Higher Education in India
Vision and Action
Country Paper

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Foreword

The World Conference on Higher Education, 1998, organised by UNESCO on the eve of the next century presents a valuable opportunity for us to place India's national perspective of higher education before the international community.

India's distinctiveness rests on its great foundations, which were built by her ancient sages who relentlessly sought after the highest integral knowledge and perfection; as a result, her culture has been sustained, even through periods of decline, with surprising continuity since remote antiquity.

India's renaissance, which began in the last decades of the 19th century, has been marked by multisided awakening, creativity, renewal and reconstruction enabling the country to make valuable contributions in the services of her people and the peoples of the world. Our culture has always stood for universality and common fraternity of the entire human race, and our aspirations are reflected in the educational field in creating, strengthening and developing a national system that should be geared to the highest ideals of universal peace, unity and harmony.

We maintain that education is a liberating force as also an evolutionary force, which enables the individual to rise from mere materiality to superior planes of intellectual and spiritual consciousness. Education is a dialogue between the past, present and the future, so that the coming generations receive the accumulated lessons of the heritage and carry it forward. In the words of Sri Aurobindo, the foremost philosopher and sage of our times, "The past is our foundation, the present our material, the future our aim and summit. Each must have its due and natural place in a national system of education."

Contemporary problems of environment, universal peace and international co-operation have added new dimensions and we are required to promote through education harmonious relationship between the individual, environment and cosmos, and we have to realise that harmony and unity can come about in the outer space only when our inner space is purified and perfected. We speak also today of learning to be, but as our ancient Indian wisdom counsels us, in order to be, one must realise one's internal and imperishable being. We are endeavouring to build our education system at all levels on the basis of these precepts and insights.

This country report aims at presenting a brief idea of how our country has been able to construct one of the largest systems of higher education in the world and of the tasks we are envisaging to equip our young people so as to enable them to shoulder their responsibilities both as Indians and as citizens of the world.

Murli Manohar Joshi

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Overview

Ancient records of the Indian tradition testify to the search of the Rishis and sages for higher knowledge (*para vidya*), and their discoveries have been continuously transmitted to posterity and kept alive through its long history, marked by periods of expansion, specialization, decline and renewal. This theme of higher knowledge informs and inspires even the latest developments in the Indian educational system. It has been a significant component of the country's struggle for freedom, attainment of independence and an awakening from the slumber in which people were cast during the British rule.

A Very Large System

Despite serious handicaps of means and resources, the country has built up during the last 50 years a very large system of education and has created a vast body of men and women equipped with a high order of scientific and technological capabilities, robust humanist and philosophical thought, and creativity.

Though riddled with explosion in the growth of population, a large illiterate population and problems of economic poverty affecting one-third of the people, modern India is still set to forge a bright future and to contribute significantly to the higher goals of world peace, human unity and universal welfare. Much credit for this goes to the ancient but ever-young spirit of the nation and to what higher education has striven to fashion in terms of determining great objectives and implementing them under very difficult conditions.

Growth of Higher Education

Prior to independence, the growth of institutions of higher education in India was very slow and diversification in areas of studies was very limited. After independence, the number of institutions has increased significantly. There are today, 214 universities and equivalent institutions including 116 general universities, 12 science and technology universities, 7 open universities, 33 agricultural universities, 5 women's universities, 11 language universities, and 11 medical universities. Besides, there are universities focusing on journalism, law, fine arts, social work, planning and architecture and other specialized studies. In addition, there are 9703 colleges where 80% of undergraduate and 50% of postgraduate education is imparted. The number of students has reached the level of 6.75 million and there are 3,21,000 teachers in the higher education system. The government expenditure alone was of the order of Rs. 42,126 millions in 1996-97, and during the subsequent period this has risen even higher.

A special emphasis has come to be laid on women's education. The number of women's colleges has recorded a substantial increase, and India has 1195 women's colleges today. The enrolment of women at the beginning of 1997-98 was 2.303 million, 34 per cent of them being of the postgraduate level.

This massive development has been guided by a process of planning and recommendations of several national commissions set up by the Government of India. The objectives of higher education have gradually become more and more precise and a system of governance is developing in the direction of increasing autonomy and accountability.

But, in spite of vast efforts over the last 50 years, it is only now that the country is slowly emerging out of the fetters of old ideas and rigid structures, built during the colonial rule. There is at present a demand for radical changes which have the potential to actualise a national system of education that was visualised during the freedom struggle.

Objectives

Pursuit of integral knowledge and liberation, which has been a constant endeavour of Indian culture, is also the central objective of education. Education is also visualised as an evolutionary force so that each individual is enabled to evolve from purely material consciousness towards superior planes of intellectual and spiritual consciousness. Education is also perceived as a bridge between the past, present, and the future and as a means by which the best of the heritage is transmitted to the new generations for its further progression.

In receiving the modern message of learning to be, our endeavour is to harmonise it with the insight of our ancient Indian wisdom according to which this goal can be achieved only by the realisation of our internal and imperishable being. Our educational system also aims at promoting environmental protection, universal peace, and international cooperation; and since harmony and unity in external space can best be realised through internal purification and perfection, our educational system endeavours to promote harmonious relationship between both the inner and outer dimensions of the individual, environment and the cosmos.

Our objective in higher education is not only to promote equality and social justice, but also to provide the right kind of work ethos, professional expertise and leadership in all walks of life. Above all, our endeavour is to foster among teachers and students and, through them in society generally, integral development of values inherent in physical, emotional, rational, aesthetic, ethical and spiritual education.

At present mankind is undergoing an evolutionary crisis in which is concealed a choice of its destiny.

Sri Aurobindo

Structure and System of Governance

In order to implement these objectives, a complex structure and system of governance has been evolving. The structure of higher education consists of three years of education (after 12 years of school education) leading to a bachelor's degree in arts and science and four years in professional fields like engineering and medicine. This is followed by two years of study for a Master's degree; and three years at least beyond the Master's degree for a Ph.D degree which generally takes longer. There are also postgraduate diploma programmes open to graduates, and

certain professional programmes like those in education and law require a first degree as a pre-condition for admission in most places.

The universities are of various kinds: with a single faculty, or multi-faculties; teaching or affiliating, or teaching-cum-affiliating, single campus or multi-campus.

Most of the universities are "affiliating universities", which prescribe to the affiliated colleges the courses of study, hold examinations and award degrees, while undergraduate and, to some extent, postgraduate instruction is imparted by the colleges affiliated to them.

Universities impart postgraduate education and conduct and promote research in a variety of disciplines.

Colleges in India are established by State Governments and private agencies. In some cases, universities themselves establish colleges. Most of the colleges seek support from the State Governments for their maintenance. Universities have been set up by the Central or State Governments by means of legislation.

Education – A Concurrent Subject

Under the Constitutional scheme, "education" is in the concurrent list, and the Union Government and States exercise joint responsibilities. As a result, while the role and responsibilities of the States in regard to education remains unaltered, the Union Government accepts a larger responsibility to reinforce the national and integrated character of education, to maintain quality and standards, to study and monitor the educational requirements of the country as a whole in regard to manpower for development, to cater to the needs of research and advanced study, to look after international aspects of education, culture and human resource development, and in general, to promote excellence at the tertiary level of the educational pyramid throughout the country.

The coordination and cooperation between the Union and the States is brought about in the field of education through the Central Advisory Board of Education (CABE). This body needs strengthening.

University Grants Commission

In order to determine and maintain standards in universities, the University Grants Commission (UGC) was established in 1952 and was constituted as a statutory body under the Act of Parliament in 1956. In performing its basic functions, the UGC allocates and disburses grants placed at its disposal by the Central Government to the universities, after an assessment of their needs. The Commission provides development and maintenance grants to universities established by the Central Government and provides development grants to the other universities established by the State Governments.

All-India Council of Technical Education

There is also an All-India Council of Technical education (AICTE), the major function of which is the planned and coordinated development of technical education in the country. The major programmes are related to review and renewal of the curriculum for education and training of engineers and technicians, modernisation of the laboratories and workshops and removal of obsolescence and establishment of community polytechnics. It supports engineering colleges, management of educational institutions and polytechnics engaged in training of technicians.

National Council for Teacher Education

The National Council for Teacher Education (NCTE) is designed to ensure planned and coordinated development of teacher education and determination and maintenance of its standards. The Council lays down norms for specified categories of courses and guidelines.

Other Councils

In the field of agriculture, the Indian Council for Agricultural Research (ICAR) promotes research and provides funds to a number of research institutions and agricultural universities, which have been set up under its auspices. The Indian Council of Medical Research (ICMR) promotes higher levels of medical research in the country and is a coordinating body for the promotion of medical research in the country. Besides, there are other councils related to professional education such as law. In addition, the UGC has established the National Accreditation and Assessment Council (NAAC) for carrying out periodical assessment of universities and colleges in the country.

Open University System

The country has also a developing open university system and the Indira Gandhi National Open University (IGNOU) set up in 1985 has nation-wide jurisdiction in the field of distance education. A Distance Education Council has been established as a statutory authority under the IGNOU Act, which provides development funds to open universities and distance education institutions from the funds placed at its disposal by the Central Government. The open university network has established common pool of programmes consisting of contributions from different open universities, which can be shared by any open university through the process of adoption, adaptation and transmission. IGNOU has received international attention and recognition and the Commonwealth of Learning has recently conferred the status of excellence in distance education on the IGNOU.

Education is the process of the individual mind getting to its full possible development.....It is a long school which lasts a life time.

Dr. Zakir Hussain

Protective discrimination

An important aspect of the National Policy on Education is to ensure the protective discrimination for a large number of sections of society. It aims at enabling a large number of

sections of society, through reservation of seats in higher education, special access to colleges and universities. Students from Scheduled Castes and Scheduled Tribes are provided scholarships, and there is also a provision for coaching classes for these students, which aim at overcoming their deficiencies.

National Eligibility Test

There is a system of National Eligibility Test for selection of teachers in the system. The student-teacher ratio in the Indian system of higher education is 1:21. It is also noteworthy that over the period, the number of students per 100,000 has increased significantly since independence, from 80 per 100,000 in 1951, to 613 per 100,000 in 1997.

Diversification

Within the formal system, an increasing diversification has been taking place since 1950s. Under the scheme of diversification, there are three courses — foundation, core and applied — which have built-in-flexibility in special combinations. The scheme also provides for introduction of courses for developing vocational skills in certain areas relating to regional and national needs.

The UGC has also launched a scheme of career-orientation to education and a number of institutions have introduced career-oriented courses in 35 subjects. In the field of professional education, stress has come to be laid on new areas of studies, which have direct relevance to new industries. Open learning systems and distance education courses have also contributed significantly to the diversification of courses. UGC has also launched a TV programme for general awareness in natural sciences, social sciences and arts.

Quality Improvement

A number of measures have been taken for quality improvement. These include the development of infrastructure, curriculum, human resources and research and establishment of centres of excellence and interdisciplinary and inter-institutional centres. The scheme of academic staff colleges was started in 1986-87, under which 45 such colleges have been set up. These colleges conduct orientation programmes for training new teachers and also refresher courses in various disciplines for in-service teachers to enable them to update their knowledge.

To enrich the quality of higher education, a country-wide classroom programme was launched. Under this scheme, special films on various subjects are prepared and telecast for the benefit of students and teachers. Twenty one centres have been set up to produce special films, and a large number of video tapes are being produced for transmission on the national TV network.

Autonomous Colleges

Apart from these initiatives, a number of regulatory measures have been taken to bring about structural reforms and ensure quality in higher education. A scheme of autonomous colleges has been launched under which teachers in the colleges themselves prescribe the curriculum and conduct the evaluation of their students through a system of continuous evaluation. At present,

there are 119 autonomous colleges. The UGC constitutes review committees in order to oversee and assess the quality of the university programmes.

The UGC and the Council of Scientific and Industrial Research have also set up the National Educational Testing Programmes. UGC has also set up a national level institution for quality assessment and accreditation.

Man is neither mere intellect, nor the gross animal body, nor the heart or soul alone. A proper and harmonious combination of all the three is required for the making of the whole man and constitutes the true economics of education.

--Mahatma Gandhi

Reforms in the Examination System

There is also a programme for reforms in the examination system, and various experiments have been conducted to ensure that students are freed from the burden of annual examinations and are encouraged to continue to study throughout the entire period of study. Further thought is being given to broaden these experiments.

Investment in Higher Education

Higher education in India is in deep financial strain, with escalating costs and increasing needs, on the one hand, and shrinking budgetary resources, on the other. The share of higher education in total planned resources increased from 0.71% in the first Five-Year plan to 1.24 % in the fourth Five-Year plan. But ever since, it has declined continuously to 0.53% in the seventh Five-Year plan and further down to 0.35% in the eighth Five-Year plan (1992-97), though the actual expenditure has increased by more than 100 times from Rs.140 million in the first Five-Year plan to Rs. 15,000 million in the eighth Five-Year plan at current prices, and 6.5 times in terms of real prices. Thus, although higher education in India is characterized by massive public investment, this investment is still regarded as much below the optimum.

Recently, major efforts have been mounted for mobilization of resources and it has been recommended that while the Government should make a firm commitment to higher education, institutions of higher education should make efforts to raise their own resources by raising the fee levels, encouraging private donations and by generating revenues through consultancy and other activities. A suggestion has also been mooted for levying an educational cess. It is clearly seen that if higher education has to be maintained and developed further, the Government will have to step up measures for encouraging self-reliance while providing a much more massive investment than hitherto.

Tasks Ahead

India, like other countries, visualizes that a new age is dawning, that will be characterised by unimaginable advances in knowledge and synthesis of knowledge, triggering major changes in

the objectives, contents, and methods of higher education. Great emphasis will fall upon lifelong education and the realization of a learning society. Complete education for the complete human personality will come to be emphasized more and more imperatively. Building up the defences of peace in the minds of men and women will continue to make tremendous demands on all levels of education, and higher education will have to bear the responsibility.

India also visualizes that contemporary problems can be resolved only if human nature is so changed that mutual goodwill and spontaneous drive to cooperation become ingrained in the human consciousness. India, therefore, visualizes a number of tasks that relate to the creation of a new society that is non-exploitative and non-violent in character by virtue of the integrated personalities of the constituents.

Education means enabling the mind to find out that ultimate truth which emancipates us from the bondage of the dust and gives us the wealth, not of things but of inner light, not of power but of love, making this truth its own and giving expression to it.

Rabindra Nath Tagore

Readiness to Move Forward

India looks upon the present difficult situation of humanity with realistic optimism. While it is aware of the tremendous dangers that threaten the human aspiration for its higher fulfilment in terms of lasting peace, unity and upliftment of all, it is confident that humanity has the habit of survival and arrival and that it would overcome its pressing problems, even though they require more strenuous and widespread efforts.

India is, therefore, preparing itself to join the entire forward looking humanity in its journey to step up the pace in the task of addressing the needs of young people and their future.

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Objectives of Higher Education in a Changing World

Addressing the graduates of the Allahabad University in 1947, Jawaharlal Nehru, the first Prime Minister of India, said:

"A university stands for humanism, for tolerance, for reason, for the adventure of ideas and for the search for truth. It stands for the onward march of the human race toward higher objectives. Universities are places of ideals and idealism. If the universities discharge their duties adequately, then, it is well with the nation and the people."

This statement effectively initiated the formulation of the essential purpose of university education in independent India.

Universities in India have been the living repository of a long-cherished heritage — a heritage continually revitalised by the teachers and researchers by their contribution to and interaction with it.

The higher education system in India has constantly striven to build universities as places of culture and of learning open to all and, above all, reinforcing the theme of learning throughout life. Participating in and contributing to major debates concerning the direction and future of society is seen as a major task, and a moral obligation as well, of the university system.

The first major step taken by the Ministry of Education after independence (1947) in higher education was to appoint a Commission on university education under the Chairmanship of Dr. S. Radhakrishnan to report on Indian university education. In its report, the Commission said: "Democracy depends for its very life on a high standard of general, vocational and professional education. Dissemination of learning, incessant search for new knowledge, unceasing effort to plumb the meaning of life, provision for professional education to satisfy the occupational needs of our society are the vital tasks of higher education."

The past is our foundation, the present our material, the future our aim and summit. Each must have its due and natural place in a national system of education.

Sri Aurobindo

The Commission set out the aims of university education in the following terms:

- Higher education policies and programmes should be in line with the social purposes which we profess to serve;
- There should be a sufficient unity of purpose in the diversity to produce a community of values and ideas among educated men and women;
- Institutional forms may vary as time and circumstances require, but there should be a steadfast loyalty to the abiding elements of respect for human personality, freedom of belief and expression for all citizens, a deep obligation to promote human well-being, faith in reason and humanity;
- Mere vocational and technical education, important though they are, do not necessarily serve the spirit. We might have a number of scientists without conscience and technicians without taste who would find a void, a moral vacuum, within themselves;
- We should preserve the values of democracy, justice and liberty, equality and fraternity. Universities must stand for these ideals which can never be lost so long as men seek wisdom and follow righteousness;
- The Indian Constitution lays down the general purposes of the State. The universities should educate people on the right lines to make the understanding and vision of the framers of the Constitution, the common possession of all the Indian people.

Education and National Development

In 1964, the Ministry of Education, Government of India, appointed a Commission to advise the Government on the national pattern of education and on the general principles and policies for the development of education at all stages and in all aspects. In its comprehensive Report, the Commission proposed that education should:

i) address the problems of national development, particularly issues concerning self-reliance, economic growth, employment and social and national integration;

ii) relate to the life, needs and aspirations of the people;

iii) help improve productivity by emphasi-sing work-experience, vocationalisation, improvements in scientific and technological education and research;

iv) be perceived as the main instrument of change through human development;

v) contribute to social and national integration;

vi) modernise the society through knowledge and its applications;

vii) inculcate social, moral and spiritual values in the people.

The Education Commission (1966) said in its report: "While the fundamental values to which the universities owe their allegiance are largely unrelated to time and circumstances, their functions change from time to time. Their tasks are no longer confined to the two traditional functions of teaching and advancement of knowledge. They are assuming new functions and the older ones are increasing in range, depth and complexity."

The Commission set out the following functions of the universities in the modern world:

- To seek and cultivate new knowledge, to engage vigorously and fearlessly in the pursuit of truth and to interpret old knowledge and beliefs in the light of new needs and discoveries;

- To provide the right kind of leadership in all walks of life by helping the individuals develop their potential;

- To provide society with competent men and women trained in all professions who, as cultivated individuals, are inclined with a sense of social purpose;

- To strive to promote equality and social justice and to reduce social and cultural differences through diffusion of education;

- To foster in the teachers and students, and through them in the society generally, the attitudes and values needed for developing the ‘good life’ in individuals and society;
- To bring the universities closer to the community through extension of knowledge and its applications for problem-solving.

We want that education by which character is formed, strength of mind is increased, the intellect is expanded and by which one can stand on one's own feet. Education is the manifestation of the perfection already in man.

Swami Vivekananda

National Policy on Education – 1986

Two decades later, the Government of India undertook a comprehensive review of the nation's education policy. The policy statement which emerged following this review reaffirmed: "Education is a unique investment in the present and the future. This cardinal principle is the key to the National Policy on Education."

Higher education, according to the 1986 Policy, provides people with an opportunity to reflect on the critical social, economic, cultural, moral and spiritual issues facing humanity. It contributes to national development through dissemination of specialised knowledge and skills. It is, therefore, a crucial factor for survival. Being at the apex of the educational pyramid, it has also a key role in producing teachers for the education system.

The policy urged that in the context of the unprecedented explosion of knowledge, higher education had to become dynamic as never before, constantly entering uncharted areas, and it proposed that the large number of universities and colleges in the country needed all-round improvement and that the main emphasis in the immediate future should be on their consolidation and expansion.

The 1986 policy called for launching the open university system as an instrument of democratising education and to develop a new pattern of the Rural Universities to take up the challenges of micro-planning at grass-root levels for the transformation of the rural areas.

Democracy depends for its very life on a high standard of general, vocational and professional education.

Dr. S. Radhakrishnan

Recent Trends

There has recently been a new tide of educational thought which aims at drawing from our current experience of all that is quintessential, as also to develop a new vision in the light of the highest traditions of Indian education and of the contemporary needs and aspirations.

The following educational objectives are being emphasised:

- Education aims at liberation — liberation from bondage and ignorance, backwardness and gravitational pulls of the lower human nature;
- Education, being an evolutionary force that enables both the individual and the collectivity to evolve various faculties and to integrate them by the superior intellectual,

ethical, aesthetic and spiritual powers, should aim at developing a new type of humanity highly humane, cultured and integrated.

- Education should be developed as a harmonising force, which tries to relate the individual, environment and cosmos in a total harmony by the purification and cultivation of various domains of outer space and inner space;
- Education should be so designed as to become a powerful carrier of the best of the heritage and it should, therefore, aim at transmitting to the new generations the lessons of the accumulated experiences of the past for further progress in the present and the future.

Considering that the contemporary problems of environment, of conflicts and of asymmetrical relationships need to be resolved as early as possible, the Indian system of education aims at the promotion of the goals of universal peace, harmony and unity, based on the principles of liberty, equality and fraternity.

The highest education is that which does not merely give us information but makes our life in harmony with all existence.

--Rabindra Nath Tagore

Within the broad canvas of these objectives, the specific objectives of higher education that are evolving are:

- To seek and cultivate new knowledge, to engage vigorously and fearlessly in the pursuit of truth, and to interpret all knowledge and beliefs in the light of new things and discoveries;
- To provide the right kind of work ethos, professional expertise and leadership in all walks of life;
- To strive and promote quality and social justice;
- To foster among teachers and students and, through them in society generally, integral development of values inherent in physical, emotional, rational, aesthetic, ethical and spiritual education; and
- To promote synthesis of knowledge, with special emphasis on unity of scientific and spiritual pursuits that would revitalise our country's heritage and promote the ideal of the whole world as one united family.

Those confined to narrow consciousness consider things with a sense of division and separativeness; but for those endowed with noble character, the entire earth is one family.

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Growth of Higher Education

The theme of higher knowledge and higher education was fashioned in India by the ancient Rishis and sages in the Vedic Age, the date of which is uncertain but is supposed to be traceable

to great antiquity. The early Gurukul* system of education flourished in the Vedic and Upanishadic periods, but a huge University came to be set up at Takshashila in the 6th Century B.C. Two other universities, namely, Nalanda and Vikramsila were established in the 4th and 5th centuries A.D., respectively.

India has had a long tradition of inquiry and articulation of concepts of universe, self, role of state, economy, social order and other related matters. The methodologies adopted were both subjective and objective and included observation, conceptualisation, verification, articulation and teaching.

As a result, India had gone further in science than any other country before the modern era—specially in mathematics, astronomy and chemistry, metallurgy and physics. Indian scientists discovered and formulated and anticipated by force of reasoning or experiment some of the scientific ideas and discoveries which Europe arrived at much later. Ancient India was well equipped in surgery and its system of medicine survives to this day. A vast literature is also available on "Vriksha Ayurveda" (Herbal Medicine). In literature, in philosophy and in systems of yogic knowledge not only ancient India but medieval and modern India reached highest levels of achievement. The higher education system flourished in ancient India well; and it continued to influence developments during its subsequent ages, in spite of diverse forms that developed under the impact of changes in religion, and in social, economic and political life.

Beginnings of Modern Higher Education

The modern higher education system is only 140 years old, when the first three universities were set up in 1857 under the British Rule. Policy guidelines given by Macaulay and Wood's Despatch (1854) shaped the scope and the role of universities in India. To begin with, colleges set up in India were affiliated to British universities. In 1857, for the first time, universities were set up in India. Existing colleges got affiliated to these universities.

The period 1857 to 1947 was the period of slow development of institutions of higher education in India. They were set up mostly in administrative headquarters and port towns. They provided education in literature, history, philosophy, political science, social science and natural sciences. The thrust of development was mainly on liberal arts education. Science education occupied a very small proportion. The rate of development was slow as in a period of 90 years only 18 universities were set up in the country. Most of these followed the model of the three leading universities at Bombay, Calcutta and Madras. Along with liberal arts, some engineering and medical colleges were also set up. Most of the colleges imparted education as formulated by the universities. The universities also acted as examining and degree granting bodies. The initiative in the hands of college teachers in terms of curriculum development was, therefore, very much limited.

The guiding principles of colonial rulers were slightly modified by Indian scholars who desired to blend Indian culture with western thought. They felt this would make Indians appreciate knowledge both from Indian as well as from the British point of view. These two philosophical approaches simultaneously operated during the colonial period.

But the development that followed was greatly influenced by Macaulay's Minutes, which had crippling effects, and even till today those effects continue to obstruct the process of major reforms that are now felt to be urgent and imperative.

During this colonial period, particularly after 1906, the desire for a national system of education and need for imparting knowledge of India's philosophy, art and literature also gained momentum. Some of the leading persons attempted to establish indigenous educational institutions with the support of the community. A National College was set up by nationalist leaders in 1906 at Calcutta under the principalship of Sri Aurobindo, and some other institutions too came to be established, such as Viswa Bharati by the great poet Rabindra Nath Tagore.

A one year course of national service on farm or factory should be made a part of the curriculum for a bachelor's degree. A system of people's colleges and universities may also be instituted so that grown up persons with a few years experience in some profession can make use of them when they are ready and willing.

Shri R. M. Lohia

Development after Independence

After independence, India adopted the approach of planned development of the country. The First Five Year Plan focused on agriculture, the Second Five Year Plan on industry and the Third Five Year Plan again attempted to focus on agriculture and agro-based industry for the development of the country. This approach for development called for development of the education system in the subsequent Five Year Plans, to meet the challenges of development and the needs of agriculture, industry and society in general.

At Independence in 1947, India inherited a system of higher education which was not only small but also characterized by the persistence of large intra/inter-regional imbalances. Determined efforts were made to build a network of universities, and their affiliated colleges which provided tremendous outreach to a country of vast diversities in language as also in the prevailing standards of education at the lower levels. The feeder schools differentially impacted on the higher education system leading to significant qualitative imbalances within it.

When India became independent, it had only 20 universities and 500 colleges located in different parts of the country. It enrolled around a hundred thousand students in higher education. Participation of women was limited and those who graduated annually were no more than a couple of dozens or so. The policies and aspirations of people influenced the development in the following decades.

In the post-independence period, higher education has expanded fast, and it is mostly public in nature. Today, India ranks very high in terms of the size of the network of higher education institutions, with 6.75 million students enrolled. The teaching force numbers about 321,000. Student enrolment increased from 263,000 to 6,755,000 by 1996-97. It grew at an estimated rate of 7 per cent between 1987 and 1993 but has now declined to 5.5 per cent compound rate of growth, with 14 states (out of 23 States and 1 Union Territory in India which have Universities)

having a lower rate. In spite of this phenomenal growth, the total enrolment, however, forms only about six percent of the relevant age-group (17-23) population.

The number of students per 100,000 population has increased significantly since independence. It was only 48 per 100,000 in 1951 increasing to 613 per 100,000 in 1997.

India's higher education system compares favourably with the other countries of South Asia and Africa in its enrolment, while our South East Asian neighbours show much higher enrolment such as in the Philippines (27.8%), Thailand (19.0%), and Malaysia (10.1%). Hence, in spite of the rapid expansion of the system in 50 years, access to higher education still remains an issue as the pressure of India's very youthful population continues to bear on it.

With this scientific and technical manpower India has the potential to become the largest reservoir in the world. Compared to the situation that the country inherited from the colonial rulers about half a century ago, these numbers mark a phenomenal expansion of the system.

Growth in Higher Education in India

Institutions	1950-51	1990-91	1996-97
Universities	30	117	214
Colleges	750	7346	9703
Enrolment('000s)	263	4925	6755
Teachers('000s)	24.0	272.7	321

Note: *includes institutions deemed to be universities, but excludes other institutions.

Source: UGC Annual Report 1996-97 (New Delhi: University Grants Commission); and Selected Educational Statistics (New Delhi: Ministry of Human Resources Development) (relevant years).

The number of women's colleges has recorded a substantial increase from 780 colleges in 1986-87 reaching a figure of 1195 in 1996-97. Of the total enrolment, women's enrolment accounts for 34 per cent.

There is a system of National Level Eligibility Test for appointment as teachers in the system. Some States also conduct State Level Tests for appointment of teachers in their States. Positions of Professors and Readers in the Universities are filled through open selection. Under the Career Advancement Scheme, teachers are also promoted to higher positions up to Professors in the Universities and up to Readers in the Colleges. Out of the total number of teachers in higher education, Professors and Readers account for 12.8 and 26.2 per cent respectively, in the University Departments and University Colleges. In the Affiliated Colleges there are 13.9 per

cent Senior Teachers and 81.7 per cent Lecturers. There were 21 students for one teacher in 1996-97 as compared to 12 students per teacher in 1965-66.

As a system expands, it absorbs a population of students who come from a wide spectrum of socio-economic groups. The "massification of education" has occurred in India at the lower levels of education which feed into higher education. The quality of that education impacts on higher education. Inevitably, therefore, the higher education system has had to cope with the problems of a very diversified student body from first generation learners to those from professional and higher income families whose children are exposed to many other opportunities besides education. The first generation learners have mostly attended the publicly funded schools with far poorer preparation than the latter who patronise the private institutions. Increasing access and decrease in quality have been major issues confronting higher education with a very large young population and increasing strain in government resources.

Education can have a great role to play in decreasing social disparities between groups and in promoting social mobility. For instance, the tremendous expansion of the middle class in India can be confidently attributed to the investment in education, especially in higher education. In this respect, the Indian ethos is echoed now in the Delors Report.

There is a need to place greater emphasis on enrolment of students from underprivileged backgrounds such as the rural areas, the scheduled castes and tribes and other backward groups, minorities, the disabled and others who have suffered from discrimination which has existed for centuries. Hence, special attention has to be given to all these groups through various strategies to be adopted in the university system, especially for access to the system, retention in the system and qualitative development of performance.

The Present Status

There are today, 214 universities and equivalent institutions. The total number of universities include six open universities—one central university and five state universities—all run by the government. They also include four universities exclusively meant for women, while all other institutions are open to both males and females. There is no university exclusively for males. Similarly, there are nearly a thousand colleges in the country which give admission exclusively to women students. In addition to providing most of the courses available in other institutions, these colleges and universities provide a few additional courses which are of special interest to women.

Apart from degree awarding university level institutions, there are 9,703 colleges that provide mostly bachelor’s and some times master’s level education. A majority of the colleges are arts, science and commerce colleges, offering education in humanities, natural sciences, arts and commerce. There are about 550 engineering and technical colleges, 655 medical colleges, nearly 600 management institutions, 700 teacher education/training colleges and 1100 polytechnics. While many universities in India provide general as well as professional education, there are some universities which exclusively provide professional education, and some exclusively general.

No plan for the future development of the country can be deemed to be complete which does not provide for technical and scientific training. This is the age of Machine and it is only those countries in which technical and scientific training has risen to the highest pitch that will survive in the struggle that will commence when the war is over, for maintaining decent standards of living for their people.

Dr. B.R. Ambedkar

Most of the higher education institutions in India are public institutions. There are no private universities so far, though efforts have been initiated to allow opening of private universities. There are, however, a large number of private colleges. A majority of the private colleges are financially supported by the State. The rapid growth of self-financing private colleges is a recent phenomenon.

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Governance and Management

Significant progress has been made in recent years not only in the development and strengthening of higher education in terms of improved student access, strengthened research and postgraduate programmes, more equitable representation of different social groups, renewed curricula and adoption of new teaching and delivery methods, but in enhanced institutional management and strategic planning capacity as well.

The higher education system has been experimenting with management approaches to deal with challenges arising from internet factors, such as changes in academic disciplines and new instructional methods, and external factors such as population growth, diverse clienteles and changing labour market requirements. Non-university institutions and establishment of open universities and distance learning system have been particularly important initiatives.

Involvement in decision-making by all key stakeholders of higher education institutions is recognised as imperative. To this end, a large measure of autonomy is being stimulated in the system to encourage freedom to select staff and students, determine curriculum and degree standards and to allocate funds; while at the same time being accountable to the system.

Higher education in India is coordinated by several agencies. While the university system falls within the jurisdiction of the UGC, professional institutions are coordinated by different bodies. The All India Council for Technical Education (AICTE) is responsible for coordination of technical and management education institutions. The other statutory bodies are Medical Council of India (MCI), Central Council of Indian Medicine, the Homeopathy Central Council, the Indian Council of Medical Research (ICMR), Indian Nursing Council, the Dental Council, the Pharmacy Council, the Bar Council of India, the Indian Council of Agricultural Research (ICAR), etc. There are also bodies at the state level, such as State Councils of Higher Education

that were established recently. There is yet another type of coordinating agency called Association of Indian Universities (AIU), which was earlier known as Inter-University Board of India. All the universities and other equivalent institutions of higher education are members of the AIU. The AIU has no executive powers, but plays an important role as an agency of dissemination of information and as an advisor both to the government and/or UGC and universities.

The University Grants Commission

The University Grants Commission (UGC) was established in 1952 and was constituted as a statutory body under an Act of Parliament in 1956. The establishment of the UGC was the first major legislative measure initiated by the Government of India (GOI) under the constitutional provision reserving to it the powers for coordination and determination of standards in universities.

The primary responsibility of the Commission is to promote and coordinate university education in the country and to ensure that the standards are maintained in teaching, research and examinations. In performing these functions, the UGC allocates and disburses grants placed at its disposal by the Central Government to the Universities, after an assessment of their needs. The Commission provides the development and maintenance grants to universities established under the Acts of Parliament and only development grants to those established by state legislatures.

The major initiatives taken by the UGC in improving the quality and standards of higher education are :

- Improvements in the quality and standards of teaching and research through programmes for setting up Centres of Advanced Study and Research, improve-ments in college teaching, strengthening research and infrastructure, etc.
- Periodic review and renewal of curricular content of courses in various disciplines, and special schemes for introduction of emerging areas of education and training.
- Establishment of common facilities for research networking of resources for information and documentation.
- Induction of electronic media in higher education.
- Provision of scholarships and fellowships to students.
- Launching of special programmes for greater participation of women, disadvantaged groups and the weaker sections in higher education.

All India Council for Technical Education (AICTE)

The AICTE was set up in 1948 as an advisory body to assist the Central Government in the planning and development of technical education at the post-secondary level. Education in engineering and technology, architecture, management and pharmacy is within the purview of the AICTE. In 1988, the AICTE was constituted as a statutory body under an Act of Parliament.

The major function of the AICTE is the planned and coordinated development of technical education in the country. In the performance of its functions, the AICTE works in close

coordination with the UGC as far as technical education programmes offered by the Universities are concerned.

The AICTE coordinates and supports the development of engineering colleges, management education institutions and polytechnics engaged in the training of technicians. Development support is provided by the AICTE to universities (through the UGC) and engineering colleges and polytechnics for their expansion, as also for improvements in their quality and standards.

Among the major programmes supported by the AICTE are review and renewal of the curriculum for the education and training of engineers and technicians. Modernisation of the laboratories and workshops, removal of obsolescence, establishment of community polytechnics, technology forecasting, manpower planning, training of teachers, preparation of norms and standards for programmes of education and training in various disciplines at different levels, and extending the benefits of technical and training to the backward and rural areas.

A significant feature in the development of technical education in the last two decades or so is the emergence of "self-financing" institutions in the private sector which do not depend on government grants, but recover their costs from students in the form of fees. Some of these institutions had their origin in what was then known as "capitation fee" institutions which were set up by private agencies in response to the increasing social demand for professional and technical education, especially in medicine and engineering. Most of them were charging exorbitant fees, and the facilities provided, in many cases, were much below the essential requirements. The Central and State Governments discourage this trend, and legislative measures are being envisaged to regulate the levels of fees that could be charged. There have also been legislations, and the Supreme Court, dealing with a number of cases on the subject, has directed that the Government and its agencies should lay down the principles on the basis of which institutions could levy fees.

National Council for Teacher Education

The National Council for Teacher Education (NCTE) was set up in 1973 by a Government Resolution as a national expert body to advise Central and State Governments on all matters pertaining to teacher education. The Council was made a statutory body by an Act of Parliament in 1993.

The primary function of the Council is to ensure planned and coordinated develop-ment of teacher education and determination and maintenance of its standards. For the performance of this function, the Council lays down norms for specified categories of courses and guidelines for granting recognition to teacher training programmes offered by various institutions including universities and colleges.

Indian Council of Agricultural Research

The Indian Council of Agricultural Research (ICAR) was established through a Government Resolution for promotion of agricultural education and research in the country. The council functions under the supervision of the Ministry of Agriculture.

Under the auspices of the Council, a number of research institutions and Agricultural Universities have been set up in the country. The ICAR provides funds to these institutions for their development.

Accreditation of Institutions

In order to ensure a measure of accountability and to evaluate the performance of institutions on the basis of objective criteria, a system of accreditation of institutions of higher learning has been under discussion following the 1986 Policy statement.

As far as universities are concerned, the UGC took the initiative and established a mechanism called National Accreditation and Assessment Council (NAAC) as an autonomous council under the aegis of the UGC to carry out periodical assessment of universities and colleges in the country. The methodology developed by NAAC for assessment involves :

- a self-appraisal by each university/college on the basis of specified parameters and documenting its performance with reference to each of them;
- an assessment of the performance by an Expert Committee on the basis of probes identified in respect of each parameter;
- a peer review of the self-appraisal and expert's evaluation; and
- a judgement of the performance.

The NAAC has developed the instruments for carrying out the evaluation studies and several universities and colleges have offered themselves for this assessment. This council needs to be strengthened.

The AICTE Act of 1988 envisages the establishment of accreditation mechanisms for institutions offering technical education programmes. The AICTE has since established a National Board of Accreditation (NBA) to initiate the accreditation of technical institutions.

As a first step, the NBA has undertaken a detailed exercise for benchmarking the performance of premier institutions so that a frame of reference for the evaluation of the performance of the institutions can be initiated.

The University System

The universities are of various kinds: with a single faculty or many faculties; teaching or affiliating, or teaching-cum-affiliating; single-campus or multi-campus; Agricultural Universities; Medical Universities; Tech-nological Universities; Language Universities (Hindi, Sanskrit, Tamil, Telugu, Urdu); and Women's Universities. There are besides special institutions in medicine, science, engineering and technology, management and social sciences. All these institutions of higher learning can be classified into the following categories:

- Universities which are established by an Act of Parliament or State Legislature and are of unitary or affiliating type;

- Institutions of national importance — such as the Indian Institutes of Technology — which are established under Acts of Parliament and are empowered to award degrees.
- Institutions deemed to be universities, which are given university status under a provision in the UGC Act. Some of these institutions offer advance level courses in a particular field of specialisa-tion, while many of them award general degrees.
- Institutions which award only diplomas and are not established by legislation or not declared as deemed to be universities. The Indian Institutes of Management are in this category.

The UGC Act has a provision which prohibits any institution from awarding degrees unless it is established under an act of Parliament or a State Legislature, or is specially empowered to award degrees through legislation, or is deemed to be a university under the UGC Act. The first institution to be given the status of a university was Serampore College, near Calcutta, in 1829.

The first three universities established in India in 1857 at Calcutta, Bombay and Madras were "affiliating universities" following the model of the London University. Later, Allahabad University, which has completed one hundred years, was established as a unitary university. In this dispensation, the universities prescribed the courses of study, held examinations and awarded degrees, while all instruction was imparted by the colleges.

It was only during the period between 1904 and 1913 that imparting instruction within the universities began in India. Even so, the gene- ral pattern of affiliation of colleges continues with most of the universities in the country.

Since the colleges do not have the power to award degrees, they have necessarily to seek affiliation from a university. As the number of universities multiplied, and most of them sought to cater to the needs of a region or a state, a system of jurisdiction over specified territories among the universities, for the purpose of affiliation of colleges, also evolved.

The power of granting affiliation to a college is vested in the universities. Most universities have laid down detailed conditions which the management of a college has to fulfil before its application for affiliation is considered by the university. Most universities insist on physical inspection before taking any decision on affiliation. In an attempt to ensure the process of affiliation on a more rigorous academic exercise, the UGC has recommended detailed guidelines to all the universities in the country.

Colleges in India are established by the state governments and private agencies. In some cases, the universities themselves establish colleges. Although the number of colleges established under private initiative is fairly large, more often, most of them begin to seek support from the state governments for their maintenance. Today, most of the colleges, with the exception of those which are self-financing, are receiving financial support from public funds.

Although there is a broad consensus on the core issues of university management, on matters of detail, perceptions and views vary. The core issues on which there is a broad consensus are:

- Universities management should be struc- tured on the principle of self-governance based on participation, decentralisation, autonomy and accountability;
- The various constituents of a university, namely, Faculties, Schools, Departments, Colleges, etc., should have the freedom to achieve excellence; and
- The main Act of a University should lay down the structure and organisation in broad terms and the relevant details may be prescribed by statutes and ordinances.

The collegiate landscape is a wide, heterogeneous spectrum of institutions and services. The pattern of governance varies considerably in terms of their internal administration as well as in their relationship with their external environment, the major constituents of which are the university and the government. The universities have to ensure the maintenance of academic standards in their affiliated colleges, and the state governments meet part or whole of the expenditure incurred by these institutions; other issues that relate to staff and students and their roles in the organisation, administration and development of their campuses are largely left to the resourcefulness of individual colleges.

Instruction for almost 80% of the enrolment in first degree programmes is imparted in colleges. Since the universities concerned prescribe the courses, set the standards and conduct the examinations, the large body of college teachers are left with very little option in deciding what to teach and how. The UGC has, therefore, evolved a scheme to confer autonomous status on selected colleges which would enable them to prescribe the courses, determine the content and decide the teaching-learning processes. The colleges would continue to remain affiliated to the universities whose major functions would be to approve the courses, hold the examinations and award the degrees. The experiment has led to the review and renewal of the curricular content of the programmes offered by the autonomous colleges, and imparting to the programmes some measure of relevance.

Accountability

Universities are creations of legislatures and they are by and large financed from public funds. They have therefore to be accountable to the concerned legislatures and govern-ments. Performance of the functions, which require exercise of academic judgement lies exclusively within the domain of universities. A new awareness is growing that while the status of teachers should be raised, there should also be a corresponding system of their accountability.

Other Councils

There are, at the national level, a multiplicity of Councils established by the Government of India as statutory mechanisms for developing and regulating various professions. To the extent the preparation for all these professions is done by the universities through education and training, they have to satisfy the regulator's prescriptions of standards of professional preparation, though most of them are not involved in the resource allocation processes.

A number of Research Councils have been set up, notable among them being the Indian Council of Philosophical Research, Indian Council of Historical Research, Indian Council of Social Science Research, Indian Institute of Advanced Study, National Council of Rural Institutes,

Central Council of Research in Ayurveda and Siddha, Rashtriya Sanskrit Samsthan, and Rashtriya Veda Vidya Pratishthan.

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Pertinence and Quality

In this age of a techno-scientific revolution, when the sheer quantity of knowledge and information is expanding exponentially, when the needs of a constantly growing and increasingly varied student population are burgeoning, the quality of training for teachers and the quality of teaching in higher education institutions demand top priority.

The higher education system in India recognises its key responsibility in training teachers, in establishing links with teacher training institutions at other levels and in training teacher trainers. Efforts are being made to bring in teachers from the commercial and social sectors to facilitate interchange and build links with the education system. The higher education system in India is facilitating access to the common heritage of knowledge and research. It is fulfilling its moral obligation to society in exchange for the resources assigned to it by society. Recently, a Task Force on Fundamental Duties laid down in the Constitution has been constituted so that the same can be reflected in the curriculum. This would also lay down a code of accountability of all stakeholders in the educational system.

The University Grants Commission [UGC] was set up in 1956 as an agency for coordination and maintenance of the standards of teaching examination and research in universities. During the last 40 years, the UGC has taken a number of measures to improve quality and to introduce innovations.

Quality improvement through infrastructural development:Here the policy is to ensure a minimum level of facilities such as laboratories, libraries, classrooms and hostels, by the provision of development grants. Special grants have also been provided to improve in quality humanities, social science and science streams.

Financial support has also been provided for creating new inter-disciplinary oriented universities such as the Jawaharlal Nehru University.

Curriculum, human resources and research development:Another quality assurance measure is the provision of resources in the form of Research Fellowships for M.Phil. and Ph.D. programmes undertaken by university and college teachers, University leadership programmes (ULP) for college teachers, and Seminars, workshops, summer schools in various subjects so as to help the teachers upgrade their knowledge.

Such programmes reach a large number of teachers in the system. In 1987, Academic Staff Colleges (ASC) were set up to provide opportunities for general orientation and subject refresher programmes for academic staff. Under the scheme, more than hundred thousand teachers have

received orientation and subject refresher programmes of 3-4 weeks duration. Such measures are expected to have greater impact on the quality of teaching and learning in the system of higher education in the country.

Other measures within this broad category are restructuring of courses, improving the quality of research and curriculum development by constituting various subject panels and encouraging universities to undertake constant revision and improvement of curriculum. In order to implement relevant curricula, a scheme of restructuring of undergraduate programmes was initiated. The scheme envisaged flexible and socially relevant undergraduate curricula with a provision for foundation, core, application and skills-oriented course components.

A recent innovation has been the introduction of the vocational education scheme, at the undergraduate level. Under this scheme one of three subjects required for having a Bachelor's Degree could be a vocational education subject. The scheme has suggested 35 vocational subjects and recently some more vocational subjects related to agriculture and rural areas have been introduced. Nearly 1,500 colleges have been given facilities for vocational education and a large amount has been invested to support the implementation.

Centres of Excellence in Higher Education

Centres of excellence in different subject specialities have been established under the scheme of Centres of Advanced Studies (CAS), Department of Special Assistance (DSA) and Inter-University Research centres at internationally comparable standards. The objectives of these centres are to provide quality input in higher education and in research areas.

Great strides in science and technology, on the one hand, and high cost of inputs for good research, on the other, have made it necessary to develop interactive institutional arrangements between teaching institutions, national research laboratories and the development sectors. The UGC has established Inter-University Centres to enable cooperation and joint use of facilities in nuclear science, crystal growth astronomy and astrophysics, social sciences and humanities. Information Centres to facilitate information flow have been set up at the Indian Institute of Science, Bangalore, M.S. University of Baroda and SNDT Women's University, Bombay.

Sudden expansion in the higher education system required the development of excellence. A major strategy has been devised by the UGC for establishing Advanced Centres and Departments of Special Assistance within the university system. At present, about 411 departments are participating in these schemes and 157 in the scheme for strengthening the infrastructure facilities for postgraduates and research in science. These schemes have had a major impact on raising standards and promoting excellence in higher education.

Research and Development

Research is promoted by encouraging students to do M.Phil. and Ph.D. research. The UGC provides financial assistance to those who are meritorious and propose to pursue research. Meritorious students are selected through National Level Test. Nearly 50,000 scholars are receiving Fellowships for conducting research. Those who are enrolled for research programme

account for 74,000, i.e. 1.1 per cent of total enrolment in higher education. Nearly 10,000 students are awarded Ph.D. degree every year.

Teachers are encouraged to do research through award of minor and major research projects. Nearly 500 major research projects and 650 minor research projects were awarded during the last year. Besides, there are schemes of Research Associateship, Scientistship, Emeritus Fellowship, Teacher Fellowship and Career Awards through which research work is supported by providing financial assistance to teachers. These Fellowships are available for Science, Social Sciences, Humanities and Engineering & Technology. Besides UGC, support for major and minor research projects is provided to teachers in higher education by Department of Science and Technology and various Councils related to Social sciences, History and Philosophy.

Training of teachers is an important component of any policy, which aims at maintaining high standards of teaching in the universities and colleges. The review of Educational Policy (1992) stressed upon a comprehensive programme of professional development of teachers through Academic Staff Colleges. The scheme of Academic Staff Colleges was started in 1986-87, under which 45 such Colleges have been set up so far. These colleges conduct four-week orientation programmes for training new teachers with innovative techniques and also three to four week refresher courses in various disciplines for in-service teachers to enable them to update their knowledge. Since these Academic Staff Colleges cannot cater to the needs of all the teachers, 72 departments of universities and specialised institutions have been selected to conduct refresher courses, in addition to the Academic Staff Colleges. These centres have prepared reading material for the use of teachers. The Academic Staff Colleges also conduct seminars of two to three days' duration for the Principals located under the catchment area. The Academic Staff Colleges sensitise the teachers about students' expectations and perceptions and provide them an understanding of the academic context of higher education.

They also help teachers in developing insights into the dynamics of working in the educational system. Up to 31st March, 1997, nearly 1.14 lakh teachers had participated in refresher courses and 42,000 teachers in orientation courses.

To enrich the quality of higher education, a Country-wide Classroom scheme was launched. Under this scheme, special films on various subjects were prepared and broadcast for the benefit of students and teachers. To carry this out, institutional audio-visual research centres and educational media research centres were set up throughout the country. Such Centres already number 21 and are likely to increase. These centres are producing a large number of video tapes that are transmitted on the national TV network.

Structural Reforms

The regulatory system was introduced as early as in 1857 along with the establishment of the modern university in India. The main purpose was to ensure the standardisation of curriculum in undergraduate programme, as well as objective and impersonal evaluation of students. The system of affiliated colleges involved determination of curriculum by the university. Implementation of this curriculum was carried out by the affiliated colleges and university

departments and evaluation of students through comprehensive examinations. So long as the system remained small in size, it worked reasonably well.

But, with the expansion in the number of institutions and students, this system has become counter-productive and has caused serious damage to the process of teaching and learning; diversification of higher education, social relevance of the curriculum and evaluation of students. In order to remedy this situation, the following steps have been taken:

- Scheme of Autonomous Colleges: These are intended to ensure quality relevance and appropriate assessment of students. Under this arrangement, teachers in the colleges decide the curriculum and conduct the evaluation of their students through systems of continuous evaluation. At present, there are 119 autonomous colleges.
- Critical inputs and recognition: Other regulatory measures, such as creation of minimum level of infrastructure, the specified number of qualified staff and well-defined administrative procedures, are insisted upon before any institution is affiliated to a university, or before a university can be recognised by the UGC for financial assistance. These measures discourage the opening of substandard institutions.

Evaluation and Monitoring

UGC review committees and visiting committees oversee and assess the quality of university programmes. These committees are constituted for different areas and disciplines and for all the universities which receive financial assistance from the UGC.

Another UGC measure is the National Educational Testing (NET) programme. The UGC and the Council of Scientific and Industrial Research (CSIR) conduct tests in science subjects twice a year for Junior Research Fellowships (JRF) and an eligibility test for the teaching profession.

Universities and colleges are required to consider the candidature of only such persons who have qualified for teaching jobs. Those who qualify for JRF tests are awarded Junior Research Fellowships of Rs. 5,000/- per month. These tests have proved to be important indicators of quality of students engaged in the teaching and research profession.

As a part of coordination and maintenance of standards of higher education, the UGC has set up an Inter-University Institution of quality assessment and accreditation. This is named as National Assessment and Accreditation Council (NAAC) and it was set up in 1994 under Section 12 CCC of the UGC Act.

NAAC's responsibility is to assess and accredit institutions of higher education that volunteer for the process, based on certain criteria which can be applied to the functioning of the institution in totality. NAAC's process of assessment and accreditation involves the preparation of a self-study report by the institution, its validation by the peers and final decision by the Council.

Though assessment and accreditation is voluntary on the part of the institutions, UGC has already indicated that its plan-based development support to educational institutions will be related to the outcome of assessment and accreditation. It has

already extended financial support to the extent of Rs. 5 lakhs to each university to meet the expenses involved in undergoing the accreditation process. Likewise, the autonomous colleges are provided with financial support for this purpose as a part their annual grant from the UGC.

So far 47 universities, 75 affiliated colleges and 20 autonomous colleges have volunteered to be accredited by NAAC. Around 10 universities and 25 colleges are in the advanced stage of finalising the self-study report in a few months time. The on-site visit to seven institutions — one university and six colleges—has already been completed. For a few more institutions, the on-site visit is being planned.

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Open University System

The advances in information and communication technology provide great opportunities to enhance teaching and learning in higher education by both on-campus and distance education. Even disabled students who are denied access to traditional institutions, and all those who require updating of their knowledge and life-long education can now be benefited by the modern facilities of communication. They also provide increased access to information sources and facilitate communication among researchers and teachers and the building of networks of institutions and scholars.

Through the open universities and distance learning initiatives, mechanisms are in place to upgrade skills at regular intervals and develop new competencies. People's needs of lifelong learning are constantly expanding. Higher education institutions are offering learning opportunities to satisfy these diverse demands. Ready access and flexibility are the hallmarks of these initiatives.

The Open University System was initiated in the country to augment opportunities for higher education as an instrument of democratising education and also to make it a lifelong process. The first open university in the country was established by the state government of Andhra Pradesh in 1982. In 1985, the central government established the Indira Gandhi National Open University (IGNOU).

Indian Gandhi National Open University

The IGNOU designed, developed and delivered high quality academic programmes in the Humanities, Sciences and Social Sciences as well as in professional areas like Computer Applications, Education, Engineering, Management, Nursing and Tourism. The University has currently 39 programmes comprising 482 courses to offer. Most of the University’s programmes are structured on modular pattern, leading to the award of certificates, diplomas and degrees.

The enrolment in the university has been rising rapidly. From less than 4,000 students in 1987, the enrolment rose to over 1,60,000 in 1998. The University has a vastly heterogeneous student

body: demo-graphically diverse (age, gender, region, social background, etc.); educationally dis-advantaged (most of them without the traditional qualifications for entering into higher education and who have had no other opportunities to make up for the lost time); and economically weak (large majority belonging to low and lower middle income groups). Most of these students are in the lower rungs of their career looking for opportunities to improve their qualifications, professional competence and/or in acquiring new skills.

The University has demonstrated that modern communication technologies can be effectively harnessed in providing access to educational opportunities and that high technology need not necessarily be a high cost medium. The University has, at its inception, set up Audio-Video production facilities with the generous support provided by the Governments of UK and Japan. These facilities were substantially augmented with a major grant given by the Government of Japan. The current Electronic Media Production Centre is a state-of-the-art technological facility that significantly enriches the university's learning packages. The media packages of the university are transmitted on the nation-wide television network as well as through selected radio stations. A dedicated, satellite-based teleconferencing network is being developed on an experimental basis in cooperation with the Indian Space Research Organisation for providing interactive teaching-learning support to distance education programmes offered by open universities in India.

For the delivery of various services to its students, the IGNOU has developed a nation-wide network of 19 Regional Centres, 334 Study Centres/programme centres and 40 work centres. The Study Centres and Work Centres are located generally with existing educational or training institutions who have made their facilities and services available to the IGNOU students.

Since the establishment of the IGNOU, seven more open universities were established in different states (Bihar, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and West Bengal).
A few more state governments are considering the establishing of open universities.

Distance Education Council (DEC)

The IGNOU is also a national level apex body for distance education. The apex body role envisages the establishment and development of an Open University Network by sharing the intellectual and physical resources within the distance education system among different institutions and enriching the system by extending its outreach, on the one hand, and ensuring the quality standards of its programmes of education and training, on the other. For the performance of this function, a Distance Education Council has been established as a statutory authority under the IGNOU Act. In discharging its responsibility, the Distance Education Council also provides development funding to open universities and distance education institutions from the funds placed at its disposal by the Central Government.

Open University Network

The Distance Education Council (DEC) has taken several initiatives to develop the Open University Network. A major step taken by the DEC is the establishment of a Common Pool of

Programmes, consisting of contributions from different open universities, which can be shared by an Open University through the process of adoption, adaptation and/or translation. The programmes developed and produced by IGNOU are extensively used by the State Open Universities in the country. Efforts have also been made to evolve common standards for the products as well as processes (programme structure, credits, examination, grading, etc.) to facilitate student mobility across programmes as well as institutions through systems of credit transfer. Steps have also been initiated of credit transfer. Steps have also been initiated to frame norms and standards for the design, development and delivery of programmes in specific fields and to ensure their quality.

Cost Effectiveness and Pertinence

The Open University programmes have proved to be highly cost-effective. The current indications are that their cost varies between 35 and 50 per cent of the cost normally incurred by the traditional system on comparable programmes. The open universities could bring down this cost further through economies of scale since a part of its fixed cost will get distributed over a larger number of students.

The open universities in the country have generally developed their programmes and courses with a view to ensure that they are relevant to the economic and employment needs. Most of their programmes are very different from those offered by the traditional universities. They are designed and developed in several modules to assist the potential students to choose such modules as they perceive are relevant to their needs. On their part, the universities have also sought to diversify their course provisions and developed high quality multi-media open learning curriculum designed to meet the academic, technical and vocational needs of diverse student groups. A notable feature of these programmes especially those in the technical, vocational and professional areas is the close linkages with the industry and other employer groups, not only in designing and preparing the learning packages, but also in the delivery of various services to the students at the work place.

The open university programmes offered by IGNOU have received international attention and recognition.

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Financing of Higher Education

Demand for higher educated manpower will increase substantially in the near future and this will impel central focus on the quality and quantity of manpower produced by the higher education system. Both for quantitative expansion and improvement in quality, the system requires large additional resources.

Increasing needs stemming from population growth, need for modernisation and the limited nature of resources, are problems facing financing of education.

The concept of 'investment in education' was explicitly adopted by the Government of India in the National Policy on Education, 1968. Keeping in view the growing requirements of the education system, the Government of India has promised to allocate at least six per cent of national income to education from the public exchequer. This goal is set for realisation by the end of the ninth Five Year Plan.

Besides its social and cultural dimensions, education is also an economic and political investment yielding long-term benefits. It is, therefore, not only justifiable but desirable to raise money from private sources in order to ease pressure on public spending. This, of course, is not meant to release the state from its financial commitments, which have been substantial in India.

Growth in Expenditure on Higher Education

Higher education in India is in financial stress. However, it should be noted that huge investments have been made in higher education in independent India. Total expenditure on higher education has increased remarkably during the post-independence period. At the inception of planning in the country (1950-51), India was spending Rs. 172 million on higher education. Government expenditure alone was of the order of Rs. 42,035 million in 1996-97, and it has risen further during the subsequent period. This impressive growth is, however, considerably offset by increase in prices, and increase in population, more particularly student numbers in higher education. Inflation has had an adverse effect on education. Nevertheless, on the whole, the trends suggest that higher education had a good start during the 1950s (with real growth of 7.5 per cent per annum), and had its golden days during the 1960s, with the real expenditure increasing at an annual rate of growth of 11 per cent; but it suffered significantly during the 1970s, with the rate of growth coming down to a meagre 3.4 per cent as educational planners aimed at consolidation of higher education instead of its rapid expansion; and showed some tendencies to recover during the 1980s. Though the growth in expenditure on higher education has been erratic during the 1980s, it had increased on the whole at a rate of growth of 7.3 per cent per annum. The 1990s heralded an era of austerity and higher education suffered greatly.

Share of Higher Education

The relative priority accorded to higher education can be measured in terms of the share of higher education in GNP. Starting from a very low figure of 0.19 per cent of GNP invested in higher education in 1950-51, the share of higher education increased five-fold by 1980-81; but it came down to nearly one per cent of GNP after three decades of development. But ever since, allocation of resources has been steadily coming down: it tended to decline to 0.4 per cent of GNP by mid 1990s.

India has adopted Five Year Plans as an important development strategy since 1950. The Five Year Plans set new directions for development—quantitative expansion, improvement in quality and relating to several other dimensions of education development—and represent the serious intention of the planners to further develop the system.

The share of higher education doubled in the total education outlay from 9 per cent in the first Five Year Plan to 18 per cent in the second Five Year Plan, and increased to an all time peak of

25 per cent in the fourth Five Year Plan, and ever since it has been consistently declining, and was about 15 per cent in the seventh Five Year Plan. The share of higher education in the total education outlay in the eighth Five Year Plan was estimated to be 8 per cent.

In case of education, including higher education, plan expenditures are of relatively small size and huge amounts are incurred as 'non-plan expenditures', i.e., for the maintenance of the gigantic system, recognised as the second largest system in the world.

In the total expenditure on education, the share of higher education was less than one-fifth in 1950-51, it increased to about a quarter by 1955-56, and became stable around one-fourth, suggesting that the relative importance given to higher education in the total education system remained unchanged since the beginning of the second Five Year Plan up to the sixth Five Year Plan, though there had been marginal increases during this period. But the situation has changed considerably from the seventh Five Year Plan onwards.

Devaluation, and the accompanying price rise, has led to an enormous increase in prices of books and journals; and as a result, many universities have had to inflict very serious cuts on their library budgets.

Sources of Funds

The various sources of finances for higher education in India are: (a) government sector — central government, and state government; and (b) Non-governmental sector— students/parents (or families), e.g., fees, and other maintenance expenditure, and the rest of the community at large, e.g., donations and endowments.

The relative shares of various sources in 'total' expenditure on higher education in India have changed considerably over the years. The share of the government has increased in financing higher education, and correspondingly that of every other source, viz., student fees, community contributions, and other internal sources declined steeply, though in absolute money terms there has been a significant increase in the contribution of these sources as well. The share of government (central and state) increased from 49 per cent in 1950-51 to 76 per cent in 1986-87. And the share of the non-governmental sector declined remarkably. Students' contributions in the form of fees used to form more than one-third of the total until the beginning of the 1960s; its relative share declined to less than half of what it was in 1950-51. The share of "other" sources (including voluntary donations, endowments, etc.) also declined, though the decline is not as sharp as the decline in the share of the fees. Non-governmental finances (fees and others) accounted for one-fourth of the total.

Thus, higher education in India is characterised by massive public investment, though the investment is still regarded as much below optimum. Such a rapid growth in public financing of higher education in India has been necessary for the following reasons:

- Facilities for higher education available at the time of independence were insignificant. Independence had created an abnormal increase in the social demand for higher education, and public expenditure has had to cope with the demand.
- Building up a new socio-economic system after the end of the colonial rule required large scale manpower with varied skills; so the government had to expand investment in higher education.
- The very development models emphasised high skilled labour force, and building up of huge social infrastructure for excellence in science and technology, and research and development.
- Government policies towards equality in education led to the growth in public investment in education, since it involves huge subsidies at all levels of education to a substantial number of students, belonging to weaker sections.
- The rapid growth of school education naturally pushed the demand for higher education.

Recently, efforts are being made to mobilise resources, and it has been recommended that while the government should make a firm commitment of funding higher education, colleges and universities should also make efforts to raise their own resources.

Current Policy Issues in Financing

Generally it is felt that the levels of fees in higher education in India are very low and that there exists much scope for increase in the fee and for rationalisation of the fee structure. This is more so in case of higher technical education. The UGC and AICTE Committees recommended that at least 20 per cent of the recurring expenditure per student has to be generated through student fees (and other sources).

Student loan programme has been one of the most prominent methods that is currently suggested as an effective solution to the problem of financing higher education. This is also advocated as an effective antidote to check the regressive effects of increase in fees. Many nationalised banks in India have begun to offer a variety of loans to students for higher education within the country and abroad.

An idea has been mooted to levy an educational cess on industries and other organisations that use technical manpower.

Efficiency and Economy in Expenditure

Several measures are being suggested for efficient utilisation of resources in educational institutions and to effect economy in expenditures, including the one related to the consolidation of uneconomic institutions. For effective utilisation of available resources, it is necessary that an optimum size of the institutions is worked out. Institutions with small size would be uneconomic and in the institutions with large student numbers, the resources might be over-optimally utilised. The AICTE felt that institutions of technical education should have enrolments in the range of 1,500-2,000, with a minimum annual intake of 180, and with an intake of 40-60 for every course/discipline. The Committee has also suggested staff-student ratios to vary between 1:15 and 1:20. Available data on some engineering institutions show that more than half the

institutions were having enrolment below 1,500, and more than 80 per cent of the institutions have a staff-student ratio of less than 1:15. All this suggests the need for consolidation of technical education institutions, through proper institutional planning.

Privatisation of Higher Education

The new trends of thinking and overall constraint in resources call for private initiative and community support. In the Indian mixed economy, while the contribution of private sector has been significant in general, its contribution to higher education has not been encouraging.

While until now there is no formal private university in India, there are a large number of private colleges in the general and technical education spheres. Private colleges that form about three-fourths of the total number of colleges, are of two types: privately managed but publicly funded colleges familiarly known as (government) "aided" colleges, and privately managed and funded colleges, known as "unaided" colleges. A substantial number of private colleges belong to the former category, and they receive government aid to meet almost the whole recurrent expenditure. The private aided colleges have not contributed significantly to easing the financial burden of the government, as more than 95 per cent of the recurring expenditure, and sometimes even the capital expenditure, is met by public exchequer. Hence strictly from the point of view of finances, such private colleges do not have any significant role.

Pure or "unaided" private colleges do provide financial relief to the government in providing higher education, but at huge and long-term economic and non-economic cost to the society. Such institutions have been really a recent phenomenon. They are the result of private enterprise and initiative. In the very recent period, growth of private engineering and medical colleges has been remarkable. They charge donations and capitation fees. While other colleges are, by definition,
non-profit institutions, many of these institutions not merely cover their costs, but also make profits, which are not necessarily re-invested in education. The government wants to encourage private initiatives in higher education but not commercialisation.

Measures for Financial Self-Reliance

Now-a-days with declining or stagnant budgets for education, specifically for higher education, institutions of higher education increasingly feel the need to become financially self-reliant by generating resources not only through increase in fees, but also through other measures, such as augmentation of resources from corporate sector in the form of donations and other similar contributions, by forging effective relationships with industry. The government has already promised incentives both to the institutions and to the individual donors. The institutions that generate such resources are promised matching grants by the government, besides stating that such resources would not be taken into account in giving bulk/maintenance grants. The donors are offered fiscal incentives in income tax savings (tax deduction at the rate of 125 per cent of the contributions to professional institutions and 100 per cent to other institutions of education).

It is, however, recognised that none of these measures for mobilisation of additional resources should aim at reducing the demand for higher education.

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New Challenges

India recognises that the new global scenario poses unprecedented challenges for the higher education system. The University Grants Commission has appropriately stated that a whole range of skills will be demanded from the graduates of humanities, social sciences, natural sciences and commerce, as well as from the various professional disciplines such as agriculture, law, management, medicine or engineering.

India can no longer continue the model of general education as it has been persisting in for the large bulk of the student population. Rather, it requires a major investment to make human resource productive by coupling the older general disciplines of humanities, social sciences, natural sciences and commerce to their applications in the new economy and having adequate field based experience to enhance knowledge with skills and develop appropriate attitudes.

Responding to these emerging needs, the UGC stated: "The university has a crucial role to play in promoting social change. It must make an impact on the community if it is to retain its legitimacy and gain public support". It seeks to do so by a new emphasis on community based programmes and work on social issues.

Concepts of access, equity, relevance and quality can be operationalised only if the system is both effective and efficient. Hence, the management of higher education and the total networking of the system for effective management, has become an important issue. The shift can occur only through a systemic approach to change as also the development of its human resource, and networking the system through information and communi-cation technology.

The decline in public funding in the last two plan periods has resulted in serious effects on standards due to increasing costs on non-salary items and emoluments of staff, on the one hand, and declining resources, on the other. Effective measures will have to be adopted to mobilize resources for higher education. There is also a need to relate the fee structure to the student's capacity to pay for the cost, so that, students at lower economic levels can be given highly subsidised and fully subsidised education.

The Ninth Plan policy imperatives will focus on (a) access and equity; (b) relevance and quality of education; (c) universities and social change; (d) the delivery systems, the institutional and organisational structures and management; and (e) funding which constitutes the necessary resource underpinning for development.

Emphasis has to be laid on curriculum change; interdisciplinary courses gradually replacing discipline oriented learning, especially at the master's degree level; greater emphasis on field based learning experiences for students both in undergraduate and postgraduate programmes; more career oriented courses and response to local needs for human resource in specific work-related opportunities.

The university is required to be seen not only as a seat of learning and new knowledge through its research and extension functions but also as a focal point for the dissemination of information to the community through continuing education, extension education and through field outreach activities. It will have a major role to play in directly impacting on the community for social development and change. It should be facilitated in this task which is described by the UGC as the third dimension of education.

As universities abandon their isolationist existence and increasingly interact with other segments of society, there is a need for them to adopt a more professional management. This includes opting for a new type of leadership capable of interfacing with user and other groups in society, and at the same time, capable of providing academic and administrative leadership within a decentralised system of administration, and making increased use of information technology.

The above implies that there will be greater interaction with the user community of both employers and the public to create relevant programmes, to develop greater autonomy in a decentralised structure and to develop a professional management system which has autonomy as well as accountability, and maximising the use of information technology for both effective and efficient management.

As a very small proportion of the relevant age group (around 6 per cent) is enrolled in higher education in India, compared to the developed countries (about 40%) with which the country is going to engage itself in the international market, efforts will need to be directed towards raising the enrolment in higher education sector and meeting the increasing costs of such enrolment.

Access means costs but access cannot be overlooked when the base is narrow, not in absolute numbers but in the percentage of the educated in the country's structure. We have to acknowledge the need to prepare a human resource capable of accepting the challenges of the new millennium.

We have also to realise that social changes and transformation can only be brought about by people and not through technology alone which itself is a product of human endeavour. Hence, human resource development, at all levels, needs to be given priority and made a part of the nation's overall strategy.

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International Cooperation

Universities in India have been a primary conduit for the advancement and transmission of knowledge through traditional functions such as research, innovation, teaching, human resource development, and continuing education. International cooperation is gaining importance as yet another function.

With the increased development of transport and communication, the global village is witnessing a growing emphasis on international cooperation and action to find satisfactory solutions to problems that have global dimensions. And, higher education is one of them.

India has been in the forefront to adopt the new 'information society' technologies such as distance education and the internet to forestall the further widening of the gap between itself and the advanced countries. International cooperation in education is seen in this context of partnership — rather than aid — where countries assist each other by sharing their successful experiences, technologies, material and financial resources and learning to appreciate each other's cultural heritage.

International cooperation has also been an important focus area in promoting the ideals and objectives of higher education.

The Indian National Commission for Cooperation with UNESCO (INC), set up in 1949, is an apex advisory, executive, liaison, information and coordinating body at the national level. INC has been playing an active role in UNESCO's work, particularly in the formulation and execution of its programme in collaboration with the UNESCO Secretariat as well as the National Commissions of Asia and the Pacific Region.

India contributes to the activities of UNESCO and its Regional Offices through participation in numerous workshops, symposia and conferences, by assisting in the organisation of national, regional and inter-regional activities in India in areas of competence of UNESCO, arranging participation of Indian experts in UNESCO's activities, formulating projects under the Participation Programme of UNESCO and administration of UNESCO Coupons Scheme. India is a member of the Executive Board of UNESCO. Public information activities relating to UNESCO are supported in the form of publication of Hindi and Tamil editions of the Courier, a UNESCO periodical.

So far, nine UNESCO Chairs have been set up in India in diverse areas such as cultural development, eco-technology, science education, peace, human rights and democracy, energy, small industries and teacher education. Proposals for setting up UNESCO Chairs in social economics, biotechnology, social anthropology, medicinal plants and cultural identities are under consideration.

The UNITWIN/UNESCO Chairs Programme was launched by UNESCO in 1991 as an international action plan and movement for academic solidarity to strengthen inter-university cooperation, with particular emphasis on support to higher education in the developing countries.

The programme aims at establishing and reinforcing strong and durable links amongst higher education and scientific institutions world-wide. The programme has the following goals:

- to give fresh impetus and a global dimension to twinning and other linking arrangements between higher education institutions in the industrialised and developing countries;

- to reinforce existing sub-regional and inter-regional cooperation networks of higher education and research institutions and to establish new networks, whenever there is a perceived need;
- to develop centres of excellence for specialised studies and advanced research, with international support;
- to alleviate the consequences of the brain drain.

The programme focuses on graduate studies and research and places particular emphasis on developing strategies and mechanisms for the rapid and efficient transfer of knowledge and for its application to specific national and local conditions and needs.

The INC operates the UNESCO International Coupon Programme which assists individuals and institutions working in the fields of education, science, culture and communication to import their bonafide requirement of educational publications, scientific equipment, educational films, etc., from abroad without undergoing the foreign exchange and import control formalities.

The Department of Education in the Ministry of Human Resource Development has also built relations with other international organisations such as the Commonwealth Secretariat, Commonwealth of Learning, SAARC, UN Organisations and NAM and Shastri Indo-Canadian Institute, etc. The External Academic Unit of the Department handles policy matters to promote India's external academic relations with more than 97 countries with whom India has bilateral Cultural Exchange Programmes (CEPs) and other collaborative arrangements, and monitoring of the educational component of the bilateral and collaborative programmes with other countries.

The INC has been closely associated with the work of the Delors Commission on Education for the 21st Century. The Report of the Commission, *Learning: The Treasure Within*, has been reprinted by the INC for wider dissemination. A national debate is envisaged on the recommendations of the Report. A two-member delegation of the Department also attended the Conference on Education for the 21st Century in the Asia-Pacific Region, held at Melbourne from 30 March to 3 April, 1998.

The Bilateral Exchange Programmes connected with the university sector, between India and other countries, are implemented by the UGC on behalf of the Government of India. In 1996-97, such programmes had been initiated with 70 countries. Development of bilateral linkages in specific areas between identified departments of universities and institutions of higher education have been given greater emphasis.

The UGC provides foreign language teachers to universities having a proper infrastructure for teaching foreign languages under the Collaborative Exchange Programmes. In 1996-97, 32 foreign teachers in German, French, Chinese, Portuguese, Spanish, Hungarian, Mongolian, Iranian, Russian, Polish, Rumanian, Pushto and Korean were assigned to various universities in India.

Several scholarships and fellowships have been instituted in Indian universities with the support of the German and French governments. The UGC also implements the scheme of SAARC Chairs/Fellowships/Scholarships.

An Academic Link Interchange Scheme is being implemented in collaboration with the British Council for the development of linkages between institutions in higher education in India and the UK, in specific areas such as joint research, joint publication, curriculum development and so on.

Under the Commonwealth Academic Staff Fellowships/Scholarships programme, the UGC coordinates with the Association of Commonwealth Universities (ACU) in UK and makes nominations for the award of Commonwealth fellowships and scholarships to enable promising faculty members in universities and colleges in India to do research work at the universities/institutions in the UK.

Proposals from 13 Universities for under-taking the Canadian Studies programme have been approved by the UGC. Financial support is being provided to these universities, at various levels, for undertaking studies relating to the historical, social, economic and political aspects of Canada.

Travel grants are provided by the UGC for teachers who have offers of fellowships/stipends for foreign countries for collection of source material for their research work.

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Vision and Tasks Ahead

Towards a New Synthesis

India realizes, like other nations of the world, that humanity stands today at the head of a new age of a large synthesis of knowledge, and that the East and the West have to collaborate in bringing about concerted action for universal upliftment, and lasting peace and unity.
In this new age, great cultural achievements of the past have to be recovered and enriched in the context of the contemporary advancement so that humanity can successfully meet the evolutionary and revolutionary challenges and bring about a new type of humanity and society marked by integrated powers of physical, emotional, dynamic, intellectual, ethical, aesthetic and spiritual potentialities.
Frontiers of knowledge are, therefore, bound to expand unimaginably, and new researches will oblige humanities, sciences, technologies, and fine arts to arrive at new equations and new combinations.
Need for Vast Changes

All these factors will impel higher education to undergo vast changes in respect of objectives, contents and methods. It will have to bear momentous responsibilities for generating new vistas of knowledge and wisdom, bolder forms of courage and heroism, unprecedented arts of harmony and beauty, and unimaginable skills suited to developing technologies and crafts. It will also be required to set more exacting standards of excellence and perfection.

Coming of Information Age

The world is entering into an Information Age and developments in communication, information and technology will open up new and cost-effective approaches for providing the reach of higher education to the youth as well as to those who need continuing education for meeting the demands of explosion of information, fast-changing nature of occupations, and lifelong education.

Sovereignty of Young People

We also feel called upon to encourage and support the forces and developments relating to the learning society and to the theme of the sovereignty of learners, particularly young people.

Operation Knowledge

India has already decided to launch "Operation Knowledge" as a part of the Information Technology Action Plan. This will mean not only continuous expansion and improvement of the facilities of modern equipment but also a gigantic task to redesign teaching-learning materials in every discipline appropriate to the special demands of the new technologies and media of transmission and new teacher-pupil relations.

Determining New Objectives

A most difficult task ahead is to conceive certain new objectives of higher education. It will not be enough to promote specialized knowledge and skills of professional excellence; a deeper and subtler aim will be to develop abilities to think globally and to resolve emerging tensions between rationa-listic, ethical, aesthetic and spiritual elements of personality. The objective of a complete education for a complete human being will need to be underlined as of highest importance.

Designing New Contents

Another major task will be to change the contents of higher education. Appropriate courses have to be designed so as to achieve a proper blending of wide general knowledge and such specialization, which would have in-built facilities to renew relevant knowledge and skills at increasingly shorter intervals and even on a continuous basis. Increasing freedom of choice in selecting subjects of studies has to be ensured, and interdisciplinary studies will have to be so devised that they will foster understanding and appreciation of national history in the context of the goal of multicultural under-standing and of creating in the world a harmonious human family, appropriate to the ancient Indian ideal of "Vasudhaiva Kutumbakam"1.

Student-Centred Education and Dynamic Methods

Methods of higher education also have to be appropriate to the needs of learning to learn, learning to do, learning to be and learning to become.

Student-centred education and employment of dynamic methods of education will require from teachers new attitudes and new skills. Methods of teaching through lectures will have to

subordinated to the methods that will lay stress on self-study, personal consultation between teachers and pupils, and dynamic sessions of seminars and workshops. Methods of distance education will have to be employed on a vast scale.

Teachers – New Dimensions of their Role

Special emphasis on value-oriented education will impart a new dimension to the role of the teacher. For value-orientation cannot be imparted without teachers' own value-orientation. Again, the objective of integral development of personality cannot be fulfilled without teachers developing their own integral personality.

It is increasingly recognized that if the defences of peace are to be built in the minds of men and women, and if the qualities of cooperation, mutuality and harmony are to be fostered in humanity, the role of the teacher will include the task of changing the tendencies of egoism and domination that are the ultimate causes of division and war. It is particularly for this reason that a new programme of teaches' training has to be envisaged, and this programme will not only cater to the continuous development of professional skills but also continuous development of teachers' ethical and spiritual abilities.

Appropriate to the new and difficult demands on teachers, we have to constantly raise the status of teachers in the country.

Wider Access

India recognizes that access to higher education will have to be so broad-based that the system of open universities has to continue to grow and it will not only have to be extended vastly but also to be so designed that it can foster among students constant motivation to learn and to develop not only academic abilities but also practical skills and talents that are being demanded by the modern world.

National Testing Service

A major task ahead is to bring about radical changes in the system of examination. Methods of testing have to be so devised that not only will tests be rigorous but they will be so flexible and of varied nature so as to be appropriate to the demands of promoting various curricular and non-curricular abilities, physical fitness, artistic taste, and value-orientation. In this context, National Testing Service needs to be established, the tests of which can be availed on voluntary basis by those who may need certification or admission for employment, irrespective of whether they hold prescribed degree or diploma. The new testing system should facilitate delinking of degrees from jobs and curricular reforms bringing in emphasis on multi-disciplinary courses. Such changes will also be a recognition of the sovereignty of the learner and of making education reality-oriented and learner-centred.

Towards a Learning Society

As we move towards a learning society, every human activity will require contributions from experts, and this will place the entire sector of higher education in sharp focus. Although the priorities, which are being assigned today to the task of Education for All, will continue to be preponderant, the country will have to prepare itself to invest more and more on higher education and, simultaneously, measures will have to be taken to refine, diversify and upgrade higher education and research programmes.

Major Changes in System of Governance

Our present system of governance of higher education is undergoing increasing strain, and sooner rather than later, major changes will have to be effected not only to ensure greater autonomy and accountability but also to facilitate rapid changes in the very framework, directions and goals.

Greater Investment

Financial strain in the educational sector imposes several difficult tasks not only relating to fee structure and new partnership of education with industry and various income and profit generating sectors but also to the cost-effective designs of structures and methodologies of education that can cater to the needs of massive programmes of education as also to those of intensive education that aim at individual perfection. The advances in communication technology, specially the satellite based teleconferencing, have made it possible to use distance education for training skills in virtual classrooms. It is expected that technology, rightly designed for developing deeper and higher dimensions of personality, will at once bring down the costs and increase the efficiency of the educational system.

'I firmly believe in the efficacy of education as a panacea for our social evils.'

Dr. B. R. Ambedkar

India's Realistic Optimism

India looks upon the future with realistic optimism, despite difficult challenges and world-wide crises through which humanity is passing today. We feel that major efforts are required to cross over the present transitional period, during which negative forces will try to outweigh the positive forces. But considering the vast ethical and spiritual potentialities that lie really untapped, we can trust that humanity will overcome the crisis and emerge stronger to create a new world of harmony and unity. But in fulfilling this hope, education will have to play a crucial role. Considering also that future advances in research will affect the theme of higher knowledge centrally, the country is getting ready to strengthen the system of higher education and to adopt strategies that will provide new dimensions to the delivery system that will help change society and prepare young people to shoulder the heavy responsibilities of a difficult but fascinating future.

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Abbreviations

AICTE	All India Council of Technical Education
AIU	Association of Indian Universities
ASC	Academic Staff Colleges
CABE	Central Advisory Board of Education
CSIR	Council of Scientific and Industrial Research
CAS	Centre for Advanced Studies
DEC	Distance Education Council
DSA	Department of Special Assistance
GOI	Government of India
ICMR	Indian Council of Medical Research
IGNOU	Indira Gandhi National Open University
ICAR	Indian Council for Agricultural Research
JRF	Junior Research Fellowships
MCI	Medical Council of India
NBA	National Board of Accreditation
NAAC	National Accreditation and Assessment Council
NCTE	National Council for Technical Education
NET	National Educational Testing
UGC	University Grants Commission
ULP	University Leadership Programmes

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The Cover

Juxtaposing the ancient and modern, past and the present, the cover conveys the deep appreciation that India's ancient civilisation had for education at its highest level.

The visual at the top left corner represents our discovery of the "Shunya"—the zero. The lotus at the bottom right corner stands for knowledge and wisdom. The visual at the top right corner is of Nalanda University, a renowned institution of learning, visited by the famous Chinese traveller Hiuen Tsang. The Banaras Hindu University, shown in the bottom left, is a premier educational institution today.

The graphic in the centre, represents the endeavours of modern India to embrace modern knowledge so that India can contribute to synthesis of science and spirituality which is bound to be the theme of the coming days.