f) UGC Act	5589	40%	40%
Include u/s 12(B) UGC Act	5273	94.35%	38%
Funded by UGC (X plan)	4870	92.36%	35% (65 not funded)
Acrredited by NAAC	2780	57.08%	20%
Colleges with sources, 60%	2506	90.14%	17.90%

Table: 5(b)
Quality estimates of University sector under UGC – 2006

Universities (as on 31.03.2005)	Nos.	% of previous row
Total no. of Universities	357	
Under UGC's purview All Universities excluding institute of national importance, institute established under state legislation and agriculture, technology and medial universities and institutions	317	81%
Central Universities State Universities Deemed Universities Institutions under State Act Institutions of National Importance	20 216 103 05 13	12(B) – 72
Funded by UGC (X Plan) a) Institutes included under 12(b), b) Central universities (quality by enactment) c) 24 deem universities (quality assessment by UGC)	164	52%
Accredited by NAAC	128	78%
Universities with scores, 60%	128	100%

Table – 6
Measurement of Excellence – Universities, Department & College Sector by UGC

Scheme	No. of Institutions	% of Total University/ Colleges Funded by UGC
Total Central and State Universiteis	234	
State universities under 12(b)	164	
University with Potential for Excellence	9	5.88%
Centres (specialized theme) with Potential for Excellence	12	7.84%
Establishment of new centres / Institutes (Establishing during IX Plan)	5	3.26
Special Assistance Programme	477	
Colleges with Potential for Excellence % of Colleges with PFE % of Colleges under 2(f) % of Colleges under 12(B) % of Colleges funded	97% 7% 2% 2% 2%	

Table 7

Universities with Centre with potential for excellence

S.No.	University	Areas of Specialization to be developed
1	Panjab University	Biomedical Sciences
2	Guru Nanak Dev	Sport Sciences
3	Cochin University of science & Technology	Laser & Opto-electronic Science & Technology
4	Madurai Kamraj University	Genomic Sciences
5	Himachal Pradesh University	Himalayan Studies
6	Sardar Patel University	Applied Polymers
7	Allahabad University	Behavioural Cognitive Sciences
8	Karnataka University	Polymer Chemistry
9	Anna University	Environmental Sciences
10	Arunachal University	Biodiversity
11	Rashtirya Sanskrit Vidaypeeth Tirupati	Traditional Shastras
12	Devi Ahilya University	e-Management Studies

Table 8

News Centres/Institutes of excellence

S.No.	University	Areas of Specialization to be developed
1	Panjab University, Chandigarh	Human Genome Studies & Research
2	Sanjay Gandhi PG Institute of Medical sciences, Lucknow	Centre of Biomedical Magnetic Resonance
3	University of Pune, Pune	National Centre for International Security and Defence Analysis
4	University of Mysore, Mysore	National Centre for History of Science at the Oriental research Institute,
5	Jawaharlal Nehru University, Delhi	Creation of a Centre of applied Human Genetics, school of Life Sciences

Table : 5(c)

NAAC Ranking – 2006

Total Colleges - 14000

1)	A++, A+, A (A)	245	High Quality	9%
2)	B++, B+, B (B)	1785	Medium Quality	66%
3)	C++, C, C- (C)	668+	Low Quality	24%
		Total	**2698**	**100%**
4)	College not assessed (self financing and not permanently affiliated)	11302	Grade not known (Presumably low quality)	

Table 5(b)

Total Institutions – 357		**Total**		**Total**
	Total Universities	319		
(a)	Central Universities	20	Under section 12(B)	18
(b)	State Universities	216	Under Section 12(B) of UGC	164
(c)	Deemed Universities	103	Under section 12(B)	24
(d)	Total Under 12(B)			

SIXTEENTH CONVOCATION

SRI. B K CHATURVEDI IAS

Member of Planning Commission

Government of India, New Delhi

ECONOMIC GROWTH AND HUMAN CAPITAL

1. His Excellency Shri Narayan Dutt Tiwari, Chancellor, Dr. B. R. Ambedkar Open University, Professor O.R. Reddy, Vice Chancellor, distinguished Members of the University academic community and dear students.

2. It is a matter of great honour for me to be invited to deliver the Convocation Address of Dr. B.R. Ambedkar Open University. In a span of more than a quarter century, this University has established a name for itself by providing huge opportunities in the field of higher education, developing new curricula, widening access to research and post-graduate courses and postgraduate diploma programmes and through its extensive academic activity. May I congratulate its faculty for working with dedication and helping in the expansion of higher learning.

3. Indian economy today is going through a buoyant phase. In the last four years, it has averaged a growth in GDP of around 8.8 per cent per annum and both savings and investment rate in the economy are about 35 per cent and more. In the last decade, these have gone up by nearly ten per cent. Exports, which were in the nineties, around 8% of the GDP are now around 14 per cent of the GDP and the foreign trade sector is now contributing about 40 per cent of the total economy. Exports have crossed $ 126 billion last year and may, in the current year, reach $ 160 billion. The Foreign Direct Investments have been increasing rapidly and are expected at around $ 18 billion in the current year. The foreign exchange reserves have crossed $ 291 billion and are growing. In fact, the problem now is to manage these huge reserves. The overall plan

investments in the next five years are slated at $ 900 billion and would be more than double of that of 10th Plan.

4. There are, however, several areas of concern. Let me enumerate a few. The growth of agriculture in the last two decades has been slow. It has grown at the rate of two to four per cent since the 1980s and the area under cereals has remained almost stagnant for the last decade and a half. While primary sector contributes more than 20 per cent to the overall economy, it has provided nearly 60 per cent employment. The contribution of agriculture to the economy has gone up more than four times in the last five decades. The income of agriculture worker, however, has gone up only by about 75 per cent. This is due to our inability to reduce the dependence of working force in agriculture significantly by producing non-farm employment. Nearly half of those who are engaged in agriculture are not literate and a very small percentage has completed 10+2 education. The size of holdings is getting small as these get more fragmented. The terms of trade in the last ten years have grown adverse, though there were some positive movements earlier. The nation today needs large inputs of technology in agriculture and, in particular, in major cereals like wheat, rice and pulses and oilseeds for improving productivity. Availability of these basic goods in the market has to grow if we have to provide to our consumers food at reasonable prices. A major step up in investments in agriculture and technology will be required in the next few years. This should strengthen our ability to meet the growing requirements. It would help if we are also successful in creating more jobs in the manufacturing and informal sectors to improve incomes of those employed in agriculture.

5. Certain developments in the international market, however, are threatening to severely erode our ability to grow rapidly. The international global scene on primary commodities is showing a very high volatility. For meeting the demand of diesel, petrol and other products we import large quantities of crude oil. In the coming years, too, our demand for it would be growing. Crude oil prices have crossed all records and have gone up four times of their earlier benchmarked levels. The international prices of wheat, whose demand in domestic market is high, have more than doubled in last one year. There are indications that large quantities of maize have been earmarked by

the United States for production of ethanol, resulting in reduced overall surpluses of food grains from them. The international market for pulses is a thin one and major requirements for these have to be met from the domestic production. The prices of edible oil, particularly palm oil, of which we are a large importer on a regular basis, have increased sharply to twice of what these were a year back. There is a clear strong upswing in the prices in international market of primary commodities. With the Indian economy getting more integrated with the world economic system, these developments would have serious repercussions on the domestic price situation. High prices for food grain, oil and crude oil will particularly impact the low and middle income groups. Both energy and food are critical and vital for our economy; the price trends in these will have serious impact on the economy on a long term basis.

6. Our nation today faces a number of challenges. One of the most important tasks before us is to improve standards of living, provide nutrition, education and health care to all our people and plan for high level of physical quality of life. This is a daunting task on which while successive Plans have made attempts, yet the progress has riot been commensurate with our expectations. In the last one decade, we have made efforts to reduce the number of those people whose incomes are less than a certain minimum which is referred to as the poverty line. While in percentage terms, a measure of success has been achieved — there is an improvement of nearly five per cent — because of. the increasing population, the actual number of people still below the poverty line remains around 30 crores. Our growth process has to be inclusive and must take care of these deprived segments of the population. While income inequalities exist, they are particularly glaring in certain states when measured against the national average. Over a period of years, the divergence amongst the States is growing wider. While 10 years back, the ratio between the lowest and the highest income States was 0.3, it has deteriorated now to 0.2. This means that the per capita income in Bihar, which is the lowest income State, is roughly 115th of the highest income level state of the country. This is not a very happy development. The growth process has to take care of this issue. In particular access to health care and education for Scheduled Tribes, Scheduled Castes, certain minority groups, and other low income groups are

critical national needs. An Inclusive Growth can only mean that all are able to avail of these facilities for quality education and health care. This is a task which we have to address ourselves in right earnest. Development of Human Capital will be vital for rapid growth of these States and social groups.

7. As we plan for the next four decades and hope to take the Indian economy forward, make rapid strides, and join the world leaders China and the United States - a key determinant will be the development of national human capital. While our country has mineral resources including deposits of coal and iron ore, considering the size of the growing population, these are quite inadequate. Any growth strategy has to be based on development of the human capital promoting excellence and improving productivity. A strong focus on improvement in quality and technology will be required in the coming years.

8. Nations progress when their human capital is strong. Japan is a shining example of this principle. Its more Than 40 per cent industrial plants and infrastructure were destroyed in the war. It made strong recovery and clocked very high rates of growth throughout the 1970s and the 80s. It developed a highly skilled and dedicated labour force which had a strong support from the educational system. It emphasized, apart from literacy, discipline, hard work and wage increases related to productivity. Increased savings, quality of investments, access to US market and policy interventions which were consistent with the world economy were also important factors in its growth. It cannot be denied that a nation which had very little of its own mineral resources and raw materials was able to grow at such a fast pace, primarily because of a strong human capital base.

9. With a large working population entering this century, their employability will be improved only if skill levels are high. It is important that the skill levels are matching the demand of the economy. The pool of trained manpower and its competencies should meet the requirements of the industry. In particular, they should be globally competitive. A strong interaction with private industry which is a key driver of growth is vital for developing appropriate skill sets and capacities. Major developed nations

provide skill development training to a very large segment of their population varying from 70% to 95%. China provides short-term modules for 4000 trades. It will be, therefore, important that the skill development is given a strong push with a very wide choice of menu. By 2020, this country will have more than 33 crore people in the age group of 20-35. A well-trained manpower with both short and long-term training facilities available across the country would provide a strong support to the growth process. A major skill development programme is planed by Central Government in the coming five years. Effective implementation of this would be important for the country's growth.

10. The BRICS Report prepared by Goldman & Sachs has visualized a rapid growth of the Indian economy. One of our major strengths is the growing working population and low dependency. In the western countries, people are living longer and the share of the working population is declining with increasing stress and old age. In the Indian economy, we have a better situation. This endowment, however, cannot be utilized unless we take comprehensive steps to improve literacy levels, develop skill sets, meet the gaps in research and development, improve investments in research and ensure that the access to various facilities is widespread and extensive so that all income groups can be benefitted by it. Let me elaborate on this point.

11. The demographic dividend, which India is expected to reap, has been fuelled by the fact that while India is increasing its share of working population, it is going down in other countries. India's population growth is slowing down but the percentage of young people entering the working age is increasing. The proportion of dependants to working age is hence reducing. It may go down from 0.8 in early nineties to 0.6 in 2011. This offers interesting opportunity for our young boys and girls. It is estimated that by 2020 there will be manpower shortage globally of around 6 crore people and we would have a skilled manpower of around 5 crore surplus if preparatory steps are taken from right now. The demographic bulge is occurring at the age bracket of 15 to 29. In case we do not use this opportunity, we would be facing a demographic crisis. We would have young men and women without any skill sets, and therefore, unemployable. The criticality of skill development for the young population, therefore,

cannot be over-emphasized. It is particularly interesting to note that a lot of this population growth is today taking place in the States of Bihar, Uttar Pradesh, Orissa and Rajasthan. It is these very States which have very low incomes, low literacy levels and comparatively lower skill sets. This would, therefore, offer an opportunity for young men and women in these States to provide workforce for the global needs. Open University would have a major role in doing so.

12. A large number of young students today do not go to the universities. As against the world average of 21 per cent, only 11 per cent of the young Indian students join the university stream for higher learning. Even for increasing it to 15 per cent which is planned in the next five years, major expansion in higher education infrastructure is required. There is a need for new world class Institutes and improving the quality of education. This requires investments in the libraries, laboratories, connectivity and other facilities of existing universities. Several new universities, polytechnics and colleges will have to be opened and capacities of existing institutions augmented. An expansion of this require, apart from investments, dimension would extensive planning.

13. There is also the question of commercialization of education. A large number of engineering and management institutes have been opened in the private sector. The educational facilities with several of these are very poor. Even though the regulatory bodies have made efforts in this direction, the situation continues to be depressing. Government would, therefore, have to play a major role by way of setting up new institutes, providing strong regulatory norms, developing self- regulation mechanisms and insisting on good infrastructure.

14. One of the main areas of concerns in the higher education system is the declining number of students in 'natural sciences'. The investments in technology and science determine the strength of a nation. Unfortunately, young boys and girls have recently preferred to shy away from the study of 'natural sciences'. The number of research papers published in this field is limited and the research facilities are not expanding adequately. While some initiatives are planned to meet the gap by giving larger number of scholarships, there is a need to have a more comprehensive programme and larger

funds, earmarked for this. If we can build a big arid strong base of technology, the coming generation will see a very large body of young men and women trained in 'natural sciences capable of undertaking fundamental research and thereby improving the nation's technological capability.

15. A key determinant of human capital in the field of higher education will be the strategy for improving access and promoting excellence. The Knowledge Commission has made a strong case for expansion of open and distance education. It has in its recent report emphasized the potential of faster expansion of open and distance education. In this context, some of the suggestions which are worth considering relate to development of network of open and distance education institutions, setting up of a National Education Foundation for developing common open resources and facilitating convergence with conventional universities. To enable a quick assessment, one of the important suggestions is setting up of a national testing service. In some other areas requiring improvement in the quality of education and for meeting the gaps in faster expansion, it has recommended setting up of a research foundation to support research activity and overhaul of the training programme of the educators, development of a system for quality assessment, developing production of quality content through selected set of Indian institutions, leveraging of global educational resources and creating faculty and institutional development programmes. All these suggestions and several others are aimed at expansion and quality improvement on a long-term basis of the open education and distance learning systems. I am sure, this University is already working on several of these areas.

16. Expansion of higher education to cover about 15 per cent of the 18 to 23 years age group planned in the next five years will require major expansion of faculty. In a short time, this will be extremely difficult. It will be particularly so in the field of medicine, management, engineering and other new disciplines. The salary structur,1 of young boys arid girls coming out of the institutes in some of these disciplines is quite attractive in the private sector. This is particularly so in certain segments like IT. Teachnig and research, therefore do not attract bright students as a good career option when they come out of the university. This trend has to be reversed.

17. The problem in the field of higher and technical education has been further compounded by the nature of growth of institutions of higher learning. Till a decade back, private engineering and medical educational institutions in northern India, particularly in States like Uttar Pradesh and Bihar were very few. With the coming of private investments in this sector, a very large number of management and technology institutes have come up. This sudden spurt in these colleges has given rise to a severe faculty shortage. It also has impact on the quality of teaching and the excellence in education which we are trying to promote. This is a serious issue. Open universities can take up the development of faculty and quality educational material in all seriousness.

18. There is a need for looking at research and teaching in a more holistic manner. The existing structure of research in science and technology has led to development of a number of research laboratories. CSIR has under it a very large number of laboratories spread throughout the country. They work in different fields and have a very large number of highly qualified science personnel. Similarly, the Universities, IITs and IIScs also conduct research and teaching. It will be useful to have a greater integration in the system. It is possible to ask the research scientists to undertake teaching for a few hours. This will help improve quality of learning, availability of faculty of the highest order and promotion of research. The research laboratories would gain from interaction with young minds.

19. As many of you complete your University education and go out to face the challenges of the career which you may have in mind and plan for realization of the vision and dreams which many of you will have, there will be several impediments and difficulties in your way. You would face them well if you have a commitment to quality and excellence. Sometimes you may also feel unclear in your mind as to which path to adopt. Often you may face difficult decisions where the idea that you have with you and the reality of life are widely different. These tough times will be your real test. I hope that when such occasions arise, you will stand by what is right, fair and just and promotes excellence. It is this ability and adherence to principles which in the long run will take you far it is your dedication and commitment to your ideals which

will shape your future life. Sometimes you may be tempted to give up your ideals for immediate gains. Such victories occasioned by these temptations would definitely be short-lived and may cause you incalculable harm in the long run. I am sure you would, with the great traditions of your Open University behind you, follow the path of rectitude while living your vision and ideals.

I wish all of you success in your endeavours.

SEVENTEENTH CONVOCATION

PROF. S. MAHENDRA DEV

Chairman, Commission for Agricultural Costs and Princes

Ministry of Agriculture Government of India, New Delhi

It is a great honour to be invited to deliver the 1 7th convocation address of Dr. B.R. Ambedkcar university. I am grateful to the Chancellor, the vice-chancellor and the others at the University for extending this invitation to me. It is a matter of great pride to learn about the progress made by this university in the last 27 years in terms of providing quality distance higher education to hitherto unreached sections of the population. I had the privilege of observing this progress at close quarters when I was director of the Centre for Economic and Social Studies (CESS), Hyderabad during the period 1999-2008. One should also remember the contributions of late Prof.G.Ram Reddy, founder vice chancellor and pioneer of open distance learning who had great vision on this form of education. Dr. B.R.Ambedkar Open University has established a name for itself in providing intellectual leadership in distance learning in terms of enrollment of students, courses offered, development of new curricula direct contact centres and initiating many innovative ideas. There has been lot of talk about the need for inclusive growth or inclusive development in India. The efforts of this university have made higher education inclusive. I congratulate the faculty and the administration for their hard work and hope that these efforts would continue in future in promoting inclusive higher education.

Currently, there have been many challenges for Indian economy due to global financial crisis. I will take this opportunity to speak on 'global financial crisis and its impact on Indian economy'.

Financial Crisis and Impact on India:

In the year 2007-08, three global crises viz., food, fuel and financial had impact on India. On the positive side, significant easing of international oil prices and softening of international food prices has helped in softening the inflationary pressure. Inflation has come down from 13% in the middle of 2008 to around 5% in January 2009. However, the unprecedented global financial crisis has been having severe adverse effect on Indian economy. The financial turmoil which started in the US financial system as a result of defaults of sub-prime mortgage loans has blown into an unprecedented financial crisis, It has affected the international money, credit, equity and foreign exchange markets. US households used to save 6% of their disposable income. But in recent years they went on a borrowing and spending spree and the household savings dropped to nearly zero. Corporations and financiers also were also having debts to buy houses, stocks and commodities. This created bubbles which exploded in 2008. The global situation deteriorated massively after mid-September 2008 following the collapse of Lehman Brothers, one of the top five investment banks in the US. There has been a massive choking of credit since then and a global crash in stock markets. The slowdown that was expected in the global economy became much worse with the US, Europe and Japan moving into recession. A crisis of this magnitude in industrialized countries is bound to have an impact on India.

The financial crisis originated in the US being transmitted to other countries through three principal channels. First, it has directly affected the financial institutions all over the world due to investments in mortgage-backed securities and their derivatives, which turned toxic following large-scale defaults in the US housing markets. Second, the financial crisis has created a liquidity problem. The US firms which needed liquid resources withdrew their funds from stocks and bonds in other countries. Decline in the prices of stocks and bonds had impact on local investors who pulled back from the market. This led to choking of credit all over the world. The third source of transmission is the impact on real sector. The financial crisis led to recession in the US. This led to decline in demand of goods from other countries in the US. As the contagion spread and job losses rose in the advanced industrial economies, confidence was eroded

further and general consumer demand in both the US and other developed nations dropped. In consequence, emerging economies saw export markets contract. This has affected the exports and business confidence in developing countries.

While India has largely escaped the first transmission, it has not been able to avoid the other two channels. While the direct exposure of Indian banking system to the sub-prime market abroad is almost absent, there may be very limited investment by a few Indian banks in the collaterized debt obligations which had underlying entities with sub- prime exposures. The Government ownership of banks has proved to be a big advantage in these troubled times. However, the indirect impact of the crisis, transmitted through capital flows, financial markets and trade (real sector) would affect India. The foreign exchange reserves have declined in India and created a liquidity problem due to global crisis as well as tightening of monetary policy earlier. The exports from India would also be affected.

The growth rate of GDP in India is expected to decline to around 7% in 2008-09 as compared to 9% growth in 2007-08. This is partly due to the financial crisis and partly due to the tight monetary policies which in turn was due to high inflation. The Economic Advisory Council indicated that growth could be around 7 to 7.5% in 2009-1 0. But, other forecasts and international organizations showed that growth could be around 6% in 2009-10. Lower growth may affect the employment prospects. It may have an adverse impact on social sector expenditures as tax/GDP ratio may go down with lower growth.

At sectoral level, manufacturing sector is the most affected sector. The credit crisis and decline in demand has adverse impact on several industries. Flow of funds to the corporate sector has declined by nearly Rs.94,000 crores in the current financial year upto early January as all foreign sources of funding dried up. Despite expansion in bank credit, there has been a perception of non-availability. The RBI attributes this to reduced flow of funds from non-banking sources, mainly the stock market and external commercial borrowings. The external commercial borrowing (ECB) and short-term credit from abroad, which met more than 20 per cent of India's INC's credit

needs in 2007-08 have contributed only 8.2% of the financing needs. Increase in the bank credit has not been enough to plug the gap left by other sources.

Since the business confidence is low, inspite of monetary and fiscal measures, the banks are not able to deliver credit because of two reasons. First one is that credit demand is low. Second one is that the banks are also averse to lend at a time when economic growth is definitely slackening. The chances of even existing loans, leave alone new ones, turning bad are perceived to be high. Industrial activity decelerated during April-November 2008-09, with the year-on-year expansion in Index of Industrial Production (IIP) being 3.9 per cent as against 9.2 per cent during the corresponding period of the previous year reflecting slowdown in all the constituent sectors. The slowdown in manufacturing sector was largely on account of food, textiles and metals. The IIP output growth in October was reported to be (—)1 .2 per cent, from which it recovered slightly to a positive 2.4 per cent in November 2008. The sectors adversely affected are exports, real estate, housing and automobiles. A survey by the labour ministry indicates that already 5 lakh jobs are lost. In the export sector, most of the items particularly gems and jewellery, textiles would be affected adversely. The slow down in exports may have impact on 2 million workers.

The slowdown in industry would affect the growth of services. The remittances from abroad will go down including services in IT sector. The financial crisis would have impact on small and medium enterprises (SMEs). SMEs with investment less than Rs 5 lakhs employ 100 million people. They contribute 31% of GDP and spread over leather, coal, apparel, food processing and handicrafts. But they get only 2% of net bank credit.

The impact of the financial crisis is likely to have negative effects on the agricultural sector and food security. Agriculture sector has been fortunate in having had five successive good monsoons and good harvests. In the last three years, the average growth in agriculture was 4.7% per annum. The growth rate in 2008-09 is also expected to be 3 to 4%. However, this good performance may not last if proper steps are not taken into account.

The pathways through which the agricultural sector will be affected are on both demand and supply sides. The slowing down of economic growth would affect demand for agricultural commodities. Prevailing uncertainty and consequent negative market expectations could further dampen demand. The falling demand may put further downward pressure on agricultural commodity markets. In general, lower food prices are good for consumers but reduce incentives for producers to make the necessary investments which would improve food security in the medium term. However, decline in food prices would not be sufficient to compensate the consumers from the reduction in household incomes due to recession, fall in employment and remittances from abroad.

On the supply side, reduction of agricultural prices may result in cutback in agricultural production. Although oil and fertilizer prices declined, in general, input prices can be sticky and would affect the supply of agricultural commodities. The financial crisis is likely to have negative impact on agricultural credit which is widely regarded as major constraint to agriculture in developing countries. Farmers who took advantage of rising agricultural prices to invest in raising production may find themselves unable to pay off their debts because of falling output prices. As banks cut lending because of financial crisis, it would be difficult for small farmers to make new investments. The financial crisis may reduce agricultural investment at macro level and cut back on social protection expenditures.

The combination of falling agricultural prices, reduction in agricultural investment and access to credit may have negative effect on agricultural production. It would have serious implications for food security. Poverty reduction efforts may be stalled because of low employment and volatility in food prices. The negative impact on household income would affect the well being of women and children.

What should be done to revive the Indian Economy and Improve Employment?

There is a need to take five measures to revive the Indian economy and reduce adverse impact on employment and livelihoods of people. These are: (a) continuation ior monetary and fiscal measures; (b) sectoral interventions in manufacturing (c)

improving agricultural sector; (d) focus on unorganized sector; and (e) better implementation of safety nets.

(a) Monetary and Fiscal Measures: In order to reduce the impact of financial crisis, India has taken several monetary and fiscal measures. The Reserve Bank of India has taken a number of measures to address the issue of rupee liquidity and foreign exchange liquidity. Since September 2008, the RBI embarked on a programme to reduce the cash reserve ratio (CRR), policy interest rates, introduce new financing! re-financing windows and extend other measures supportive of business activity. The aggregate of measures taken since September through early January has resulted in a reduction of the CRR to 5.0 from 9.0 per cent; of the repo rate to 5.5 from 9.0 per cent; and of the reverse repo rate to 4.0 from 6.0 per cent. According to RBI, Rs.3,88,045 crores have been released into the system since mid-September last year. The four percentage point reduction in CRR alone will release 1,60,000 crores.

The Government has also taken fiscal measures to improve demand in the economy. In the first stimulus package, government reduced excise taxes and announced Rs.20,000 Crore increase in government expenditure on infrastructure. In the second stimulus package announced on 2' January, 2009, the measures include the following: ECB (External Commercial Borrowings) access, approval norms further liberalized, EII investment limit incorporate debt hiked to $15 billion from $6 billion, Rs.25,000 crores liquidity support to NBFCs through SPV (special purpose vehicle), Rs.20,000 crore recap plan for PSU banks over the next two years, states allowed to raise Rs.30,000 crores much through market borrowing, incentives to exports etc. The vote on account budget also announced some fiscal measures to improve employment.

The monetary and fiscal measures announced by the RBI and Government are in the right direction to improve liquidity and investor confidence in the economy. There is a need to continue these measures in future also. Depending on the situation, RBI may have to further reduce the interest rates and cash reserve ratio. It is true that credit growth in non-food credit by 2nd January, 2009 was 23.9 per cent. It was higher than the 22% on January 4, 2008. However, despite the expansion in bank credit, credit is

not enough because there has been reduced flow of funds from non-banking sources. Thus, banks have to reduce interest rates and improve credit situation further. Regarding fiscal policies, further stimulus is needed in this fiscal and next fiscal years. Particularly, there is a need to increase public investment in infrastructure.

(b) Sectoral interventions in Manufacturing and Services: Apart from aggregate measures, some interventions may be needed in labour intensive industries and services. Sectors like housing, garment industry, automobiles and other export industries need incentives. For example, garment exports have been hit due to shrinking demand in the western markets. On the other hand, demand for the products of China, Bangladesh and Vietnam is needed. Garment industry employs 7 million and needs assistance. Some of the proposals of the Apparel Export Promotion Council (AEPC) are: 2% additional subvention in export credit, exemption from fringe benefit tax, ad hoc increase in duty drawback to 4% from September 2008, interest free loans for investment in machinery and two year moratorium for repayment of principle amount against term loan. There is no need to have big bailouts but supporting measures can be attempted.

On corporate governance, the objective should be to put the Satyam-induced trauma behind by initiating moves to ensure transparency and proper corporate governance, besides strengthening the regulatory mechanism.

(c) Improving Agricultural Sector:

There are different views on the policies that have to be taken to come out of the financial crisis. One view is that demand should be increased through direct fiscal action by the government. The objective of the larger government spending must be the reversal of the squeeze on the living standards of the people. The new paradigm must entail inter alia a foodgrain-led and agriculture growth strategy. In other words, stimulus package has to be towards the agricultural sector and primary food producers.

A study by International Food Policy Research Institute (IFPRI) shows that investing in agriculture and raising agricultural productivity would reduce the negative effects of recession and would reduce hunger and malnutrition.

Growth of agriculture in India decelerated from 3.5% from 1981- 82 to 1996-97 to around 2% during 1997-98 to 2004-05 although there are signs of improvement in recent years. Yield growth has also declined. Farmers' suicides have continued / increased in some states. Farming is becoming a non-viable activity. There are also other problems. Further scope for increase in net sown area is limited. Land degradation in the form of depletion of soil fertility, erosion and, water logging has increased. There has been decline in the surface irrigation expansion rate and reduction in ground water table. Exposure of domestic agriculture to international competition and, volatility in prices are other problems. Disparities in productivity across regions and crops and between rainfed and irrigated areas increased. Long term factors like steeper decline in per capita land availability and shrinking of farm size are also responsible for the agrarian crisis.

What are the goals of agricultural development? There are three goals. First one is to achieve 4% growth in agriculture and raise incomes of the farmers. Here challenge is diversification to high value agriculture and rural non-farm by maintaining food security. Food security does not mean foodgrain security. Second objective is to sharing growth with small and marginal farmers, lagging regions, women etc. Here focus has to be on lagging regions like Eastern India. Third is to maintain sustainability of agriculture by focusing on environmental concerns.

What are the policies needed for achieving these goals? Both supply side and demand side factors are important. There are six deficits in agriculture : (a)investment, credit and Infrastructure deficit, (b) research and extension (technology) deficit, (c)market deficit, (d) diversification deficit, (e) institutions deficit, (f) education / skill deficit. Younger generation does not want to go for agriculture. Group approach is needed for inputs and marketing. Deficiency in agriculture and rural infrastructure is biggest problem for agricultural development. Small farmers can respond positively

with infrastructure. There is a need for massive increase in outlays for agriculture and rural infrastructure by simultaneously improving the delivery systems. Government is thinking of big push to education in 11th Plan. Such a big push is needed for agriculture sector.

(d) Focus on unorganized workers: It is well known that more than 90% of workers are in unorganized sector in India. Even in organized sector we have unorganized workers in the form of casual and contract workers. According to the National Commission for Enterprises in the Unorganized Sector (NCEUS) immediate attention has to be given 'to protect the livelihood security, employment and income of the vast majority of the people who are either poor or vulnerable and in doing so also stimulate overall economic growth'. The higher economic growth of the Indian economy in the last 20 years bypassed 77% of the people. Most of them are illiterate or have only primary level education, and suffer from malnutrition and ill-health. Most of them are unemployed or belong to the working poor, or self employed unorganized workers. Among the farmers, 84% are marginal and small farmers operating not more than 2 hectares of land. Agricultural labourers who are the bottom layer of the occupational structure, include a majority of workers from SCs and STs, and constitute around 89 million. The smallest segment of the unorganized sector (with investment below Rs.5 lakh in Plant and Machinery) gets less than 2% of net bank credit while investment below Rs.25 lakh get 4.3% of formal sector credit.

NCEUS is of the view that given the global financial meltdown on the economy and particularly the poor who are the unorganized workers, a major response is urgently required. The Commission advocates a major fiscal stimulus comprising of:

(a) programmes to boost pro-poor public investment in physical and social infrastructure;

(b) Programmes, schemes which protect and promote incomes of the poor;

(c) Expansion in scope and coverage of social security schemes of the unorganized workers.

Some of the proposals of NCEUS are given below.

(i) Enhance pro-poor public investment. This includes expansion of rural infrastructure consisting of rural infrastructure, roads providing connectivity, housing, drinking water, sanitation and rural production infrastructure.

(ii) Strengthen and expand self employment programmes: A number of measures have to be taken to graduate micro finance to livelihood finance. The measures can assist both farm and non-farm workers who are likely to face reduced prospects of employment in the wage market.

(iii)Special Programme for Marginal and Small farmers: Institutional Credit for small and marginal farmers have to be improved. Special programmes like land improvement, minor irrigation, capacity building, training etc. can be given to these farmers.

(iv) Enhancing access to credit to micro enterprises: In times of financial crisis, the small producers will be rationed out of the credit market. Steps have to be taken to increase credit to unorganise sector micro enterprises.

(v) Create a National Fund for Unorganized Sector: A national fund for unorganized sector has to be established in order to step up credit and developmental effort for this sector.

(vi) A programme for Skill Development in the Informal Economy:

The government has provided measures to expand skill training. But, they remain mostly to organized workers. There is a need to have a programme for receiving on-job training in unorganized enterprises. This scheme aims at workers who have primary but less than secondary level education.

(vii) A National minimum social security for in formal workers: The Commission proposed a universal but minimum level of social security for all the unorganized workers in the country. It consisted of (i) sickness and maternity, (ii) disability and death, and (iii) old age security in the form of a national pension for those belonging to BPL households and a contributory provident fund for those belonging to APL

households. The NCEUS proposal has estimated to cost only half a per cent of GDP to the government for all the unorganized workers.

In order to save the informal sector from collapse, the NCEUS has sought Rs.58,000 crores special package to implement all the above programmes. If implemented, these programmes would create about 57 million additional jobs over the next five years.

(e) Better Implementation of Safety Nets

If we leave everything to market and growth, we cannot take care of risk and inequality. Certain redistributive policies can be good for growth. Presence of safety nets can maintain acceptable minimum floor for social cohesion and can prevent irreversible losses of human capital in hard times. The state has a role in helping the poor in times of insecurity and in ensuring minimum levels of provision to those unable to gain from the growth process.

The present major programmes for the poor in India fall into four broad categories: (i) self employment (ii) wage employment (iii) direct cash transfers to the targeted groups and (iv) food transfer like public distribution system (PDS) and supplementary nutrition. There are also many direct programmes for women.

National Rural Employment Guarantee Scheme (NREGS) is one of the biggest safety net programmes in India. It provides 100 days of employment to unskilled workers. Although there are problems at ground level, the implementation of NREGS has improved over time. There is a need to strengthen NREGS. In order to complement NREGS, an urban employment guarantee programme has to be introduced. The activities can include low income housing especially for slum dwellers, electrification, water supply, slum improvement, low cost waste management etc. During the time of financial crisis, NREGS can act as biggest safety net for unskilled workers.

There is also a need to strengthen and expand investment in human development of the poor and vulnerable. The families and children in the informal economy suffer from capability deprivation. Given the conditions of poverty and vulnerability and

low human capabilities, there is a need to strengthen and expand programmes that improve human development of these households. Here the programmes such as Sarva Shikshan Abhiyan (SSA), National Rural Health Mission (NRHM), public distribution system (PDS), Integrated child development services (ICDS) should be expanded and strengthened to the poor and unorganized workers.

Inclusive Growth in India

The global economic growth may pick up in 2009 or early 2010. The measures taken by Indian government so far and other future actions may have impact on Indian economy and start showing up higher growth in the second half of 2009-10. However, apart from higher economic growth, India needs inclusive growth or inclusive development to sustain broad based development. This is particularly important during the current financial crisis and beyond. The elements of inclusive growth are: agriculture development, poverty removal and employment generation, human development and social and regional disparities. We shall discuss here the divides in the economy and society.

The exclusion problems have not been seriously addressed by the government programmes and strategies since independence. The experience of the economic reforms in the last 18 years also indicate while there have been improvements in economic growth, foreign exchange, IT revolution, export growth etc, the income distribution has been unequal and only some sections of the population benefited more from higher growth and prosperity.

The social problems of contemporary India are the result of a complex interaction between the aspects of exclusion and inclusion rooted in history, values and cultural ethos. Many of these problems have not been addressed by the development strategy launched since independence. Exclusion continued in terms of low agriculture growth with increasing visibility in farmers' suicides, low quality employment growth, concentration of poverty and low human development both geographically and in terms of social categories, increase in rural urban divides and regional disparities. Although we have constitutional commitment to equality and rise in the emphasis on

equality of women, it had only a limited impact in reducing disparity and discrimination of women. There has also been failure in child development in terms of health, nutrition and quality education. The criticism of economic reforms in the last 18 years has been that it neglected the divides within the country.

Therefore, **bridging the divides** should be the priority areas of the Indian government. Most glaring among the divides is the social inequality. Several social and economic indicators show that the SCs& STs have the lowest levels in indicators followed by Muslims, OBCs and other castes. There are significant disparities in socio-economic development between marginalized sections (SCs&STs) and other groups. There have been various programmes and legal provisions for improving the access of these groups to cultivable land, education, health care and basic amenities through inclusive development strategies. Though there has been some progress in many development indicators for the SC and ST communities, they still lag behind the mainstream, or the 'other' social groups. The situation with respect to economic well-being is also a matter for concern as the poverty level among the STs has, in fact, increased during the last decade or so. It may be noted that without effective steps to enhance access to productive assets including land and, most importantly, employment opportunities through 'affirmative policy action', their condition cannot be improved in a sustainable manner. Recently the government has proposed to extend reservations for OBCs in the Central educational institutions. These type of 'affirmative actions' are important for fair participation of socially disadvantaged groups. In order to have more sustainable socially inclusive policies, inequalities in opportunities in employment, health and education have to be removed.

Regarding Muslims, they continue to be underprivileged in terms of basic indicators like literacy, income, consumption expenditure. Also, there has not been significant improvement in the conditions of Muslims over time compared to other religions. However, the demographic (e.g. high population growth) and social characteristics are not due to religious factors but are linked to economic background and social deprivation. Some of the facts such as Muslims having sex ratio above that of the general population, a large number of Muslims practicing contraception, a low

percentage of anaemic women and a low infant mortality rate (IMR) would question some of the myths regarding Muslim communities. Reducing inequalities in health, education, employment and other opportunities and 'carefully conceived affirmative programmes' can improve social and economic development of Muslims.

Another glaring factor among the divides is the regional disparities in economic and social development. One of the important elements of inclusive growth is reduction in regional disparities. The growth rate in SDP across states seems to be more uneven in the post-reform period as compared to pre-reform period. Poorer states like Bihar, Orissa, M.P. and U.P. suffer from high population growth and low economic growth. The poor among SCs in rural areas are concentrated in Uttar Pradesh, Bihar and West Bengal while the poor among SCs in urban areas are concentrated in Madhya Pradesh and Uttar Pradesh. Regarding poor among STs, Bihar, Gujarat, Madhya Pradesh and Maharashtra together accounted for 75.5 per cent of the poor among STs in 1999-2000.

Disparities increased in India for poverty, inequality in consumption, underweight children and infant mortality. In the case of enrollment, inter-state variations have declined. However, provincial disparities increased in some of the selected countries also and it is not unique for India. The poorer states in India seem to be catching up with other states in social development particularly in education as compared to economic growth and poverty.

What are the policies needed for reduction in regional disparities in economic and social development? Important issue is that some states benefited from reforms while some others lagged behind. The answer for this issue lies partly in the initial or pre-reform level of social and economic infrastructure conducive to growth and partly in the rate of capital formation, physical as well as human, in the post-reform period. Historical factors and initial endowments explain only part of the reasons for regional disparities. The experience of different states shows that the group of some western and southern states has done better than some eastern and northern states. For example, Tamil Nadu and Southern states could do better than poorer states because of better infrastructure, fiscal management, investment in social sector and institutions including governance.

However, central government role is equally important in reducing regional disparities. The shares of the per capita plan outlay for the poorer states have declined in the post-reform period. The Central Government including the Planning Commission should help poorer states in getting investments for infrastructure and social sector. There is a need to have more devolution of finance, functions and powers to panchayats to improve accountability and development Governance has to be improved in less developed regions.

Rural-urban disparity is the other important disparity. Of course, inter-regional disparities are related to these divides. Development and the quality of life in urban areas are improving more rapidly than in rural areas. This is partly explained by the poor performance of agriculture in the country. On the one hand, the growth of GSDP is more than 9% in recent years. On the other hand, the share of agriculture in GSDP has dropped below 20% without any appreciable shift in the proportion of the population still dependent on agriculture for livelihood. This has led to a large disparity in output per worker between rural and urban areas and the relative impoverishment of rural areas. The government has to take necessary steps to bridge the rural-urban divide. Basically, agriculture and the rural non-farm sectors have to be developed further. The former President of India Dr. A.P.J. Abdul Kalam has advocated the implementation of the scheme 'PURA' —Providing Urban Amenities in Rural Areas. 'PURA' is a scheme to enhance physical, economic, knowledge, societal and electronic connectivity in rural areas.

There are also significant gender disparities in socio-economic development. Although we have constitutional commitment to equality and changes in feminine discourses for equality of women, it had only a limited impact in reducing disparity and discrimination of women. The data for men and women show that exclusion is taking place in social, cultural, and economic spheres, in rural and urban areas, across the states, as well as among the SCs and STs. Gender equity should be a concern for the society as a whole including changes in perceptions of men. There is a need, however, to improve economic, political and social empowerment and the education and health indicators of women. Similarly children's issues have to be addressed.

Finally inequality in education has to be tackled. In today's context, knowledge is the core of economic and social development. Higher education in India holds a great promise for the future growth of knowledge economy, democracy and our society in general. In other words, equality of opportunities in education is important. Even if we do not follow equitable distribution of assets, every one should get equal opportunity for better education. India has 'window of opportunity' in the form of 'demographic dividend'. Increase in the share of the youth population due to the demographic 'dividend' or the 'youth bulge' seems to be one of the sources of future economic growth. The proportion of people in the age-group of 15-24 years has increased over time. Although the proportion of youth in the labour force has been declining with an increase in school and college enrolment rates, the high proportion of youth in the labour force indicates that the problem of youth unemployment and under employment would remain a serious policy issue for many more years to come. Youth unemployment also leads to many social problems. The demographic dividend or youth 'bulge' is expected to increase the working age group and reduce the dependency ratio, which should lead to acceleration in growth. However, the poor employability of the workforce due to deficiencies in educational attainment and training may hamper the advantages of the demographic dividend. 'Deficit' in education and 'employability' of the workforce may hamper the advantages of this dividend. This needs to be remedied in order to take advantage of the opportunity of growth that the demographic dividend is supposed to give to India.

Inequalities in higher education are well known. According to the 11th Five Year Plan document, our Gross Enrolment Ratio (GER) in higher education is only 11%. This is very low compared to the world average of 23.2%, 36.5% for countries in transition, 54.6% for the developed countries, and 22% for Asian countries. As compared to overall GER of 11%, the GER of SCs/STs and OBCs was respectively 6.5% and 8.8%. These social disparities in higher education have to be corrected apart from improving overall enrollment of higher education.

To conclude, the global financial crisis has significant adverse impact on economic growth and employment in India. Monetary and fiscal policies are important

but not enough. In order to improve demand and raise livelihoods, we have to focus on agriculture and unorganized sector also. Government also has to focus on inclusive growth by bridging the divides such as social inequalities, rural-urban, regional and gender disparities. Nehru's vision of development, which he articulated to the National Planning Committee (1937) was "a free and democratic state involves an egalitarian society in which equal opportunities are provided for every member for self-expression and self-fulfillment and an adequate minimum of a civilized standard of life is assured to each member so as to make the attainment of this equal opportunity a reality. This should be the background or foundation for our plan" (Gopal, 1989). Dr. B.R.Ambedkar had his own vision about the social and economic development of disadvantaged sections. While the Indian government has implemented policies that unleashed the country's growth potential, it should also embark on a process of social transformation that ends discrimination on the basis of caste, class and gender. Focus also has to be given to better enrolment and quality of higher education including social disparities in education. Dr. B.R.Ambedkar Open University can contribute to this objective of enhancing the reach and reduction of disparities in higher education. Thank you very much.

EIGHTEENTH CONVOCATION

PROF. N. BALAKRISHNAN

Professor of super Computer Education Research and associate directior, Indian Institute of Science, Bengaluru

His Excellency the Governor of Andhra Pradesh Shri E S L Narasimhan Sir Honorable Vice Chancellor of Dr B. R. Ambedkar Open University, Guests on the Dias, faculty members of Dr B. R. Ambedkar Open University, parents of graduating students, other special invitees and my dear students. It is my pleasure, privilege and honor to be here in Dr B. R. Ambedkar Open University, Hyderabad and participate in this ceremony marking the 18th Convocation of a great University.

I note with happiness that Dr B. R. Ambedkar Open University, which started in 1982, is the first Open University in India and since its inception has been growing in leaps and bounds. It now has a large number of quality undergraduate and post graduate programmes in a wide range of disciplines such as Arts, Commerce, Sciences, Management, Library and Information Sciences, Languages and Education. The University also has started the MPhil and PhD programmes in many disciplines. Starting with a modest enrollment of 6281 in 1983-84, it has grown to a stunning strength of active students to 180,016 in 2009-2010. The number of degrees / diplomas ad certificates awarded has increased from 1492 in 1986-87 to 19,731 in 2009-2010.

Dr. BRAOU uses modern multimedia and broadcast technology effectively to reach out to the students through its network of 217 Study Centers located in Andhra Pradesh. The Open University offers programmes that are flexible in terms of admission, choice of Programs, duration and age requirements, teaching methods and evaluation procedures. It is a great boon for those who missed the opportunities for higher education.

First of all I wish to congratulate, the parents of the students who are graduating today. I am sure that they are surely and certainly responsible, though anxious at times, to make sure that nothing comes between their wards and their aspirations to

become the best qualified engineer, scientist or a technologist. Today you will be relieved to know that the quality time that you spent with your wards, has resulted in the flowers that have blossomed in front of you and are now waiting to conquer the world. The proudest moment for the parents is when they are asked by the world that "By what great austerities did he merit such a son or a daughter?". Today many will ask you this question and make your day the best one to remember.

I must also congratulate the great faculty of Dr.BRAOU who, true to the definition of a Guru, have patiently performed the act of shaping these youngsters to let them out into the world as Knowledge Soldiers on whose shoulders the future of the world could comfortably and safely rest. For a teacher, the most proud moment is when others say that "He has created students who are not mere clones of himself but they have far excelled him in knowledge". Many of your wards today will fall into this category and this will most certainly make you happy.

Finally, I congratulate the students who are graduating today. After many years of intensive study and intellectual challenge, you will all be ecstatic that at last you are turning the page on an important chapter of your life. Let me wish you the very best in all your endeavors- I am sure that you will have a dream, a dream that makes your eyes gleam with hope, a dream that will make you proud of yourself, make your parents and teachers proud. When your dream comes true, the Nation's dream will automatically come true- for I know that having been trained by Dr.BRAOU with its legacy of a scared learning institution, you will be Indian first and an individual next.

On such occasions like this, one is expected to deliver a talk that is filled with advice and sermons. I am going to refrain from this established norm but would like to share with you the environment of and the excitement that is there in the world that awaits your grand entry.

The India that you enter:

You are most fortunate to be graduating at this time in the history of India. The Indian economic growth has been very consistent and stunning for more than a decade now. Its technological advances in Space, Atomic Energy, Defence Research, IT, BT,

NT and its great strides in the world of science are most talked about with astonishment by the world. In India, more than 8 million cell phones are added every month and soon we will have the 3rd Generation Technologies reaching out to every corner of our land more so to our villages. Within your life time you will see that the dream of Dr Kalam to make India a developed nation become a reality. Two of the greatest ingredients that are needed for large scale advances are the economic strength and base for Science and technological innovations. Today in India both these ingredients are available in plenty. Indian companies such as TATA's, Mittal Steel, Infosys and Wipro and many more have truly become global MNCs and have challenged the best in their fields in every turf and have acquired many companies from abroad. In most of the list rich and famous, many Indians figure in the top ten. Our Educational Institutions are becoming truly international. To be Indian today is a proud privilege. I am very confident that you all have it today and would cherish it forever.

The Indian Education Scene is going through tremendous changes and now is the most dynamic and opportune moment in its history. For long, India has been battling between equity and excellence, between quantity and quality and between affordability and access. The Right to Education Bill is a great step forward to provide greater access to education. The recent efforts to improve the quality of deemed universities are in tune with the nations efforts towards creating a large pool of employable manpower.

"According to the National Knowledge Commission an estimated 160,000 students leave the country annually to study abroad despite 18,000 colleges and more than 500 universities in India. Indian and Chinese students make up majority of foreign students heading to the United States, Singapore, United Kingdom and Australia for further studies contributing billions of dollars to their education industries. The new Foreign Universities bill may eventually put a dent on the number of Indian students going to other countries but also inversely increase business opportunities for foreign education providers wanting to tap into the huge and increasingly affluent Indian market" (from the press).

Many new IITs, IIITs and IISCERs and Management Institutions have been created by the Government and many new private Institutions are also coming up. Most of these Institutions are traditional Universities wherein the students have to be full time students and often residential.

In the game plan of the nation to create large pool of trained manpower, the major player can only be Distance Education based open universities such the Dr.BRAOU. They provide an inclusive growth and become an out let for those who for many socially compelling reasons could not afford or missed the opportunity to be full time students of the traditional university.

Today there is a paradigm shift in learning towards "Just in Time", "Life Long" and "Learning by Doing". The Open Universities are possibly the only vehicle to meet these newer challenges in learning.

History of Distance Learning:

Central to education is the communication between the teacher and the taught. Communication is one technology that has been undergoing tremendous are unrelenting growth. This has in effect made the area of Distance Learning a dynamic and fertile area of intense research, technology assimilation and application.

The first foray in distance education started in the early l8th Century through correspondence education. The technology based distance education is of more recent origin. It was in the early 2O century that the audio visual devices were introduced in the class room. Instruction films were produced in the years 1910 and 1913. Thomas Edison predicted that due to the introduction of films our educational systems would change completely. Instructional Television was an important ingredient in the growth of Distance Education worldwide. During the World War II, military training had benefitted by audiovisual media.

In the late 60's and early 70's, the Distance Education Community exploited very well the developments in cable and satellite TV Broadcast. With the free availability of VCRs and recording media, many universities started distributing video lectures

besides real time broadcasting. This gave the Distance Education proponents an instant access to millions of students simultaneously. The scalability of the Distance Education Programmes became a reality. The only drawback of the broadcast based Distance Education exercise was its one-way nature of communication, prohibiting the interaction in real time. This was to some extent mitigated by using telephones for the communication from the students to the teachers. With the advent of Internet and ever exploding bandwidth, today the Distance Education is poised to have a rebirth that will make all the experiences- teaching and the campus ambience — between real and virtual universities identical and indistinguishable.

The major reason for the success of Distance Education and symbiotic coexistence with the traditional universities is that the Distance Education tried to capture the clientele who would otherwise be left out of the education system. The rapidly escalating cost of traditional resident education, increasingly mobile population, the need for career oriented training, developing newer competencies, removing the restrictions of place and time and social reasons to take up a job before completing formal education have also been contributing world over to the popularity of distance education. The scalability of distance education has also contributed to its lower cost and affordability and hence its popularity. The fact that more women and those from rural areas benefit is in effect a salute to the great work done by the distance education systems across the world.

The area of distance education has itself become an intense topic of research. One of the important issues researched all over is to answer the question whether the quality of the students coming out of Distance Education Universities is as good as the ones coming out of traditional universities. It is heartening to note that the answer to the question in almost all cases is an emphatic 'yes'.

The Changing world of Distance Education:

The important ingredients in Distance Education are connectivity and contents. When the Distance Education was first brought in, the technology was not very advanced at that time and this perhaps was the reason for the initial hiccups one

noticed in the early introduction of distance education. There two important paradigms in communication. They are:

1. The less empowered people need more bandwidth

2. The higher the level of education the higher the bandwidth required.

For example, if the two persons communicating are very well educated, simple correspondence by low bandwidth asynchronous email communication would suffice to communicate ideas. If they are less educated, may be higher bandwidth communication like synchronous voice communication needed. If they are even lesser empowered, then large bandwidth video communication may be necessary.

There are three important constituents of education. They are called the 3Ls of learning- Lectures, Library and Laboratory. They also need increasing bandwidths and also reflect increasingly higher levels of learning.

The technologies that are at the backbone of distance education are the 3Cs- Computers, Connectivity and Contents. The world that you are entering now is poised to witness a revolution in all these areas, the likes of which the human kind had not witnessed so far. These disruptive technologies characterized by exponential growth rates are sure to make the distance education an important aspect of global learning process.

The World that you are entering:

The world that you are going into is going through a revolution like the ones that are seen once in a few centuries. It is now heralding in a Knowledge era- having passed through the agrarian, industrial and information eras. In this era, you are the major investment needed to build a family, a nation and a truly prosperous world. Your success in understanding that true world is the most critical part of everything that will follow. A defining characteristic of this new world according to Alvin and Heidi Toffler is the stunning pace at which it changes. The acceleration of changes affects everything that you see around you. It often overwhelms people everywhere

and disorients individuals, business, communities and governments. Technology will have a very dominating role to play in the world that you enter and I am sure that you will have an exciting time trying to survive and shape the future. Those who master the art of understanding this rapid change will be part of the elite who will create history and others will become history- they will swirl down the storm drain of history.

A hundred years ago, there were no cars and no highways, no electric utilities, no phone system, no radio or TV, and no airplanes. Most of these inventions happened in the first half of the 20th century.

In the past 40 years, since I started my college education, advances in engineering have resulted in the invention of nuclear power, satellite communications, the transistor, digital computers, Internet, world-wide web, and the discovery of DNA, decoding of the human genome, and the landing on the moon! In fact, most of what you see around you would have been invented only in the last ten years.

You will have a bright career that will span more than fifty years of active work. The changes that you will see and in fact be part of the change in this technology and science dominated world in the next fifty years will be even more dramatic than the last hundred years. I am going to look at the crystal ball and share with you such stunning and disruptive growth in the world that you are waiting to enter.

Technological advances have truly contributed to making the "world flat" and are now threatening to make borders between disciplines, between countries and between faiths porous. The problems that we will face in this world are global and affect no one single nation or one group. Today one talks about Global Warming, Energy Security, Food Security and Health Security — for every nation. The responsibility of the true citizen of any country towards his global commitment is no different. In spite of the global nature of the issues, the innovation is to solve the problems locally and globally. A great challenge for all of you is ahead and you need the ability to innovate with responsibility and to develop with sustainability.

It is a world where you will work in an office that has presence in many countries and solves issues connected with the world in general. If there is instability in India, it will affect many countries in Europe and in the US and if the stock market in the US fluctuates, Indian economy will sneeze. It is a world where you will work in a multicultural environment, your boss may be from Hungary, your coworkers from the US, China, Japan, Korea or Europe or elsewhere you will soon be a "Borderless Engineer or a Borderless Scientist".

The World of Convergence:

It is a world that talks more about Convergence than specialization. Within your professional life time, you will hear new names of areas that are not yet known. You will work in these areas often formed by the convergence of and at the interface between multiple disciplines, particularly at the interface between science and engineering and engineering and medicine and many more. Let me tell you about what is likely to happen in the areas that you often hear about Information Technology, Biotechnology and nano Technology.

Information Technology:

Starting with the invention of the transistor in 1947, the IC in 1957 and the microprocessor in 1971, the semiconductor technology has been following what is now known as the 'Law of accelerating returns". The Moore's Law epitomizes the advancement towards higher density, higher speed and lower power. In the next few years, the micro processors in your Personal Computer at home will have more than a billion transistors and will become commonly available almost at the cost of less than Rs 3000. It will do more than a trillion operations in a second. Recently the size of the transistors have reached the nano scale (10 &9) being only 50 nano meter wide. The influenza virus is about 150 nano meter. The 25 nano meter technology is already awaiting commercialization. It is reported that last year more transistors were produced, and at a lower cost, than grains of rice, according to the Semiconductor Industry Assn. It is now known that the number of transistors shipped in 2003 was 10 quintillion, or 10 to the 18th power — about 100 times the number of ants estimated to

be stalking the planet. By the year 2019, the personal computer you have at home will have the same power as a human being. The computer has already started to do many things like a human- recognize speech, talk like a human, recognize people and faces, understand even gestures, write songs, review movies, and by 2019 it will be almost human like in capability. This is computer revolution for you.

The heat dissipated inside the microprocessor has been increasing due to the increased density. Today's processors dissipate the same amount of heat per square inch as a furnace. The future microprocessors will dissipate as much per square inch as a nuclear blast and later as much as the sun. Taking this heat away is a scientific challenge that you will be participating with excitement.

The cell phone that you are using today started off as a simple phone. Today it has a camera, a radio, MP3 player, Video player, Internet access, address book, speech recognition, and of course a device that you use for authenticating your transactions with your bank. This is a convergence of many devices into one smart device. In the good old days, to watch the TV you needed the Cable or an antenna. Today you can watch TV programmes on the Internet and even on your cell phone. Almost 65,000 new videos are added every day in You Tube. The cable companies can offer the Internet and so do the telephone companies. You are witnessing the convergence of networks.

The most dramatic of all recent technological advances is the doubling of bandwidth every 8 to 9 months, propelled by the advances in fiber optic technology. Today you can buy commercial systems that permit transmission of 1 .6 terabits per second on a single fiber using dense wavelength division multiplexing (DWDM) technology. This technology uses 160 different wavelengths each capable of transmitting 10 giga-bits-per-second. Experimental systems are able to transmit as much as 25 tera-bits-per-second on a single fiber today!

What can you do with 1.6 terabits per second bandwidth? In one second, you can transmit 20 HDTV movies (at 10GB each), or 200 regular full-length feature films (at 1GB each), or 30000 hours of MP3 music on single fiber. It would take about 20 minutes to transmit all the books in the Library of Congress with color and images. All

the phone calls in the world can be carried on single fiber with room to spare. This is Communication Revolution for you.

The computer and communication revolution converged as ICT and they have been continuing to impact the services industry, the manufacturing through enhanced productivity, safety and quality, the world of consumers through a range of products including kitchen utilities, TV, music, games, entertainment, sports and many more, the health care through computing, monitoring and diagnosing and also agriculture, defense and space research. This convergence led to many applications of semiconductor and Information and Communication Technology that has enhanced quality of the human life.

While the world witnessed this exponential and disruptive growth in semiconductor technology, there have been equally fascinating advances in many other areas. The storage technology — the little disks that you use in your computer, advanced even faster than the processor technology and this has stimulated the Content revolution and it will make the computers process information more like the human brain.

A four hundred gigabytes disk can be bought for 100$. It can be used to store about 400 movies (at 1000MB per movie), 10,000 paintings (at 40MB per painting), 100,000 songs of MP3 music (at 4MB per song) and 50,000 books (at 8 MB per book)— larger than most of our personal collections at home. By the year 2013, we should be able to buy "100 terabytes" for about the same price. At that cost, each of us can have a personal library of several million books, a lifetime collection of music and movies-— all on our home PC.

By 2025 you will be able to buy "100 petabytes" for a 100 dollars, essentially an infinite amount of memory for all practical purposes. What can you do with a petabyte? If you choose o, you will be able to capture everything you ever said from the time you are born to the time you die. That would take less than one percent of a petabyte! Everything you ever did and experienced can be captured in living color with only a few petabytes.

When you come of out of your college, the cell phone or the ipod / ipad that you will have may have every video that you ever wanted to watch, every song that ever wanted to hear and all the books that you would ever be able to read in your life. When you take your first child to the school, the same Ipod / ipad may have all the knowledge ever produced in this world within its tiny storage. You will be working in a knowledge world where you carry with you the world's knowledge the knowledge at your fingertips — literally. What we don't have on our PC will be available at the click of the mouse from the universal digital library containing all the authored works of the human race.

The changing face of the World Wide Web has also been astounding. What started off as a means of sharing of documents has become a tool for Governance, commerce and entertainment. More recently with the advent of social networks through Orkut, Myspace, U tube and others, the World Wide Web has suddenly reborn. The blogs and the world of Wiki have spearheaded a generation of users who create, share and manage contents within and for their community of common interest. The Web 2.0 is the new buzz word today.

The greatest challenge for the future in information technology will be to simulate the entire human brain. This in many ways will spearhead bio inspired computing paradigms.

Research in robotics and Artificial Intelligence, which originally aimed at relieving the man from the drudgery of monotony in tasks such as those in the assembly line, has matured to a very significant level. Today the Strong AI described as machine intelligence with the full range of human intelligence has made the machines equal the humans in voice recognition, vision, learning, music and cooperative decision-making. Information Technology has been maturing from being the technology of calculating machines to the thinking machines and will soon become the human like "spiritual machines". This is again a great convergence.

Nano – Technology:

Nano technology refers to manipulation of matter at the atomic and molecular scales of the order of 0.1 to 100 nano meters. It is a multidisciplinary science encompassing physics, chemistry, engineering, molecular biology and material science. The last decade has seen emergence of applications of nano technology in materials, tools for drug discovery and delivery in biosciences and in information technology.

There are two types of nano fields — the "wet" or "dry". The dry waterless nano technology has found applications in energy efficiency, enhanced sensing, computer elements and newer class of materials. The "wet" nano science and technology centers around biological systems that exist in water environment and it has heralded newer class of applications in biotechnology and biomedical engineering. This has resulted in the popular belief that the future inventions in pharmaceutical industry will be centered on advances in nano and information technology.

Bio–Technology

Many of the key elements of the vast human nervous system exist at nano scale. The pigment molecules in the eye that make vision possible, the vesicles that store neurotransmitters are just few of the examples of the nature's work at nanoscales. The DNA molecule which is just about 3 nano meters in width has been central to the developments in biotechnology and biomedicine. The study and understanding of targeted drugs depends on nano particles as carriers. The whole mystery of the human genome and the way by which knowledge is encrypted is being revealed systematically using computers.

Cogno Technology

Increasingly computers would be used in sensing, perceiving, memorizing, actuating and controlling and in continuous learning. Like for example the cameras in the airports. The sensing element that would play a critical role will come from nano technology. The machines mimicking the human activities in large scale will be a reality. Neurobiology and brain machine interface will be the key technologies that will emerge

to enhance the human life and quality. It will be common for people to have many implants and even have embedded chips in their brain, and other parts of the body — for enhanced performance- say good memory, and slowly the health care will become health repair- There will be a little bit of silicon in every one of us. Philosophically speaking, we will get fossilized faster!

The unity of nature at the nano scale and the progress in information technology due to which the size of the transistors that form the core of the microprocessors and their memory have become a few nanometers have paved the way for progressive merger and convergence of the info-bio-nano-cogno (NBIC) technologies. This convergence is far greater in impact than that due to multidisciplinary fields such as biochemistry, astrophysics and computational linguistics etc. The NBIC convergence will promote human progress and will need careful planning so that the convergence in the technical arena is also followed by social convergence, lest there will be global divide. You are fortunate to enter this great world of convergence and I am sure you will have an exciting time making sure that in the technology development and assimilation there are many social issues that are addressed with sensitivity and make sure that India stays ahead of the world when it embraces borderless science. I am sure that the training that you have had at Dr.BRAOU that has taught you the value of selfless service will stand by you when you make the world that becomes inclusive and the technology truly touches every one- any time, any place and any one.

The future of Distance Education and Open Universities like Dr. BRAOU :

In a world of unlimited memory, bandwidth and computing power, it will soon become possible to have your teacher appearing in front of you — in full 3-D in a virtual world and listen to his lecture. You will be able interact with him like you would do in person. This is almost like teleportation, only seen in Science fiction movies. You will have instant access to every journal, book, paper and discussion on any subject from anywhere, from any place and at anytime. You will be able to interact comfortably with your social groups like your class mates. This will make the experience of learning extremely satisfying. You will be able to control sophisticated equipments and facilities

like the wind tunnel or a spectroscope from the confines of your home. The future Distance Education will become like any other traditional university except it will still retain its advantages of low cost, no geographical or time limitations, high levels of scalability and the most important one — the inclusive societal growth.

Realizing this, India has already made great strides in making the distance education come alive. The open Universities like IGNOU, Dr.BRAOU and others have made significant contributions in creating quality contents that are web enabled. The NPTEL programme of MHRD through which the IITs, IISc and other academic institutions have been developing phenomenally large repertoire of educational materials has already brought pride to the country and is in fact considered by some as of comparable or even better quality than those developed by famous MIT of the US. The SAKSHAT programme of MHRD is something that will make us all feel very contented and in fact will give us a platform of high quality for democratic access to education. The national Knowledge Network which will deliver a giga bit connectivity to every college and the broadband initiative of our government to provide unlimited low cost bandwidth to every home in rural areas will make the distance a needless concern in the future. In brief, the future of education will become synonymous with Distance Education. Institutions like Dr.BRAOU and the new products of Dr.BRAOU like all of you will lead the nation in its march towards prosperity.

Your Future:

Hence, my dear students, when you walk into the world which is characterized by the magic word. Convergence, when the border between science, engineering, management and arts has become totally permeable, it is not important what branch of study you pursue as long as you strive hard to become the very best in whatever you do- It is time to recall the great words of wisdom of the great Indian

Scientist Prof CNR Rao who said that “At the frontier there are no borders”. What you do- it is IT or BT or Science or Commerce or Library Science or Arts- is unimportant and what is the most important one is that you be the best in whatever you do.

This is the time to part with friends who shared the best of moments with you. It is the time to find new friends. You will continue to maintain contact with some of your school mates- by emails, through Orkut and schoolmates.com, you will loose contact with many. When you grow older and build your own nest and start balancing your own bank accounts, you will become famous and many people would want to be friends with you- some for your position, power and money and some for what you mean to them. You will realize that they will never be even remotely comparable to those whom you have had as friends in Dr.BRAOU because you were friends when none of you was anybody and everybody was a nobody. This friendship is the purest and you will relish again when you build them back after missing them for many years.

Your teachers are amongst the best that you have or will come across in your life. They made a selfless sacrifice and spent their today so that you can have a better tomorrow.

You are going to a world where you may be away from the watchful eyes of your parents. But be rest assured that those watchful eyes have a heart that cares for you and only for you and the only destination that you can go to whenever you need to share your joy or sorrow.

You will all agree with me that “only a burning candle can light another”. Dr.BRAOU today has made you that burning candle of knowledge. If you can pledge to ensure that you will use this knowledge to light many little candles and spread the spirit of Dr.BRAOU in the future generations, you would have paid your dues to your teachers and parents you have worked to make you what you are today.

I wish you all the very best and I see a very bright future for you.

NINETEENTH CONVOCATION

PROF. VED PRAKASH

Chairman, University Grants Commission, New Delhi

Higher Education in India — A Perspective Convocation Address

His Excellency, Chancellor Shri E.S.L. Narasimhan, beloved Vice-Chancellor, Dr.P.Prakash, Members of the Executive Council, Deans of Faculties, Registrar, Distinguished Guests, Teaching and Non-Teaching staff, Students who are going to receive their degrees and awards, their parents, media persons, Ladies and Gentlemen.

Let me say, at the outset, that I am very pleased and delighted to be a part of this convocation of Dr. B.R.Ambedkar Open University, the first Open University in the country. It gives me great pleasure to be in the midst of all awardees who have earned their degrees through hard work, dedication and commitment.

My Dear Students, let me congratulate you all for your splendid success. I also congratulate the parents, teachers and siblings without whose support it would have been difficult for you to have achieved this milestone in your life.

I know that this university was founded by a great visionary of Open and Distance Learning in the country Prof. G.Ram Reddy in 1982, who was also the founding Vice-Chancellor of IGNOU at New Delhi in 1985, and subsequently who became the chairman of UGC. The establishment of this university is a breakthrough in the sphere of Higher Education, opening the doors for the underprivileged and marginalized sections of the society who wish to pursue higher education. It is interesting to know that this university is offering 65 programmes covering UG, PG, Diploma, Certificate and Research Programmes. I am glad to learn that the university is providing support services to the students through a wide network of 220 study centers which include 23 Regional Coordination Centers, catering to the needs of over 180,000 students.

Friends, the vision of higher education in any country is to realize the human resource potential to its fullest with equity and inclusion. The challenges are many, diverse and conflicting.

Higher Education sector has witnessed a remarkable proliferation after independence. It was during the colonial period that the European Model of Higher Education was introduced in India. The institutions of higher Education established by the British were augmented by our rulers. The country had a very small system of Higher Education at the time of independence with only 20 universities and 500 colleges; the number of Universities / University-level institutions has increased from 30 in 1950-'51 to 634 in 2011. Today, there are 43 Central universities, 297 State universities, 100 Private universities, 129 Deemed universities, 65 Institutions of National Importance and other University level Institutions (established under various State legislations). The number of colleges has also registered manifold increase with just 695 in 1950- '51 to 33,023 by 2011. Today India has the largest system of higher education in the world in terms of the number of institutions — 634 universities and 33,023 colleges, and emerged as the third largest in terms of enrollment in the world.

After independence the higher education system witnessed a visible change from being an elite system to a system for the masses. And I know that Dr.B.R.Ambedkar Open University is a pioneer in this regard as it has set itself an objective of "Reaching the Unreached" by bringing "Education to the Doorstep". There are at present 14 State Open Universities in India, which are single mode institutions, providing higher education through distance mode. These universities cater to people who are unable to pursue regular courses due to various reasons.

Open and Distance Learning (ODL) is flexible in regard to modalities and timing of teaching and learning as also the admission criteria without compromising necessary quality considerations. ODL system of the country is becoming more and more significant for continuing education and skill upgradation of in service personnel.

INDIA has seen a consistently high rate rate of economic growth in the recent years. Skill-based activities have made significant contribution to this knowledge based

economic growth. Such activities depend on the large pool of qualified manpower that is fed by its higher education system. It is now widely accepted that higher education has been critical to India's emergence in the global knowledge economy. India has significant advantages in the 21st century knowledge race. It has large higher education sector — it is the third highest in the world in student number after China and USA. The States along with the Central Government in its federal structure allows variety of policies and approaches for culmination of quality higher education. Industries routinely point towards huge skill shortages and are of the opinion that growth momentum may not be sustained unless the problem of skill shortages is addressed. Challenges in higher education have large dimensions, particularly after trade in services has been brought under the purview of the WTO regime. With the explosive growth of knowledge in the past century and with the development of handy tools of information and communication technologies as well as of other scientific innovations, competition has become a hallmark of growth all over the World. As a result, knowledge is not only going to be the driver of Indian economy, but also, it is going to permeate into all the strata of Indian society for a better quality of life and living conditions. Therefore, India has to rise to the occasion urgently and reorient its higher education system to be vibrant, competitive and meaningful. Besides, there is absolutely no substitute to quality of higher education, although the country has been faced for a long time with the serious problem of meeting the quantity needs of our society. It is, therefore, essential that we need to blend to meet the requirements of the society in the foreseeable future.

Higher Education is the shared responsibility of both the Centre and the States. The coordination and determination of standards in institutions is the obligation of all the temples of higher learning for holistic development.

As stated earlier, the higher education system in India has grown in a remarkable way, particularly in the post-independence period, to become one of the largest systems of its kind in the world. However, the system has many issues of concern at present, like financing and management including access, equity, quality and relevance. Reorientation of programmes by laying emphasis on health consciousness, values and ethics and quality of higher education together with the assessment of institutions and

their accreditation is the need of the hour. These issues are important for the country, as it is now engaged in the use of higher education as a powerful tool to build a knowledge-based information society of the 21st Century. Universities need to become knowledge power houses in creating new knowledge and human resource pool to face the challenges of myriad issues of society, nation and globe. In view of this, the Universities have to perform multiple roles, like creating new knowledge, acquiring new capabilities and producing an intelligent human resource pool, through challenging teaching, research and extension activities so as to balance both the need and the demand.

From the early 20th century, there have been several high level commissions set up to provide policy orientation to the development of higher education in India. On the basis of the report of the Sadler Commission (1917—19), also referred to as the Calcutta University Commission, the Central Advisory Board of Education (CABE) was set up to define the general aims of educational policy and coordinate the work of various provinces and universities by guarding against needless duplication and overlapping in the provision of the more costly forms of education. The University Education Commission, presided over by Dr S. Radhakrishnan, in its report in 1949 recommended that university education should be placed in the Concurrent List so that there is a national guarantee of minimum standards of university education. It was much later, in 1976 that education was made a concurrent subject with the 42nd Amendment of the Constitution.

The Kothari Commission (1964—66) examined various aspects of education at all levels and gave a very comprehensive report full of insight and wisdom. This report became the basis of the National Policy on Education, 1968, which enabled to build a common structure of education (10+2+3) by many states over a period of time. The restructuring of courses at the undergraduate level was also initiated apart from setting up of centres of advanced studies for post-graduate education and research.

In 1985, a comprehensive appraisal of the existing educational system was initiated. This was followed by a countrywide debate. It was noted that while the

achievements were impressive in themselves, the general formulations incorporated in the 1968 policy did not, however, get translated into a detailed strategy of implementation, accompanied by the assignment of specific responsibilities with emphasis on financial and organizational support. It was further noted that problems of access, equity, quality, utility and financial outlay, accumulated over the years, had assumed such massive proportions that pledged immediate attention of policy makers. Based on this background, the National Policy on Education (NPE), 1986 was documented. It was noted in the preamble of the policy that education in India stood at the crossroads, and neither normal linear expansion nor the existing pace and nature of improvement of the situation augmented the structure and the system. It was also noted that education has an actualizing role. Higher Education refines sensitivities and perceptions that contribute to national cohesion, a scientific temper and independence of mind and spirit—thus furthering the goals of socialism, secularism and democracy enshrined in our Constitution. For effective implementation, a policy of programme of action (PoA) was formulated in 1992.

Higher education has received a lot of attention in India over the past few years. There are four reasons for this recent focus. First, country's weak higher education system is being blamed for skill shortages in several sectors of economy. Second, reservation quotas in higher education institutions, particularly the more reputed ones that provide access to high status and best-paid jobs became a highly divisive issue, central to the policy of inclusive growth and distributive justice, and hence politically very important. Third, in the backdrop of the first two developments, it began to be argued that the country would not be able to sustain its growth momentum and maintain competitiveness unless problems with higher education are fixed. Last, demand for higher education continues to outpace the supply due to growing population of young people, gains in school education, the growing middle class and their rising aspirations.

The technological advancement and a large pool of skilled human resources independent of geographical location became a tool in expanding the service sector. Higher Education plays a pivotal role to harness and ensure optimum utilization of these resources. The National Knowledge Commission (NKC) examined the higher

education sector and made several useful and important recommendations. The Government of India has increased funding significantly during the Eleventh Five Year Plan. Many new institutions have been planned and some of them are in operation.

The present state of affairs pinpoints that there are problems deeply embedded which call for a major overhaul. The state-sponsored education is afflicted with poor governance, dearth of teachers and shortage of funds. What is necessary is the establishment of institutions having the necessary infrastructure and qualified teachers.

The country is going through a major economic and technological flux. The system of higher education has to prepare its products for participation in the emerging social, economic and cultural environment. The higher education system must provide for accountability to society and accountability within. The relevance and quality issue is most crucial and the delivery system is literally under pressure. The explosion of IT based knowledge outsourcing and the inability of our system of education to break the cocoon of straight jacketed curriculum frame are also posing problems in responding to the emerging needs of the student community. In spite of massive development, there exists regional imbalances in infrastructure and academic climate, gender divide and marginalization of vulnerable lot.

The main function of the university is to create and disseminate knowledge. The university bears the responsibility of moving the society forward by addressing the pressing problems of the society and producing the positive thinkers and intelligent workers. In this age of globalisation, technological advancement and competition, there is no alternative to the creation of a knowledge-based society which is only possible through universities.

This may be possible through the system of higher education which is strategic importance in national development of any country. For this purpose, expansion of higher education is a genuine claim, but we are less concerned about simultaneous change in traditional objectives of higher education, improvement in management and efficiency in performance. Enrolment is one of the major indicators of determining demand for education.

The new policy on distance learning in higher education makes it mandatory for all the universities and educational institutions offering distance education to use Information and Communication Technology (ICTs) in delivery of their programmes, management of the student and university affairs. I am sure Dr.B.R.Ambedkar Open University does not lag behind in this regard. The present generation of Distance Education can aptly use pedagogical tools like "E-learning (Electronic Learning), M-learning (Mobile Learning) and U-learning (Ubiquitous Learning) where the learning environments can be accessed in various contexts and situations. Use of lCTs may enable both teachers and students to enrich their knowledge and skills and create a seamless learning environment. In this context it becomes imperative to quote Sir John Daniel, President and CEO, The Commonwealth of Learning, Canada, who observed "Online learning is here to stay and grow". In a recent study on Online Learning Vancouver-based Technology guru Tony Bates found that enrolment in online courses in the US expanded by 21% between 2009 and 2010 compared to a 2% in Campus based enrolment. Over 80% of the US students are expected to be taking courses Online by 2014. In fact "employing multimedia" materials into the learning environment is highly rewarding, as it is learner centric in its approach.

Problems faced by higher education

Access: The growth of enrolment at the secondary level and large number of pass outs at school level examinations put a pressure for admission in the higher educational institutions. But due to limitation of capacity, not all can be accommodated in the university set up. For the remaining vast number, the need is to open alternative choices such as, vocational education, correspondence course, open university programmes, departmental training by employing agencies and sharing of Open Educational Resources with a focus on academic standards. This will involve a careful and detailed planning, at all levels of conventional, technical, vocational and Open Distance Learning.

Quality: The demand for higher education also affects its quality. Assurance of quality, rather than massification, is a critical issue in higher education. It is a general perception and a very widely circulated view that the quality of higher education in Bangladesh is low and that the standard has fallen over time in the Asian region. The bench mark of comparison may be international or even national when the regional reference is examined. Quality of higher education is usually measured by employability of their products. The existing pattern of unemployment and under-employment of university graduates implies that the system is not working efficiently and effectively.

Governance: The greatest challenge of higher education today is its operation through the principles of good governance, which includes autonomy, accountability, transparency, responsiveness, coordination, efficiency, capacity building, equity and sustainability. Satisfying demands of all these indicators is not easy and is a complex matrix. The problems of governance are quite different in the public and private university systems, but it can be said that most of the universities in either system suffer from the problems of misgovernance. All Public Institutions need to regulate their administration adhering to the norms of statutory bodies for good governance.

Relevance: One common criticism of higher education is that it is characterized without having any significant relevance to the national needs and problems of rural economy of the country. The unemployment of huge products of education implies that it is not effective and relevant for their absorption in appropriate jobs. Higher education which consumes more money from public sector need to have relevance to the societal needs and its sustenance . There is a need for higher education system to be rectified through national planning and policy for its effective implementation.

Efficiency: The efficiency of higher education is proved by the usability of their products and their contribution to the society. The outputs of higher education are one criterion of measuring efficiency. Among the successful outputs only the able students hope to enter into the profession which require high academic competency and professional skills. Another weakness of higher education is that universities and colleges have no follow up records of their graduates. The data on unemployment of graduates of

universities and colleges which are currently available are scanty and sometimes contradictory. There is also lack of scientific tool for measuring efficiency of higher education. Brain drain is one of the indicators of measuring efficiency of the education system. A large number of able students going abroad every year means that education system lacks adequate facilities for higher studies and research. In this way we lose many of the potential best products who could have greatly contributed to the development of the society and the country.

Modernization of curriculum and syllabus in the light of new knowledge is one of the essential tasks of any education system. The curriculum of higher education, should be regularly updated so that it can embed the contributions of modern knowledge and make its standard acceptable to the outside world. The teachers require exposure to various external influences within the country and abroad. In order to facilitate such an exposure, the universities should develop a multifaceted programme of faculty improvement on a regular basis such as encouraging professional conferences, participation of faculty member in such conference and workshop both in the country and outside, liaison with the industry, maintaining contact with national and international problems, inviting distinguished visitors for lecture, discussion and collaborating work, providing good library, reprographic facilities, encouraging faculty members to write referral books, research papers, exchange of faculty between the institutions for enrichment of knowledge and its dissemination, in teaching-learning environment.

The goals of higher education and particularly the university education are to expand the frontier of knowledge, share knowledge and enable the society to enjoy the fruits of their intellectual pursuit. To address these, the government has given serious thought to the reform of the education system. It has adopted several significant measures for improvement of national education policy from primary to tertiary level. The measures relating to tertiary level deserves special mention.

The global need for teacher education is greater now in the early 21st century than ever before. According to UNESCO, half of the world's 195 countries will have to

expand their stock of teachers significantly — some by tens of thousands — if the goal of universal primary education as articulated in the Dakar Framework for Action in 2000 is to be met by 2015. Socioeconomic inequities, political instability, demographic changes and crises such as the HIV/AIDs epidemic have engendered huge shortfalls in teacher supply and low teacher quality in many developing countries. It is now clear that "bricks and mortar" approaches to expanding teacher education may not be adequate if the current and projected shortfalls in teacher supply and low teacher quality are to be properly addressed.

Today, both teaching and research are showing tremendous opportunities for open and distance learning (ODL). Capitalizing on the strengths afforded by innovative information and communication technologies and media, ODL broadens and streamlines access to teacher education in a way that traditional delivery modes cannot. At the same time, adopting ODL requires new thinking about learning and teaching strategies, applications, costs and other practicalities.

Conclusion:

What sculpture is to a block of marble, education is to the human soul said Joseph Addison. Good quality higher education still remains elite in nature as it is still not accessible by a large chunk of eligible population. This is primarily attributed to the policy shift in the mid 1980's by forestalling the growth of public institutions and leaving a wide open market to private institutions offering courses of study that have high market premium. Government should realize the limitations of the private sector and strengthen higher education in areas which are very vital in improving nation's competitiveness through fundamental research. The trends in funding should be reversed and public funding for higher education should be substantially increased. India like other developing nation may have to overcome the access, equity, quality, governance and funding problems. In fact the pace of addressing these issues would largely determine the effective participation of universities in the process of creating knowledge based society, besides raising country's economic capacity.

We however should not be cynical about the gross enrollment ratio of 20 percent at present. It is not difficult to achieve 30 percent gross enrollment ratio by 2020 and I am sure that with the kind of efforts put in by Dr. B. R. Ambedkar Open university we will be able to surpass the target ratio set by us.

With these few observations I once again thank His Excellency the Chancellor, the Vice-Chancellor and this august gathering for giving a patient hearing.

I congratulate all the graduating students, awardees of Gold Medals and Book Prizes and wish them all success in their future endeavors.